

FREQUENCY OF PSYCHIATRIC DISORDERS AND ORGANIC ILLNESS AMONG PATIENTS REPORTING WITH ACUTE BEHAVIOURAL DISTURBANCE

Beenish Hassan Khan, Farrukh Saleem Shah, Chaudhary Ali Nawaz

Pakistan Naval Ship (PNS) Shifa Hospital, Karachi Pakistan

ABSTRACT

Objective: To determine the frequency of psychiatric disorders and organic illness among patients reporting with Acute Behavioural Disturbance to a tertiary care psychiatric facility.

Study Design: Cross sectional study.

Place and Duration of Study: This study was conducted at Psychiatric Emergency reception of Armed Forces Institute of Mental Health, Rawalpindi, from Jun 2014 to Dec 2014.

Methodology: This study involved 200 patients of both genders, having ages between 18 to 65 years, presenting with Acute Behavioral Disturbance in the Emergency Department. Patients were followed and required laboratory and radiological tests were done. Final diagnosis was recorded and then data analysis was done.

Results: The mean age of the patients was 34.98 ± 10.63 years. There were 128 (64%) males and 72 (36%) females patients in the study group. The mean duration of symptoms was 9.28 ± 4.35 days. Mood disorders were the most frequent and were diagnosed in 73 (36.5%) patients followed by substance abuse disorders (34.5%) and schizophrenia (21.5%). Total 15 (7.5%) patients had underlying organic illness.

Conclusion: The outcome of patients reporting to Psychiatric Emergency with Acute Behavioural Disturbance is variable. The significantly high frequency of underlying organic illness among patients, highlights the need for emphasizing quality training of psychiatrists, casualty medical doctors, primary healthcare providers as well as paramedics.

Keywords: Behavioral problems, Emergency services, Psychiatric.

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INTRODUCTION

Psychiatric disorders are a common presentation in Emergency Department of a tertiary care hospital, particularly among young males¹. Psychiatric problems account for about 5% of all Emergency Department visits¹. Psychiatric Emergencies as defined by the American Psychiatric Association are "an acute disturbance of thoughts, behaviour, mood or social relationships, which requires immediate intervention as determined by the patient himself, family, or his social unit" and these also constitute a huge burden on the health care system². There is a significant diagnostic dilemma in differentiating acute psychiatric disorders from underlying medical conditions which may present a similar clinical picture³. Emergency department physicians and

general practitioners are usually the first contact in such cases and must be well trained in this respect⁴.

The most prevalent diagnoses among patients presenting in Psychiatric Emergency are schizophrenia (47.14%), mood disorders (21.14%), substance abuse disorders (18.57%), organic mental disorders (7.14%), neurotic disorders (0.37%) and other ICD-10 disorders (4.64%)⁵.

Since psychiatric disorders are gaining more public awareness in our society, and the stigma is gradually reducing, the influx of patients with psychiatric symptoms is on the rise in both outpatient and Emergency Departments of local hospitals. Our health care system lacks an effective screening methodology for such patients. There is also a lack of proper primary care and referral system in most of the medical setups¹. Often the patients with Acute Behavioral Disturbances are brought directly to psychiatric emergency due to their behavioral symptoms but

Correspondence: Dr Beenish Hassan Khan, Department of Psychiatry, PNS Shifa Hospital, Karachi Pakistan

Email: beenzhassan@gmail.com

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actually have an underlying organic diagnosis which is liable to be missed.

The differentiation of organic conditions from psychiatric illness can be at times difficult when patients come to an emergency department with predominantly behavioural symptoms⁶. When the clinical differentiation between functional and organic disease is unclear on the basis of available information, a patient should be thoroughly evaluated to exclude a toxicological cause or a medical disorder by carrying out relevant examination and screening as well as diagnostic tests. A missed diagnosis may lead to life threatening situation for the patients⁷.

The important steps in managing such patients are detailed interview from patient and attendant, collateral information, detailed physical examination and routine laboratory tests. Specialized investigations may be required including toxicological tests^{8,9}. Medical assessments and clearance is required in acute cases but it is a common area of disagreement between medical and psychiatric health care providers¹⁰. The ideal setting in such cases is multi-disciplinary team approach.

Psychiatric or medical help may be sought using video conferencing where ever required. Paramedics and primary healthcare providers may be trained in this respect to evaluate and manage patients of far flung areas where specialized medical care is not available.

There is a dire need to attain data in our local population regarding prevalence of different psychiatric disorders as well as organic basis of Acute Behavioral Disturbances. This study will allow us to have a fair idea of such cases and be vigilant in future while managing such emergencies so as not to miss any life threatening organic conditions which requires prompt treatment.

METHODOLOGY

It was a descriptive cross sectional study. It was conducted at Psychiatric Emergency of Armed Forces Institute of Mental Health

(AFIMH) Rawalpindi, from June 2014 to December 2014.

All patients with Acute Behavioral Disturbance starting from 12 hrs to within 2 weeks of presentation and patients with ages between 18 and 65 years of both genders were included. While patients with past history of known psychiatric disorder and who were already on medication were excluded from the study.

Permission from hospital ethical committee was taken. Two hundred patients from Psychiatric Emergency at AFIMH were selected using WHO sample size calculator with 95% Level of confidence, 7.62% Population proportion and 0.0363% Absolute precision⁵. Patients were selected by non-Probability purposive sampling.

Written informed consent from all the patients/attendants was taken. Demographic and personal data along with presenting complaints were noted on a specially designed Performa. Required laboratory and radiological tests were done. All the patients were followed and their final diagnosis was recorded. All the collected data was entered and analyzed through SPSS-17. Mean and standard deviation were calculated for quantitative data like age, number of children and duration of onset of symptoms. Frequency and percentage were used for analysis of qualitative data like gender, marital status and religion.

Effect modifiers like age, gender, occupation, education and marital status were controlled by stratification. Post stratification chi-square test was applied keeping p -value ≤ 0.05 as significant.

RESULTS

The age of the patients ranged from 18 years to 63 years with a mean of 34.98 ± 10.63 years. Majority 149 (74.5%) of the patients were aged between 18-40 years followed by 41-63 years 51 (25.5%). There were 128 (64%) male and 72 (36.0%) female patients in the study group. The duration of symptoms ranged from 1 day to 14 days with a mean of 9.28 ± 4.35 days. Ninety five (47.5%) patients were married while 86 (43%)

patients were un-married with another 19 (9.5%) divorced/widowed patients. Majority 72 (36%) of the patients were matriculate followed by graduates (20.5%), intermediate (20%), master (20%) degree holders. Only a small proportion (3.5%) of the patients was middle pass. Majority 65 (32.5%) of the patients were employed in government or private sector while 38 (19%) had their own business. Thirty four (17%) patients were

Table-I: Frequency of mood disorders.

Characteristics	Mood Disorders n=73	p-value
Age Groups		
18-40 years	57/149 (38.3%)	0.377
41-63 years	16/51 (31.4%)	
Gender		
Male	35/128 (27.3%)	<0.001*
Female	38/72 (52.8%)	
Marital Status		
Married	32/95 (33.7%)	0.291
Un-Married	31/86 (36.0%)	
Divorced/ Widowed	24/19 (52.6%)	
Education		
≤Matric	32/79 (40.5%)	0.244
Intermediate	17/40 (42.5%)	
≥Graduate	26/81 (29.6%)	
Occupation		
Un-employed	6/18 (33.3%)	0.002*
Student	8/28 (28.6%)	
Teacher	5/17 (29.4%)	
House wife	20/34 (58.8%)	
Businessman	5/38 (13.2%)	
Job Holder	29/65 (44.6%)	

Chi-square test, *observed difference was statistically significant.

housewives.

Mood disorders were the most frequent and were diagnosed in 73 (36.5%) patients followed by substance abuse disorders (34.5%) and schizophrenia (21.5%). Total 15 (7.5%) patients had underlying organic illness as shown in fig-1.

When stratified, frequency of mood disorders was significantly higher among females ($p=0.001$), house wives and among job holders ($p=0.002$). It was also higher among widowed/divorced patients but the difference was not

statistically significant ($p=0.291$) as shown in table-I.

The frequency of substance abuse disorders was significantly higher among male ($p=0.006$) and married ($p=0.048$) patients and among those who were graduates and above ($p=0.035$) and businessmen ($p=0.002$) as shown in table-II.

There was no statistically significant diffe-

Table-II: Frequency of substance abuse.

Characteristics	Substance Abuse n=69	p-value
Age Groups		
18-40 years	50/149 (33.6%)	0.632
41-63 years	19/51 (37.3%)	
Gender		
Male	53/128 (41.4%)	0.006*
Female	16/72 (22.2%)	
Marital Status		
Married	40/95 (42.1%)	0.048*
Un-Married	26/86 (30.2%)	
Divorced/ Widowed	3/19 (15.8%)	
Education		
≤Matric	24/79 (30.4%)	0.035*
Intermediate	9/40 (22.5%)	
≥Graduate	36/81 (44.4%)	
Occupation		
Un-employed	6/18 (33.3%)	0.002*
Student	10/28 (35.7%)	
Teacher	5/17 (29.4%)	
House wife	4/34 (11.8%)	
Businessman	23/38 (60.5%)	
Job Holder	21/65 (32.3%)	

Chi-square test, *observed difference was statistically significant.

rence in the frequency of schizophrenia across age ($p=0.438$) gender ($p=0.374$), marital ($p=0.064$), educational ($p=0.159$) and occupational status ($p=0.578$) as shown in table-III.

The frequency of organic illness was higher (13.7%) among older patients ($p=0.055$) as shown in table-IV.

DISCUSSION

Psychiatric disorders are a common presentation in Emergency Departments of various hospitals, especially tertiary care and

account for about 5% of all Emergency Department visits¹. Psychiatric emergency presentations and Emergency Department visits are gradually on the rise due to various reasons including psychosocial considerations like lack of awareness among the masses, poor quality of social support and lack of resources for outpatient care of psychiatric patients. The easy and twenty four accessibility to Emergency Departments is also a

Table-III: Frequency of schizophrenia.

Characteristics	Schizophrenia n=43	p-value
Age Groups		
18-40 years	34/149 (22.8%)	0.439
41-63 years	9/51 (17.6%)	
Gender		
Male	30/128 (23.4%)	0.374
Female	13/72 (18.1%)	
Marital Status		
Married	14/95 (14.7%)	0.064
Un-Married	25/86 (29.1%)	
Divorced/ Widowed	4/19 (21.1%)	
Education		
≤Matric	14/79 (17.7%)	0.159
Intermediate	13/40 (32.5%)	
≥Graduate	16/81 (19.8%)	
Occupation		
Un-employed	5/18 (27.8%)	0.578
Student	9/28 (32.1%)	
Teacher	4/17 (23.5%)	
House wife	7/34 (20.6%)	
Businessman	8/38 (21.1%)	
Job Holder	10/65 (15.4%)	

Chi-square test, Observed difference was statistically insignificant.

contributing factor^{11,12}.

There is significant diagnostic dilemma in differentiating acute psychiatric illness from underlying medical conditions and delirium which may present a similar clinical picture¹³. The differentiation of organic conditions from common psychiatric disorders can be difficult when patients come to an Emergency Department with predominantly psychiatric symptoms. A missed diagnosis may lead to life threatening situation for the patients¹⁴. There was a dire need to attain data regarding prevalence of different

psychiatric disorders and organic basis of Acute Behavioural Disturbances in our clientele.

In the present study, the mean age of the patients was 34.98 ± 10.63 years. A similar mean age has been reported previously by Adeosun *et al*⁵. (36.8 ± 10.9 years), Cowling *et al*¹⁵. (36.4 ± 9.7 years) and Boyer *et al*¹⁶. (37.4 ± 10.8 years) among Nigerian, Australian and French such patients respectively. There were 128 (64%) male and 72

Table-IV: Frequency of organic disorder.

Characteristics	Organic Disorders n=15	p-value
Age Groups		
18-40 years	8/149 (5.4%)	0.055*
41-63 years	7/51 (13.7%)	
Gender		
Male	10/128 (7.8%)	0.823
Female	5/72 (6.9%)	
Marital Status		
Married	9/95 (9.5%)	0.409
Un-Married	4/86 (4.7%)	
Divorced/ Widowed	2/19 (10.5%)	
Education		
≤Matric	9/79 (11.4%)	0.185
Intermediate	1/40 (2.5%)	
≥Graduate	5/81 (6.2%)	
Occupation		
Un-employed	1/18 (5.6%)	0.607
Student	1/28 (3.6%)	
Teacher	3/17 (17.6%)	
House wife	3/34 (8.8%)	
Businessman	2/38 (5.3%)	
Job Holder	5/65 (7.7%)	

Chi-square test, *observed difference was statistically significant.

(36.0%) female patients in the study group giving a male to female ratio of (1.8:1). Boyer *et al*¹⁶, in 2011 (1.8:1) and Cowling *et al*¹⁵, in 2007 (1.4:1) reported similar male predominance. Olfson *et al*¹⁷ (1:2.1), Boyer *et al* (1:1.6), and Adeosun *et al*⁵ (1:1.4), however reported female predominance among such patients.

The mean duration of symptoms was 9.28 ± 4.35 days, since only those patients with acute presentation (less than 2 weeks) were included in the study. 95 (47.5%) patients were married while

86 (43%) patients were un-married with another 19 (9.5%) divorced/ widowed patients. Majority 72 (36%) of the patients were matriculate followed by graduates (20.5%), intermediate (20%), master's degree holders (20%). Only a small proportion (3.5%) of the patients was middle pass. Majority 65 (32.5%) of the patients were employed in government or private sector while 38 (19%) had their own business. Thirty four (17%) patients were housewives. In a similar study by Adeosun *et al*⁵. 2014 (34.57%) patients

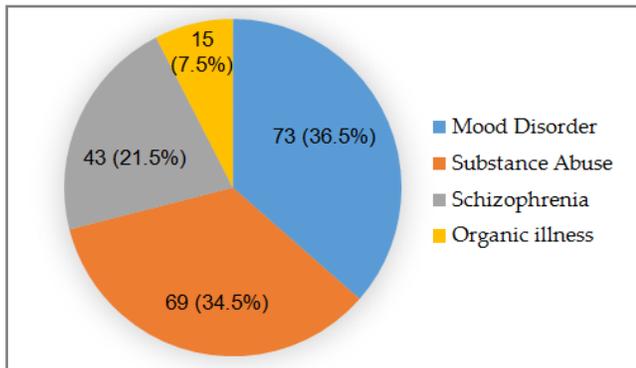


Figure: Frequency of psychiatric disorders and organic illness.

were married while (65.43%) patients were un-married. (39.71%) patients were employed while (60.29%) were un-employed.

Mood disorders were the most frequent psychiatric disorder and were diagnosed in 73 (36.5%) patients followed by substance abuse disorder (34.5%) and schizophrenia (21.5%). Total 15 (7.5%) patients had underlying organic illness. A similar frequency of mood disorders (35%), substance abuse disorders (36%) and schizophrenia (20%) has been reported by Boyer *et al*¹⁸ among patients presenting with ABD at a Teaching Hospital in Marseille, France. Adeosun *et al*⁵. Reported similar frequency of organic brain disorders (7.14%) among Nigerian such patients. Robling *et al*¹⁹. Reported similar frequency of mood disorders (35%) and schizophrenia (19%) among British such patients. While Olfson *et al*¹⁷ (25.4%), Adeosun *et al*⁵ (21.14%), and Jacob *et al*²⁰ (16.0%) reported comparatively lower frequency of mood disorders in patients presenting with ABD. Cowling *et al*¹⁵ (58.1%) and Feuer *et al*²¹

(54.0%) reported relatively higher frequency of substance abuse while Olfson *et al*¹⁷ (11.3%) and Adeosun *et al*⁵. (18.57%) reported much lower frequency of substance abuse among similar patients. The frequency of schizophrenia in the present study was 21.5% which is quite lower as compared to the observations made by Adeosun *et al*. (47.14%) and Jacob *et al*²⁰ (46%).

When stratified, frequency of mood disorders was significantly higher among females ($p < 0.001$), house wives and job holders ($p = 0.002$). Boyer *et al*¹⁶ however observed insignificant difference in the frequency of mood disorders across gender ($p = 0.27$). These differences could be taken into account due to socio-cultural differences in our population and the higher prevalence of depressive mood disorder among females in general population.

The frequency of substance abuse was significantly higher among male ($p = 0.006$) and married ($p = 0.048$) patients and among those who were graduates and above ($p = 0.035$) and businessmen ($p = 0.002$). Boyer *et al*¹⁸ again didn't observe any significant difference in the frequency of substance abuse across gender ($p = 0.10$).

The frequency of organic illness was higher (13.7%) among older patients ($p = 0.055$) which indicates the possibility of undiagnosed medical disorders and delirium being more common in older age. It further highlights the need to be extra careful while diagnosing and treating geriatric population. Ideally a policy for routine screening of elderly patients presenting with Acute Behavioural Disturbance must be in vogue at all Emergency Departments²¹.

The present study is first of its kind in local population and provides a fair idea of the magnitude of various disorders among patients presenting with Acute Behavioral Disturbance in Emergency Departments. This in future will aid in better differential diagnosis of such patients and therefore leading to better management. We also noticed certain age, gender, marital, educational and occupational groups to have significantly higher frequency of certain disorders

which can help in risk stratification of future patients but still needs further study. Particular care needs to be taken in diagnosing psychiatric disorders among patients presenting with Acute Behavioural Disturbances especially among the elderly population.

The limitation of this study was that the data was collected from emergency bay of a psychiatric facility and would be better if it was collected from emergency bay of the main hospital which could yield a wider range of results. This point can be kept in mind for future studies.

CONCLUSION

The outcome of patients reporting to Psychiatric Emergency with Acute Behavioural Disturbance is variable. The significantly high frequency of underlying organic illness among patients, highlights the need for emphasizing quality training of psychiatrists, casualty medical doctors, primary healthcare providers as well as paramedics.

CONFLICT OF INTEREST

The authors have no conflict of interest to declared in this study.

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