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Homicide in Psychiatric In-Patient Facilities: A Review, a Six-Year Study, and a Case Report

REFERENCE: Ladds, B."**Homicide in Psychiatric In-Patient Facilities: A Review, a Six-Year Study, and a Case Report,**" *Journal of Forensic Sciences*, JFSCA, Vol. 40, No. 3, May 1995, pp. 440–444.

ABSTRACT: Many research studies have attempted to explore the apparent relationship between mental illness and violence. These studies have generally examined the rates of violence during one of three phases: before, after, or during psychiatric hospitalization. Violence that takes place during psychiatric hospitalization has unique implications for both patients, treatment facilities, and for research on violence. This area therefore deserves special study. This article focusses on the most extreme violence that can take place on the wards of a psychiatric facility, assaults resulting in death. This article reviews the literature in this area, reports on a study of the incidence of such occurrences in New York State, and reports in some detail on an additional case which occurred prior to the period under study. The study presented here found that amongst all psychiatric facilities in New York State in a six year period there were three cases of in-patient homicide. An average of approximately 90,000 people were served within these facilities during each of the years under study. Suggestions are made for further research in this area.

KEYWORDS: psychiatry, homicide, assault, violence, patient, death

Many research studies have attempted to explore the apparent relationship between mental illness and violence. These studies have generally examined the rates of violence during one of three phases: before, after, or during psychiatric hospitalization. Violence that takes place during psychiatric hospitalization has unique implications for patients, treatment facilities, and for research on violence. This area therefore deserves special study. This article focuses on the most extreme violence that can take place on the wards of a psychiatric facility, assaults resulting in death. This article reviews the literature in this area, reports on a study of the incidence of such occurrences in New York State, and reports in some detail on an additional case that occurred prior to the period under study.

Over the last several decades, there have been numerous research studies on violence that occurs on the wards within psychiatric in-patient facilities [*1–3*]. Most of these studies specify broad definitions of assault. These studies aim to capture all such aggressive incidents and they typically restrict their inquiry to a small population of patients over a brief period of time. This type of research design permits the accurate measurement of large numbers of such incidents and allows statistical comparisons between groups of assaultive and nonassaultive patients. The advantage of research with this type of design is that it has provided information about the kind of patient who may be at highest risk of being assaultive.

Studies with this type of design are generally consistent in finding that assaults are common in the in-patient setting and that such assaults rarely cause serious injury [*3*]. However, precisely because these studies select small pools of subjects and brief periods of observation they would not be expected to capture the relatively infrequent instances of extreme violence.

Indeed, most of the recent research studies have reported no instances of assaults leading to death [*4–10*] or even serious injury [*11–16*]. The limited references in the recent literature to homicide occurring specifically in the in-patient setting are mentioned in passing [*17,18*], in the context of an unusual case report [*19–22*], as occurring on a general medical ward [*23*] or among health care workers in all health care settings [*24*], or in the "unit reception area" within a psychiatric hospital [*25*].

There are a few exceptions to this recent trend. The study by Hunter [*26*] reported on a five year review of assaults in one very large forensic psychiatric facility and it indeed found one case of homicide. The series of studies reported by Kamara et al. [*27*] investigated several different types of institutions in one county in Oregon. In the five year period from 1983-1987, they found two cases of homicide in one state psychiatric hospital and one case in a forensic psychiatric facility, and during 1988-1992, they found one case in total among these facilities. In addition, Vartiainen reported the incidence of homicide among psychiatric in-patients in Finland a 1 per 15,000 patient years [cited in *28*].

The bulk of this recent literature creates the impression that in-patient homicide is very rare. However, one would form a very different impression based on the literature on in-patient violence published during the 19th and early 20th century [*29*]. Numerous instances of in-patient homicide were reported at that time. Stierlin [cited in *29*] reviewed 140 years of records in Germany and noted the first known case of a patient killing a psychiatrist in 1849 and then another such case in 1886. Laehr in 1889 [cited in *29*] reported seven psychiatrists killed by patients, and Edel in 1897 [cited in *29*] reported on a patient killing a hospital employee. Bianchinni [cited in *29*] reported in 1933 that in Italy during the first 30 years of this century there was on average one in-patient homicide every year. Finally, in 1970 Ekblom [*30*] described a 10 year study in Sweden which included eight such cases, including the 1968 killing of a Swedish physician-in-chief.

Received for publication 31 Jan. 1994; revised manuscript received 12 July and 6 Sept. 1994; accepted for publication 7 Sept. 1994.

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Presented at the 46th Annual Meeting of the American Academy of Forensic Sciences, February 1994, San Antonio Texas.

The emphasis and main concern reflected in these few reports from the older literature was precisely on the uncommon but most extreme instances of in-patient violence. Given the abundance of recent research studies on in-patient violence to emerge over the last several decades (see, for example, [*31*]), the small number of recent reports of serious injury calls for clarification. Two diverse hypotheses could account for this difference in reports between the recent and more remote literature. First, this difference could reflect a change in what is occurring in treatment facilities in the last several decades. For example, since the 1950's anti-psychotic medications have been a mainstay of treatment and perhaps the efficacy of these and other medications in treating the underlying psychiatric disorders could account for a diminished rate of the most extreme violence in the in-patient setting. "Deinstitutionalization" is another major historical development that could account for an actual decrease in the number of such events. Over the last 40 years, there has been a massive decrease in the number of patients in psychiatric institutions throughout this country. It may therefore also be the case that the number of patient-related untoward events may also have markedly decreased.

An alternative hypothesis could ascribe the low frequency of reports of extreme violence to limitations in the recent research methodology rather than to any actual change in the rate of their occurrence. The design used in recent research selects small populations during brief periods of observation, as already noted. The aforementioned finding by Hunter [*26*] and Kamara [*27*] in-patient homicide may reflect his selection of a 5 year study period, which is significantly longer than that used in most other recent research.

The current literature, therefore, appears to leave open the question of whether in-patient homicide, and other forms of extreme violence, occur but go largely undetected by research surveys. Whether these events occur, and with what frequency, are questions that are of course important to administrators, policy-makers, clinicians, and the patients in these facilities. In addition, some researchers have indicated that the time may now be ripe for further investigation into precisely the most severe forms of aggression. Eichelman [*32*], for example, has suggested that the most productive focus for further human research on the relationship between violence and mental disorder is the study of "the severely and repetitively aggressive patients." Certain patients with extreme problems, "may hold significant clues in their pathology for the understanding of the biology of aggressive behavior . . ."[*32*].

For these reasons, a study of the most extreme violence occurring in the in-patient setting could be of potential value. This inquiry must begin by simply determining, in a systematic manner, whether there are any incidents of assault leading to death in the in-patient setting. This calls for surveys of large populations of patients over a long period of time, and placing any such incidents within the context of the overall number of persons served within these facilities. The null hypothesis for this study, which would in fact be suggested by nearly all of the recent research in this area, is that there would be no cases of in-patient homicide in the study period.

Methods

This study limited its inquiry to incidents of assault that resulted in death in a psychiatric in-patient facility. To find any such cases, information from a centralized data base of all incidents of violence occurring on any in-patient psychiatric ward in New York State was accessed. This includes all such incidents that were reported to have occurred on any ward among all in-patient psychiatric facilities, including both those that are operated by the State and all other facilities which are all licensed by the State. The study period begins in 1988, with the inception of a computerized data base for any incidents that occur in state-operated facilities and extends, for six years, through 1993. Data from all other facilities were also available for inclusion, as noted. The 'incident report' forms that were relied upon for this study have been in use for some time in all psychiatric facilities in New York and have been previously described and evaluated [*33*].

This investigation did not aim to provide a detailed description of a small number of detected cases. Descriptive characteristics of a small number of assailants would be of only limited use in predicting similar future incidents among other patients. This stems from the problem of unavoidably high 'false positives' whenever predictions are made of an event that has a low base rate. In addition, any comparisons one might make between very small groups would lack statistical significance. This study received approval from an institutional review board.

Results

In the six year period under study, there were three cases of in-patient homicide among all psychiatric in-patient facilities in New York State. These events occurred in adult facilities, during 1988, 1991, and 1992. (During the period under study, there was also an additional fatal assault that occurred among adolescent clients in a residential treatment center for adolescents. This facility, however, is more similar to a community residence than to an in-patient facility and is therefore excluded from further consideration in this paper.)

During the period under study, the overall number of psychiatric beds in the state of New York steadily declined. Data were obtained (personal communication, [*34*]) to estimate the number of psychiatric beds and the number of persons served during an average year in the period under study. These data indicate that there were on average each year approximately 13,000 beds in state-operated psychiatric facilities, 5200 additional psychiatric beds in private free-standing state-licensed psychiatric in-patient facilities (with an approximately 90% occupancy rate) and 1400 psychiatric beds in general hospitals (with an approximately 90% occupancy rate) and 2000 psychiatric beds in Veterans hospitals. This totals approximately 21,600 psychiatric in-patient beds. There were on average 105,000 admissions to these beds each year, two-thirds of which involved unduplicated persons (that is, not people re-admitted within the same year). If this number of unduplicated admissions is added to the approximately 20,000 people who were already in a facility at the start of a calendar year, it follows that approximately 90,000 people were served on average each year in the period under study.

The three incidents all involved female victims. Two of the alleged perpetrators were male patients, and one was female. The female assailant carried diagnoses of schizophrenia, substance abuse and personality disorder. One male assailant who had an extensive history of both psychiatric hospitalizations and also criminal arrests. The other male fatally assaulted a female patient with whom he had been romantically involved. No cases occurred in the period immediately or very soon after admission. These events occurred in public facilities that are designed for long-term stays. Further information about these cases is not available for publication at this time because these cases are still under review or are in various stages of litigation. Because the details of these cases cannot be elaborated upon at this time, an additional case of in-patient homicide that occurred more than a decade ago is here

presented in some detail, with all information drawn from a review of the medical chart.

Additional Case Report

In the middle of a November night several years ago, Mr. A., a man in his mid-20s, was admitted to a psychiatric hospital in New York for the third time in 8 months. At 3:00 A.M. on the first night back at the hospital, Mr. A. walked to the nurses' station to complain of difficulty sleeping. While he stood there, an older female patient approached him and apparently spoke in an abusive manner. Mr. A. falsely perceived that she was on the verge of attacking him. In response to his psychotic fears, he suddenly hit and repeatedly kicked this woman and she died from the injuries.

There was nothing in Mr. A.'s early years that foreshadowed this violent act. He grew up in New York, and his childhood was unremarkable. During his high school years, however, he began to use illicit substances and he was convicted and sentenced to probation for a drug-related offense. In his second year of college his life began to deteriorate further. His use of alcohol, L.S.D., and heroin increased. He worked briefly at different jobs, including as a hospital attendant and as a security guard, but his social and occupational functioning were becoming increasingly impaired.

At around this time in his early adulthood, Mr. A. began to experience persecutory delusions and command auditory hallucinations. He believed that his employers were trying to drive him out of his job by broadcasting radio and T.V. programs about him and he believed people were trying to kill him. After mailing a letter which stated, "If I die, bury me in China," he attempted suicide by cutting his neck, wrist and penis. He required surgery under general anesthesia and was then admitted for his first psychiatric hospitalization. Mr. A. was initially noted to be mute and "catatonic-like" but he improved after being started on the anti-psychotic medication, haloperidol, and he was able to be discharged to his family after a one month hospitalization.

While home, Mr. A. refused his medication and he did not attend his day treatment program. He became 'suspicious and depressed,' and he experienced the urge to kill his brother. Instead of harming his brother, however, Mr. A. again lacerated his own neck requiring surgery. This led to his re-hospitalization, barely a month after his previous discharge. He again improved on haloperidol and was discharged home after a three month stay. Soon after discharge he once again decompensated. He experienced persecutory delusions of people being "after" him. He believed that his sister in particular was stealing his money and he took hold of a butcher knife and threatened to kill her. This led to his third and fateful admission, at which time he was complaining of mounting "tension and nervousness." On the night of this admission, he committed the offense described. This was his first act of violence toward someone other than himself. At his subsequent criminal trial, Mr. A. was found not guilty by reason of mental disease and he was committed to a psychiatric institution.

Discussion

The results of this study are surprising. Three cases of in-patient homicide were noted to have occurred in New York State during this six-year period. Nearly all other research studies on in-patient violence over the last two decades have reported few if any serious injuries from in-patient assault. As we noted earlier, lethal assaults are rarely reported. These reports would have led us to predict that there would be very few, if any at all, of such incidents in this study period. As noted, three cases were in fact found.

This study has also provided some data that may assist in placing this finding in some context. There were approximately 90,000 persons served among all in-patient psychiatric facilities in New York State in each year on average during the period under study. This translates to approximately 0.56 in-patient homicides for every 100,000 people served in the psychiatric in-patient setting in New York State each year. This rate is 10 times lower than the rate reported by Vartiainen in Finland [*28*], and 250 times lower than the rate reported by Kamara [*27*] for the period 1983-1987, and 130 times lower than the rate reported by Kamara [*27*] for the period 1988-1992 in one county in Oregon. These markedly discrepant rates may reflect methodological differences in these studies. The studies of psychiatric patients by Kamara, for example, are limited to the one state psychiatric hospital (and a forensic facility) in one county in Oregon. They extrapolate the rate of fatal assaults per 100,000 people on the basis of a single facility with an average census of 277 (in which there were 2 cases of in-patient homicide in 5 years). Large extrapolations based on such small numbers are difficult to interpret.

The rate found in this study of New York psychiatric in-patient settings may be further compared to other statistics concerning rates of homicide. The rate of 0.56 per 100,000 is much lower than the general rate of homicide in the nation, which was 9.3 per 100,000 people in 1990 and 1992 and which has generally remained over many years close to 10 a year for every 100,000 people [*35*], totaling approximately 24,000 homicides nationally each year. The in-patient rate of 0.56 is further lower than the homicide rate in New York State which was approximately 13 per 100,000 on average during the years under study here, totaling nearly 2,400 homicides each year, or close to 10% of the nation's homicides. (The rate in New York City in 1993 was nearly 26 per 100,000.) Thus, each in-patient homicide reported here in New York State constituted one out of the approximately 4,800 homicides that occurred in New York State during each 2 year period.

One might also note that the number of fatal assaults occurring in non-psychiatric institutional settings in New York State appears to be far greater than in psychiatric institutions. For example, two prisons in New York State each had one homicide each year in the four years since 1991 [*36*]. Fatal assaults by prisoners also occur in Federal penitentiaries, where for example, 11 prisoners were killed by fellow inmates throughout the nation in fiscal year 1994 [*37*].

With respect to those who work in any of these facilities, it may also be worth noting that, in general, homicide is the second-leading cause of death in the work-place nationally, the leading cause of death in the work-place for women nationally, the overall leading cause of death in the work-place in New York City [*38*], and an important cause of mortality among all health care workers [*24*].

Although the homicide rate in psychiatric in-patient settings is far lower than the national and regional rates, these events should perhaps be evaluated differently than such occurrences in society at large. The fatal in-patient assaults noted in this paper, and another case recently widely reported in the press [*39*], occurred in settings where safety and security are expected.

These findings at the very least seem to raise the question of whether the typical design of most of the recent research in this area has resulted in the under-detection of important adverse events. However, it is not clear how generalizable the present study is. It is possible that unique characteristics of the patient population served in New York State differ from that of patients in some

other geographic regions. It is theoretically possible that the type of events noted in this study do not occur in some other regions, although as noted, such incidents have been reported in California [26] and Oregon [27]. Clearly, similar studies of large populations over long periods of time would need to be conducted in other states before any definitive conclusions could be drawn. It would also be useful for such research to investigate occurrences of assault leading to serious injury, as well as those that lead to death. The present findings of three cases in six years, plus the one additional case reported here, of fatal assaults in New York facilities, taken together with the other cases cited in this report support the need for such additional research.

In the meantime, it is natural to wonder whether there are any ways to prevent the type of events referred to in this paper. Further information about the three incidents found in this study might be of some use in this regard. However, this is not currently available and it would be of limited value in attempting to develop a statistical profile of the type of patient who might be at highest risk for committing such an act. It would be difficult to discern the characteristics that might distinguish these few patients from the general population of patients from which they derive. In short, very small numbers of patients do not lend themselves to statistical comparisons to other control groups. In addition, when the base rate of an event is as low as it is in this study the problem of 'false positives' cannot be avoided in any attempt to predict future events.

It follows that there are at least two avenues that further research in this area could take. First, as noted, it would be useful if researchers in other states would conduct similar broad surveys of extreme in-patient violence over long periods of time. Such surveys might also attempt to compare the rate of extreme in-patient violence that occurs in the current era of relatively short hospital stays (and reduced staff-to-patient ratios) to the rate of such occurrences in prior decades when hospitals stays tended to be longer (and staffing patterns more generous). It is conceivable that the relatively recent increase in such trends in some facilities may have contributed to more volatile in-patient environments in which extreme violence is more likely now than it was several decades ago. However, such notions about factors relevant to the cause of extreme in-patient violence await further empirical investigation.

It might also be productive for further research to examine these extreme but rare incidents using, as an alternative to the traditional statistical approach, the 'case study method,' as advocated by Monahan [1] and Eichelman [32]. The in-patient setting indeed lends itself especially well to such case inquires, since it is a controlled environment in which the antecedents and concomitant circumstances of a severe violent act are often uniquely known. Such incidents are often free of the confounds and uncertainties that are usually inherent in reconstructing the violent acts that occur in the community. Further study of extreme in-patient violence, including but not limited to lethal assaults, would therefore seem to be of great value.

We must ask, however, whether further research into this particularly tragic and potentially stigmatic area should be conducted. Several authors have addressed potential concerns about additional reports associating violence with people suffering from mental disorders. In this regard, the views of Bloom [23], (also quoted by Monahan [1]), seem relevant. Bloom writes, "Few are interested in either heightening the stigmatization of the mentally ill or impeding the progress of the mentally ill in the community. Yet this progress is bound to be critically slowed without a realistic look at dangerousness."

We might add that among research into the relationship between violence and mental disorders, studies of in-patient violence concerns itself uniquely with the welfare of people suffering from severe mental illness. In other words, such research is concerned not only with the patients who commit violent acts but also with the other patients in the hospital who are often the victims of these acts. Violent patients deserve to be protected from their own potentially destructive actions. The other patients on a psychiatric ward, and the staff who care for them, also deserve protection from extreme acts of violence. An argument could therefore be made that caring for people with severe mental illness may in fact call for further study into the circumstances in which such rare but unfortunate events occur.

Acknowledgment

Parts of this study were done with assistance from the New York State Office of Mental Health, but the views expressed herein are of the author alone.

The author thanks Michael Perlin and Joel Dvoskin for comments on an earlier draft of this paper.

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