

SUBSTANCE ABUSE AND PSYCHIATRIC CO-MORBIDITIES: A CASE STUDY OF PATIENTS AT MATHARI PSYCHIATRIC HOSPITAL, NAIROBI, KENYA

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ABSTRACT

Substance abuse co-morbidity with psychiatric disorders is common and has been widely reported, except in Kenya. This study aimed to determine the prevalence, pattern and socio-economic burden of a dual diagnosis of substance abuse disorder and other psychiatric conditions. This was a cross-sectional descriptive study of 691 patients admitted at Mathari hospital. Only 42 patients had a first working diagnosis of substance abuse but nearly thirty-five percent of the patients scored for a Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition) diagnosis of alcohol dependence/abuse. There was high co-morbidity of alcohol abuse/dependence with opiate, sedative and *khat* use, as well as with mood and other psychotic disorders. Substance abuse disorders correlated significantly with other psychiatric disorders. Only 12 patients were in a drug rehabilitation unit, all of whom had a dual psychiatric diagnosis of affective disorder. There were high co-morbidity rates of substance abuse in both general psychiatric wards and drug rehabilitation units.

KEY WORDS: substance abuse, co-morbidity, psychiatric disorders, Kenya

INTRODUCTION

In clinical settings, co-morbid substance abuse disorders are common among people receiving in-patient psychiatric treatment (Eisen, Youngman, Grob, & Dill, 1992; Greene, Ennett, & Ringwalt, 1997) and conversely, psychiatric co-morbidity is common in those in treatment programs for addiction (Bukstein & Kaminer, 1994; Kaminer, Bukstein, & Tarter, 1991; Stowell & Estroff, 1992). Most

studies have generally found that onset of psychiatric disorder precedes substance abuse disorder (Angold, Costello, & Erkanli, 1999; Brook, Whiteman, Gordon, & Cohen, 1986; Brook, Whiteman, Finch, & Cohen, 1996; Elliot, Huizinga, & Menard, 1988; Rohde, Lewinsohn, & Seeley, 1996; van Kammen & Loeber, 1994). This may be related to a longer duration of time required to achieve Diagnostic and Statistical Manual of Mental Disorders – Version IV (DSM – IV) (American

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Psychiatric Association [APA], 1994) criteria for substance abuse and dependence than for other disorders. Thus the likelihood that an individual will seek treatment for a particular disorder increases the presence of a second co-existing disorder (Boyle & Offord, 1991; Brook, Cohen, & Brook, 1998).

Available data on the consequences of alcohol abuse and alcoholism in the United States of America (USA) and Canada (World Health Organisation, 2004; Rehm, Baliunas, Brochu, Fischer, Gnam, Patra, Popova, Samocinska-Hart, & Taylor, 2006) showed that there were both direct and indirect costs. The magnitude of the problem when illustrated in financial terms, showed for example, the overall economic cost of drug abuse in the United States rising at the rate of 5.3 percent annually from \$107.5 billion in 1992 to an estimated \$180.9 billion in 2002. Direct costs included those arising from medical expenditures to treat the medical consequences of alcohol abuse and alcoholism and law enforcement efforts to curb crime attributable to drug use. Other direct costs were vehicle collision damage as a result of motor accidents caused by drunken driving, fire damage and deaths because of impairment of sensory judgement or physical function by alcohol consumption and a range of costs associated with providing employee support at the workplace. Significant loss of productivity in the workplace or at home, premature death, illness and injury as a result of alcohol use were all considered under indirect costs. In South Africa, the health, social and economic consequences associated with problematic alcohol use have been documented as the burden of harm under the same dimensions as those presented earlier (Parry, 2000). In a survey by Whyte (1991) carried out in Tanzania, it was reported that financial loss was mentioned 45 times in a sample of 170 subjects. Families spent large sums of money in payment to traditional healers.

There is no documented study in Kenya that focuses on the co-morbidity of substance abuse and psychiatric disorders in patients. The aim of this study was therefore to find out whether or not there is a co-morbidity of substance abuse

disorder with psychiatric disorders among in-patients admitted at Mathari hospital.

METHOD

In an attempt to improve comprehensive history-taking in line with DSM-IV-TR (Text Revision) criteria (American Psychiatric Association [APA], 1994), the Structured Clinical Interview for DSM-III-R Diagnoses (SCID) (Spitzer, Williams, & Gibbon, & First, 1990) format was used on all patients admitted at the Mathari Hospital over a period of one month in June 2004. The SCID provides a symptoms profile as well as a DSM-IV diagnosis. Experienced psychiatric nurses were trained for this exercise in an attempt to test the feasibility of adopting this procedure. This was done in order to improve and standardise diagnostic techniques as a quality control exercise in the routine care of patients. Informed consent was obtained only from those who were not too sick or too disturbed to participate in the study. Those who were very sick were recruited into the study through assent and consent for their participation was obtained from their caregivers. A total of 691 patients were recruited. Those who met the SCID criteria of substance abuse were further interviewed using a semi-structured questionnaire to elicit information on their socio-economic characteristics.

For each patient, the hospital diagnosis and clinical management data were extracted from their notes. The data were analysed using SPSS version 11.0. The DSM-IV diagnoses of alcohol, substance abuse and psychiatric disorders were correlated with clinical diagnoses in the same patients.

RESULTS

The data collected showed that this was a relatively young population (age range: 17 – 64 years; mean age: 31.97 years) as 82.1% were aged 40 years and below. More than

Table 1. DSM-IV Diagnoses of Alcohol Dependence and Other Co-existing Psychiatric Disorders

Diagnosis	Current Admission Differential Diagnosis*			
	D1	D2	D3	D4
Adjustment disorder	0	3	1	0
Mood disorder	48	3	2	0
Delusional disorder	1	1	0	0
Psychotic disorders	69	10	1	0
PTSD	1	0	0	0
Schizo-affective disorder	6	3	0	0
Schizophrenia	81	12	4	1
Substance use disorder	31	15	3	0
N	238	44	11	1

*D1 – Working diagnosis

D2 – 2nd working diagnosis

D3 – 3rd working diagnosis

D4 – 4th working diagnosis

half (58.4%; n = 139) of the patients were single, 26.1% (n = 62) were married while 12.6% (n = 30) were widowed, divorced or separated. More than one third (34.4%; n = 238) of the patients met the DSM-IV criteria for a substance abuse disorder and all of them had a diagnosis of alcohol dependence. The proportion of male patients in this group was 82.4% while that of females was 17.6%. Of those with a substance abuse disorder (n = 238), 55.9% (n = 133) or 19.2% of the total sample (N = 691) were dependent on opiates. Nearly three-quarters of the substance abusers (71.4%; n = 170) representing a quarter of the total sample, were dependent on sedatives, while 140 (58.8% of the substance abusers or 20.3% of the total sample) recorded stimulant dependence.

The hospital and differential diagnoses of the 238 patients are summarised in Table 1. Schizophrenia accounted for 34% (n = 81) of the first hospital diagnoses making it the most common diagnosis. It was followed in order by other psychotic disorders (29%), mood disorder (20.2%) and substance abuse disorder (13.0%). It is noteworthy that although alcohol dependence was the most common SCID substance abuse disorder, it was hardly recorded as a hospital diagnosis.

Table 2 summarises the correlations between SCID core symptoms and alcohol/substance abuse disorders, and between

alcohol and other drugs. The results suggest high co-morbidity of SCID core symptoms with alcohol and other drugs and also, co-morbidity between alcohol and other drugs. When the DSM-IV diagnoses of alcohol, substance abuse and psychiatric disorders were correlated with clinical diagnoses in the same patients, the highest number of significant correlations was seen between psychiatric disorders and alcohol abuse. The correlations of minor depressive and recurrent grief disorders with alcohol abuse were very strong. Although not statistically significant, there was co-morbidity of all substance abuse with depressive episodes, dysthymia and minor depressive episode. The other correlations which reached significance were negative.

DISCUSSION

The results showed that a majority of the patients with DSM-IV-TR substance abuse disorders (87%) had different first working diagnoses. Schizophrenia was diagnosed most frequently followed by other psychotic disorders, mood disorders and substance abuse disorder. There was likelihood that people in the community with substance abuse disorder only seek treatment if a co-existing psychiatric disorder starts to manifest itself. The co-existing disorder makes patients unable to

Table 2. Substance dependence/abuse correlations with psychiatric disorders (Pearson correlations)

Disorders	Alcohol	Opioids	Sedatives	Stimulants
Depressive episode	.000	(a)	.239	.060
Dysthymia	.532	(a)	.048	.000
Minor depressive disorder	.745 (**)	(a)	.118	.856 (**)
Recent major depressive episode	-1.000 (**)	(a)	(a)	(a)
Past major depressive episode	-1.000 (**)	(a)	(a)	(a)
Current manic episode	-1.000 (**)	(a)	(a)	(a)
Autonomic symptoms	.141	.089	-.145	-1.000 (**)
Panic disorder	.542	-1.000 (**)	.816	(a)
Delusions	-.575	-.873	.341	(a)
PTSD1 (past)	(a)	.316	-.404	-.667
PTSD3 (current)	.010	.001	.001	.001
Generalized anxiety disorder	-.417	-.816	-.937 (*)	(a)
Acute stress disorder	-.172	.971	.971	(a)
Sedatives	-.525 (*)	.970 (**)		.662
Stimulants (<i>khat</i>)	-.875	(a)	.662	
Opioids	-.408		.970 (**)	(a)
Hallucinations	.060	(a)	.271	(a)
Negative symptoms	-.200	-.577	.372	(a)
Schizophrenia	(a)	(a)	.353	(a)
Alcohol		-.408	-.525 (*)	-.875
Recurrent grief disorder	.806 (**)	(a)	-.394	.000
Somatisation disorder	-.577	(a)	-.342	(a)
Current acute stress disorder	.198	-.577	-.189	(a)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

a Cannot be computed because at least one of the variables is constant.

Note: The negative correlations (whether or not significant) denoted 'no co-morbidity.'

function or adjust effectively in the society. The findings in this study agree with those from the US (Brook et al., 1998; Bailey, 1992). The patients may have started using substances of abuse/dependence predominantly because psychological risks such as other psychiatric disorders provided a basis for picking the habit. This was demonstrated by the strong significant correlations seen between alcohol abuse and certain psychiatric conditions. However, the relationship between substance abuse and co-morbid psychiatric disorders may be non-specific and it was not within the scope of this study to determine whether or not psychiatric symptoms or disorders developed as a consequence of substance use or abuse or vice versa.

The fact that a substance abuse disorder did not lead to help-seeking behaviour by patients is confirmed by the results that show that less than 5% had taken the initiative to

look for help for a drug use problem. Alcohol dependence was the most frequently recorded substance abuse disorder (see Table 2). Once an individual started using one substance of dependence, the risk of using other substances seemed to increase (Bailey, 1992). The resultant significant association with other mental and substance abuse disorders is a finding also obtained in the US (Bukstein & Kaminer, 1994; Eisen et al., 1992; Elliot et al., 1988; Greene et al., 1997; Kaminer et al., 1991; Rohde et al., 1996; Stowell & Estroff, 1992). Therefore, by the time the patients sought psychiatric treatment, they were presenting with more than one substance abuse disorder, a finding also established in studies conducted in the US and Canada (Bailey, 1992; Brook et al., 1998; Boyle & Offord, 1991).

The significant positive correlation between minor depressive illness and alcohol ($p < 0.01$) and stimulant use ($p < 0.01$) is not surprising

given that these drugs could have been used to give the depressed patient a sense of well-being. This could also be inferred from the finding of a negative correlation between alcohol use and recent or past depressive illness – that is, the patients did not use alcohol when they were not currently depressed. The same explanation is likely for the correlation between recurrent grief disorder and alcohol use ($p < 0.01$). The concurrent use of opioids and sedatives ($p < 0.010$) can be explained by the fact that sedatives may have been used to deal with the anxiety and restlessness associated with the withdrawal effects of opioids.

The co-morbidity of autonomic symptoms with alcohol and opioid use was most likely a reflection of the withdrawal symptoms associated with the use of these drugs, whereas the co-morbidity of panic disorder and alcohol and sedative use was a reflection of the use of these substances to control panic attacks. The co-morbidity of both delusions and hallucinations with sedatives illustrates that the sedatives were being used to treat the psychotic symptoms and conditions. Concurrent abuse of sedatives and opioids may have been because of the reasons already discussed, while simultaneous stimulant and sedative use (a common practice) may have been because sedatives are normally used to control the effects of stimulants. Noteworthy is that there was no co-morbidity of use of alcohol with other drugs. The negative correlation between current manic episodes and alcohol use was contrarily to expectation as uninhibited patients as happens in mania are likely to indulge in alcohol. In summary, the study showed that substance abuse disorders remain undiagnosed and are therefore not managed. There was high co-morbidity of DSM-IV diagnoses of alcohol dependence with other substance abuse disorders as well as with psychiatric conditions. Several DSM-IV-TR diagnoses and/or symptoms had significant correlations with DSM-IV diagnoses of substance abuse disorder. These results have profound clinical and practice policy implications. The significance of dual diagnosis and dual management is critical as they call

for compressive history taking, regardless of the presenting condition. This practice should apply in psychiatric, detoxification and rehabilitation units as well as in community and home-based (out-patient) management. Failure to recognise dual diagnosis in a substance abuse disorder will mean that only partial treatment and management is provided to the patient. Collateral information will assist in the authentication of whether or not a substance abuse disorder exists.

ACKNOWLEDGEMENTS

The authors would like to thank the staff at Mathari Hospital who facilitated the data collection and the patients who participated in the study; an anonymous Kenyan philanthropist for funding this study; the Africa Mental Health Foundation for logistic and technical support; Grace Mutevu of AMHF for all the data entry, cleaning, typing and co-ordination, and Patricia Wekulo for editing the paper.

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