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"THE PREVALENCE AND PRECIPITANTS OF AGGRESSION IN ADMITTED PSYCHIATRIC PATIENTS" AN INDIAN CROSS SECTIONAL STUDY

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ABSTRACT

Background Almost 1 in 5 psychiatry patients admitted in psychiatric wards is known to exhibit violent acts in different patterns. Aggressive behaviours in schizophrenia and other psychotic disorders have a higher prevalence as compared to other disorders.Risk assessment has shown male gender with the age group of 30 yrs are more associated with violent acts. Presence of hallucinations, delusions, provocation with substance abuse is associated with violent acts in psychotic disorders and schizophrenia. As, these violent acts put threat to life of patients, relatives and health professionals, the magnitude of precipitants needs to be assessed which might help in proper clinical management of these patients. This study was done to estimate the prevalence of aggression with known risk factors, precipitants among admitted psychiatric patients in a tertiary care centre of western Rajasthan. **METHODOLOGY** Evaluation and psychiatric interviews were conducted by using structured Performa of mini screen neuropsychiatric examination. 150 patients meeting inclusion criteria were taken through systemized random sampling. Patients with aggressive episodes were evaluated first by Brief Psychiatric Rating Scale Pro forma and Modified Overt Aggression Scale was used. Significance was determined using chi square and t-test wherever applicable. **Results** The study recorded 50.67%(76) patients as being aggressive. Males and females were equally likely to be violent. Schizophrenia (31.58%) and Bipolar affective disorder(27.63%), were major diagnostic groups with aggressive behaviour. BPRS higher scores in hostility–suspiciousness and in activation factors appeared to be associated with Aggressive patients. Substance abuse, Confined environment, family issues, Poor compliance, longer hospitalisation were the variables significantly(p value <.05) prevalent in patients with aggressive behaviour. **Conclusion** Various precipitants for aggression have been reported in this study. A proper risk assessment is warranted during the management of these patients to prevent and predict these behaviours in the future.

KEYWORDS : Aggression,psychiatric patients, precipitants

Introduction

Aggression is overt behaviour that involves threat or action that potentially or actually causes pain, withdrawal, or loss of resources. *Violence* is physically or psychologically harmful human aggression that involves the threat or use of force.[1]

Aggression is an important presentation and admission criteria of psychiatric disorders associated with significant disruption and violent attacks over staff, doctors and relatives present in inpatient department.

Prevalence: Almost 1 in 5 psychiatry patients admitted in psychiatric wards is known to exhibit violent acts in different patterns.The pooled prevalence of aggression was 35.4% .Aggressive behaviour in schizophrenia and other psychotic disorders have a higher prevalence as compared to other disorders.[2,3]

Risk assessment: has shown male gender with the age group of 30 yrs are more associated with violent acts.Presence of hallucinations, delusions, provocation with substance abuse is associated with violent acts in psychotic disorders and schizophrenia.[4]

Substance Abuse Effects on Aggression: According to the large, prospective Mac Arthur study, patients with dual diagnosis of mental disorder and substance use disorder were found to be aggressive and violent than with major mental illness diagnosis only.[5]

Justification for this study: As many clinical and epidemiological studies have considered violent acts in psychiatric wards by psychiatric patients of immense importance. As, these violent acts put threat to life of patients, relatives and health professionals, the magnitude of precipitants needs to be assessed which might help in proper clinical management of these patients. The aim was to find the Prevalence and Precipitants of aggression in admitted Psychiatric Patients.

MATERIALS AND METHODS

A cross-sectional observational study was conducted at the psychiatry department of the tertiary care hospital of western India over a period of 6 months. Informed written consent was obtained from the participants.

Inclusion criteria:
Patients with diagnosed Psychiatric conditions as per ICD 10 criteria in age group between 18 -65 years.

Exclusion criteria: Patients with altered level of consciousness and having associated neurological deficit.

Procedure Patients with diagnosed psychiatric disorders were clinically evaluated in detail with history and mental status examination. Evaluation and psychiatric interviews were conducted by using structured Performa of mini screen neuropsychiatric examination. 150 patients meeting inclusion criteria were taken through systemized random sampling. First patient was chosen by lottery method through random selection of receipt/registration no. of admitted patients. Then every alternate/other patient was selected to conduct the study till the sample size was reached. Patients and relatives accompanying them were explained about the study as before interview was conducted. Nature of study and information to be collected were explained to them. For collecting socio demographic, clinical information sheet were used. Clinical information sheet included the aggressive episodes with their frequency. Psychiatric interview was conducted in separate room to maintain safe settings for patients and nursing staff .Patients with aggressive episodes were evaluated first by Brief Psychiatric Rating Scale Proforma.It was done primarily to assess changes in behaviour covering 18 items with a broad range of areas, including thought disturbance, emotional withdrawal and retardation, anxiety and depression, and hostility and suspiciousness. Scoring was done according to the component present from severity levels (1-7). In order to assess the pattern and types of aggressive episodes, Modified Overt Aggression Scale was used. By this scale verbal and non verbal type of aggressive behaviour were evaluated and scoring was done according to the severity of episodes as per reported. Statistical analysis was done in relation to psychiatric diagnosis, aggressive acts and component reported in assessment of behaviour through Brief Psychiatric Rating Scale. Significance was determined using chi square and t-test wherever applicable. Results were presented and discussed in reference to previous studies.

Results

The study conducted over the 6-month period was on admitted psychiatric patients in the psychiatry Department, 50.67%(76 patients) of the total inpatient psychiatric population studied were aggressive.

Table 1 compares aggressive patients and nonaggressive patients for gender, mean age, occupation, socioeconomic and marital status. Males and females were equally likely to be violent. From the total 70 females, 52.63% were aggressive and 45%(36) of 80 males were aggressive. A $\chi 2$-test failed to detect any significant differences between sex and aggressiveness ($\chi 2 = 1.70$, $p = 0.15$). The mean length of stay for aggressive patients was 8.3 days. In contrast, the mean length of stay for nonaggressive patients was significantly lower, 6.2 days ($\chi 2 = 22.23$, $p = 0.00$).

Table 1. Comparative analysis of Socio demographic profile in patients with aggressive and Non-aggressive behaviour

	Aggressive behaviour patients(76)	Non Aggressive patients(74)	Chi square value	t-test value	p value
Gender Male Female	36 40	44 30	1.74		.17
Mean-Age (years)	36.7+-11.04	35.10+-12.1		.993	.336
Education	Illiterate(52) Upto5th std (16) Upto8thStd (2) 12thstd (2)Graduate(4)	Illiterate(46) Upto5th std (19) 8th std (2) 12th std (1)Graduate(6)	3.27		.88
Occupation	Unemployed (64)Unskilled(5) Semi skilled (7) Skilled(0)	Unemployed (38)Unskilled(17) Semi-skilled(8)Skilled(11)	18.8		.001
Marital Status Total Family Income range per month(Rs) Mean duration of admission in days	Married(59) Unmarried(17) <20000(60) 20000-30000(16) >30000(0) 8.3+-.3	Married(54) Unmarried(20) <20000(54) 20000-30000(18) >30000(2) 6.2+-1.5	.22 .44	22.2	.63 .4 .001

Statistical analysis by chi square test, t test#&Statistical significant at .05 level, .01 level##.

Table2. Association between Aggression and psychiatric diagnostic Spectrum(ICD 10)

Psychiatric diagnostic spectrum	Frequency of Aggressive behaviour	Frequency of Non-Aggressive behaviour	Chi square value	p value
F20-29(Schizophrenia, Schizotypal and delusional disorders) Schizophrenia Acute Polymorphic Psychotic Disorder Schizoaffective Disorder Psychosis Not otherwise Specified	50	15	55.377	.00001
F31 Bipolar Affective Disorder	21	12		
F32 Depressive episode	1	11		
F40-48(Neurotic, Stress related and Somatoform disorders) Dissociative(conversion) disorders	2	12		
F10-19(Mental and behavioural disorders due to psychoactive Substance use) Alcohol Dependence Syndrome Opioid Dependence Syndrome	2	24		
TOTAL	76	74		

Table 3. Comparative analysis of Substance use and other variables

	Present Aggressive behaviour	Absent Aggressive behaviour	Chi square value	p value
Substance use	28	3	22.62	.000003
Confined environment	55	40	6.23	.02
Family issues	45	26	7.7	.03
Poor compliance	28	7	17.28	.00083

Discussion

There were 150 patients in the study and 76 patients (50.67%) were recorded as being aggressive. This finding is in line with review of empirical studies done on "Perpetration of Violence, Violent Victimization, and Severe Mental Illness: Balancing Public Health Concerns" which reported that admitted patients had higher rates of violent perpetration (upto50%). The high prevalence was found as compared to other previous studies which can be attributed to higher number of admitted patients were aggressive in the community before their admission in the psychiatry wards. The number of admitted patients with psychotic illness having severe psychopathology was higher as compared to other psychiatric diagnosis. In this study neither sex was significantly associated with aggressive behaviour.

Psychiatric diagnosis and aggression:

The study found that Schizophrenia, Schizotypal and delusional disorders Spectrum of psychiatric diagnosis was highly associated with aggression in the study with $\chi 2 = 55.337$, p = **0.0001**. Due to disturbances in the form of thought disturbance, hostility and suspiciousness over psychopathological parameters Schizophrenia spectrum disorders patients have been found to be major aggressive group in acute psychiatric patients.[6,7]

Similarly the study found the mean score of Modified Overt Aggression Scale was higher in Psychosis Not otherwise specified (23.2), Paranoid Schizophrenia (22.7) and Acute Polymorphic Psychotic Disorder (18.9) as compared to Bipolar Affective Disorder(16.0) with statistical significance(p value<.05).

Psychopathological dimensions and aggression:

In the present study, the BPRS score on the basis of gender, age group, aggressive behaviour, Psychiatric diagnostic spectrum and Psychiatric diagnosis was compared and found significant association of aggression, Schizophrenia, schizotypal and delusional disorder spectrum and Schizophrenia diagnosis with high BPRS mean score (p value<.05). Aggressive behaviour was associated with higher scores in the BPRS factors, which together represent a measure of positive psychotic symptoms: hostility– suspiciousness, conceptual disorganization, thought content disturbance and excitement. With regard to the psychopathological dimensions, higher BPRS mean scores of Non aggressive patients (6.16) in the anxiety–depression factor as compared to aggressive patients (4.51) but higher scores in hostility–suspiciousness(7.21) and in activation factors(6.9) appeared to be associated with aggressive patients which has been found to be a supportive finding of previous studies.[8]

In contrast, anxiety–depression variables were negatively associated with physically aggressive behaviours. Patients with prominent negative symptoms were not prone to act out violently as reported in

many studies.[9] Higher BPRS mean scores of Non aggressive patients in the anxiety–depression factor as compared to aggressive patients with statistical significance highlighted the anxiety, depression, guilt feelings and somatic concern as negative predictors of aggression in risk assessment.

Substance Use and aggression:
In this study, a high proportion of patients (90.3%) with substance use was found to have aggressive episodes with statistical significant (p value .000003).Patients with diagnosis of Schizophrenia spectrum disorders having substance use had even higher proportion(96.7%) of aggressive episodes. This finding is in correlation with studies done by Wanson, Dorn et al and Fazel et al on violence and ever aged community treatment for persons with schizophrenia.[10]

The present study also considered other factors apart from psychopathological dimensions, psychiatric diagnosis as the precipitants of aggression. Confined environmental condition was compared between aggressive and non aggressive patients, 72.37% of patients with confined environment were reported to have aggressive episodes. The statistical significance was evident with $\chi 2 = 6.23$, $p = 0.02$. Specificity for the diagnosis and co morbid condition was not established in the study.

Similarly, family issues (63.3%with aggressive behaviour) and poor compliance (80% with aggressive behaviour) were also prevalent with statistically significant in aggressive patients.

Hence, involuntary admission status, family issues, poor compliance, substance abuse and the nature of the confined environment were perceived as precipitating factors.

Conclusion
This study has found the aggression in admitted patients with psychotic disorders especially Schizophrenia is highly prevalent which poses a major challenge for their suitable management. Several factors can predicate and precipitate aggressive behaviours in these patients. A proper risk assessment is warranted during the management of these patients to prevent and predict these behaviours in the future.

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Conflict of Interest
None

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