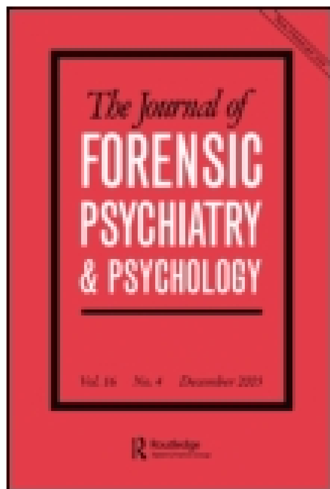
This article was downloaded by: [Simon Fraser University]
On: 19 November 2014, At: 10:17
Publisher: Routledge
Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



The Journal of Forensic Psychiatry

Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/rjfp19

Personality disorders and psychoses form two distinct subgroups of homicide among female offenders

Hanna Putkonen , Jutta Collander , Marja-Liisa Honkasalo & Jouko Lönnqvist

Published online: 09 Dec 2010.

To cite this article: Hanna Putkonen , Jutta Collander , Marja-Liisa Honkasalo & Jouko Lönnqvist (2001) Personality disorders and psychoses form two distinct subgroups of homicide among female offenders, The Journal of Forensic Psychiatry, 12:2, 300-312, DOI: 10.1080/09585180122116

To link to this article: http://dx.doi.org/10.1080/09585180122116

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information.

Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at http://www.tandfonline.com/page/terms-and-conditions

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

The Journal of Forensic Psychiatry Vol 12 No 2 September 2001 300–312

ROUTLEDGE Taylor & Francis Group

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

Personality disorders and psychoses form two distinct subgroups of homicide among female offenders

HANNA PUTKONEN, JUTTA COLLANDER, MARJA-LIISA HONKASALO and JOUKO LÖNNQVIST

ABSTRACT This study examined circumstances of homicide by women in relation to their subsequent diagnoses. We investigated the written reports of forensic psychiatric examinations on 125 Finnish women who committed murder, attempted murder, manslaughter, or attempted manslaughter during 1982–92. In 86% of the cases the victims were adults, in 15% children. Intimate partners were the victims in 54% of the cases. Stabbing was the most frequent method and a quarrel the most frequent motive. The diagnoses of personality disorders and psychoses formed distinct subgroups. Psychotic women attacked proportionally more children than the personality disordered, who mainly attacked adults. Personality disordered women were more likely to have been intoxicated with alcohol at the time. Future treatment programmes and studies are suggested.

Keywords: women, homicide, victim, methods of operation, motive, psychiatric diagnosis

The Journal of Forensic Psychiatry
ISSN 0958-5184 print/ISSN 1469-9478 online © 2001 Taylor & Francis Ltd
http://www.tandf.co.uk/journals
DOI: 10.1080/0958518011005684 9

The association between mental disorders and homicide is now well established (Tiihonen and Hakola, 1995; Hodgins *et al*., 1996; Eronen *et al*., 1996). In the study of Husain *et al*. (1983), schizophrenia in women was associated with homicide and antisocial personality disorder particularly with the young female offenders. Personality disorders appear to be common among homicidal women (Eronen, 1995). A Scandinavian study established that both psychotic and non-psychotic women kill their children, but that mainly non-psychotics kill their spouses (Gottlieb *et al*., 1987).

Previous studies (e.g. Husain *et al*., 1983) form the foundation of the picture of the female-perpetrated homicide, but knowledge remains sparse. Studies tend to portray female homicide as the result of interpersonal conflicts, with women defending themselves (Jurik and Winn, 1990) and usually killing family members (Husain *et al*., 1983). Overall, stabbing and shooting are the commonest methods of homicide both in Finland and the USA (Mattila, 1988; Kellerman and Mercy, 1992). Intoxication at the time of homicide appears to be prevalent in female-perpetrated homicides, although less so than in men (e.g. Spunt *et al*., 1996). The consensus is that women are committing violent offences in growing numbers and therefore more studies are necessary.

This paper is part of a larger study of Finnish women charged with homicide or attempted homicide, the goal being to form a comprehensive picture of these women. Our first paper focused on their diagnoses (Putkonen *et al*., 1998), while in this article we focus on the circumstances of the incidents. Psychotic disorders and personality disorders are important diagnostic groups in forensic psychiatry, both in clinical practice and research. The course, treatment and prognosis of these groups differ, as do the legal process and outcome. So far, no one has compared psychotic and personality disordered women in relation to homicide in a nation-wide sample. Moreover, as our own study (Putkonen *et al*., 1998) revealed these categories to be the main diagnostic groups in the data, we set out to form a more comprehensive picture by exploring these groups in terms of characteristic variables.

Our first aim was to describe the general nature of the crime. Based on previous studies, we formulated four questions. Who were the victims? How did these women kill, and why? How often were the offenders intoxicated? Our further aim was to group the studied women diagnostically. We hypothesized that psychotic and personality disorders would form distinct categories, allowing a more complete and coherent understanding to emerge.

MATERIAL AND METHODS

In Finland, less than 10% of homicides remain unsolved every year and this was also the case in our study material (National Research Institute of Legal

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

Policy, 1993). Women commit 10% of all homicides (ibid.). The established practice in Finland is that almost all homicide offenders undergo a detailed forensic psychiatric examination, or are at least evaluated by a psychiatrist to help the court decide whether such an examination is needed (Eronen *et al.*, 1996). The court may demand a forensic psychiatric assessment, but the offender or the offender's attorney may also request the examination. Whether or not an assessment is deemed necessary is also linked to the severity of the crime. On this basis, most homicide offenders in Finland are thoroughly examined, and the remainder tend to be those with minor or no psychiatric problems. The forensic psychiatric examination is a thorough psychiatric evaluation in a hospital lasting for a maximum of 2 months; 5 weeks on average. It consists of extensive data-gathering from various sources, standardized psychological tests, physical examinations, laboratory tests, and constant observation and interviews by a multi-professional team. Based on the examinations a forensic psychiatrist assesses the level of criminal responsibility and makes a psychiatric diagnosis. Diagnoses were made according to ICD-8 (World Health Organization, 1967) and DSM-III criteria (American Psychiatric Association, 1980) before 1987 and according to DSM-III-R criteria thereafter (American Psychiatric Association, 1987). The examining forensic psychiatrist formulates a detailed written statement for the National Authority of Medicolegal Affairs, which then prepares its own statement for the court. A detailed report on the Finnish forensic psychiatric organization was recently published (Eronen *et al.*, 2000).

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

Subjects

Finnish national statistics (Statistics Finland) show that approximately 75% of women prosecuted in district courts for homicide or attempted homicide in 1982–92 had received a forensic psychiatric examination. This study focused on these women. We have previously described the study population in more detail and presented all their psychiatric diagnoses (Putkonen *et al.*, 1998). Only a few homicidal women are not sent for forensic psychiatric examination, and offenders who promptly commit suicide explain some of the loss (Marzuk *et al.*, 1992). In Finland, the suicide rate soon after homicide has been estimated to be 8% in male data (Mattila, 1988). It is fair to assume that the percentage for women is higher, since depression rates are higher in the general female population.

Our nation-wide investigation was based on the written reports on all 125 women who underwent forensic psychiatric examinations subsequent to committing murder (n = 22), attempted murder (n = 6), manslaughter (n = 55), or attempted manslaughter (n = 42) during 1982–92. Seven additional women committed neonaticide during this period, but this group was excluded because of the specific psychiatric and social features and circumstances

distinguishing them from the rest (Resnick, 1970). We believe these features warrant separate and exclusive consideration. The subjects' ages during the index offence were almost normally distributed with a slight positive skew, and the mean age of the group was 33 years (SD 13).

Variables

The variables used in this study were index crime, victims, method of operation, motive, intoxication, and psychiatric diagnosis.

Index crime

We included the index crimes of murder, manslaughter, attempted murder and attempted manslaughter. The Finnish law defines all these crimes as intentional and life-threatening. In practice, the Finnish definition of murder is close to the definition of first-degree murder, and manslaughter means unlawfully causing the death of another intentionally, but without malice or premeditation (second-degree murder). Involuntary manslaughter (involuntarily or unintentionally causing the death of another) was not included. The including of attempted murder and manslaughter allowed us to augment the study population without extending the time period involved and thus to avoid problems related to prolonged periods of study. We verified the absence of any significant differences between the fulfilled and attempted acts regarding all studied variables to ensure the reliability of analysing all the crimes together. Some previous studies on homicidal crime have also included attempts (Robertson *et al*., 1987; Maden *et al*., 1994).

Victims, methods of operation and motives

We recorded all victims, methods of operation and motives exactly as they appeared in the statements; restricting ourselves to a primary victim, motive or method would have given a limited picture, and would often have been difficult to confirm. A child victim was by definition under 18 years of age, though only three children were over 7 years old. We grouped the victims according to their relationship with the offender. No consistency of terminology for former or present intimate partners has been established in the literature. We categorized them as past or present husbands, common-law husbands, or steady 'boyfriends'.

Methods of operation were classified as in the police reports. Motives were recorded as the offender herself reported them, both during the police investigations and the forensic psychiatric examination, and then categorized as such. The motive was coded as impulsive when the perpetrator herself claimed to have acted without further thought; it was coded as

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

sexual if it had sexual content, e.g. if the victim had pressured for sex. Self-defence was coded if the perpetrator reported the victim to have been violent towards her. Delusional reasons included fear of losing her child and being commanded by voices. No reason was coded if the perpetrator did not admit to the act or reported she had killed for 'no reason'. The reports also stated explicitly whether or not the offender was intoxicated at the time.

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

Psychiatric diagnosis

We were interested in the diagnostic categories of psychotic disorders and personality disorders. We recorded all the diagnoses directly as they were in the statements, and have reported them thoroughly in a previous article (Putkonen *et al.*, 1998). We also checked that there were no statistically significant differences in the frequencies of the diagnostic groups pre and post 1987 to confirm there were no significant changes in diagnostic procedures. Of the 125 offenders, 27% had a psychotic disorder and 70% a personality disorder. In the group of psychotic disorders (n = 34) we placed the diagnoses of schizophrenia (n = 15), psychotic mood disorders (n = 5), and other psychotic disorders (n = 14). The last group included paranoid psychosis (n = 6), brief or reactive psychosis (n = 3), unspecified psychosis (n = 2), post-partum psychosis (n = 2) and organic psychosis (n = 1). Of the 34 women with psychotic disorders, 11 also had a personality disorder diagnosis, but were only classified under psychotic disorders according to the common hierarchy in psychiatry. As stated in DSM-III-R (American Psychiatric Association, 1987) the principal diagnosis is usually assumed to be on axis I. There were 77 women in the group of personality disorders, most of which were cluster B illnesses (n = 42). There were 7 in cluster A, 15 in cluster C, 26 personality disorders not otherwise specified, and 8 passive aggressive personality disorders. Several women had more than one personality disorder. In addition, there were 57 women with alcohol dependence/abuse, 50 of whom were also diagnosed as personality disordered. In 14 cases women had no diagnosis of psychotic or personality disorder; 8 had not fulfilled the criteria for any psychiatric diagnosis at all, while 3 were diagnosed with alcoholism and 3 with mental retardation. Hence, the comparisons between the psychotic and personality disorder groups included 111 women.

Statistical analysis

For statistical analysis we used Fisher's exact test, two-tailed. The results were presumed statistically significant when the p value was < 0.05. The results were uncorrected for multiple comparison.

RESULTS

There were 136 victims altogether, as seven women had more than 1 victim. In 105 cases the victims were male and in 25 cases female. There were 108 cases with adult victims and 19 with child victims. The most frequent victim was an intimate partner, former or present (68/125, 54%), and the second biggest group was friends or acquaintances (30/125, 24%). In 17 cases offenders attacked their own children, the third largest victim group, and in 8 a parent or other relative. Two perpetrators did not know their victims.

Stabbing was the most frequent method of operation (81/125, 65%), followed by strangulation (15/125, 12%) and hitting with a blunt object (14/125, 11%). There were 9 women who drowned their victims, 5 who battered them and 3 who suffocated them. Poisoning and shooting were both used by 4 women. There were 18 women (14%) who used more than one method.

A quarrel with the victim was the most frequent (59%) motive reported by the offenders (Table 1). Friends and acquaintances were attacked most often in a quarrel (14/30, 47%); 11 of these women claimed to have acted impulsively. Six of the seven revenge cases had friends or acquaintances as victims. An intimate partner was the most frequent victim attacked for sexual reasons (11/14) but this was never the only motive. Jealousy was reported as the motive against an intimate partner (7/12) or friends and acquaintances (5/12). Ten of the 12 women were intoxicated at the time of the crime; 2 of these were delusional in their jealousy and had diagnoses of psychotic disorders. The remaining 8 cases can be seen as drunken fits of jealousy with more or less rationale. Self-defence was reported by 11 women, one of whom was not intoxicated at the time of the crime. Ten of these victims were past or present intimate partners and one was a male friend. These 11 perpetrators reported that the victims had attacked violently, five with a knife and three by trying to strangle the perpetrator. In 13 out of 14 cases the victims of extended suicide were the perpetrators' own children and one was a grandchild. Delusional motives were associated with extended suicides; the perpetrator thought that dying would be better for the child as well. There were 6 other cases with delusional motives, though; 2 women thought their child was being taken away, 1 thought getting rid of her child would relieve her own anxiety, 1 heard commanding voices, 1 thought death was arriving anyway and 1 thought she would be able to quit drinking by stabbing the victim. Finally, 2 women said they just wanted to kill someone. One had an impulsive thought of killing and the other claimed to have wanted to kill someone ever since she saw a vampire movie.

There were 111 women with either psychotic or personality disorders. The groups differed in 12 variables (Table 2). The personality disordered killed more adults than the psychotic women, and the motive was more often a quarrel. In 68% of the cases with children as victims the perpetrator was

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

Table 1 Homicidal women in Finland 1982–92: motives*

Motive	*Cases (n = 125)*
Quarrel with victim	74 (59%)
Impulsive act	38 (30%)
Victim's provocation	38 (30%)
Long-term violence by the victim	36 (29%)
Extended suicide**	14 (11%)
Sexual motives	14 (11%)
Jealousy	12 (10%)
Self-defence	11 (9%)
Other†	18 (14%)
Several reported motives	91 (73%)
None‡	10 (8%)

Key
*Motives were recorded as the offenders had reported them. Because 91 offenders reported several motives, the sum of presented figures exceeds the total number of cases.
**Homicide accompanied by suicidal intentions.
†Financial motives, revenge, other crime involved, delusional motives.
‡No obvious reason, or reluctance to reveal reasons; two simply wanted to kill someone.

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

psychotic. Both the psychotic and the personality disordered women reported similar motives for killing children.

Intoxication was reported for 89/125 (71%) of the women, 84 (67%) with alcohol. Thus 5 women were intoxicated with substances other than alcohol. The women diagnosed with personality disorders were most likely to have been drunk (Table 3). Five of the 9 psychotic women drunk at the time of the crime were diagnosed as schizophrenic.

DISCUSSION

This is the first published study of the circumstances of female homicide using nation-wide, representative female data. Our results showed that the studied women most often killed men by stabbing them in a quarrel. Psychotic women killed proportionally more children. Most personality disordered women were drunk while committing their crime.

Our first goal was to form a comprehensive characterization of Finnish female homicide, which was lacking in the literature. The studied women most often killed men and intimate partners, which is in agreement with other findings (Husain *et al*., 1983). Furthermore, women have been found rarely to kill strangers (Robertson *et al*., 1987; Mann, 1990), which was also true in our study. The second largest group of victims was 'friends and

Table 2 Homicidal women in Finland 1982–92: comparison of groups with psychotic or personality disorders*

	Psychotic disorders	*Personality disorders*	*p value*
*Victim***			
Adult	22 (65%)	72 (94%)	0.000
Child	13 (38%)	5 (7%)	0.000
Own child	11 (32%)	5 (7%)	0.001
Partner or ex-partner	12 (35%)	45 (58%)	0.039
Method of operation†			
Stabbing	16 (47%)	55 (70%)	0.018
Drowning	8 (24%)	1 (1%)	0.000
Suffocation	3 (9%)	0 (0%)	0.027
Motive‡			
Quarrel	9 (27%)	54 (70%)	0.000
Victim's provocation	3 (9%)	29 (38%)	0.002
Long-term violence by the victim	4 (12%)	24 (31%)	0.034
Extended suicide	10 (29%)	4 (5%)	0.001
Delusional motive***	5 (15%)	1 (1%)	0.010
Total of cases	34	77	

Key
*Other diagnostic groups are excluded. Only variables with significant differences between the groups are shown. Percentages within the psychotic or personality disordered groups are shown. Variables are in the order of decreasing difference in percentages. Fisher's exact test, two-tailed, was used.
**Because in six cases there was more than one victim, the percentages exceed 100%.
†Because in 15 cases there was more than one method, the percentages exceed 100%.
‡Because 81 perpetrators reported more than one motive, the percentages exceed 100%.
***Delusional motives not otherwise categorized.

Table 3 Homicidal women in Finland 1982–92: comparison of intoxication with alcohol between groups with psychotic or personality disorders*

	Psychotic disorders	*Personality disorders*	*p value*
Intoxicated with alcohol	9 (27%)	66 (86%)	0.000
Not intoxicated with alcohol	25 (73%)	11 (14%)	
Total of cases	34	77	

Key *Other diagnostic groups are excluded. Fisher's exact test, two-tailed, was used. Percentages of the total of psychotic or personality disordered are shown.

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

acquaintances'; previous studies have produced varying proportions of this group (Jurik and Winn, 1990, Husain *et al.*, 1983).

Stabbing was the most common method used by the studied women. This contrasts with the USA, where shooting is the most usual method, followed by stabbing (Kellerman and Mercy, 1992). In Finland, stabbing has been found to be the commonest method in both sexes (Mattila, 1988).

A quarrel was the most frequent motive reported in our study. Eleven women also reported self-defence as a motive. In previous studies battering husbands have sometimes been found to become victims themselves (Husain *et al.*, 1983). Extended suicide was a motive to kill children. Maternal salvation fantasies have been found underlying similar cases before (Marzuk *et al.*, 1992). Most of the women in the present study reported several motives. Not only had they broken the law, but they had also seriously violated their gender roles, since women are not 'supposed' to be violent at all. Violence is also a part of a discourse about gender difference (Moore, 1994).

Our second goal was to group the women by clinical diagnoses. The clearest difference between the psychotic and personality disordered women was that the former killed proportionally more children; in 68% of the child homicides there was a psychotic perpetrator. This is almost the same percentage as reported in a 1969 study (Resnick, 1969) but much higher than in a 1979 study, which found only 16% of the perpetrators of child homicide to have psychotic illnesses (D'Orban, 1979). Motives for killing a child were quite similar in both diagnostic groups and the most frequent was extended suicide. Altruistic motives and extended suicide have been associated with filicide in previous studies (Bourget and Bradford, 1990; Somander and Rammer, 1991). The differences between the groups regarding motives and methods were also related to the differences in victims. Children were attacked for different reasons and using different methods than adults.

The personality disordered women were more apt to attack an adult than a child, and most often the intimate partner. The studied woman often reported suffering long-term violence by the victim; in the midst of yet another quarrel, and provoked by the victim, she had taken action. In addition, the personality disordered women seemed more likely than the psychotic to have been drunk at the time. Appropriately, impulsiveness and proneness to alcohol abuse are common features of some personality disorders. Alcohol intoxication has been found frequently among homicide perpetrators (Jurik and Winn, 1990; Muscat and Huncharek, 1991). Alcoholism is also prevalent in personality disordered male homicide perpetrators in Finland (Tiihonen *et al.*, 1993). Previous studies have reported that from 34.5% to 61.7% of female homicide perpetrators were drunk (Muscat and Huncharek, 1991; Mann, 1990). The low incidence of narcotics in the intoxication figures might reflect not only the low level of the narcotics problem in Finland at the time of study, but also the methods of investigation in the

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

1980s: the verification of alcohol-intoxication has long been routine, but other substances might have been overlooked. Because of this we analysed differences between the groups only for intoxication with alcohol. Comorbidity problems may be more prevalent in the future, though. A recent study found 58% of hospitalized psychiatric patients to have a lifetime substance use disorder (Mueser *et al.*, 2000).

The great majority of Finnish homicide offenders undergo thorough forensic psychiatric examinations, which means Finland provides a rather unique base for study material. A study of the Finnish forensic psychiatric procedures in violent crime showed that when the perpetrator is judged to have diminished criminal responsibility a forensic psychiatric examination has almost invariably been performed, and psychiatric diagnoses are associated with the level of criminal responsibility (Pajuoja, 1995). It can be assumed that the most severe personality disorders and almost all psychotic disorders are included in our data. Our nation-wide data offer comprehensive information for the period involved, and our results not only confirm previous findings on female homicide but also offer fresh information. However, female homicide is a comparatively rare phenomenon, and statistical analysis becomes restricted because of the inevitable small sample size. This was a minor problem in our study, however. The results were uncorrected for multiple comparison and the p values should be considered suggestive.

It is important to question the reliability and validity of the presented diagnoses, and thus how much limitation this imposed on our study. The first possible problem is that the examining psychiatrists might have been lenient towards the women, as women tend to be treated differently from men (Herjanic *et al.*, 1977; Maden *et al.*, 1994). Secondly, the diagnostic reliability of personality disorders has been suggested to be fairly poor (Mellsop *et al.*, 1982; Zimmerman, 1994). This is a topic of significant discussion in psychiatry in general, and our study represents the diagnostic procedures of the forensic psychiatric examinations in Finland during the time of study – as accurate and reliable as they were. To our knowledge, there is no published study comparing SCID diagnoses with Finnish forensic psychiatric diagnoses, for example, to confirm validity and reliability. However, all the diagnoses were based on exhaustive clinical examinations, and if diagnostic criteria were not fulfilled the examining forensic psychiatrist would not have made a psychiatric diagnosis (Eronen, 1995). The figures can be considered accurate for the most severe mental disorders, such as schizophrenia, whereas those for neuroses, alcoholism and some personality disorders may actually be underestimates (ibid.). Furthermore, the diagnostic effect of the index crime seems to be of little importance (ibid.). The diagnoses of Finnish forensic psychiatric examinations have been used as study material before (Eronen, 1995; Räsänen *et al.*, 1995; Repo *et al.*, 1997). In conclusion, the diagnoses made on the basis of

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

forensic psychiatric examinations should be at least as accurate as general clinical diagnoses. The reliability of Finnish clinical diagnoses has been discussed (Keskimäki and Aro, 1991) and considered good, especially for schizophrenia (Hovatta *et al*., 1997; Cannon *et al*., 1998).

In conclusion, we found two main groups of perpetrators: psychotic women who attacked proportionally more children, and personality disordered women who attacked adults, mainly their partners, during a quarrel. The two groups were clearly distinct. The personality disordered group may resemble homicidal men, while the psychotic women seem to form a characteristic group. The clinical importance of our results may relate to this psychotic group. A true danger may arise when a psychotic woman has thoughts of killing her child or herself, and such an expression should be treated with the seriousness it warrants. Furthermore, the high frequency of intoxication may indicate a need for better treatment programmes for personality disordered women with substance abuse. To conclude, as far as we know, findings of the presented type related to the characteristics of homicide in a nation-wide female database have not been reported before. In the future, it might be interesting to interview homicidal women and make more detailed diagnostic comparisons of the circumstances of the incidents.

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

ACKNOWLEDGEMENTS

Special thanks to Anna Maria Viljanen, PhD, and Matti Joukamaa, MD, PhD

Hanna Putkonen, researcher,
MD, Vanha Vaasa Hospital, State Mental Hospital, PO Box 13, FIN–65381 Vaasa, Finland;
and National Public Health Institute, Department of Mental Health and Alcohol Research,
Mannerheimintie 166, FIN-00300 Helsinki, Finland; Fax: -358-6-3567 047;
e-mail [hanna.putkonen@vvs.fi]

Jutta Collander, senior detective constable, National Bureau of Investigation, PB 285, FIN 01301 Vantaa, Finland

Marja-Liisa Honkasalo, MD, PhD, senior fellow of the Academy of Finland, Medical Anthropology Unit, University of Helsinki, Department of Cultural Anthropology, PO Box 59, 00014 University of Helsinki, Finland

Jouko Lönnqvist, MD, PhD, research professor, National Public Health Institute, Department of Mental Health and Alcohol Research, Mannerheimintie 166, FIN–00300 Helsinki, Finland

Correspondence to Dr Putkonen

REFERENCES

American Psychiatric Association (1980) *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edn (DSM-III). Washington, DC: APA.

American Psychiatric Association (1987) *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edn rev. (DSM-III-R). Washington, DC: APA.

Bourget, D. and Bradford, J. M. W. (1990) 'Homicidal Parents'. *Canadian Journal of Psychiatry* 35: 233–8.

Cannon, T. D., Kaprio, J., Lönnqvist, J., Huttunen, M. and Koskenvuo, M. (1998) 'The Genetic Epidemiology of Schizophrenia in a Finnish Twin Cohort'. *Archives of General Psychiatry* 55: 67–74.

D'Orban, P. T. (1979) 'Women Who Kill their Children'. *British Journal of Psychiatry* 134: 560–71.

Eronen, M. (1995) 'Mental Disorders and Homicidal Behavior in Female Subjects'. *American Journal of Psychiatry* 152: 1216–18.

Eronen, M., Hakola, P. and Tiihonen, J. (1996) 'Mental Disorders and Homicidal Behavior in Finland'. *Archives of General Psychiatry* 53: 497–501.

Eronen, M., Repo, E., Vartiainen, H. and Tiihonen, J. (2000) 'Forensic Psychiatric Organization in Finland'. *International Journal of Law and Psychiatry* 23: 541–6.

Gottlieb, P., Gabrielsen, G. and Kramp, P. (1987) 'Psychotic Homicides in Copenhagen from 1959 to 1983'. *Acta Psychiatrica Scandinavica* 76: 285–92.

Herjanic, M., Henn, F. A. and Vanderpearl, R. H. (1977) 'Forensic Psychiatry: Female Offenders'. *American Journal of Psychiatry* 134: 556–8.

Hodgins, S., Mednick, S. A., Brennan, P. A., Schulsinger, F. and Engberg, M. (1996) 'Mental Disorder and Crime – Evidence from a Danish Birth Cohort'. *Archives of General Psychiatry* 53: 489–96.

Hovatta, I., Terwilliger, J. D., Lichtermann, D., Mäkikyrö, T., Suvisaari, J., Peltonen, L. and Lönnqvist, J. (1997) 'Schizophrenia in the Genetic Isolate of Finland'. *American Journal of Medical Genetics* 74: 353–60.

Husain, A., Anasseril, D. E. and Harris, P. W. (1983) 'A Study of Young-Age and Mid-Life Homicidal Women Admitted to a Psychiatric Hospital for Pre-Trial Evaluation'. *Canadian Journal of Psychiatry* 28: 109–13.

Jurik, N. C. and Winn, R. (1990) 'Gender and Homicide: a Comparison of Men and Women Who Kill'. *Violence and Victims* 5: 227–41.

Kellerman, A. L. and Mercy, J. A. (1992) 'Men, Women, and Murder: Gender-specific Differences in Rates of Fatal Violence and Victimization'. *Journal of Trauma* 33: 1–5.

Keskimäki, I. and Aro, S. (1991) 'Accuracy of Data on Diagnoses, Procedures and Accidents in the Finnish Hospital Discharge Register'. *International Journal of Health Sciences* 2: 15–21.

Maden, T., Swinton, M. and Gunn, J. (1994) 'Psychiatric Disorders in Women Serving a Prison Sentence'. *British Journal of Psychiatry* 164: 44–54.

Mann, C. R. (1990) 'Black Female Homicide in the United States'. *Journal of Interpersonal Violence* 5: 176–201.

Marzuk, P. M., Tardiff, K. and Hirsch, C. S. (1992) 'The Epidemiology of Murder-Suicide'. *Journal of the American Medical Association* 267: 3179–83.

Mattila, J. (1988) *Alttiudesta syyllistyä toistamiseen väkivaltarikokseen: On Proneness to Repeat a Violent Offence*. Monographs from Psychiatria Fennica 15, Helsinki. (In Finnish, with an English summary.)

Mellsop, G., Varghese, F., Joshua, S. and Hicks, A. (1982) 'The Reliability of Axis II of DSM-III'. *American Journal of Psychiatry* 139: 1360–1.

Downloaded by [Simon Fraser University] at 10:17 19 November 2014

Moore, H. (1994) ‘The Problem of Explaining Violence in the Social Sciences’. In Harvey, P. and Gow, P. (eds) *Sex and Violence – Issues in Representation and Experience*. London and New York: Routledge, pp. 138–55.

Mueser, K. T., Yarnold, P. R., Rosenberg, S. D., Swett, C., Miles, K. M. and Hill, D. (2000) ‘Substance Use Disorder in Hospitalized Severely Ill Psychiatric Patients: Prevalence, Correlates, and Subgroups’. *Schizophrenia Bulletin* 26: 179–92.

Muscat, J. E. and Huncharek, M. S. (1991) ‘Firearms and Adult, Domestic Homicides – the Role of Alcohol and the Victim’. *American Journal of Forensic Medicine Pathology* 12: 105–10.

National Research Institute of Legal Policy (1993) *Criminality in Finland 1992*. Helsinki.

Pajuoja, J. (1995) *Oikeussosiologinen tutkimus syyntakeisuussäännöksistä ja mielentilatutkimuksesta*. Helsinki: Suomalaisen Lakimiesyhdistyksen julkaisuja, A-sarja N:o 201. (In Finnish.)

Putkonen, H., Collander, J., Honkasalo, M.-L. and Lönnqvist, J. (1998) ‘Finnish Female Homicide Offenders 1982–1992’. *Journal of Forensic Psychiatry* 9: 672–84.

Räsänen, P., Hakko, H. and Väisänen, E. (1995) ‘The Mental State of Arsonists as Determined by Forensic Psychiatric Examinations’. *Bulletin of the American Academy of Psychiatry and the Law* 23: 547–53.

Repo, E., Virkkunen, M., Rawlings, R. and Linnoila, M. (1997) ‘Criminal and Psychiatric Histories of Finnish Arsonists’. *Acta Psychiatrica Scandinavica* 95: 318–23.

Resnick, P. J. (1969) ‘Child Murder by Parents: a Psychiatric Review of Filicide’. *American Journal of Psychiatry* 126: 325–34.

Resnick, P. J. (1970) ‘Murder of the Newborn: a Psychiatric Review of Neonaticide’. *American Journal of Psychiatry* 126: 1414–20.

Robertson, R. G., Bankier, R. G. and Schwartz, M. A. (1987) ‘The Female Offender: a Canadian Study’. *Canadian Journal of Psychiatry* 32: 749–55.

Somander, L. K. H. and Rammer, L. M. (1991) ‘Intra- and Extrafamilial Child Homicide in Sweden 1971–1980’. *Child Abuse & Neglect* 15: 45–55.

Spunt, B., Brownstein, H. H., Crimmins, S. M. and Langley, S. (1996) ‘Drugs and Homicide by Women’. *Substance Use & Misuse* 31: 825–45.

Statistics Finland (1982–1995) *Criminality 1982–1995*. Official Statistics of Finland, Helsinki.

Tiihonen, J., Eronen, M. and Hakola, P. (1993) ‘Criminality Associated with Mental Disorders and Intellectual Deficiency’. *Archives of General Psychiatry* 50: 917–18.

Tiihonen, J. and Hakola, P. (1995) ‘Homicide and Mental Disorders’. *Psychiatria Fennica* 26: 125–9.

World Health Organization (1967) *The ICD-8 Classification of Mental and Behavioural Disorders*. Geneva: WHO.

Zimmerman, M. (1994) ‘Diagnosing Personality Disorders: a Review of Issues and Research Methods’. *Archives of General Psychiatry* 51: 225–45.

Downloaded by [Simon Fraser University] at 10:17 19 November 2014