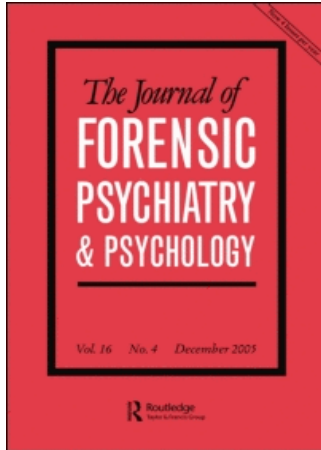


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## **The role of mental illness in homicide-suicide in New Zealand, 1991–2000**

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### **Abstract**

Prior studies of homicide-suicide (H-S) have largely glossed over the relevance of mental illness (MI), either ignoring the issue outright or defining H-S cases as intrinsically related to MI or not. While such positions have methodological or theoretical justifications, it was felt that a finer-grained analysis was possible and might prove fruitful. As part of a large population study on homicide and MI in New Zealand, all H-S cases over a 10-year period were identified through a police database and their Coronial Services files reviewed. Thirty-three H-S cases (0.08 per 100,000 prevalence) were identified. Fourteen perpetrators (42.4%) were classified as MI; among these were all five of the female perpetrators and 32% of the male; 20% had not previously been in treatment. Most of the MI perpetrators killed their children and then themselves. In contrast, only a few of the H-S perpetrators who killed a current or former partner were MI. It is concluded that H-S events in New Zealand appear broadly similar to such events in other countries, and that MI plays a significant role in some forms of H-S. However, the relationship between gender, H-S motivation, and mental illness is clearly complex and in need of further study.

**Keywords:** *Homicide-suicide, mental illness, epidemiology, typology, domestic violence, filicide*

### **Introduction**

The killing of a person followed by the suicide of their killer is without doubt one of the most tragic and distressing of all societal events. The losses

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are particularly acute when both (or all) parties are related by blood or marriage, which is often the case (Barracough & Harris, 2002; Marzuk, Tardiff, & Hirsch, 1992), resulting in incalculable loss to the remaining family members and friends. In order to potentially foresee and prevent some of these events, homicide-suicide incidents should be studied systematically. Unfortunately, this is difficult to do, as the perpetrator, by definition, cannot be interviewed or evaluated. How then do we make sense of these tragic events? There are two core aspects of homicide-suicide incidents (hereafter H-S) that require interpretation: (1) the assignment of culpability to one party; and (2) the linkage of the two (or more) events. Since there is no trial, the first cannot be accorded the high level of proof required for legal responsibility; as such, culpability is usually decided by the police or coroner's report.

More complicated is the issue of whether the homicide(s) and suicide are part of one event, or whether the suicidal impulse comes secondarily in response to having committed the homicide(s) (i.e., out of guilt or grief). A determination of this requires an assessment of the perpetrator's motivation, made difficult by his (or her) death. Most authors make this determination solely on the basis of the time interval between the two events. Typically, suicides occurring more than three days or one week after the homicide are not considered H-S events (Barracough & Harris, 2002; Marzuk et al., 1992), although intervals as long as three months (Allen, 1983) and as short as three hours (Lecomte & Fornes, 1998) have been proposed. Some have also excluded suicides occurring in custody, regardless of the time interval (Milroy, Dratsas, & Ranson, 1997).

How common is H-S? Over 20 years ago, Coid, in an influential review (Coid, 1983), compared rates of H-S across countries, and found a range of .04–.40 per 100,000 (per annum).<sup>1</sup> In comparison, overall homicide rates ranged from .27–6.10 per 100,000. Rates of abnormal homicide (defined as persons considered mentally ill when examined shortly after the offence or given a mental illness-related verdict at trial) fell into the narrowest range, of .08–.22 per 100,000. Coid argued that abnormal homicide was relatively immune to the societal forces that contributed to such large variability in overall homicide rates (such as the prevalence of firearms). He suggested that, as H-S has almost three times the variation of the abnormal homicide group, H-S might be only partly related to mental illness, and therefore somewhat more affected by societal forces. West (1965) had previously come to the same conclusion.

Even so, the relation between H-S and mental illness remains a matter of controversy, with recent large-scale studies taking different positions on this issue. Several, including major UK (Taylor & Gunn, 1999) and Austrian (Schanda et al., 2004) studies, have excluded H-S events outright, on the basis that, because of the death of the perpetrators, only a limited analysis could be undertaken. Other studies considered H-S to be a form of

'abnormal' homicide by definition (on the basis that suicide on its own is an indication of a mental illness; Landau, 1975; Wong & Singer, 1973),<sup>2</sup> while still others, including the New Zealand study from which this cohort was derived (Simpson, McKenna, Moskowitz, Skipworth, & Barry-Walsh, 2004), grouped H-S events along with 'normal' homicide (on the basis that the nexus between mental illness and the event could not be legally established).

Those studies that have made a concerted attempt to assess the prevalence of mental illness in H-S samples are listed in Table I. While there is considerable variation in the prevalence of mental illness in these samples, ranging from 15% to 91%, this variation is at least partly due to differences in the definition of mental illness used.

The highest percentage of mental illness was reported in a study of women who killed their children and then themselves in Quebec (Bourget & Gagné, 2002); 10 of the 11 women had previously been in psychiatric treatment, overwhelmingly for depression (only one had a psychotic disorder). In contrast, the lowest percentage of mental disorder in a H-S sample (15%) came from a 15-year study from Finland, whose criterion for mental illness was prior psychiatric hospitalization for a psychotic disorder (Virkkunen, 1974).

Perhaps the most rigorous study was conducted by Rosenbaum (1990), who examined a subset of H-S committed in Albuquerque, New Mexico, over a 10-year period, those involving couples (which constituted 70.6% of all H-S), and compared them to all other cases of homicide (without suicide) involving couples during the same period. In addition to reviewing available records, Rosenbaum interviewed surviving family and friends of the victims and perpetrators. He concluded that 75% of the H-S perpetrators suffered from DSM-III-R depressive disorders, compared to none of the 'simple' homicide perpetrators. A third of the H-S group had been in psychiatric treatment prior to the killings. However, it appears likely that at least some of the depressed perpetrators not previously in treatment may have been suffering from a 'situational' depression, secondary to a personality disorder, rather than a depressive disorder per se, as Rosenbaum characterizes the typical onset of the depression as occurring after the relationship had ended. Nonetheless, his conclusions regarding the prevalence of depression (broadly defined) in 'spousal' H-S have been supported by other studies' findings (Lecomte & Fornes, 1998; Milroy et al., 1997). None of these studies, however, attempted to distinguish situational depression or depression arising primarily from personality disorders from depressive disorders per se, an endeavour crucial to the determination of the role of mental illness in H-S events.

If, as these studies suggest, some H-S incidents relate to mental illness and others do not, might there be a difference with regard to type of H-S incidents? Typologies of H-S events have been proposed, most prominently

Table I. Homicide-suicide and mental illness.

| Study                           | Region                  | Time period | N <sup>1</sup>  | Data sources   | Definition of MI                                   | Types of MI  | % MI                   | % of MI in treatment prior to the H-S <sup>2</sup> |
|---------------------------------|-------------------------|-------------|-----------------|--|--|--|------------------------|--|
| Virkkunen (1974)                | Finland                 | 1955–1970   | 126             | Central Statistical Office (Coronial Services), hospital records   | Prior hospitalization for a psychotic disorder     | Schizophrenia<br>Paranoid psychosis<br>Psychotic depression  | 15%<br>10%<br>2%<br>3% |  |
| Gudjonsson and Petursson (1982) | Iceland                 | 1900–1979   | 4               | Police record, medical reports, interviews with police             | Based on prior psychiatric assessment or treatment | 'Psychotic illness'  | 75%                    |  |
| Allen (1983)                    | Los Angeles County      | 1970–1979   | 104             | Police files   | Not indicated                                      | Depression   | 18%                    |  |
| Rosenbaum (1990)                | Albuquerque, New Mexico | 1978–1987   | 12 <sup>3</sup> | Police files, hospital records, interviews with family and friends | DSM-III-R diagnosis                                | Depressive disorders (bipolar, major depression, dysthymia)  | 75%                    | 33%  |
| Buteau et al. (1993)            | Quebec                  | 1988–1990   | 39              | Coronial Services  | Any mention of mental disorder in file             | Any mental disorder (includes substance abuse)<br>Depression | 67%                    | 31% <sup>4</sup>                                   |

(continued)

Table I. (Continued).

| Study                     | Region              | Time period   | N <sup>1</sup>  | Data sources              | Definition of MI | Types of MI   | % MI             | % of MI in treatment prior to the H-S <sup>2</sup> |
|---------------------------|---------------------|---------------|-----------------|---------------------------|------------------|---|------------------|--|
| Milroy et al. (1997)      | Victoria, Australia | 1985–1989     | 39              | Coronial Services         | Not indicated    | Depression, morbid jealousy, erotomania                               | 18%              |  |
| Lecomte and Fornes (1998) | Paris and suburbs   | 1991–1996     | 56              | Police and judicial files | DSM-IV diagnosis | Severe depression (some psychotic) Evidence of psychosis <sup>5</sup> | 75%              | 9%   |
| Bourget and Gagné (2002)  | Quebec              | 1991–May 1998 | 11 <sup>6</sup> | Coroners' files           | Prior treatment  | <i>Depression</i><br><i>Psychosis</i>                                 | 91%<br>9%<br>82% |  |

Notes: <sup>1</sup>Number of incidents (not victims); <sup>2</sup>for those studies which did not define MI as persons previously in treatment; <sup>3</sup>couples only – 70.6% of the total of 17 homicide-suicide cases; <sup>4</sup>consultation or hospitalization in psychology or psychiatry in the past year – may include substance abuse treatment; <sup>5</sup>characterized as 'paranoia' or 'psychotic spell'; <sup>6</sup>exclusively cases of maternal filicide.

by Marzuk et al. (1992) and Felthous and Hempel (1995). Both sets of authors agree that the largest group of H-S events (estimated to be one-half to three-quarters of all H-S committed in the United States; Marzuk et al., 1992) involves males killing their female partners or ex-partners, and in some cases the woman's new lover. These have been termed 'consortial' or 'spousal' H-S (Felthous & Hempel, 1995; Marzuk et al., 1992) and may involve situational or reactive depression or quasi-delusional jealousy. Other types of familial H-S events are: (1) 'declining health' spousal, in which an elderly male (typically) with an ailing wife kills her and then himself; (2) filicide-suicide – the killing of one's children and then oneself – women are frequently the perpetrators of these events and are often mentally ill (Bourget & Gagné, 2002); and (3) familicide-suicide – typically depressed, paranoid, or intoxicated males who kill their entire families and themselves (Felthous & Hempel, 1995; Marzuk et al., 1992). Extra-familial H-S events, which do not involve family members, are rare (Felthous & Hempel, 1995; Marzuk et al., 1992).

### **Material and methods**

All H-S cases over a 10-year period (1991–2000) were identified during a comprehensive population study of all homicide events in New Zealand (Simpson et al., 2004). While H-S cases were sought over the entire 30-year period of the earlier study, some important databases were available only for recent years. Accordingly, as we had less confidence in the completeness of the data from the first 20 years, the analysis was limited to H-S cases occurring since 1990.

Cases were identified from the New Zealand Police Homicide Monitoring Database, a detailed schedule of all homicide events in New Zealand since 1988 with information on the circumstances surrounding the event, the victim(s), and the (presumed) perpetrator. Files from the Coronial Services of the New Zealand Ministry of Courts were then sought, for both the victim(s) and perpetrator, and were reviewed by the first author. These files typically contained information about the perpetrator's mental health history and also about his/her mental state around the time of the killings. In addition to relevant police and medical reports, police interviews with family members and/or friends were often available in the coronial files.

We employed the same criterion as Marzuk et al. (1992), only considering suicides committed a week or less after the homicide. When an individual died subsequent to the one-week interval from injuries inflicted less than one week after the homicide they were included, as were individuals whose bodies were not found within a week of the homicide(s), but who were believed to have killed themselves within the one-week interval on the basis of available evidence (such as their abandoned car

being found shortly after the homicide, in an area where their body was later found).

We considered the perpetrator mentally ill if there was credible evidence of prior psychiatric treatment, or a psychiatric diagnosis given by a mental health or medical professional. However, if only lay descriptions of apparent psychiatric symptoms were available, they were also considered indicative of a mental illness if: (1) characteristics of the offence appeared bizarre; and (2) no reasonable alternative motive (other than a mentally ill one) was apparent. Individuals were not considered mentally ill if they were only described by family or friends as first becoming depressed subsequent to the break-up of a relationship. While such an approach raises difficulties, defining mental illness solely on the basis of prior professional contact (the only feasible alternative) would undoubtedly underestimate the role of MI in H-S events. As approximately 30% of (non H-S) MI homicide offenders were first diagnosed MI subsequent to the homicide (Shaw et al., 1999; Simpson, McKenna, Moskowitz, Skipworth, & Barry-Walsh, 2003), similar figures for MI H-S perpetrators are not unlikely. While no attempt was made to assign specific diagnoses to the perpetrators, those considered to be mentally ill were broadly grouped into mood disorders, with or without psychotic features, and non-affective psychoses. Initial assignments of perpetrators as mentally ill or not were made by the first author, and discussed with both AS and BM. Final decisions were arrived at consensually.

Ethical approval for this study was granted by the Auckland Ethics Committees and permission to access the Homicide Monitoring Database and Coronial Service files was given by the New Zealand Commissioner of Police and the New Zealand Ministry of Justice, respectively. The ethical approval for the study precluded the publication of specific information from individual cases, which could lead to the identification of a particular incident.

The data were entered into SPSS version 11 (SPSS Inc., 2002) for analysis.

## **Results**

From 1991 to 2000, 36 homicides were followed by the suicide of the perpetrator in New Zealand. Three cases were excluded as the perpetrators killed themselves more than one week after the homicide (19 days to eight months later). One perpetrator was included who died 12 days after the homicide from injuries sustained shortly after the incident, as was an individual whose body was found months after the homicide, but who had gone missing immediately afterward.

Thus, the final sample included 33 H-S events, equivalent to an annual population rate of .08 per 100,000. The highest number of H-S cases per year was five, occurring in 1992, 1994, and 1995, and there was at least one

incident in every other year. Consistent with prior literature, over three-quarters of the incidents occurred in the victim's home, with firearms being the most common means of killing both (or all) parties. Notably, however, only one of the five female H-S perpetrators used a firearm for the homicide (or suicide). Other means of homicide included drowning, knives or sharp instruments, or carbon monoxide poisoning. In addition to the manner of homicide described above, means of suicide also included hanging and leaping from a structure. In two-thirds of the cases, the suicide was committed immediately after the homicide, and in most of the remaining cases, within 24 hours of the earlier incident.

Of the 33 cases, 61% ( $n=20$ ) were spousal or consortial H-S – that is, a spouse killing their partner or ex-partner (and/or their current or former lovers) and then themselves (after Marzuk et al., 1992). All but one of the perpetrators of these cases was male. Another third of the H-S cases ( $n=11$ ) are classified as familial but non-spousal; of these, four (36%) of the perpetrators were women. In these familial cases, eight involved a parent killing their child or children and then themselves – what Marzuk et al. (1992) referred to as filicide-suicide. One case was a familicide-suicide – a male who killed his wife and five other members of his family before killing himself, and the remaining two were adult children who killed their parents (a pattern for which Marzuk et al. lack a sub-category). Finally, there were two cases in which a male killed an acquaintance – a work colleague or a flatmate – and then themselves.

The demographic characteristics of our H-S perpetrators appear consistent with prior studies, with 85% male and the majority either married or separated/divorced from a partner. The ethnic breakdown, with 18% of Maori or Pacific Island background, was broadly consistent with that of New Zealand's general population and the ethnicity of the victims matched that of the perpetrators in all cases.

There were, however, more victims than perpetrators, as 6 of the 33 incidents (18.2%) involved multiple victims. Four of these involved the killing of two or three children, one the killing of the perpetrator's wife and her lover, and one the killing of six family members, including children and grandchildren. Consistent with prior research, the victims were disproportionately female; most were or had been in a relationship with the male perpetrator. However, a significant minority, almost 40%, were children, killed by the male or female parent.

The prevalence of mental illness in this sample is presented in Table II. There was evidence of prior mental illness in 11 cases (33%), and of prior mental health treatment in eight cases (i.e., in the other three cases a diagnosis had been given but there was no evidence of mental health treatment). Of note, fully half of those who had previously received psychiatric treatment had been in contact with mental health services in the month prior to the killings, strongly suggesting an active mental illness at

Table II. Mental illness diagnosis and treatment in New Zealand homicide-suicide perpetrators, 1991–2000.

| Characteristics  | Homicide-suicide perpetrators ( <i>N</i> = 33) |        |
|--|--|--------|
|  | <i>n</i>                                       | %      |
| Evidence of mental illness   |  |        |
| Yes  | 14   | 42.4   |
| Diagnosis and prior treatment  | (8)  | (24.2) |
| Diagnosis but no evidence of prior treatment   | (3)  | (9.1)  |
| No prior treatment or diagnosis but psychiatric symptoms around the time of the H-S incident | (3)  | (9.1)  |
| No   | 19   | 57.6   |
| Diagnosis <sup>1</sup>   |  |        |
| Mood disorder <sup>2</sup>   | 9  | 27.3   |
| with psychotic features  | (3)  | (9.1)  |
| Schizophrenia or non-affective psychosis <sup>3</sup>  | 4  | 12.1   |
| Anorexia nervosa <sup>4</sup>  | 1  | 3.0    |
| Contact with mental health services  |  |        |
| Less than one month prior  | 4  | 12.1   |
| More than one month but less than one year prior   | 2  | 6.1    |
| More than one year but less than five years prior  | 2  | 6.1    |

Notes: <sup>1</sup>Excluding personality disorders and substance abuse; <sup>2</sup>including one case of bipolar disorder (based on collateral data) and one depressive disorder, possibly of organic aetiology (i.e., brain tumour); <sup>3</sup>including two diagnoses based on collateral data, and one 'personality-disordered' individual who had previously been diagnosed with schizophrenia, exhibited bizarre behaviour immediately prior to the H-S incident, and had been diagnosed with schizophrenia in the past; <sup>4</sup>with some evidence of a mood disorder.

the time of the H-S. In an additional three cases, there was no prior treatment or psychiatric diagnosis documented, but there were clear and compelling descriptions of psychotic symptoms around the time of the H-S event from lay sources. In two of these cases a male demonstrating psychotic symptoms (according to lay sources) killed members of his family for no apparent reason. The third case was more complex, as the homicide incident involved a non-bizarre killing of a partner; however, there were descriptions of deteriorating behaviour from multiple lay sources and no evidence of relationship difficulties. One perpetrator, described as depressed by a friend, was not classified as mentally ill as his depression developed subsequent to the break-up of an intimate relationship and appeared to be secondary to a personality disorder.

Thus, 14 out of the 33 H-S perpetrators, or 42.4%, were by these criteria mentally ill. A breakdown by type of H-S is informative. While 25% of

the perpetrators of spousal/consortial H-S appeared mentally ill at the time, fully 73% of the familial H-S perpetrators were mentally ill and one of the two acquaintance H-S perpetrators was mentally ill. Furthermore, all five of the female perpetrators appeared to be mentally ill at the time of the incident, while only 32% (9/28) of the male perpetrators appeared to be mentally ill. As can be seen in Table II, most of the mentally ill perpetrators appeared to be suffering from an affective disorder with psychotic features, while four appeared to have a non-affective psychotic disorder such as schizophrenia.

## Discussion

The New Zealand population annual rate of .08 H-S incidents per 100,000 people falls toward the low end of the range of H-S events across countries (Coid, 1983; West, 1965). It is, nonetheless, very similar to two recent UK studies (Barracough & Harris, 2002; Milroy, 1993), both of which reported population rates of .07 per 100,000. As in those studies, the vast majority of the H-S perpetrators were male and the majority of victims were women. However, in this study, there was also a disturbingly high percentage of children among the victims – almost 40%. Most incidents were committed in the victims' homes (often also the perpetrators') with firearms, and the vast majority of suicides occurred concurrent with or within 24 hours of the homicides. Eighteen percent of the incidents involved multiple victims, usually children.

The perpetrators in this study were similar in many ways to those of previous studies. The gender balance, 85% male, was identical to that of three prior studies (Barracough & Harris, 2002; Lecomte & Fornes, 1998; Milroy et al., 1997), and the ethnic balance matched that of the overall New Zealand population. This latter finding was notable, however, as it contrasted with the substantial overrepresentation of Maori and Pacific Island offenders in the overall New Zealand homicide offender population (Simpson et al., 2003). Wolfgang (1958), in Philadelphia, noted a similar discrepancy in the prevalence of African-Americans in H-S cases as compared to overall homicide cases. Furthermore, while firearms were the most frequent weapons in both homicides and suicides, as in all other studies, female H-S perpetrators in our study rarely used firearms. This pattern was also demonstrated in recent Australian and Canadian studies (Bourget & Gagné, 2002; Byard, Knight, James, & Gilbert, 1999). This may be due to a combination of decreased access to firearms and a desire to use more 'gentle' means of killing, such as poisoning (Byard et al., 1999).

Prior typologies of H-S (Feltous & Hempel, 1995; Marzuk et al., 1992) proved useful with these data, as these H-S events could be classified as spousal/consortial (61%), filicide-suicide (24%), familicide-suicide (3%),

and extra-familial (6%) relatively easily. One gap appeared to be the lack of a category for adult children killing their parent(s) before killing themselves, which occurred in two cases in this data set (6%). There was a significant gender imbalance between the categories, with women making up only 5% of the spousal/consortial H-S, but 33% of the filicide-suicide H-S cases. This latter finding was consistent with Byard et al.'s (1999) study of filicide-suicide in South Australia, and Bourget and Gagné's (2002) analysis of filicide (not all perpetrators killed themselves) in Quebec, both of which found approximately 46% of the perpetrators to be women. In this study mental illness primarily affective disorder, was relatively common among the H-S perpetrators, with one-third having received a psychiatric diagnosis or engaged in treatment prior to the H-S incident. This percentage is also highly consistent with prior research, as three other studies found 23–33% of their sample to have received prior psychiatric treatment (Buteau, Lesage, & Kiely, 1993; Rosenbaum, 1990; Simpson et al., 2003). The finding that four perpetrators, over 12% of the overall H-S sample, were in contact with mental health services in the month prior to the H-S incident is particularly worrisome, and suggests that mental health professionals may need to assess more rigorously their clients' risk of violence to themselves and others.

In addition, three other individuals without a history of diagnosis or treatment (21.4% of the mentally ill subgroup) appeared to have been mentally ill at the time of the killings. While this has not previously been documented in H-S studies, it is consistent with prior homicide/mental illness studies, which have found 28–30% of mentally ill homicide offenders not to have previously been in treatment or psychiatrically diagnosed (Shaw et al., 1999; Simpson et al., 2003). Clearly, in contrast to the group that was in treatment at the time of the killings, there is no easy way to detect this group and prevent these incidents from occurring.

Finally, there were important gender and H-S type differences. There was evidence of mental illness in all the female perpetrators, but in fewer than a third of the male perpetrators. Mental illness was also far more common in the familial H-S incidents (73%) than in incidents that involved only intimate partners, ex-partners, or their lovers (25%). Thus, on the basis of our data, we can conclude that there are at least two broad groups of H-S incidents: (1) consortial/spousal incidents whose perpetrators are overwhelmingly men, a minority of whom are mentally ill, and whose victims are their spouses or ex-spouses and/or their current partners; and (2) familial incidents in which children are killed, involving both male and female perpetrators, the majority of whom are mentally ill. While these categories are consistent with prior proposed typologies the presence of two anomalous H-S cases in our sample, involving adult children, both with a history of mental illness, killing one of their parents and then themselves,

suggests the need for a possible revision of proposed H-S categories (Felthous & Hempel, 1995; Marzuk et al., 1992). Little comment can be made about the extra-familial H-S cases, given the small  $n$  here. Finally, we can conclude that, when women do commit H-S, they tend overwhelmingly to be mentally ill, a finding confirmed by prior research (Bourget & Gagné, 2002).

Certain limitations to this study should be acknowledged. As H-S cases are by nature high profile, the chance that any H-S cases during this 10-year period were missed is small, but cannot be ruled out. More importantly, the assessment of mental illness in individuals who can no longer be interviewed is problematic. The use of broad diagnostic groupings, as opposed to specific diagnoses, was an attempt to match diagnostic categorization with data quality. As more than three-quarters of the cases classified as mentally ill had previously been in treatment or had been given a psychiatric diagnosis, and as clear lay descriptions of symptoms of mental illness (in addition to certain characteristics of the incidents) were required for the others, we can be reasonably confident of the cases of mental illness that were identified. It is possible, however, that we may have missed other cases in which no family members or friends were interviewed, or where they were interviewed but did not detect or report significant psychological changes. In addition, given the limitations of our data, we cannot be certain that mental illness was active at the time of the H-S incident for those cases with prior treatment or diagnosis, but no contact with mental health services in the period leading up to the H-S. Future research studies not limited to archival data can address this by attempting to interview friends and relatives of the perpetrators (and perhaps victim/s).

As with abnormal homicide more broadly, we could expect that perhaps 25–30% of H-S cases might be the first presentation of a psychotic illness (Shaw et al., 1999; Simpson et al., 2004). The presence of such cases in our sample suggests that we may have identified a relatively complete grouping of those with mental illness. In addition, our finding of a relatively low H-S rate, consistent with that of other countries whose populations have only limited access to firearms, supports Coid's (1983) argument that societal factors may have some impact on H-S rates.

As H-S incidents, particularly those that involve children, are among the most tragic of societal occurrences, it is of crucial importance that everything possible be done to try to minimize the possibility of such events. The domestic violence treatment community has long been aware of the risk to women who separate from violent men, and the risk to the men themselves. It is now apparent that, in addition, mental illness in vulnerable parents can place children at risk of a violent death at their hands, providing us with another reason to encourage frequent mental health screening of at-risk individuals.

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## Notes

- 1 Milroy (1995) found an almost identical range (.05–.55 per 100,000) when he updated Coid's review with 10 more recent studies.
- 2 This position is somewhat difficult to defend, as personality disorders (not typically defined as mentally ill in forensic contexts) in domestic violence offenders are also associated with suicidality (Chioqueta & Stiles, 2004; Verona, Patrick, & Joiner, 2001).

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