SPECIAL ARTICLE

Child murder by mothers: patterns and prevention

SUSAN HATTERS FRIEDMAN, PHILLIP J. RESNICK

Department of Psychiatry, Case Western Reserve University School of Medicine, Hanna Pavilion, University Hospitals of Cleveland, 11100 Euclid Avenue, Cleveland, OH 44106, USA

The tragedy of maternal filicide, or child murder by mothers, has occurred throughout history and throughout the world. This review of the research literature sought to identify common predictors in the general population as well as in correctional and psychiatric samples. Further research is needed to improve identification of children and mothers at risk. Infanticide laws are discussed. Suggestions for prevention are made based on the current literature and the authors' experiences.

Key words: Filicide, infanticide, child homicide

(World Psychiatry 2007;6:137-141)

When a young child is murdered, the most frequent perpetrator is a victim's parent or stepparent (1). Rates of infanticide parallel suicide rates rather than murder rates (2). The risk of being a homicide victim is highest during the first year of life (3-5). Though the US has the highest rates of child homicide (8.0/100,000 for infants, 2.5/100,000 for preschool-age children, and 1.5/100,000 for school-age children), the problem of child homicide transcends national boundaries (6). These rates of child murder are probably underestimates, due to inaccurate coroner rulings and some bodies never being discovered (4,7,8).

Maternal filicide is defined as child murder by the mother. *Infanticide* is child murder in the first year of life. The term *neonaticide* was coined by Resnick (9) to describe murder of an infant within the first 24 hours of life. Almost all neonaticides are committed by mothers. Neonaticidal mothers are often young, unmarried women with unwanted pregnancies who receive no prenatal care. For a detailed analysis of the neonaticide literature and a discussion of neonaticide prevention, the reader is referred to our recent review (10).

Resnick's review of the world psychiatric literature on maternal filicide (11) found filicidal mothers to have frequent depression, psychosis, prior mental health treatment, and suicidal thoughts. Maternal filicide perpetrators have five major motives: a) in an *altruistic filicide*, a mother kills her child out of love; she believes death to be in the child's best interest (for example, a suicidal mother may not wish to leave her motherless child to face an intolerable world; or a psychotic mother may believe that she is saving her child from a fate worse than death); b) in an *acutely psychotic filicide,* a psychotic or delirious mother kills her child without any comprehensible motive (for example, a mother may follow command hallucinations to kill); c) when *fatal maltreatment* filicide occurs, death is usually not the anticipated outcome; it results from cumulative child abuse, neglect, or Munchausen syndrome by proxy; d) in an *unwanted child filicide,* a mother thinks of her child as a hindrance; e) the most rare, *spouse revenge filicide* occurs when a mother kills her child specifically to emotionally harm that child's father.

In developing countries, the preference for male infants may lead to sex-selective killings (12,13). Cultural and legal differences across countries may affect research findings. For example, one country's correctional sample may be similar to another country's psychiatric sample, depending on the laws and attitudes toward prosecution.

The purposes of this paper are to summarize recent research findings about maternal filicide, and to consider potential strategies for prevention. The authors completed database searches for peer-reviewed articles in English regarding maternal filicide over the past quarter century. Studies were separated by population type, as in our previous analysis (14), because studies in the general population differ from those in psychiatric or correctional populations. Maternal filicide-suicide (a mother kills both her child and herself) was considered independently.

MATERNAL FILICIDE RESEARCH FINDINGS

Countries represented in the English literature filicide search were Australia, Austria, Brazil, Canada, Finland, France, Hong Kong, Japan, Ireland, New Zealand, Sweden, Turkey, the United Kingdom, and the United States. In addition to studies of mothers who have committed filicide (3,4,15-55), several studies have investigated the prevalence of filicidal thoughts in various populations.

Infanticide

An American macro-level study of *infanticide* (victims in the first year of life) found increased rates with economic stress (24). Although England and Wales have Infanticide Acts, and Scotland does not, the countries experience similar rates of infanticide (3,38). Maternal infanticide studies in the general population (20,38,44,45) found a predominance of unemployed mothers in their early 20s. Many cases occurred in the context of child abuse (4), though some mothers had associated suicide attempts. Often they expe-

rienced psychiatric disorders (36 to 72%) (44,45). In Japan, the infant victims frequently had physical anomalies.

General population studies of maternal filicide

The mothers were often poor, socially isolated, full-time caregivers, who were victims of domestic violence or had other relationship problems. Disadvantaged socioeconomic backgrounds and primary responsibility for the children were common. Persistent crying or child factors were sometimes precipitants for the filicide. Some mothers had previously abused the child, while others were mentally ill and devoted to their child (41). Neglectful or abusive mothers were often substance abusers. Many of the perpetrators had psychosis, depression, or suicidality (15,16,18,20,28,40-43,45,48,51,52).

Correctional samples of maternal filicide

In the correctional population, filicidal mothers were frequently unmarried, unemployed abuse victims, who had limited education and social support (29-33,46-47,53,54). Some had decreased intellect, and a few considered the child victim to be abnormal. Several correctional studies noted frequent depression, psychosis, substance abuse, suicidality, and prior mental health care (33,46,47,53,54). Multiple stressors (economic, social, abuse history, partner relationship problems), primary caregiver status, and difficulty caring for the child were frequent.

Psychiatric samples of maternal filicide

The filicidal mothers in psychiatric samples had frequently experienced psychosis, depression, suicidality, and prior mental health care (18,19,22,25-27,34-37,39,49,50,55). Their mean age was in their late 20s (18,19,22,25,34-36). Some were diagnosed with personality disorders and some had low intelligence. Significant life stresses were often noted. Our recent study of mothers found not guilty by reason of insanity in two U.S. states found that the perpetrators were often depressed and frequently experienced auditory hallucinations, some of a command type. Over one third of the homicides occurred during pregnancy or the postpartum year. Almost all the mothers had *altruistic* or *acutely psychotic* motives (22). A small New Zealand study that interviewed the mothers after their filicides found that psychotic mothers who had committed filicide often killed suddenly without much planning, whereas depressed mothers had contemplated killing their children for days to weeks prior to their crimes (49).

Maternal filicide-suicide

A significant proportion (16-29%) of filicides end in completed suicide by the mother (56). Many other mothers make non-fatal suicide attempts in association with their filicides. When mothers of young children commit suicide, about 5% also kill at least one of their children (57,58).

Filicide-suicides have much in common with filicides committed by severely mentally ill mothers (15). Most frequently, these mothers have altruistic motives (15,23). Similar to results of other studies (15,20,48), our recent American study found that maternal filicide-suicide perpetrators killed older children more often than infants (mean age of children killed was 6 years old). The mothers often had evidence of depression or psychosis (23). These mothers often take the lives of all their young children.

Prevalence of filicidal thoughts

A relatively high incidence of filicidal thoughts has been found in mentally ill women. Jennings et al's (59) study of depressed mothers with children under age 3 found that 41% had thoughts of harming a child, compared with 7% of mothers in the control group. A pediatric study of mothers in the general population found that 70% of mothers with colicky infants experienced explicit aggressive thoughts toward their infants, and over a quarter (26%) of them had infanticidal thoughts during colic episodes (60). An Indian study (61) of hospitalized severely mentally ill postpartum women found that 43% had infanticidal ideation. Thirty-six percent of these women engaged in some type of infanticidal behavior. Their behavior was associated with negative maternal reaction to separation, psychotic beliefs about the infant, and female sex of the infant.

Our recent survey of psychiatrists at two American academic institutions found that many psychiatrists do not specifically ask their patients who are mothers about thoughts of harming their children, but rather they inquire generally about homicidal thoughts (62). The surveyed psychiatrists frequently underestimated the prevalence of depressed mothers who have thoughts of harming their children.

INFANTICIDE LAWS

Infanticide laws often reduce the penalty for mothers who kill their children up to one year of age, based on the principle that a woman who commits infanticide does so because "the balance of her mind is disturbed by reason of her not having fully recovered from the effect of giving birth to the child" (41). The British Infanticide Act of 1922 (amended in 1938) allows mothers to be charged with manslaughter rather than murder if they are suffering from a mental disturbance. The law was originally based on the outdated concept of lactational insanity, but the public's desire to excuse sympathetic women caused reluctance to alter the law after lactational insanity was discredited. Women convicted of infanticide often receive probation and referral to mental health treatment rather than incarceration (41).

Approximately two dozen countries currently have infanticide laws (Australia, Austria, Brazil, Canada, Colombia, Finland, Germany, Greece, Hong Kong, India, Italy, Japan, Korea, New Zealand, Norway, Philippines, Sweden, Switzerland, Turkey and the United Kingdom (12,19,21,41,63). The majority of nations that have infanticide laws have followed the British precedent and decrease the penalty for mothers killing children under one year old. However, the legal definition of infanticide varies among countries. The murder of children up to age ten is included in New Zealand (21).

In practice, however, women convicted of infanticide in England sometimes do not have significant mental illness as technically required by the law (64). Opponents of infanticide laws point out that fathers are granted far less leniency. A father who is equally psychotically depressed as a mother, who kills his 10-month-old child in an altruistic psychotic belief with an associated suicide attempt, should not be treated differently than a similarly situated mother. Some feminists criticize the infanticide laws for "pathologizing childbirth". They believe that making this exception for women denies them the same capacity for self-governance attributed to men (65). Furthermore, it is illogical that a mother who in the throes of postpartum psychosis killed her newborn and her two-year-old should be charged with infanticide/manslaughter for the homicide of the newborn and murder for the homicide of the two-year-old. If the U.S. had an infanticide law, Andrea Yates would not have qualified, because in addition to her infant she killed her four older children. An acutely psychotic mother who killed her 13 month old child would not qualify for the infanticide law in England though a mother who battered her 11 month old child might.

SUGGESTIONS FOR PREVENTION

Psychiatrists should assess filicide risk in a systematic way, as they do for suicide. First they must entertain the possibility of maternal filicide. Psychiatrists should intervene to prevent potential filicides in which maternal mental illness plays a role. Mothers who have altruistic or acutely psychotic motives for filicide may be psychotic, depressed, manic, or delirious. Some mothers who come to psychiatric attention because of severe mental illnesses, personality disorders, or substance use disorders may be abusing or neglecting their children. Psychiatrists may ask about child-rearing practices, parenting problems, and feelings of being overwhelmed. Strategies for prevention must be tailored to the different motivations of mothers who commit filicide.

Depressed mothers who have the potential to kill in extended suicides should be identified early. Mothers contemplating suicide should be asked directly about the fate of their children if they were to take their own life. Some will say their husband is quite able to look after them and others will volunteer that they would take their children to heaven with them. Thoughts or fears of harming their children should be queried. Threats must be taken seriously. A lesser threshold for hospitalization should be considered for mentally ill mothers of young children due to the possibility of multiple deaths from a filicide-suicide. Factors which potentially merit psychiatric hospitalization include maternal fears of harming their child, delusions of their child's suffering, improbable concerns about their child's health, and hostility toward a despised partner's favorite child (66).

Psychotic mothers who fear that their children may suffer a fate worse than death due to persecutory delusions should either be hospitalized or separated from their children. These mothers may be reluctant to share their delusional ideas. Delusions may sometimes be elicited through a sympathetic exploration of their concerns for the safety of their children. In some cases, the only evidence of concern is frequent checking by the mother on the health and safety of her children. Though psychotic mothers may have less warning about filicide, psychiatrists can ask about hallucinations or delusional thoughts regarding the children. Among Indian mothers with postpartum severe mental illness, a recent study found that mothers with delusions about their infant engaged in more abuse (67).

Early screening and identification of mental illness both antenatally and postnatally is important. The Edinburgh Postnatal Depression Scale (68,69) is a validated tool that can be easily administered both in pregnancy and the postpartum. Up to 4% of mothers with untreated postpartum psychosis will commit infanticide (70). Because hospital length of stay after delivery is shorter now, many cases of postpartum psychosis could be undetected in the community. Therefore, community education is important. Support services for mothers and accessible psychiatric services for at-risk populations are needed.

More filicides occur due to fatal maltreatment than because of maternal psychiatric illness. Many cases of fatal maltreatment filicide never come to psychiatric attention. Mothers may kill their children who fail to respond to demands such as to stop crying (15). Mothers who batter their children to death are likely to have abused their children more than once before (15,25). Early intervention to protect these children is more likely to fall to child protective agencies than to psychiatrists. All 50 states in the U.S. have mandatory reporting laws for professionals who suspect child abuse. Parenting classes, emotional support, and emergency numbers to call when mothers are overwhelmed can be helpful in preventing fatal maltreatment filicides. Maternal substance abuse must also be treated. Child protective agencies must remove children who are at risk of serious abuse. Mothers who are diagnosed with Munchausen syndrome should be evaluated to see if they have engaged in Munchausen syndrome by proxy behaviors. Child protective agencies should be receptive to accepting children into their care who are unwanted, even if no abuse or neglect has yet occurred.

Spouse revenge filicide is difficult to prevent, because there is usually little warning. This behavior most often oc-

curs after learning of spousal infidelity or in the course of child custody disputes. Sometimes a mother is so convinced that her child will be sexually abused if permanent custody is awarded to her ex-husband that she decides the child is better off in heaven. Evaluators of child custody disputes should be alert for this potential.

Children under age 5 may have limited contacts outside of their household and have difficulty speaking out to others, while older children often attend school and can thus reveal child abuse. In the U.S., child homicide rates peak in winter for young children under age 2, and in the summer for older children (ages 5-14) (71). Infant and child factors such as colic (60) or autism (72) may increase risk. This suggests a potential role for pediatricians in prevention as well.

CONCLUSIONS

A mother's motive for filicide may be *altruistic*, *acutely psychotic*, or due to *fatal maltreatment, unwanted child,* or *spouse revenge*. In addition, many mothers who do not attempt filicide experience thoughts of harming their child. Maternal filicide motives provide a framework for approaching filicide prevention. Suicidality, psychosis and depression elevate risk, as does a history of child abuse. Mentally ill filicidal mothers have very different risk profiles than mothers who fatally batter their children. Prevention is difficult, because many risk factors, such as maternal depression and social disadvantage, are common among non-filicidal mothers.

References

1. Bureau of Justice Statistics, US Department of Justice. Homicide trends in the United States: infanticide. www.ojp.usdoj.gov/bjs/homicide/children.htm.
2. Lester D. Murdering babies: a cross-national study. Soc Psychiatry Psychiatr Epidemiol 1991;26:83-8.
3. Marks MN, Kumar R. Infanticide in England and Wales. Med Sci Law 1993;33:329-39.
4. Brookman F, Nolan J. The dark figure of infanticide in England and Wales: complexities of diagnosis. J Interpers Violence 2006; 21:869-89.
5. Zawitz MW, Strom KJ. Firearm injury and death from crime, 1993-97. US Department of Justice, Bureau of Justice Statistics, 2000.
6. Finkelhor D. The homicides of children and youth: a developmental perspective. In: Kantor GK, Jasinski JL (eds). Out of the darkness: contemporary perspectives on family violence. Thousand Oaks: Sage, 1997:17-34.
7. Emery JL. Child abuse, sudden infant death syndrome, and unexpected infant death. Am J Dis Child 1993;147:1097-100.
8. Ewigman B, Kivlahan C, Land G. The Missouri child fatality study: underreporting of maltreatment fatalities among children younger than five years of age. Pediatrics 1993;91:330-7.
9. Resnick PJ. Murder of the newborn: a psychiatric review of neonaticide. Am J Psychiatry 1970;126:58-64.
10. Friedman SH, Resnick PJ. Neonaticide: phenomenology and prevention. Int J Law Psychiatry (in press).
11. Resnick PJ. Child murder by parents: a psychiatric review of filicide. Am J Psychiatry 1969;126:73-82.
12. Hesketh T, Xing ZW. Abnormal sex ratios in human populations: causes and consequences. Proc Natl Acad Sci USA 2006;103: 13271-5.
13. Wu Z, Viisainen K, Hemminki E. Determinants of high sex ratio among newborns: a cohort study from rural Anhui province, China. Reproductive Health Matters 2006;14:172-80.
14. Friedman SH, Horwitz SM, Resnick PJ. Child murder by mothers: a critical analysis of the current state of knowledge and a research agenda. Am J Psychiatry 2005;162:1578-87.
15. Alder C, Polk K. Child victims of homicide. Cambridge: Cambridge University Press, 2001.
16. Alder CM, Baker J. Maternal filicide: more than one story to be told. Women and Criminal Justice 1997;9:15-39.
17. Bourget D, Gagne P. Maternal filicide in Quebec. J Am Acad Psychiatry Law 2002;30:345-51.
18. Bourget D, Bradford JM. Homicidal parents. Can J Psychiatry 1990;35:233-8.
19. Cheung PTK. Maternal filicide in Hong Kong, 1971-1985. Med Sci Law 1986;26:185-92.
20. Daly M, Wilson M. Killing children: parental homicide in the modern west. In: Daly M, Wilson M (eds). Homicide. New York: Aldine de Gruyter, 1988:61-93.
21. Dean PJ. Child homicide and infanticide in New Zealand. Int J Law Psychiatry 2004;27:339-48.
22. Friedman SH, Hrouda DR, Holden CE et al. Child murder committed by severely mentally ill mothers: an examination of mothers found not guilty by reason of insanity. J Forensic Sci 2005; 50:1466-71.
23. Friedman SH, Hrouda DR, Holden CE et al. Filicide-suicide: common factors among parents who kill their children and themselves. J Am Acad Psychiatry Law 2005;33:496-504.
24. Gauthier DK, Chaudoir NK, Forsyth CJ. A sociological analysis of maternal infanticide in the United States 1984-1996. Deviant Behavior 2003;24:393-405.
25. Haapasalo J, Petaja S. Mothers who killed or attempted to kill their child: life circumstances, childhood abuse, and types of killing. Violence Vict 1999;14:219-39.
26. Holden CE, Burland AS, Lemmen CA. Insanity and filicide: women who murder their children. New Directions for Mental Health Services 1996;69:25-34.
27. Husain A, Daniel A. A comparative study of filicidal and abusive mothers. Can J Psychiatry 1984;29:596-8.
28. Karakus M, Ince H, Ince N et al. Filicide cases in Turkey, 1995-2000. Croat Med J 2003;44:592-5.
29. Korbin JE. Incarcerated mothers' perceptions and interpretations of their fatally maltreated children. Child Abuse Negl 1987;11: 397-407.
30. Korbin JE. Childhood histories of women imprisoned for fatal child maltreatment. Child Abuse Negl 1986;10:331-8.
31. Korbin JE. Fatal maltreatment by mothers: a proposed framework. Child Abuse Negl 1989;13:481-9.
32. Korbin JE. 'Good mothers', 'babykillers', and fatal child maltreatment. In: Scheper-Hughes N, Sargent C (eds). Small wars: the cultural politics of childhood. Berkeley: University of California Press, 1998:253-76.
33. Laporte L, Poulin B, Marleau J et al. Filicidal women: jail or psychiatric ward? Can J Psychiatry 2003;48:94-109.
34. Lewis CF, Baranoski MV, Buchanan JA et al. Factors associated with weapon use in maternal filicide. J Forensic Sci 1998;43:613-8.
35. Lewis CF, Bunce SC. Filicidal mothers and the impact of psychosis on maternal filicide. J Am Acad Psychiatry Law 2003;31:459-70.
36. McKee GR, Shea SJ, Mogy RB et al. MMPI-2 profiles of filicidal, mariticidal, and homicidal women. J Clin Psychol 2001;57:367-74.
37. McGrath PG. Maternal filicide in Broadmoor Hospital. J Forensic Psychiatry 1992;3:271-97.
38. Marks MN, Kumar R. Infanticide in Scotland. Med Sci Law 1996;

36:201-4.
39. Meszaros K, Fisher-Danzinger D. Extended suicide attempt: psychopathology, personality and risk factors. Psychopathology 2000; 33:5-10.
40. Meyer CL, Oberman M. Mothers who kill their children: understanding the acts of moms from Susan Smith to the "Prom Mom". New York: New York University Press, 2001.
41. Oberman M. Mothers who kill: coming to terms with modern American infanticide. American Criminal Law Review 1996;34:2-109.
42. Pritchard C, Bagley C. Suicide and murder in child murderers and child sexual abusers. J Forensic Psychiatry 2001;12:269-86.
43. Rouge-Maillart C, Jousset N et al. Women who kill their children. Am J Forensic Med Pathol 2005;26:320-6.
44. Sakuta T, Saito S. A socio-medical study on 71 cases of infanticide in Japan. Keio J Med 1981;30:155-68.
45. Silverman RA, Kennedy LW. Women who kill their children. Violence Vict 1988;3:113-27.
46. Smithey M. Maternal infanticide and modern motherhood. Criminal Justice 2001;13:65-83.
47. Smithey M. Infant homicide at the hands of mothers: toward a sociological perspective. Deviant Behavior 1997;18:255-72.
48. Somander LK, Rammer LM. Intra- and extra-familial child homicide in Sweden 1971-1980. Child Abuse Negl 1991;15:45-55.
49. Stanton J, Simpson A, Wouldes T. A qualitative study of filicide by mentally ill mothers. Child Abuse Negl 2000;24:1451-60.
50. Stone MH, Steinmeyer E, Dreher J et al. Infanticide in female forensic patients: the view from the evolutionary standpoint. J Psychiatr Pract 2005;11:35-45.
51. Vanamo T, Kauppo A, Karkola K et al. Intra-familial child homicide in Finland 1970-1994: incidence, causes of death and demographic characteristics. Forensic Sci Int 2001;117:199-204.
52. Wallace A. Homicide: the social reality. Sydney: New South Wales Bureau of Crime Statistics and Research, 1986.
53. Weisheit RA. When mothers kill their children. Soc Sci J 1986; 23:439-48.
54. Wilczynski A. Child homicide. London: Oxford University Press/ Greenwich Medical Media, 1997.
55. Xie L, Yamagami A. How much of child murder in Japan is caused by mentally disordered mothers? Intern Med J 1995;2:309-13.
56. Nock MK, Marzuk PM. Murder-suicide: phenomenology and clinical implications. In: Jacobs DG (ed). Guide to suicide assessment and intervention. San Francisco: Jossey-Bass, 1999:188-209.
57. Appleby L. Suicidal behaviour in childbearing women. Int Rev Psychiatry 1996;8:107-15.
58. Schalekamp R.J. Maternal filicide-suicide from a suicide perspective: assessing ideation. www.filicide-suicide.com/summary-dissertation.pdf.
59. Jennings KD, Ross S, Popper S et al. Thoughts of harming infants in depressed and nondepressed mothers. J Affect Disord 1999;54: 21-8.
60. Levitzky S, Cooper R. Infant colic syndrome: maternal fantasies of aggression and infanticide. Clin Pediatr 2000;39:395-400.
61. Chandra PS, Venkatasubramanian G, Thomas T. Infanticidal ideas and infanticidal behavior in Indian women with severe postpartum psychiatric disorders. J Nerv Ment Dis 2002;190:457-61.
62. Friedman SH, Sorrentino RM, Stankowski JE et al. Mothers with thoughts of murder: psychiatric patterns of inquiry. Presented at the American Psychiatric Association Annual Meeting, Toronto, May 2006.
63. Mendlowicz MV, Rapaport MH, Mecler K et al. A case-control study on the socio-demographic characteristics of 53 neonaticidal mothers. Int J Law Psychiatry 1998;21:209-19.
64. d'Orban PT. Women who kill their children. Br J Psychiatry 1979;134:560-71.
65. Coughlin A. Excusing women. 82 Cal L Rev 1994;1:6.
66. Guileyardo JM, Prahlow JA, Barnard JJ. Familial filicide and filicide classification. Am J Forensic Med Pathol 1999;20:286-92.
67. Chandra PS, Bhargavaraman RP, Raghunandan VN et al. Delusions related to infant and their association with mother-infant interactions in postpartum psychotic disorders. Arch Women Ment Health 2006;9:285-8.
68. Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression: development of the 10-item Edinburgh Postnatal Depression Scale. Br J Psychiatry 1987;150:782-6.
69. Ryan D, Milis L, Misri N. Depression during pregnancy. Can Fam Physician 2005;51:1087-93.
70. Altshuler LL, Hendrick V, Cohen LS. Course of mood and anxiety disorders during pregnancy and the postpartum period. J Clin Psychiatry 1998;59(Suppl. 2):29-33.
71. McCleary R, Chew KSY. Winter is the infanticide season. Homicide Studies 2002;6:228-39.
72. Palermo MT. Preventing filicide in families with autistic children. Int J Offender Ther Comp Criminol 2003;47:47-57.