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Homicide-Followed-by-Suicide Incidents Involving Child Victims

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Abstract

Objectives—To describe homicide-followed-by-suicide incidents involving child victims

Methods—Using 2003–2009 National Violent Death Reporting System data, we characterized 129 incidents based on victim and perpetrator demographic information, their relationships, the weapons/mechanisms involved, and the perpetrators' health and stress-related circumstances.

Results—These incidents accounted for 188 child deaths; 69% were under 11 years old, and 58% were killed with a firearm. Approximately 76% of perpetrators were males, and 75% were parents/caregivers. Eighty-one percent of incidents with paternal perpetrators and 59% with maternal perpetrators were preceded by parental discord. Fifty-two percent of incidents with maternal perpetrators were associated with maternal psychiatric problems.

Conclusions—Strategies that resolve parental conflicts rationally and facilitate detection and treatment of parental mental conditions might help prevention efforts.

Keywords

homicide-suicide; children

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Disclaimer: The findings and conclusions in this manuscript are those of the author(s) and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Human Subjects Statement
Data analyses were limited to de-identified decedent information in the National Violent Death Reporting System and deemed exempt from institutional review board review.

Conflict of Interest Statement
None of the authors have a conflict of interest in regard to this manuscript or the research on which it was based.

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Homicide-followed-by-suicide (hereafter referred to as "homicide-suicide") incidents are defined as violent acts during which a person kills one or more individuals and then commits suicide.[1–3] These incidents account for roughly 1000–1500 violent deaths annually in the United States, or 20–30 deaths weekly.[3,4] Although approximately 75% of homicide-suicide incidents involve a male perpetrator killing a current or former female intimate partner,[2] many homicide-suicide incidents involve child victims.[1,2] These types of homicide-suicides include filicide-suicides (ie, incidents in which a parent kills his or her own children before committing suicide) and familicide-suicide (ie, an individual kills multiple family members before committing suicide).[5,6] Other terms used for specific types of homicides in these incidents include neonaticide (ie, killing a child on day of birth) and infanticide (ie, killing a child under the age of 12 months).[5] Bossarte and colleagues (2006) estimated that approximately 14% of homicide-suicide victims are children, stepchildren, or foster children of the perpetrator.[1] This finding indicates that research is needed to identify factors that might prevent this form of violence against children from occurring.

A considerable amount of research has already been conducted on child homicides perpetrated by parents.[5–15] (The term parent is used throughout this article, although "parents" can be any legal guardians.) The parent's motives in these events were initially classified into 5 categories, based on a framework developed by Resnick in 1969.[5,7,8] These categories included altruism (ie, belief of relieving victims of real or imagined suffering), acute psychosis (ie, killing under severe mental illness); unwanted child (ie, lack of tolerance for the child or lack of desire to be a parent), unintentional death from child abuse, and spousal or intimate partner revenge.[5,7,8] Other parental circumstances believed to play a role in these incidents include lack of social support, unemployment or job-related problems, and alcohol or illicit substance abuse.[5,7,11,12]

Previous studies have also found that the motives and circumstances of homicides and homicide-suicides involving child victims often depend on which parent perpetrated the incident. For example, paternal perpetrators have been found to have more violent driven motives (eg, to abuse or to retaliate against an intimate partner)[10–12] and to use more violent mechanisms or methods to commit the homicide (eg, firearm, sharp object, strangulation).[10,12] Paternal perpetrators have also been associated with killing older children[5,13] and committing familicide.[2,7,10,13] Maternal perpetrators have been found to have altruistic motives, to have mental disorders (eg, schizophrenia/psychoses, major depression), and to use less lethal/violent means of killing, such as drug poisoning.[5,10,14] Maternal perpetrators have also been found to more likely commit neonaticide.[5,15]

Building on this body of research, more studies are still needed to comprehensively describe homicide-suicide incidents that involve child victims as well as the perpetrators involved to help focus initiatives aimed at reducing this form of violent behavior.[16] Furthermore, comprehensively characterizing the perpetrators' life-stress related preceding circumstances and their actions in the time leading up to the incidents based on the narratives written by law enforcement and coroner/medical examiner agents who investigated the incidents might help improve knowledge on how to intervene before violence occurs. Using data from one of the largest and most comprehensive multistate violent death surveillance systems, we explored this realm of research.

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METHODS

Study Population

We used 2003–2009 data from the National Violent Death Reporting System (NVDRS). This surveillance system captures details on incidents of violent deaths using data from multiple sources. Statewide data collection for the NVDRS began in 2003 in 7 states (ie, Alaska, Maryland, Massachusetts, New Jersey, Oregon, South Carolina, and Virginia). Six states were added in 2004 (ie, Colorado, Georgia, North Carolina, Oklahoma, Rhode Island, and Wisconsin), and 3 states were added in 2005 (ie, Kentucky, New Mexico, and Utah). California also began collecting data in 4 counties in 2005; however, they were excluded from our analyses because they did not collect data statewide. For these data years, a total of 16 US states were included in our analyses making this study one of the largest multistate studies to explore this type of violence.

Data Source

NVDRS captures information on all homicides, suicides, legal intervention deaths, unintentional firearm deaths, and deaths of undetermined intent.[17–19] This system includes information on the victims, the suspected perpetrators and their relationships to the victims, the weapons involved, and the circumstances leading up to the injury event.[17] All information is linked by incident in NVDRS so that violent events that involve multiple victims can be studied. The data sources used for NVDRS include coroner and medical examiner reports, toxicology reports, various law enforcement records, and death certificates. States manage data collection through state health departments or a subcontracted entity, such as a medical examiner's office, where data are gathered and coded by trained abstractors. The abstractors also summarize the narratives written by law enforcement and coroner or medical examiner investigators. Data may be manually extracted from reports or imported electronically from other systems (eg, Bureau of Vital Statistics death certificate files). All data are reviewed by the abstractor to ensure accuracy of the codes and adherence to the NVDRS coding manual.[19] The NVDRS has been described in further detail elsewhere.[17,19]

Case Finding

Case identification was conducted from an NVDRS database that was updated through June 2011. Homicide and suicide incidents for 2003 to 2009 were first identified by the manners of death that these incidents were assigned by the state NVDRS data abstractors. (The abstractor manner of death is determined by the manners of death reported on the various data sources and the external cause of death International Classification of Diseases, tenth revision codes listed on the death certificates.) Homicide-suicide incidents were defined as suicide incidents in which the perpetrator committed at least one homicide within one calendar day prior to his or her suicide death. Similar case definitions of homicide-suicides have been used in other studies.[1,2,7] The homicide-suicide incidents were further selected based on whether the incident included child victims (ie, those who were under the age of 18 years). Between 2003 and 2009, we identified 131 homicide-suicide incidents that involved child victims. We excluded 2 incidents that had perpetrators who were also under the age of

18 years to obtain a more clear understanding of incidents perpetrated by adults. Our final analysis included 129 incidents, 129 perpetrators, and 188 child victims.

Variables

Standard NVDRS variables—The child victims, the perpetrators, and the incidents were characterized using standard details captured in NVDRS. The child victims were characterized based on their demographic characteristics (ie, race/ethnicity, sex, and age), their relationships to the perpetrators (eg, child of perpetrator, other relative of perpetrator), and the weapons/mechanism used in their homicide deaths. The perpetrators were characterized based on their demographic information (ie, race/ethnicity, sex, and age, and marital status) and their relationship to the child victims. (Two variables were used to determine maternal and paternal perpetrators. A victim-suspect-relationship variable was used to determine if the child was killed by a parent, stepparent, or foster parent. The sex of the perpetrator determined which parent perpetrated the incident. No incidents involved multiple children with different relationships to the perpetrator.) Perpetrators were also characterized with respect to a number of standard health- and stress-related circumstance variables believed to be associated with homicide-suicide and/or filicide to help determine which circumstances most commonly preceded these incidents.[1–3,8,20–22] These circumstance variables included having a current depressed mood; a current mental health problem (ie, a documented condition); a history of mental health problems (ie, approximated by having a history of mental health treatment); a history of alcohol dependence or alcohol problems; alcohol use immediately prior to the incident; a history of other substance abuse problems; medical problems believed to have precipitated the incident (eg, chronic pain or cancer); financial problems; job problems; intimate partner problems; other relationship problems; a history of suicide attempts; and disclosed intent (suggesting ideation for self-directed violence). We also assessed whether the perpetrators left notes (suggesting serious thoughts and plans) and whether the perpetrators were currently receiving mental health treatment. Furthermore, we characterized the incidents based on the location of death (eg, house/apartment, public place) and the weapons used in the suicide deaths.

Additional variables—Using the law enforcement and coroner and medical examiner narrative information, our research team identified circumstances that preceded the child homicides among incidents with parent perpetrators based on the filicide typology developed by Resnick.[8] These circumstances included parental intimate partner problems, parental perceived mercy killing (ie, altruism), parental mental health problems (ie, acute psychoses), parental burden (ie, unable to care for the child), and parental child abuse (ie, intentional child abuse but unintentional child death). With regard to parental intimate partner problems, 2 mutually exclusive scenarios were captured. The first scenario captured child homicide deaths that occurred along with parental intimate partner violence—when one parent killed or severely injured the other parent in the incident. The second scenario captured child homicide deaths resulting from parental discord. In these cases, the parent perpetrator was upset with the other parent but victimized only the child(ren), such as the case in spousal retaliation.

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We also used narrative information to assess 2 circumstances that did not involve parental perpetrators. These circumstances included (1) the child dying as a result of other domestic abuse (ie, perpetrator was an extended family member); and (2) the child dying as a result of personal intimate partner violence (ie, the adult perpetrator was an intimate partner of the child victim). These circumstances were assessed because they have been found to be common in homicide-suicide incidents in general.[2]

Details on the criteria of these circumstances are described in the appendix. To increase confidence in how these circumstances were coded, a panel of 3 abstractors reviewed all narratives for every incident and coded the incidents according to a guideline (not shown). The panel of reviewers agreed on 54% of the cases in initial independent review. The remaining 46% of the cases with discrepant codes were discussed by the panel and then reconciled.

Statistical Analysis

Basic descriptive statistics were used to characterize the child victims, the incidents, and the perpetrators. We compared characteristics of perpetrators by sex to assess if the antecedents of this form of violence differed between male and female perpetrators. We also compared characteristics of perpetrators who committed filicide-suicide (defined as killing only their own children before committing suicide) to those who committed familicide-suicides that involved their own children and the other parent of the child victim(s). This comparison was made to assess how the perpetrator characteristics and preceding circumstances differed between those who chose to target only their own children versus those who chose to target both their children and their children’s other parent (and possibly others) before committing suicide. For all analytic comparisons, Fisher’s exact tests were used if counts were less than 5; otherwise, chi-square analyses were used. Observed differences in these comparisons were deemed to be significant at the $p < .05$ level.

RESULTS

Most of the child victims were of non-Hispanic white race/ethnicity (62%), male (54%), and 10 years of age or younger (69%) (Table 1). Approximately 85% of the child victims were killed by someone they knew. Three quarters of the child victims were killed by a parent, stepparent, or foster parent. A firearm was the most common mechanism of homicide for the child victims. Among incidents with known weapon information, firearms were listed in more than twice as many child homicides as sharp or blunt instruments, poisons/drugs, and strangulation combined.

Sixty-one percent of the perpetrators were of white non-Hispanic race/ethnicity; 76% were males; 91% were of ages 19–49 years (mean age of 38 years); 64% were currently married or divorced or separated; 75% were parents, stepparents or foster parents of the child victims; and 54% were considered custodial caregivers (ie, the caretakers) of the child victims (Table 2). Firearms were the most common weapon used for suicides. The most common problems in the perpetrators’ lives prior to committing the homicide-suicides were intimate partner problems; an estimated 63% were identified as having preceding intimate partner problems. Other health and stress factors that were common among perpetrators

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included having a current depressed mood (19%), a current mental health problem (16%), alcohol use immediately before the incident (16%), job problems (12%), and financial problems (9%). Over a quarter of perpetrators had multiple stressors spanning different domains of health and life-stress; and 23% of the perpetrators left suicide notes, which may suggest that their suicidal actions were planned.

Differences in perpetrator characteristics by sex were also observed (Table 2). Nearly a third (31%) of the male perpetrators did not include fathers, stepfathers, or foster fathers of the child victims; however, almost all female perpetrators were maternal perpetrators. Furthermore, only 42% of male perpetrators were considered the caretakers of the child victims whereas 94% of the female perpetrators were considered caretakers ($p < .01$). A higher proportion of male perpetrators used alcohol before committing the homicide-suicide; the proportion of male perpetrators who used alcohol was more than 6 times that of female perpetrators ($p < .05$). All mental health factors (ie, having a current depressed mood, having a current mental health problem, and having a history of mental health problems) were more prevalent among female perpetrators, and 29% of female perpetrators versus only 4% of male perpetrators were receiving mental health treatment close to the time of their fatal incidents.

Seventy-two percent of the 129 homicide-suicide incidents occurred in a house or an apartment, and 15% of the incidents occurred in public places (Table 3). Preceding parental intimate partner problems were identified in 72 incidents, which was 63% of all incidents and 74% of those perpetrated by a parent. Among the 72 homicide-suicide incidents that involved parental intimate partner problems, roughly half involved parental intimate partner violence. Parental intimate partner problems, in general, were more prevalent among incidents with paternal perpetrators versus those with maternal perpetrators ($p < .01$). Parental intimate partner violence was 3 times more common among incidents with paternal perpetrators ($p < .01$); however, the proportion of incidents that involved parental discord without parental intimate partner violence did not differ based on the sex of the perpetrator. An estimated 30% of the 97 incidents perpetrated by a parent were committed while the parent perpetrator was having symptoms of a mental health condition. The proportion of incidents reported to involve perpetrator psychoses was over twice as high among incidents with maternal perpetrators versus those with paternal perpetrators ($p < .01$). An estimated 7% of incidents with parent perpetrators involved altruism, 4% of the incidents involved parental burden, and 18% had unknown or other circumstances. Almost all incidents that involved nonparental perpetrators were male. Among incidents that did not involve a parent perpetrator, 19% involved a child victim being killed by an adult intimate partner, and 16% involved a child being killed by another family member.

Among perpetrators who killed their own children, there were some similarities and differences in perpetrator characteristics between those who committed a filicide-suicide (only children) versus those who committed a familicide-suicide that involved the other parent as a victim (Table 4). Although both types of incidents had mostly male perpetrators, the proportion of incidents with female perpetrators was higher among filicide-suicides. However, there were no significant differences between the 2 types of perpetrators with regard to the remaining demographic factors, the weapons used, and the preceding

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circumstances. Intimate partner problems were the most common preceding circumstances among both types of perpetrators, even though only one group of perpetrators victimized their intimate partner in the homicide-suicides.

DISCUSSION

Homicide-suicide incidents can have a profound impact on families and friends of the victims as well as communities, particularly if child victims are involved. These incidents can be impulsive, they can result from escalated anger and conflict or other acute intense feelings of distress, they can involve mental psychoses and/or substance abuse, and they can be planned violent acts intended to resolve personal problems.

In our description of these incidents, many of our findings were consistent with other reports and small-scale studies. For example, we also found that a high proportion of these incidents involved non-Hispanic white families, children 10 years of age or younger, and perpetrators who were the child victims' fathers, stepfathers, or foster fathers.[2,7,11–13] Subsequent analysis of the child homicide rates per 100,000 children (ie, under 18 years of age) did not reveal any significant differences by race/ethnicity, sex, and age category. Furthermore, we did not find that the suicide/incident rate per 100,000 adult population for the perpetrators to be different by race/ethnicity; we did, however, find the rate of perpetration to be higher among males (data not in tables). (Rate comparisons by the perpetrators' age and some of the race/ethnic categories [ie, American Indians/Alaskan Natives, Asian/Pacific Islanders] were not conducted. Rates for these categories were deemed too unstable because of small numbers.)

Previous studies have also reported that approximately 8–9% of homicide-suicides in general and 33–52% of homicide-suicides with child victims had female perpetrators.[1,2,7,10] Similarly, we found that a quarter of these homicide-suicide incidents that involved child victims and 40% of homicide-suicide incidents that involved only filicide were perpetrated by females. Also, similar to previous research, we found that a higher proportion of female perpetrators used less violent means (ie, poisoning) to commit the child homicides;[10] however, we did not find that most female perpetrators used poisoning in these incidents. We found that the most common weapon used for the child homicides by both male and female perpetrators was a firearm.

Additionally, this study found that intimate partner problems were the most common circumstances found to precede these homicide-suicide incidents, regardless of whether they were perpetrated by a male or female, father or mother, and that most of the child deaths occurred in connection with parental discord or parental intimate partner violence. As expected, perpetrator intimate-partner problems were commonly involved in familicide-suicide incidents; however, they also commonly preceded incidents that solely targeted children, which signifies that intimate partner problems might play an important role in these incidents.

Intimate-partner violence-related incidents and familicide-suicide incidents more commonly involved male perpetrators. Many of the male perpetrators in these types of incidents were

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identified as having histories of being a domestic abuser (eg, prior law enforcement reports, witness testimony, restraining orders), and 3 male perpetrators were reported to have committed the fatal act while losing their tempers during an argument; however, based on information in the law enforcement and coroner/medical examiner reports, there was also evidence of planned violence. One third of the male perpetrators of parental intimate partner violence and familicide-suicide incidents planned the violent acts (eg, provided a detailed note, disclosed plans to coworkers, friends/family members). Job, financial, and health-related problems were often cited as the reasons for committing the violence. Alcohol use was common among male perpetrators, which potentially helped exacerbate the violent behavior. In previous studies, alcohol use was found to be common among male perpetrators of domestic violence and was associated with an increased likelihood of violence-related injuries to females.[2,23–25] One study found that 72% of female victims of intimate partner violence reported that their perpetrator used alcohol and/or drugs at least some of the time during violent incidents.[26] We also found that approximately a quarter of male perpetrators did not target their own children. Many of these perpetrators targeted children who were dependents of someone they were dating; they were either victimized when the perpetrator killed the mother or were targeted for reasons of retaliation.

Our finding that intimate partner problems were the most common preceding circumstances among maternal perpetrators was not well documented in other research. Previous research on maternal filicide-suicide perpetrators has focused mostly on were reaching certain populations (eg, young, unmarried, poor women who lack prenatal care)[15,27] or addressing maternal psychiatric problems.[14, 28] Our finding that 59% of maternal perpetrators had intimate partner problems and were going through a breakup or a divorce or were having child custody issues suggests that more attention to maternal intimate-partner problems is warranted. Furthermore, we found that a fifth of maternal perpetrators had intimate partner problems and no documented mental health problems (data not shown). Also, although only a small proportion of maternal perpetrators in this study killed the father of the children, a finding similar to that of Byard and colleagues,[10] we found that the proportion of maternal perpetrators who killed their children to either retaliate against the other parent or deprive the other parent of custody or visitation was similar to that reported among paternal perpetrators. Altruistic reasons for the child killings were documented in 4 cases but were not as commonly found in maternal filicide-suicide cases as in a previous study.[7]

Mental health conditions were still found to be present among many perpetrators, particularly female perpetrators. Women have been found to more likely seek treatment to address mental health problems, which could have partially explained why a higher proportion of female perpetrators were detected as having mental health conditions.[29,30] The mental health distress and conditions among maternal perpetrators could also potentially be related to raising children without sufficient paternal support. Almost all of the female perpetrators were considered caretakers of the child victims; and almost half were divorced, separated, or widowed. Also, nearly 30% of female perpetrators were receiving mental health treatment, which suggests that mental health treatment alone might not adequately provide the support and help that are needed to help raise children and prevent violent episodes from occurring.

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Limitations

This study was one of the largest multistate studies of this type of violence to date, and it used one of the richest data sources that captured comprehensive details on the perpetrators and the incidents; however, some limitations of the data and study design should be considered when interpreting our findings. First, NVDRS data are available only from a limited number of states and therefore are not nationally representative. Second, abstractors are limited to the data included in the reports they receive. Some law enforcement and coroner/medical examiner reports lack comprehensive descriptions of the incidents, therefore limiting the abstractors' ability to capture all contributing factors. Medical and mental health information (eg, type of conditions, whether the victim was currently receiving treatment) is not often captured directly from medical records but from coroner/medical examiner reports, family members, and friends of the victims. The estimated proportion of perpetrators identified as having mental health conditions might have been underestimated because the completeness of this information is limited by the knowledge of the informant. Finally, although extensive coding training is conducted and help desk support is available daily, variations in coding might occur depending on the state abstractor's level of experience. However, states regularly conduct blinded re-abstraction of cases to test consistency of abstraction and identify training needs.

Conclusions

Our findings provide additional evidence that parental intimate-partner problems and parental mental health distress triggered by resolvable stressors could potentially elevate to a point at which the lives of children are lost. Collectively, the link among all perpetrators of these incidents was that their stresses were not addressed effectively and they handled them by perpetrating a severe form of domestic and self-directed violence. These findings highlight the need to promote services (ie, increase awareness, improve use, and sustain meaningful use of services) that help people prevent or address acute/situational or chronic/long-standing stressors, emotional stress, marital discord, and other relationship problems before they lash out violently. Also, these findings confirm not only the need for more services to prevent family and intimate partner violence and conflicts but also the necessity of bridging gaps between victim services, the court/legal system, medical and mental health systems, and domestic violence prevention programs, all coming together collaboratively to help prevent domestic violence. Coordination across these agencies might be a better approach to providing a more comprehensive safety net for families in crisis and in need of help.

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Table 1

Descriptive Characteristics of Child Victims, Their Relationship to the Perpetrators, and Their Mechanisms of Death, NVDRS 2003–2009

	Number	Percent
Race/Ethnicity		
White non-Hispanic	116	61.7%
Black non-Hispanic	41	21.8%
Hispanic	22	11.7%
Other	9	4.8%
Sex		
Male	101	53.7%
Female	87	46.3%
Age		
5 years	74	39.4%
6–10 years	56	29.8%
11–13 years	18	9.6%
14–17 years	40	21.3%
Mean (standard deviation)		7.8 (5.3)
Relationship to Perpetrator		
Child/stepchild/foster child	144	76.6%
Other relative	8	4.3%
Acquaintance, friend, or intimate partner	8	4.3%
Stranger	5	2.7%
Other	19	10.1%
Unknown	4	2.1%
Weapon/Mechanism Used for Homicides		
Firearm	109	58.0%
Sharp/blunt instrument	11	5.9%
Poisoning	13	6.9%
Hanging/strangulation	13	6.9%
Other	13	6.9%
Unknown	29	15.4%
Total	188	100.0%

Note.

NVDRS: National Violent Death Reporting System

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Table 2

Descriptive Characteristics of Perpetrators by Sex, NVDRS 2003–2009

	Overall		Male Perpetrators		Female Perpetrators		
	No.	Percent	No.	Percent	No.	Percent	p value
Race/Ethnicity							1.00
White non-Hispanic	78	60.5%	59	60.2%	19	61.3%	
Black non-Hispanic	25	19.4%	19	19.4%	6	19.4%	
Hispanic	17	13.2%	13	13.3%	4	12.9%	
Other	9	7.0%	7	7.1%	**	**	
Age							0.14
19–34 years	44	34.1%	36	36.7%	8	25.8%	
35–49 years	73	56.6%	50	51.0%	23	74.2%	
50–64 years	10	7.8%	10	10.2%	**	**	
65 years	**	**	**	**	**	**	
Mean (standard deviation)		37.5 (10.7)		37.9 (11.8)		36.3 (6.1)	
Marital Status							0.41
Married	49	38.0%	39	39.8%	10	32.3%	
Never married, single not otherwise specified	31	24.0%	25	25.5%	6	19.4%	
Divorced or separated	33	25.6%	20	20.4%	13	41.9%	
Widowed	13	10.1%	11	11.2%	**	**	
Unknown	3	2.3%	3	3.1%	**	**	
Relationship to Child Victims							0.01
Parent/stepparent/foster parent	97	75.2%	68	69.4%	29	93.5%	
Other	30	23.3%	28	28.6%	**	**	
Unknown	**	**	**	**	**	**	
Caretaker Status With Child Victims							<0.01
Caretaker of child victims	70	54.3%	41	41.8%	29	93.5%	
Weapon/Mechanism Used for Suicide							0.58
Firearm	78	60.5%	60	61.2%	18	58.1%	
Sharp/blunt instrument	5	3.9%	4	4.1%	**	**	
Poisoning	11	8.5%	6	6.1%	5	16.1%	

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	Overall		Male Perpetrators		Female Perpetrators		
	No.	Percent	No.	Percent	No.	Percent	p value
Hanging/strangulation	11	8.5%	8	8.2%	3	9.7%	
Other	23	17.8%	19	19.4%	4	12.9%	
Unknown	**	**	**	**	**	**	
Preceding Circumstances							
Current health circumstances							
Current depressed mood	24	18.6%	14	14.3%	10	32.3%	0.03
Current mental health problem	21	16.3%	8	8.2%	15	48.4%	<0.01
Alcohol dependence	**	**	**	**	**	**	**
Other substance abuse problems	3	2.3%	**	**	**	**	**
Suspected alcohol use immediately prior to incident	21	16.3%	20	20.4%	**	**	**
Physical health problems	4	3.1%	**	**	**	**	**
Disclosed intent (suicidal ideation)	16	12.4%	12	12.2%	4	12.9%	**
Current stress-related circumstances							
Financial problems	12	9.3%	8	8.2%	4	12.9%	0.48
Job problem	15	11.6%	11	11.2%	4	12.9%	0.76
Intimate partner problems	81	62.8%	66	67.3%	17	54.8%	0.09
Other relationship problems	18	14.0%	12	12.2%	6	19.4%	0.37
Number of Different Health and Stress Related Problems[a]							0.37
0	27	20.9%	22	22.4%	5	16.1%	
1	69	53.5%	55	56.1%	14	45.2%	
2+	33	25.6%	21	21.4%	12	38.7%	
Mental Health History							
History of mental health problems	19	14.7%	9	9.2%	10	32.3%	<0.01
History of suicide attempts	4	3.1%	**	**	**	**	**
Mental Health Treatment							
Current mental health treatment	13	10.1%	4	4.1%	9	29.0%	<0.01
Premeditation							
Left a note	29	22.5%	18	18.4%	11	35.5%	0.09
Total	**129**	**100.0%**	**98**	**100.0%**	**31**	**100.0%**	

Note.

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NVDRS: National Violent Death Reporting System

[a]The different health- and stress-related circumstances included a current mental health problem, alcohol dependence; other substance abuse problems, physical health problem, financial problems, job problems, intimate partner problems, and other relationship problems.

**Items with less than 3 counts were suppressed to prevent potential identification of decedents.

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Table 3

Incident Characteristics by the Sex of the Perpetrators, NVDRS 2003–2009

	Overall		Incidents With Male Perpetrators		Incidents With Female Perpetrators		
	No.	Percent	No.	Percent	No.	Percent	p Value
Location of Incident							0.62
House/apartment	93	72.1%	68	69.4%	25	80.6%	
Public transport, recreational, or commercial areas	19	14.7%	15	15.3%	4	12.9%	
Other	16	12.4%	14	14.3%	**	**	
Unknown	**	**	**	**	**	**	
Total	**129**	**100.0%**	**98**	**100.0%**	**31**	**100.0%**	
Circumstances Surrounding Incidents Only Involving Parent Perpetrators[a]							
Any parental intimate-partner problem[b]	72	74.2%	55	80.9%	17	58.6%	0.04
Parental intimate-partner violence with child violence[c]	35	36.1%	31	45.6%	4	13.8%	<0.01
Parental intimate-partner problems with child violence alone[d]	37	38.1%	24	35.3%	13	44.8%	0.49
Parental perceived mercy killing/altruism	7	7.2%	3	4.4%	4	13.8%	0.20
Parental mental health related	29	29.9%	14	20.6%	15	51.7%	<0.01
Parental burden	4	4.1%	**	**	**	**	**
Parental child abuse	**	**	**	**	**	**	**
Other/unknown circumstances	17	17.5%	12	17.6%	5	17.2%	1.00
Total	**97**	**100.0%**	**68**	**100.0%**	**29**	**100.0%**	
Circumstances Surrounding Incidents Involving Other Perpetrators							
Other domestic violence related	5	15.6%	4	13.3%	**	**	**
Intimate partner violence related	6	18.8%	6	20.0%	**	**	**
Other/Unknown	28	87.5%	10	33.3%	**	**	**
Total	**32**	**100.0%**	**30**	**100.0%**	**	**	**

Note.

NVDRS: National Violent Death Reporting System

[a]Parents can also be a stepparents or foster parents.

[b]Subcategories are mutually exclusive.

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[c] In 30 cases with parental intimate-partner violence, one parent of the child victim(s) was also a homicide victim (ie, familicide-suicide). In 5 incidents, a parent was severely injured by the other parent (the perpetrator) during the homicide-suicide incident but survived.

[d] In these cases, the children were mostly killed as a result of parental/spousal retaliation or to deprive the other parent of custody or visitation.

** Items with less than 3 counts were suppressed to prevent potential identification of decedents.

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Table 4

Descriptive Characteristics of Perpetrators Who Killed Their Own Children, Filicide-Suicide Versus Familicide-Suicide, NVDRS 2003–2009

	Filicide-Suicide Perpetrators[a]		Familicide-Suicide Perpetrators[b]		
	No.	**Percent**	**No.**	**Percent**	**p value**
Race/Ethnicity					0.48
White non-Hispanic	41	62.1%	21	70.0%	
Black non-Hispanic	12	18.2%	5	16.7%	
Hispanic	11	16.7%	**	**	
Other	**	**	**	**	
Sex					<0.01
Male	40	60.6%	27	90.0%	
Female	26	39.4%	3	10.0%	
Age					0.85
20–34 years	18	27.3%	9	30.0%	
35–49 years	45	68.2%	19	63.3%	
50–64 years	3	4.5%	**	**	
65 years	**	**	**	**	
Mean (standard deviation)		37.5 (7.9)		38.6 (8.8)	
Marital Status					0.20
Married	35	53.0%	10	33.3%	
Never married, single not otherwise specified	8	12.1%	6	20.0%	
Widowed, divorced, separated	22	33.3%	12	40.0%	
Unknown	**	**	**	**	
Weapon/Mechanism Used for Suicide					0.58
Firearm	35	53.0%	20	66.7%	
Sharp/blunt instrument	4	6.1%	**	**	
Poisoning	9	13.6%	**	**	
Hanging	8	12.1%	3	10.0%	
Other	10	15.2%	5	16.7%	
Unknown	**	**	**	**	
Preceding Circumstances					

	Filicide-Suicide Perpetrators[a]		Familicide-Suicide Perpetrators[b]		
	No.	Percent	No.	Percent	p value
Current health circumstances					
Current depressed mood	17	25.8%	4	13.3%	0.20
Current mental health problem	14	21.2%	4	13.3%	0.41
Alcohol dependence	**	**	**	**	**
Other substance abuse problems	**	**	**	**	**
Suspected alcohol use immediately prior to incident	8	12.1%	5	16.7%	0.54
Physical health problems	**	**	**	**	**
Disclosed intent	8	12.1%	4	13.3%	1.00
Current stress-related circumstances					
Financial problems	7	10.6%	5	16.7%	0.51
Job problem	7	10.6%	4	13.3%	0.74
Intimate partner problems	41	62.1%	23	76.7%	0.24
Other relationship problem	9	13.6%	7	23.3%	0.25
Number of Different Current Health and Stress Related Problems[c]					0.28
0	13	19.7%	4	13.3%	
1	36	54.5%	14	46.7%	
2+	17	25.8%	12	40.0%	
Mental Health History					
History of mental health problems	10	15.2%	5	16.7%	1.00
History of suicide attempts	3	4.5%	**	**	**
Mental Health Treatment					
Current mental health treatment	8	12.1%	4	13.3%	1.00
Premeditation					
Left a note	18	27.3%	9	30.0%	0.81
Total	**66**	**100.0%**	**30**	**100.0%**	

Note.

NVDRS: National Violent Death Reporting System

[a]Defined as those who killed only their own children before committing suicide.

[b]Defined as those who killed their own children and the other parent of the child victim(s) before committing suicide.

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[c]The different health- and stress-related circumstances included a current mental health problem, alcohol dependence, other substance abuse problems, physical health problem, financial problems, job problems, intimate partner problems, and other relationship problems.

**Items with less than 3 counts were suppressed to prevent potential identification of decedents.

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Appendix (Web Material)

Circumstances Adapted From Resnick (1969)

Circumstance	Subtypes	Criteria
Parental Intimate-Partner Problems	Parental intimate-partner violence with child violence	A child of the perpetrator was killed during parental intimate-partner violence and a parent of the child victim is also killed or seriously injured. Often, in these incidents, the entire household of occupants and visitors are killed.
	Parental intimate-partner problems with child violence alone	A parent perpetrator was having problems with the other parent of the child victim(s), which prompted the killing of his or her children before committing suicide. These incidents did not include a parent homicide victim. One example is that the perpetrator stated that he or she did not want the ex-spouse to have visitation rights and therefore killed the children.
Parental Perceived Mercy Killing/ Altruism		These incidents had a parent perpetrator who believed he or she was relieving their child of suffering (either real or imagined). For example, the perpetrator stated that he or she thought the world was too cruel for his or her children.
Parental Mental Health Related		These incidents had a parent perpetrator who killed his or her children while experiencing symptoms of a mental health problem. For this circumstance, the mental health symptom had to be connected to the act. For example, the perpetrator was reported as having hallucinations during the incident.
Parental Burden		The perpetrator expressed to witnesses or wrote a suicide note stating he or she is no longer willing or fit to care for his/her child anymore.
Parental Child Abuse		The child of a perpetrator was being physically abused or neglected. The perpetrator did not show homicidal intentions; however, the abuse resulted in death. For example, a perpetrator slapped his/her child and the child died.
Other Domestic Violence Related		The child was related to the perpetrator but the perpetrator was not a parent, stepparent, or foster parent.
Intimate Partner Violence Related		The child was killed by an adult intimate partner.