Homicide during psychotic illness in New South Wales between 1993 and 2002

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ABSTRACT

Objective: To review homicides committed during psychotic illness in New South Wales over 10 years from 1993 to 2002.

Design and setting: Case series of all known homicides committed during psychotic illness in NSW, taken from reports of psychiatrists submitted in proceedings in the Supreme Court of NSW.

Main outcome measures: Demographic and clinical features of perpetrators; estimated frequency of homicide during psychotic illness.

Results: In the 10 years from 1993 to 2002, there were at least 88 people charged with 93 homicide offences committed during the acute phase of mental illness. High rates of drug misuse, especially of drugs known to induce psychotic illness and brain injury, were reported. Evolving auditory hallucinations and delusional beliefs that led the person to believe they were in danger were the symptoms strongly associated with lethal assault. The victims were mostly family members or close associates. Only nine of the victims were strangers, including three fellow patients. Most lethal assaults (69%) occurred during the first year of illness, and the first episode of psychotic illness was found to carry the greatest risk of committing homicide.

Conclusions: People in their first episodes of mental illness should be considered to be at greater risk of committing serious violence than those in subsequent episodes. Illicit drug use, a history of brain injury, auditory hallucinations and delusional beliefs of immediate danger were particularly associated with lethal assault.

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It is important to know the risk of lethal assault arising as a result of acute mental illness, which symptoms are associated with serious assault, and when in the course of psychotic illnesses a serious assault is likely to occur. We report a study of homicides by people with psychotic illness in New South Wales over the 10 years from 1993 to 2002.

The acute phase of mental illness is known to be associated with an increased risk of dangerous behaviour, including lethal assault.[1] Recent estimates of the rates of psychotic illness (including schizophrenia, schizophreniform psychosis, schizoaffective disorder, bipolar disorder, delusional disorder, psychotic depression, and drug-induced psychosis) among those charged with homicide offences are 8.5% in Finland,[2] 20% in Sweden[3] and Denmark,[4] 10% in England,[5] 8.7% in New Zealand[6] and 7.2% in Victoria.[7]

Homicides and unprovoked assaults are often the direct result of symptoms that lead mentally ill people to believe they are in danger.[8] One study found a strong association between active symptoms and recent violent offences, as 93% of its sample had active psychotic symptoms when they committed their crimes, and 47% were "definitely" or "probably" motivated by their symptoms to commit the offences.[9] Other studies have identified an association between auditory hallucinations and persecutory beliefs, and the motivation to kill.[10]

Another study found that, whereas violence by patients with schizophrenia is associated with substance misuse, serious violence was more strongly associated with active symptoms of psychosis and depression, combined with the absence of negative symptoms of schizophrenia, such as poverty of thought and loss of volition.[11] Hence, more serious violence would be expected earlier in the illness before the development of disabling negative symptoms.

We report a series of men and women who killed during psychotic episodes, and were either found not guilty by reason of mental illness or who, in the opinion of the psychiatrists who assessed them for the courts, had the defence of mental illness available. Our study included several people who elected to enter a plea of guilty to the lesser charge of manslaughter on the grounds of "diminished responsibility" or, from 1998, following an amendment to section 23A of the *Crimes Act 1900* (NSW), "substantial impairment by abnormality of mind", to avoid the indeterminate sentence that follows a verdict of not guilty by reason of mental illness.

To our knowledge, the series includes all of those charged with homicides while affected by psychotic illness in NSW during the 10 years from the beginning of 1993 to the end of 2002. Other violent offences were not considered because of the difficulty in obtaining a complete sample, as the offences were dealt with in several jurisdictions. All of the homicide offences in this study were dealt with in the Supreme Court of NSW, and judgments and documents related to the proceedings are on the public record.

METHODS

The names of the people in our study were collected by O B N in the course of preparing opinions for the courts and in his role as a visiting psychiatrist to the then Corrections Health Service. Further subjects were identified from a search of NSW Supreme Court judgments published on the Internet from 1995 by the Australasian Legal Information Institute (http://www.austlii.edu.au). The list was then compared with the names of those found not guilty of homicide offences on the grounds of mental illness, who were referred to the NSW Mental Health Review Tribunal after the verdict.

Reports for most subjects were held on file by us from assessments provided for the courts for the defence and for the prosecution. Exhibits and published judgments in the remaining cases were then sought from the Supreme Court of NSW.

Data collected included age, sex, country of birth, aspects of early development, educational and occupational attainment, premorbid personality traits, history of criminal convictions, history of brain injury, and substance misuse. We made an estimate of the length of the prodromal illness. Features of the illness, circumstances of the offence and the nature of contact with mental health services were also recorded.

1 Demographic characteristics and clinical features of the 88 people charged with homicide and having the defence of mental illness

Variable	Finding
Mean age (years)	33.4 (range, 15–80)
Born overseas	21 (24%)
Family history of mental illness	39 (44%)
Previous criminal conviction	36 (41%)
Head injury	25 (28%)
Substance misuse	64 (73%)
Intoxication at the time of the offence	31 (35%)
Mean duration of acute symptoms	11.3 weeks (range, 1 day to 2 years)
Auditory hallucinations reported	51 (58%)
Delusional belief of threat	50 (57%)
First episode of psychotic illness	54 (61%)
Contact with mental health services in the 2 weeks prior	40 (45%)
Responded to treatment	69 (78%)

2 Phases of mental illness in which the homicides by the 88 people charged with homicide and having the defence of mental illness occurred

	Duration of illness			
	< 8 weeks	8 weeks to 1 year	1–5 years	> 5 years
Number	38	23	12	15

The study was approved by the Research Ethics Committee of St Vincent's Hospital.

RESULTS

In the 10 years from 1993 to 2002, 88 people were identified as having been charged with a homicide offence and having the defence of mental illness available to them in the opinion of at least one assessing psychiatrist. Selected demographic characteristics and clinical features are shown in Box 1.

Age, sex and country of origin

The mean age for all 88 subjects was 33.4 years, and there was little difference between the mean ages of males and females. Seventeen (19%) were women and 21 (24%) were born overseas, of whom 19 were from non-English-speaking countries.

Previous criminal convictions

Nineteen of the 54 subjects in their first episode of illness (35%) had previous criminal convictions, compared with 17 of the 34 in subsequent episodes (50%). The pattern of convictions ranged from drink-driving and shop stealing to repeated illegal activity associated with drug dependence. Only six had been sentenced to a term of imprisonment.

Prodromal illness in the 54 subjects in their first episode of psychotic illness

The prodrome of psychotic illness is defined as the period between a morbid change and the onset of acute symptoms of psychotic illness. The prodromal phase is usually only identified after the emergence of acute symptoms, and hence it is often difficult to determine when the morbid change occurred.

The length of the prodromal illnesses in the 54 subjects whose offences occurred in their first episode of psychotic illness ranged from a week to 20 years, with a mean duration of 11.8 months, after excluding the eight subjects with prodromal phases of greater than 5 years. The most common symptoms reported during prodromal illness were depression (22%), anxiety (22%), irritability (20%), religiosity (11%), and withdrawal (9%). Other symptoms included increased substance misuse and impaired mental performance.

Phases of illness in which the homicides occurred

Fifty-four subjects (61%) committed homicide in their first episode of psychotic illness (defined as the period between the onset of acute symptoms of mental illness and the first remission), and 61 (69%) within the first year of illness. Of the remaining 27 subjects, 10 were described as treatment-resistant, in that they continued to experience acute symptoms of mental illness despite treatment.

The phases of illness in which homicides were committed are shown in Box 2.

Substance misuse

A very high proportion of subjects reported substance misuse (Box 1; 57 males [80%] and 7 females [41%]). The most frequently misused drugs were cannabis (59%), amphetamine (26%) and alcohol (23%). Other drugs reported were hallucinogens, benzodiazepines and heroin.

Thirty-one subjects (35%) reported intoxication at the time of the homicide — 11 with cannabis, 10 with alcohol and six with stimulants. The remaining four were affected by either hallucinogens or benzodiazepines.

Relationship between symptoms and offence

The most common symptoms associated with lethal assault in this series were auditory hallucinations giving rise to persecutory delusional beliefs, particularly those in which subjects believed they were in danger. Fifty-one subjects (58%) reported hallucinations of voices immediately before the offence, and 50 (57%) believed they were in danger from the victim.

Auditory hallucinations in the form of commands to act were reported by only four subjects, although instructions about the reasons to kill the victim were more frequently reported.

The most common delusional belief was that the victim planned to kill the subject, reported by 32 subjects (36%). The nature of the threats included plans to use poison, ambush and supernatural assault. Other beliefs included that the victim was evil and deserved to die (18%), that the person had to be killed to save others or to prevent suffering (17%), and that the victim was possessed or had been replaced by someone else (24%).

Relationship to the victim

In most cases, the victim was a relative or close friend. Victims included 29 parents, 18 partners, 16 friends or acquaintances, 14 children, and seven other relatives. Only nine victims were strangers, including three fellow patients and a fellow prisoner.

Method of homicide

The most common method of homicide was stabbing, causing 60% of the deaths, followed by bashing or bludgeoning (17%), strangulation, suffocation or drowning (11%), and burning or scalding (7%). Only

3 Types of delusional beliefs among the 88 people charged with homicide and having the defence of mental illness

Main delusional belief	No.
Direct threat from victim	32
Victim was evil, deserved to die	16
Saving others, altruistic, nihilistic	15
Victim had supernatural associations	13
Victim replaced (Capgras delusion*)	8
Commanded by voices	4

* Delusion that a familiar person has been replaced by an exact double. ◆

four subjects (5%) used firearms, two of whom had multiple victims.

Contact with mental health services before the offence

Forty of the 88 subjects were reported to have had contact with a doctor, mental health worker or child welfare service in the 2 weeks before the offence. Three of the subjects were involuntary patients detained under the *Mental Health Act 1990* (NSW); one was absent without leave, having absconded from an acute ward; another was on trial leave; and one had been discharged hours before the offence. Another had only recently been discharged. Several of the female offenders had been assessed by child welfare workers in the weeks before killing their children.

DISCUSSION

Between the beginning of 1993 and the end of 2002, there were 1052 homicides in NSW; 93 of these (8.8%) were committed during psychotic illness. However, most of the increased risk of homicide by mentally ill people is the result of homicides by people in their first episode of psychotic illness. Assuming a prevalence of psychotic illness of about 0.5% of the population,[12] and an incidence of new cases of psychotic illness of about 20 per 100 000 per year,[13] the risk of committing homicide during the first episode of psychosis in NSW is one in every 220 new cases, and the risk of homicide by patients with established psychotic illness is about one in 8000 per year.

This finding is comparable with those of other jurisdictions, despite variations in the overall rates of homicide and the ways in which the proportion of mentally abnormal offenders have been calculated.[14] Our study only considered subjects who were thought to have the common law defence of mental illness available to them (ie, their behaviour was largely the result of symptoms of mental illness). Other studies considered their subjects' diagnoses[2,3,5] or a range of mental health disposals from the court.[6]

As in other studies,[5,6] most of the victims were family members or close associates. Only nine of the victims in this series were strangers. Delusional beliefs often arose as explanations of acute symptoms of mental illness that were attributed to those who were nearby. The high probability of killing a parent or relative seemed to be associated with the disability arising from the illness, as many of the young adults with mental illness were still living with their parents and families.

Fifty-four of the 88 subjects in this study (61%) killed during their first episode of psychotic illness — a much higher proportion than in other studies that reported the phase of the illness in which homicide took place. The most cited study of psychotic illness and violence, by Häfner and Böker in Germany, reported that only 8 of the 284 patients with schizophrenia (3%) committed their violent offence in the first month of illness, and only 45 of 277 (16%) in the first year of illness.[15] However, a recently published study from the United Kingdom found that 32 of 57 schizophrenic patients (56%) who committed homicide were in the first year of their illness, and most were undiagnosed or untreated.[16]

The most common symptoms leading to lethal assault in our series were frightening delusional beliefs arising from auditory hallucinations. This finding is in contrast to those of Häfner and Böker, who found longstanding delusional beliefs, especially of being poisoned and of infidelity, to be more likely to precipitate a violent offence. Another study also found paranoid schizophrenia, in which the predominant symptom is a delusional belief, to be overrepresented when compared with the other subtypes of schizophrenia, comprising 49% of its sample compared with an expected proportion of about a quarter.[2] In our series, the most dangerous combination of symptoms was the delusion of immediate danger arising from evolving auditory hallucinations in those with no previous experience of mental illness.

There is usually an understandable relationship between symptoms and violence.[9] The content and themes of a patient's delusional beliefs often imply or may even command a course of action, and many patients who act on delusions claim to have acted in "self defence".[9,17] A positive correlation has been found between the likelihood of violence and the acuteness of illness, lack of treatment, cessation of medication, delusions, substance misuse and previous arrests.[18]

A small number of patients offended without warning after the sudden onset of symptoms, with no reported prodromal illness. However, for all 88 subjects, the mean duration of the prodromal phase of the illness was nearly a year, and the mean duration of acute symptoms was over 4 weeks, leaving time for intervention in most cases.

In our series, 24% of subjects were born overseas, which is similar to the figure of 21% for the Australian population as a whole. However, most of those born overseas (19 of 21) were from non-English-speaking backgrounds, compared with about half of overseas-born Australians. Moreover, most of the overseas-born subjects killed during their first episode of illness, suggesting that people of non-English-speaking background may have more difficulty obtaining access to mental health care. This finding is similar to that of a German study of homicide committed by patients after transfer from hospital to community care, which found no increase in the rate of homicide by the mentally ill born in Germany, but found higher rates among those born in other countries.[19]

Substance misuse, particularly of cannabis and stimulant drugs, which are known to induce episodes of psychotic illness in susceptible individuals, was reported by 73% of the subjects. Only 35% reported being intoxicated at the time of the offence. The role of substance misuse appeared to be to induce acute symptoms leading to serious assault. This is consistent with the findings of a study which found that serious violence by mentally ill subjects was more strongly associated with acute symptoms than with intoxication.[10]

Conclusions

We found that the greatest risk of homicide being committed by people during psychotic illness was during the early phase of the illness, particularly the first episode. Many subjects had had contact with mental health services in the weeks before the offence, and many of the deaths might have been prevented if the dangerous symptoms

had been identified and there had been assertive intervention. In addition to the devastating effect on the families of the victims, who were often also relatives of the perpetrators, the deaths resulted in great cost to the community in legal proceedings and secure hospitalisation.

We found a high rate of drug misuse, with the most commonly misused drugs being those known to induce episodes of mental illness. A relationship between drug use and particular symptoms has not been shown, but it is clear that drug use increases the risk of violence by people with psychotic illness.

The offences themselves were largely secondary to frightening delusional beliefs in which the victim was perceived to present an immediate threat, and because of delusional beliefs about evil deeds or a duty to act. Delusional beliefs were often secondary to auditory hallucinations, but only a small number of subjects in our series reported acting on commanding hallucinations.

Sudden changes in mental state, delusional beliefs about family and close associates, and threatened and actual violence call for swift intervention. Family members and carers who admit to being frightened of mentally ill relatives should not be ignored. Even though most people with mental illness are never violent, our study shows that a first episode of psychotic illness carries a greater risk of dangerous action in response to symptoms. The first episode of psychotic illness should be treated as a psychiatric emergency, with a lower threshold for initiating involuntary treatment.

COMPETING INTERESTS

None identified.

AUTHOR DETAILS

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