Bipolar Affective Disorder with Co-morbid Substance Abuse in Relation to Criminal Offending

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Background: High rates of co-morbid alcohol and drug disorders have previously been found among individuals with severe mental illnesses such as schizophrenia and bipolar affective disorders. Clinical and social outcomes have been reported to be worse in this group and service costs greater than in individuals with severe mental illness only(1). Men with schizophrenia who also had a record of substance misuse were over eight times more likely to appear among the violent offenders, and four times more likely to be convicted of homicide, than those without co morbid substance misuse. A similar pattern was found in affective disorders. The prevalence of substance problems among people suffering from severe mental disorders is high, and seems to be associated with greater use of in-patient services and also associated with higher rate of criminal offending (2).Research has indicated that patients with severe mental illnesses, such as schizophrenia or bipolar affective disorder, have high rates of concurrent mental and behavior disorders due to misuse of alcohol and non-prescribed drugs (3). Clinical and social outcomes may be significantly worse than in those with severe mental illness alone. They also have substantially higher rates of offending and imprisonment (4).

Key Words: Bipolar affective disorder, Substance abuse, Criminal offending

The Aim of the Study:

this study aim to investigate whether bipolar affective disorder with co-morbid Substance misuse is associated with higher rates of criminal offending in the Malaysian setting and assess the prevalence of criminality among a sample of psychiatric patients with bipolar affective disorder with co-morbid Substance misuse in Malaysia. another purpose of the study is to examine the association between offending and contact with the criminal justice system in individuals with bipolar affective disorder and abusing drugs

Major hypotheses were that:

(a) Violent and threatening behavior and criminal offences would be more strongly associated with patients who have bipolar affective disorder and abusing drugs than with bipolar affective disorder alone.

(b) The differences persist even when potentially confounding demographic variables such as age; gender and ethnicity are controlled.

Material and Methods:

The study was designed as a **retrospective** case control study. All patient diagnosed as bipolar affective disorder, and had history of criminal offences was matched to a patient of the same sex, age and primary diagnosis of bipolar affectivedisorder being discharged from a general psychiatric ward in Hospital Bahagia Ulu Kenta (HBUK). Diagnoses of bipolar affective disorder, is a clinical diagnoses established according to DSM-IV and ICD10 criteria. Case-notes were reviewed to collect data regarding social life, criminal record and service used. The data was analyzed using SPSS

Inclusion criteria:

-All patients diagnosed as bipolar affective disorder and committed criminal offence in (HBUK) from 1980 – June 2004. A control group, drawn from the bipolar affective disorder patient regardless of criminal offending or substance abuse, was included in the study and was matched with the patients of bipolar affective disorder who committed criminal offences with regard to sex, age and ethnic group.

Results:

-The total number of patient diagnosed as bipolar affective disorder included in the study is 120 patients.

- 60 bipolar affective disorder patients who committed Criminal offences were matched to 60 bipolar patients without criminal offence for age sex and gender. **About 93% of the patients who committed criminal offences and abused substance were males. Only 7% were females.**

The patients with bipolar affective disorder who were criminal and abused drugs are 71.7% compared to 20% who abuse drugs only in the control group.

It was also proved that there is significant association between bipolar affective disorder patient who abused substance and criminal offending, this group of patients have higher tendency to be more violent, aggressive and to commit criminal offences.

It is also found that about 90% of bipolar affective disorder patients admitted to HBUK during the period time are in manic phase, and they reported to have at least one time history of violence and aggression, and their families cannot control.

The bipolar affective disorder patient with history of drug abuse reported more incident of violent and criminal offending. They have higher number of readmission and longer duration of stay in the hospital. This resulted in higher cost and greater consumption of hospital service.

The type of drug abused is mostly cannabis 80% followed by ecstasy 70% and heroin 60%. Most of the patients who abuse drugs are poly drug abusers. The study also reveals that the medication in use for treatment of bipolar affective disorder patients in HBUK is Lithium bicarbonate and typical antipsychotic in 90% of the patient.Sodium,valporate,carbomazabine and atypical antipsychotic are used in only 10 % of the patient. This may affect the treatment out come in most of the bipolar affective disorder patients. Individuals with bipolar affective disorder with co-morbid Substance abuse were significantly more likely than those with bipolar affective disorder without co-morbid Substance abuse to report history of committing an offence. P=0.0001

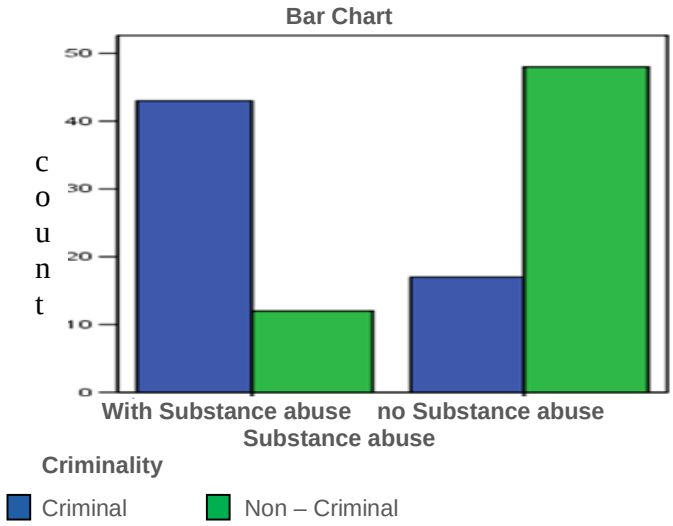
Table 1: Bipolar Patient's Criminal Offender and the control group with and without substance abuse:

	Bipolar pt with criminal offending (60pt)	Bipolar pt without criminal offending (60pt)	Criminal With substance abuse (43pt) (71.7%)	Criminal Without substance abuse (17pt) (28.3%)	Non criminal with substance (12pt) (20%)	Non criminal without substance (48pt) (80%)
Male	54 (90%)	54	40 (66.6%)	14	11	43
Female	6 (10%)	6	3 (5%)	3	1	5
Malay	29 (48.3%)	29	20 (33.3%)	9	5	24
Chinese	11 (18.3%)	11	8 (13.3%)	3	4	7
Indian	17 (28.3%)	17	14 (23.3%)	3	3	14
Others	3 (5%)	3	1 (1.6%)	2	-	3
Total	60	60				

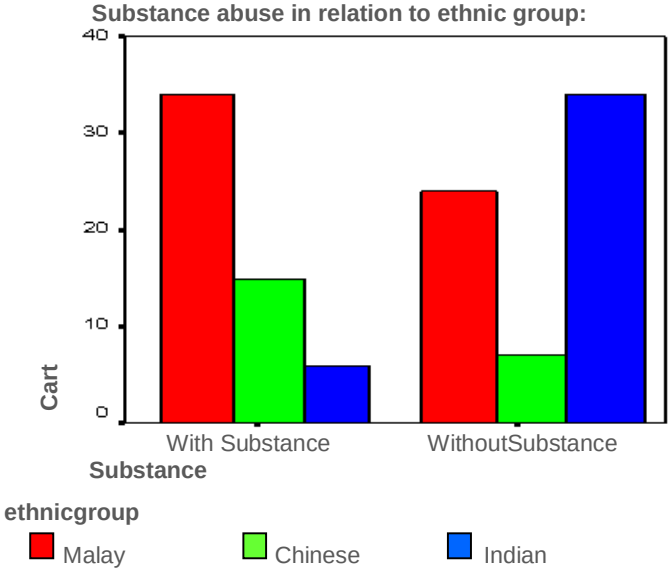
-Criminal With substance abuse (43pt)(71.7%) -Criminal Without substance abuse (17pt)(28.3%) -Non-criminal with substance (12pt)(20%) -Non-criminal without substance (48pt)(80%)

Table 2: Bipolar patient with Criminal Offending Risk Estimate:

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio For Substance abuse (With –substance abuse/ no-substance abuse)	10.118	4.342	23.574
For cohort criminality= criminal	2.989	1.941	4.603
For cohort criminality= non-criminal	.295	.178	.497
N of valid Cases	120		



Graph 2: Bipolar patient with criminal offending and Substance abuse in relation to ethnic group:



Discussion:

Research evidence suggests that people with major mental disorders, such as schizophrenia and bipolar affective disorder, are more likely than others to commit a violent offence (Coid, 1996).(22), although violence by the severely mentally ill accounts for only a small proportion of the annual number of violent acts in the community (5).This risk is diminished, but persists to a significant degree, when demographic factors such as socio-economic status are taken into account.

Some studies encompass non-violent illegal behaviors, and find rates for criminal behavior in general to be higher among people with psychotic illness than in the general population (6). Recent research has focused on identifying the particular characteristic of the minority of severely mentally ill individuals who are at high risk of aggression and offending. Age, gender, social class and employment status was found to be related to violence among the mentally ill, although these associations are not strong enough for demographic factors to be reliable in identifying high-risk individuals in clinical practice. This study aimed to examine the association between offending and contact with the criminal justice system in individuals with bipolar affective disorder and abusing drugs. And we found that abuse of drugs may be an important factor in criminal offending among patient with bipolar affective disorder.

Substance misuse is a significant factor in acts of violence among members of the public who are not mentally ill, and recent work suggests that it may also be important in assessing risk of violence among the severely mentally ill. Recent US research has found higher rates of hostile behavior legal problems and violent behavior in this group of individuals who meet criteria for diagnoses of both severe mental illness and of an alcohol or drug misuse disorder than among individuals with mental illness only, so that this combination of disorders may be important in predicting risks of violence and offending among people with mental illness (8).

Alcoholics and drug users of both sexes had a significantly higher criminality rate. Alcoholism and drug abuse contribute significantly to criminal behavior, independent of socio-demographic factors (9).

Studies showed a higher criminality rate of mentally ill patients than in the general population (12). The presumed increase in the criminality rate of the psychiatric population has been considered to be a consequence of deinstitutionalisation and the criminalisation of the mentally ill who are transferred into the penal system instead of being cared for by the mental health system. Deinstitutionalisation also contributes, as it is likely to have made access to alcohol and drugs easier for people with severe mental illnesses than for a previous generation, who were more likely to be long-term residents of large mental hospitals (10).

There was also some tendency for male patients with affective disorders to be criminally registered more often. There is high tendency for males with affective disorders to have a higher criminal rate than controls. This is also proved to be true in this study as about 90% of the patients who committed criminal offences were males.

More male patients suffering from alcoholism/drug use had a criminal record because of violent offences. Alcohol- and drug-abusing men were 5 times, and alcohol-and drug-abusing women 14.5 times more likely than control subjects to be criminally registered. The importance of alcohol/drug abuse/dependence for criminal behavior has been well established in studies of different samples including geriatric and female offenders (11).Our results prove that the diagnosis of bipolar affective disorder and co morbid drug abuse make an independent contribution with regard to criminal behavior. Thus, the successful therapy of these disorders may contribute to the reduction of the criminality rate.

Previous work from this study (2) has shown that patients with dual diagnosis used significantly more in-patient days than other patients. However, the number of admissions was not significantly different. A higher (although non-significant) proportion of patients with dual diagnosis used the emergency clinic of the local psychiatric hospital. In addition, Scott found that dual diagnosis patients had a greater history of criminal offending and hostile and aggressive behavior. People with a dual diagnosis of serious mental illness and substance misuse may be difficult to treat (14, 15).

Clients with a dual diagnosis are marginalized by society, and are more likely to be homeless and involved with the criminal justice system. They are at an increased risk of inflicting violence on themselves or others, and are more likely to have physical ill health (16).

Swartz et al (1998) examined 331 involuntarily admitted in-patients with severe mental illness (predominantly schizophrenia and other psychotic disorders, 26.9% bipolar patients and 5.1% major depression) who were awaiting a period of out-patient commitment: 33.8% had problems related to alcohol or drugs and 17.8% of the study group (*n*=59) had engaged in serious violent acts before admission. The study confirmed the finding of substance misuse being a major risk factor for violence in patients with a major mental disorder (16). Wallace et al (1998) concluded that the increased offending in schizophrenia and affective disorder is modest and often mediated by coexisting substance misuse.

In the Swedish cohort, men with major mental disorders (schizophrenia, major affective disorders, paranoid states, other psychoses) were 2.5 times more likely to commit a crime than other men and four times more likely to commit a violent offence.

Data from the Epidemiological Catchments Area study (Regier et al, 1990) suggest a four-fold increased risk of substance misuse in schizophrenia and a six-fold increased risk in mania. (17).In terms of broader epidemiological data in the past year, Regier *et al*. (7) published cross-sectional community based data on the comorbidity of mood disorder, anxiety disorder and substance disorder. The authors gave figures of 34% mood disorder comorbid with substance misuse and 17% for those with anxiety disorder with substance misuse. (18)

Lin *et al*. from Taiwan examined the prevalence of substance use disorders among inpatients with bipolar and major depressive disorder in a hospitalized population. It is interesting because in a different ethnic group from the US studies, the authors found that 18% of their mood patients screened positive for substance misuse (19).In a 1990 study, Swanson and colleagues used data from the Epidemiologic Catchment Area study. Compared with people who had no diagnoses of a mental disorder, the incidence of violence was 5 times higher among people with serious mental illnesses such as schizophrenia, major depression, and mania or bipolar disorder, and 12 to 16 times higher among persons with alcohol or substance use

disorders, even after controlling for demographic factors (20, 21).In this study it was found that the medication in use for treatment of bipolar affective disorder patients in HBUK is Lithium bicarbonate and typical antipsychotics in 90% of the patient Na valporate, carbomazabine, and atypical antipsychotics are used in only 10 % of the patient. This may affect the treatment outcome. Weiss *et al*.Looked at medication compliance in a retrospective study amongst patients with bipolar and substance use disorder. The significant medications are mood stabilizers and they found greater compliance with sodium Valpoate than with lithium. The authors highlighted this as a new concern for clinicians looking after these patients (23).

Conclusions:

Abuse of drugs is an important factor in criminal offending among patient with bipolar affective disorder.

CLINICAL IMPLICATIONS:

- Having bipolar affective disorder and substance misuse has a highly significant association with aggressive and hostile behavior, lifetime history of committing an offence and recent history of assault.

-Investigation of substance use is important for accurate assessment of risk of aggression among the severely mentally ill.

-Developing treatment strategies that target dual diagnosis may be an effective way of reducing risk of aggression and offending.

Study limitations:

-Perhaps the most significant limitation is that, the study examined only associations, and cannot be interpreted as proof of a causal link between substance misuse and offending.

-An important possibility is that substance misuse might be only one among a cluster of problems experienced by a group of young mentally ill people who live in poor social conditions, are hostile to or uninterested in mental health services, feel they have little prospect of working or being accepted in conventional society, have unstable relationships and, and may become involv involved in a range of illegal activities.

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