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Abstract

Background: Patients with psychiatric illness are at increased risk of committing violent crime more than individuals in the general population.

Objective: To estimate the risk of violent crime among psychiatric patients with different diagnoses and the clinical factors mediating this risk.

Subjects and method: cross-sectional study was used to analyze data from ElKhanka psychiatric hospital admissions and criminal convictions in 2010-2012. Risk of violent crime in psychiatric patients was compared with type of crime (homicide, set fire, physical and sexual assault), their written diagnoses in medical files and durations of admission and discharge data were considered.

Results: We found increased risk of violent crime among patients diagnosed with schizophrenic disorders 80.6%, followed by bipolar disorder 7.3% and mental retardation 8.1%. Most of the crimes committed were homicide 56.4% and physical assault 20.6%.

Conclusion: prevention of crimes in psychiatric patients needs more attention. The risk assessment, treatment and duration of admission in these individuals need further examination.

Introduction

More than 20 epidemiological studies have reported the association between major mental disorder and violence [1].

These reports typically find that schizophrenia is related to a 4 to 6-fold increased risk of violent behaviour, which has led to the view that schizophrenia and other major mental disorders are preventable causes of violence and violent crime [2].

Conceptual models of violence in schizophrenia postulate that patients with schizophrenia are violent as a consequence of the psychopathologic symptoms of the disorder itself (e.g., delusions, hallucinations) or secondary to comorbid substance use (an established risk factor for violence). An alternative model is that schizophrenia and violent behaviour co-occur because of familial factors (genetic or early environmental) that are related to both (e.g., personality traits such as irritability, poor anger management, or inadequate coping with stress) [3,4].

Patients with bipolar disorder (8.4%) committed violent crime compared with general population controls (3.5%) (Adjusted odds ratio, 2.3; 95% confidence interval, 2.0-2.6). The risk was mostly confined to patients with substance abuse comorbidity (adjusted odds ratio, 6.4; 95% confidence interval, 5.1-8.1). There were no differences in rates of violent crime by clinical subgroups (manic vs. depressive or psychotic vs. nonpsychotic) [5].

A debate is still going on around the value and disadvantage of prolonged institutionalization versus community rehabilitation. Assuming that there is a causal relationship between severe mental illness and violent crime, one way of interpreting this attributable risk fraction is that violent crime would have been reduced by 5.2%, if, hypothetically, all those with severe mental illness had been institutionalized indefinitely [6].

Methods

Study setting

This study is a cross sectional observational study conducted during the period January 2010 through December 2012.

Data on all convictions for violent crime were retrieved for 356 patients admitted in EL KHANKA Psychiatric Hospital, Forensic Department, after approval of the study protocol from the concerned ethical committee in El khanka Psychiatric Hospital. This work has been carried out in accordance with code of ethics of the World Medical Association.

Participants

Data of individuals convicted as being at risk of repeated violence, insight less in regards of their mental illness. They were transferred to forensic hospitals after being psychiatrically assessed and found to have

had major psychiatric diagnosis at the time of the offense according to the ICD 10.

Their violent crime was defined as homicide (Murder), physical assault, stealing (Robbery), any sexual offense (rape, sexual coercion, child molestation, indecent exposure, or sexual harassment), illegal threats (aggressive behaviour), religious disbelief, drug dealers, political crimes and set fire.

Available data on psychiatric diagnoses, duration of admission and type of crime were examined and analysed.

Statistical Analyses

Data were summarized as percentages in relation to clinical variables

Collected data were analysed using statistical package of social sciences SPSS version 17. Qualitative variables were described in number and percentages. Quantitative variables were described in mean and standard deviations. Pearson Chi Square test was used to detect presence or absence of significant association between two categorical variables. Independent sample t-test was used to compare between means of different groups of patients. Analysis of Variance (ANOVA) tests were used when comparing quantitative data between more than two groups. P value was used to indicate the level of

significance ($p < 0.05$ is considered significant, $p < 0.01$ is considered highly significant).

Results

We found increased risk of violent crime among patients diagnosed with schizophrenic disorders 80.6%, followed by bipolar disorder 7.3% and mental retardation 8.1%. Most of the crimes committed were homicide 56.4% and physical assault 20.6% (Table 1-5).

Diagnosis	Frequency	Per cent
Schizophrenia	287	80.6
Depression	6	1.7
Bipolar affective disorder (Mania)	26	7.3
Acute psychotic episode	7	2.0
Mental retardation	29	8.1
Personality disorder	1	0.3
Total	356	100.0

Table 1: Current case diagnoses of patients.

	Offences committed by patients								
	murder	physical abuse	sexual abuse	Robbery	fire	aggressive behavior	religious	drug dealer	political crime
Case diagnosis	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Schizophrenia	175 (87.1%)	59 (84.3%)	8 (53.3%)	10 (71.4%)	9 (50%)	17 (63.0%)	4 (100%)	1 (100%)	1 (100%)
Depression	4 (2.0%)	1 (1.4%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Bipolar affective disorder (Mania)	3 (1.5%)	7 (10%)	0 (0%)	2 (14.3%)		8 (29.6%)	0 (0%)	0 (0%)	0 (0%)
Acute psychosis	5 (2.5%)	3 (4.3%)	0 (0%)	0 (0%)	2 (11.1%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Mental retardation	14 (7.0%)	0 (0%)	6 (40%)	1 (7.1%)	2 (11.1%)	2 (7.4%)	0 (0%)	0 (0%)	0 (0%)
Personality disorder	0 (0%)	0 (0%)	0 (0%)	1 (7.1%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total	201 (100%)	70 (100%)	15 (100%)	14 (100%)	18 (100%)	27 (100%)	4 (100%)	1 (100%)	1 (100%)

$\chi^2 = 111.886$; p -value < 0.01

Table 2: The relation between offences committed by patients and their case diagnosis.

Offences	Consultants' recommendations			
	N	continue treatment n (%)	departure n (%)	go to prison n (%)
Murder	201	189 (95.5%)	7 (3.5%)	2 (1%)
Physical abuse	70	61 (88.4%)	8 (11.6%)	0 (0%)
Sexual abuse	15	13 (86.7%)	2 (13.3%)	0 (0%)
Robbery	14	6 (50.0%)	5 (41.7%)	1 (10%)

Fire	18	11 (68.8%)	5 (31.3%)	0 (0%)
Aggressive behavior	27	16 (59.3%)	11 (40.7%)	0 (0%)
Religious	4	3 (100.0%)	0 (0%)	0 (0%)
Drug dealer	1	5 (100.0%)	0 (0%)	0 (0%)
Political crime	1	1 (100.0%)	0 (0%)	0 (0%)
Total	346			

$\chi^2 = 64.636$; p-value < 0.01

Table 3: The relation between consultants' recommendations and the offences committed by patients.

Case diagnosis	Duration of stay (in years)				
	N	Mean	SD	Minimum	Maximum
Schizophrenia	287	8.90	6.499	1	33
Depression	6	9.33	9.331	2	26
Bipolar affective disorder (Mania)	26	4.27	3.305	1	14
Acute psychosis	7	4.43	1.988	2	7
Mental retardation	29	10.21	7.088	1	25
Personality disorder	1	1.00	0	1	1
Total	356	8.57	6.498	1	33

F = 3.797; p-value = 0.002

Table 4: Relation between the patients' case diagnosis and their duration of stay.

Offence	Duration of stay (in years)				
	N	Mean	SD	Minimum	Maximum
Murder	202	9.62	6.523	1	31
Physical abuse	72	8.76	7.074	1	33
Sexual abuse	15	11.60	6.208	3	22
Robbery	14	3.43	2.901	1	11
Fire	18	4.56	5.159	1	24
Aggressive behavior	27	6.26	4.981	2	20
Religious	4	3.75	2.217	1	6
Drug dealer	5	1.20	0.447	1	2
Political crime	1	2.00	0	2	2
Total	358	8.58	6.578	1	33

F = 4.960; p-value < 0.01

Table 5: Relation between the offences committed by patients and their duration of stay.

Discussion

The psychiatric offenders could be distinguished by a pervasive and stable pattern of antisocial behaviour evident from at least mid-adolescence. More than three-quarters (77.8%) of the forensic patients had previously been admitted to general psychiatric services; 24.3% of the general psychiatric patients had a criminal record. Offences had been committed by 39.8% of the forensic patients and 10.8% of the general psychiatric patients before their first admission to general psychiatry [7]. The past ten years have witnessed a surge of research on adolescent offenders with mental disorders [8]. The research shows that youths with delinquencies often have mental disorders, and youths with mental disorders are at greater risk of delinquencies. This "overlap" of the two populations is a good deal of research as the majority when examined as a proportion of all delinquent youths or of all youths with mental disorders. Yet it is substantial, especially among the subset of delinquent youths in juvenile justice secure facilities, where about one-half to two-thirds meet criteria for one or more mental disorders [9].

In our study, we examined adult psychiatric patients, with no recorded data about previous indulgence in crimes as adolescents. Some prospective studies have examined the paths of specific childhood disorders toward adult offending, especially hyperactivity, conduct, and substance use disorders [10]. However, we observed in this study the defect to record data about childhood mental disorders, personality disorder and substance abuse. Though rarely prosecuted, the criminalization of suicide may be an issue in civil litigation. Suicide was a crime in common law and remains a crime in several U.S. jurisdictions [11,12].

In these jurisdictions, the beneficiary of a claim against a psychiatrist or psychologist alleging negligence in the patient's care leading to suicide must prove that the individual who attempted or committed suicide was of "unsound mind" (thus lacking the mental capacity to commit a crime). In contrast to the above literature, attempted suicide was not considered a crime while religious disbelief was the written diagnosis for one patient among the examined group.

The intent to commit suicide may also be an issue in insurance litigation. The determination of an individual's mental capacity, or "soundness of mind," to form an intent to commit suicide may be of consequence in claims for recovery of death benefits under life insurance policies; disability policies; and homeowners policies containing intentional injury exclusion clauses that deny coverage for intentional violent acts; and in legal actions involving workers' compensation benefits, malpractice, and suicide committed as a consequence of injurious acts by third parties [13].

The percentage of discharged patients was very low in relation to the long durations of admission. This points to the importance of revising criteria of evaluation of risk and recovery in this group of psychiatric patients.

This study has a number of limitations. Psychiatric diagnoses were done after the crime and taken for the study from the hospital medical records. Patient's files didn't include the duration between previous discharges and committing crime date and the number of previous violent behaviour committed by the same patient.

Also this study included only individuals who are sentenced by the court to psychiatric hospitals but not those in prisons or not exposed to legal detention for fine acts of familial threats or suicide.

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