

# Aggression and Psychosis in Patients Seeking Emergency Psychiatric Care in New Delhi, India

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**ABSTRACT: Background/Context:** There is high risk of violence and aggression in the medical emergency care settings (MECS) of which psychiatric services constitute an important part, forming lateral entry points for patients into the mental health care system. Psychosis has been imposed as the predominant cause for majority of aggressive presentation in MECS. There is scarcity of Indian data towards this facet. **Objective(s):** The aim of the study is to explore the principal reasons for referral to a psychiatric emergency and explore the disorders most commonly associated with violent and aggressive behavior. **Methodology:** This cross sectional descriptive study evaluated consecutive psychiatry referrals from the emergency ward for duration of six months at a tertiary care center. Data was gathered using a semi structured proforma and analyzed by SPSS version 17.0. Diagnosis of schizophrenia or related psychotic disorders (SRPD) and other psychiatric disorders was ascertained via ICD-10. **Result(s):** Majority of the overall emergency psychiatry referrals presented with aggression (42%) with no significant gender difference. About 72% of aggressive subjects were diagnosed with psychiatric disorders, of which 28% suffered from SRPD. Delirium and affective disorders constituted 12% and 16% of the aggressive subjects respectively, while diagnosis could not be ascertained in 28% subjects. Of the 462 referred cases, 13.6% subjects were suffering from SRPD. About 85% of these subjects presented with aggressiveness and behavioral disturbance. Apart from 12% previously diagnosed cases of SRPD, 88% of the subjects were new cases. **Conclusion:** Aggressive behaviour is the principal presentation in psychiatric emergency services, and schizophrenia & related psychosis contribute a significant proportion of these cases. There is a high rate of previously undiagnosed subjects seeking treatment in emergency, highlighting the role of emergency psychiatric services in not just acute crisis management but also in initiating long term treatment.

## INTRODUCTION

The general public's opinion of a psychiatric patient, as influenced by popular culture, remains that of someone who is unpredictable and possibly violent and dangerous. Unfortunately, this view point is often shared by medical health professionals, which remains one of the major obstacles to mental health treatment (Gray, 2002). Although most psychiatric patients are not violent, several long term studies have concluded that serious mental illnesses such as schizophrenia are associated with an increased risk of aggression and violence (Wise, 2014). Current data also indicates that schizophrenia and other psychoses are comparable to substance abuse in increasing the risk of violence and aggression (Fazel et al., 2009).

Aggressive behaviour can range from irritability and anger to verbal aggression, progressing to physical acts of violence. Aggression has been defined in different studies using different terms like agitation, violence, dangerousness, violent crime, and hostility, with each of them classifying it differently (Serper, 2011). For the purpose of our study we have identified aggression from a point where an imminent threat of physical harm is present.

Aggression in schizophrenia or related psychotic disorders [SRPD] can occur because of a multitude of reasons, varying from positive psychotic symptoms, impulsivity, personality disorders, co-morbid substance use to even depression (Volavka

& Citrome, 2008). Various studies have provided useful predictive socio demographic, clinical and genetic risk factors for aggression in schizophrenia (Swanson et al., 2006; Spalletta et al., 2010) but no single variable has been entirely explanatory and hence aggressive behaviour has come to be understood as arising out of an interaction between the patient's psychopathology and unique personal history with the social and cultural system he/she inhabits.

Large population based epidemiological studies done in India have shown that acute psychiatric emergencies constitute about 9% of all emergencies (Saddichha, Vibha, Saxena, & Methuku, 2010). Aggression is one of the most common reasons for referral to the medical emergency care settings [MECS] (Padilha, Schettini, Santos Junior, & Azevedo, 2013) and a substantial number of these referrals are either due to psychiatric illnesses or conditions associated with drug use (Saddichha, Vibha, Saxena, & Methuku, 2010). Medical emergency care settings [MECS] are an important point of first contact for first episode psychosis patients and compared to first contact in a primary care setting, emergency clinics when staffed by specialist psychiatric teams have shown to result in shortest duration of untreated psychosis [DUP] (Bhui, Ullrich, & Coid, 2014).

In view of this scenario, with our study we aim to explore the principal reasons for referral to a psychiatric emergency and explore the disorders most commonly associated with violent and aggressive behaviour. The study will also provide valuable information regarding the crucial but yet underdeveloped role of emergency psychiatric services in the management of psychiatric illnesses. Therefore the

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present study would add on to the existing data (mainly western) on the prevalence of aggressive behaviour in an emergency care setting and its association with clinical and treatment factors.

## METHODOLOGY

### Type of Study/Sample

This was a cross sectional descriptive study that evaluated data from all consecutive patients, referred from the emergency department, seen by the psychiatric staff over a 6 month period from November 2013 to April 2014.

### Place of Study

Smt. Sucheta Kriplani Hospital is a teaching hospital affiliated to the Lady Hardinge Medical College and provides tertiary care healthcare services for the metropolitan area of New Delhi. It is only one of the three government run hospitals in New Delhi to provide 24hr psychiatric care at the accident and emergency department. The psychiatric care is provided by doctors in the first, second and third years of the medical residency training program in Psychiatry, supervised by one senior resident and one consultant psychiatrist.

### Procedures

Informed consent was obtained from patients or their relatives (in case of incapability to give informed consent) before inclusion in the study. Information on demographic characteristics, diagnoses, presenting problems and management were obtained by the residents during the call and recorded in a proforma. The diagnoses, based on the International Classification of Diseases, Tenth Revision (World Health Organisation, 2006), were made by the psychiatric resident in consultation with the senior resident and the consultant psychiatrist.

Data collected was analyzed using statistical package for social sciences (SPSS) for windows version 17. Descriptive statistics were used and the frequency tables were made.

All procedures were done respecting the ethical standards in the Helsinki Declaration of 1975, as revised in 2000(5), as well as the national law.

## RESULT

A total of 462 subjects were evaluated by the psychiatry staff on the request of the casualty medical officer. No sex predominance was noted in the total sample, with women comprising 50.6% and men 49.3%. The mean age for women was 28 years and for men 33 years. The commonest diagnoses were substance related and addictive disorders (19%), schizophrenia spectrum and other psychotic disorders (13.6%), dissociative/conversion disorder (13%) and bipolar and related disorders (8.2%) (Tables 1 and 2) While 7% of the patients were hospitalized, 24% of patients received antipsychotic medications and 51% received benzodiazepines either alone or in combination with antipsychotics (Figures 1 and 2).

Majority of the overall emergency referrals presented with aggression (42%, n = 193) with no significant gender difference (Figures 3 and 4). About 72% of the aggressive subjects were diagnosed with psychiatric disorders, of which 28% suffered from SRPD. Substance related problems, delirium and affective disorders constituted 10%, 12% and 16% respectively, while diagnosis could not be ascertained in 28% subjects. Thirteen percent of aggressive subjects presented with a medico-legal situation (Tables 3 and 4).

Of the 462 referred cases, 13.6% subjects were suffering from SRPD. Young adults comprised nearly half of the study population with female representation more than males ( $p < 0.05$ ) (Figure 5). About 85% subjects presented with aggressiveness or behavioural

**Table 1.**

Diagnosis: Complete sample.

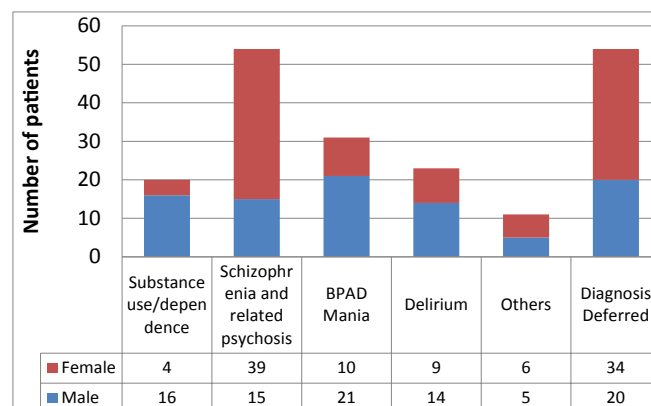
ICD-10 DIAGNOSIS	FREQUENCY	PERCENTAGE
Substance use/dependence	92	19.7
Schizophrenia and related psychosis	66	14.3
Mania	7	1.5
BPAD Mania	31	6.7
BPAD Depression	1	0.2
Depression	16	3.4
Anxiety Disorder	8	1.7
OCD	5	1.1
Adjustment Disorder	4	0.9
Dissociative Disorder	64	13.8
Somatoform Disorder	3	0.6
Sleep Disorder	1	0.2
Personality Disorder	1	0.2
Mental Retardation	8	1.7
Habit and Impulse Disorder	1	0.2
Dementia	2	0.4
Delirium	23	5
Tics	3	0.6
Head Injury	1	0.2
Seizure	12	2.6
Diagnosis Deferred	120	26
Total	469	100

\*8 patients had dual diagnosis; therefore the total was more than 462.

**Table 2.**

Diagnosis; Aggressive subjects.

ICD-10 DIAGNOSIS	FREQUENCY	PERCENTAGE
Substance use/dependence	20	10.4
Schizophrenia and related psychosis	54	28
Mania	7	3.6
BPAD Mania	24	12.4
BPAD Depression	0	0
Depression	0	0
Anxiety Disorder	0	0
OCD	1	0.5
Adjustment Disorder	1	0.5
Dissociative Disorder	0	0
Somatoform Disorder	0	0
Sleep Disorder	0	0
Personality Disorder	0	0
Mental Retardation	6	3.1
Habit and Impulse Disorder	1	0.5
Dementia	1	0.5
Delirium	23	11.9
Tics	1	0.5
Head Injury	0	0
Seizure	0	0
Diagnosis Deferred	54	28
Total	193	100



**Figure 1.** Diagnosis and sex distribution: Aggressive patients.

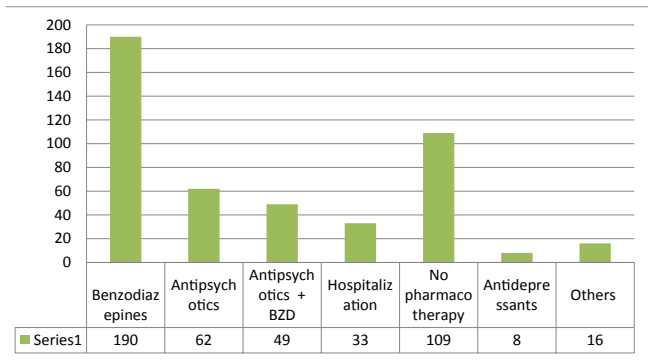


Figure 2. Medications prescribed

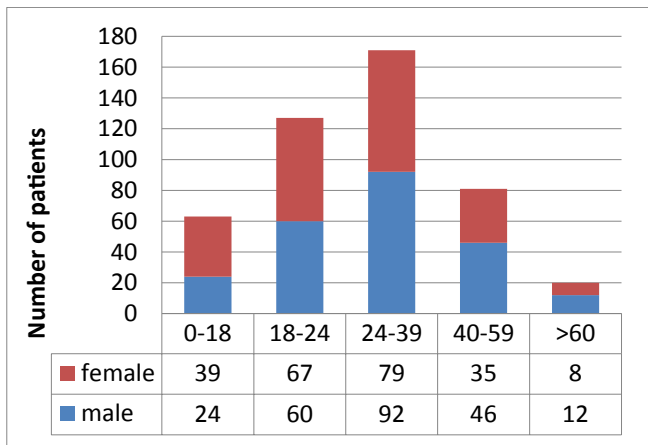


Figure 3. Age Distribution: Complete sample: n=462.

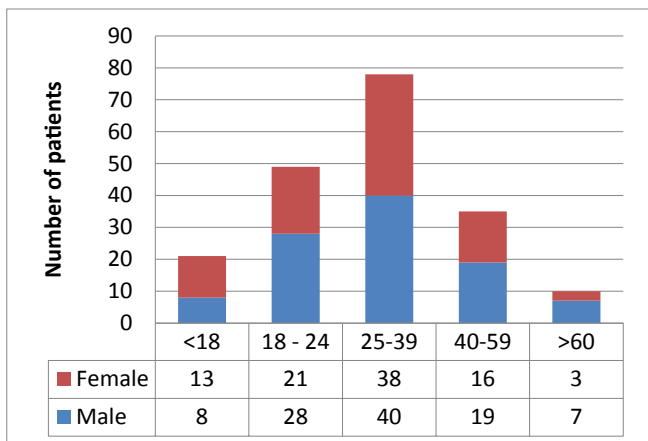


Figure 4. Age Distribution: Aggressive subjects.

Table 3. Management Plan: Aggressive patients.

PLAN	FREQUENCY	PERCENTAGE
Discharged	146	75.6
Admitted	15	7.8
Referred to Medicine	29	15
Referred to Surgery	2	1
Ix/ Other Referral	1	0.5
Total	193	100

disturbance. Apart from 12% previously diagnosed cases of SRPD, 88% of the subjects were new cases (Tables 5 and 6). About 6% subjects presented with a medico-legal situation.

## DISCUSSION

Our study suggests that nearly all psychiatric diagnostic categories are well represented even in an acute emergency care setting. The most commonly encountered diagnoses were substance abuse related problems and serious mental disorders like Schizophrenia and Bipolar disorder which was consistent with the

Table 4. Medico Legal Case Distribution

MLC	Frequency	Percentage
NO	168	87
YES	25	13
TOTAL	193	100

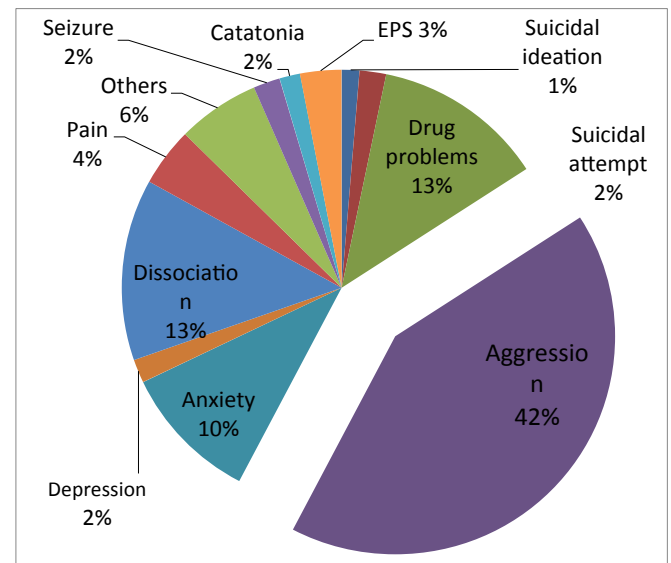


Figure 5. Symptoms Presentation.

Table 5. Old and new cases Distribution.

CASES	Frequency	Percentage
NEW	171	88.6
OLD	22	11.4
TOTAL	193	100

Table 6. Management Plan.

PLAN	Frequency	Percentage
Discharged	361	78.1
Admitted	33	7.1
Referred to Medicine	56	12.1
Referred to Surgery	8	1.7
Ix/ Other Referral	4	0.9
Total	462	100

previous studies conducted on a similar urban and developing world population (Kropp et al., 2007; Padilha, Schettini, Santos Junior, & Azevedo, 2013; Shakya, Shyangwa, & Shakya, 2008). However our study deviates substantially from previous studies in the relative lack of patients diagnosed with depressive disorder and a significantly higher proportion of patients presenting with dissociative disorder. A possible explanation for this variation is the contribution of Indian socio- cultural setting to the dissociative symptoms, as hypothesised in previous studies (Akhtar, 1988). It is also important to note that in a sizeable number of patients (26%), a psychiatric diagnosis could not be reached on initial evaluation in the emergency room. A psychiatric diagnosis is primarily based on clusters of clinical signs and symptoms and the historical information obtained from the relatives and accompanying persons, However in an emergency setting the psychiatrist is forced to take history in a rapid fashion mainly due to the distressing nature of the symptoms or because of the imminent threat involved to the patient or the care givers (Stowell, Florence, Harman, & Glick, 2012). Hence on numerous occasions a working diagnostic hypothesis is the only guide to further treatment and management.

When comparing the main reasons for seeking psychiatric emergency consultations with studies conducted in other countries,

a significant difference was the lack of patients presenting with depressive symptoms and a significantly higher number of patients presenting with agitation and behavioural complaints. In the Indian context, a large multicentre study conducted in the two states of Gujarat and Andhra Pradesh, reported suicidal attempt as the most common behavioural emergency (Saddichha, Vibha, Saxena, & Methuku, 2010). The probable cause for this difference can be the relatively “skid-row” nature of the catchment area served by our hospital, an area infamous for rampant drug use, homelessness and crime.

Agitation and acute behavioural change was the most common presenting symptom (41.8%) and the major reason for emergency psychiatric referral. Of these patients majority were diagnosed with schizophrenia & related psychosis (28%), bipolar illness (12.4%), delirium (11.9%) and substance use related (10.4). These findings were contrasting from the study by Keertish et al., in 2013, where medically unexplained symptoms (23.1%), anxiety (21%) and then behavioural changes (13.1%) were the symptom distribution (Keertish, Sathyanarayana, Kumar, Singh, & Udagave, 2013). The reason for this difference could be inclusion of both inpatient and outpatient referrals in the above mentioned study whereas only emergency referrals in the current study. Another Indian study also supports the above findings, showing different pattern of distribution in accordance with the setting (Bhogale et al., 2000). According to Bhogale et al., neurotic spectrum were commonly seen in outpatient references and psychotic & organic cases in emergency/inpatient settings. Considering that nearly half of the patients presenting to the psychiatric emergency are excited with psychomotor agitation and a threat to self or others, there is still a shortfall of evidence based treatment and management guidelines that can aid psychiatrists in decision making. To make matters worse, emergency psychiatry being in a nascent stage in the general hospital setting in India, there is a lack of even basic resources such as “safe rooms” where patients can be kept without a danger to him/her or others. There is also an urgent need to initiate training programs for not only psychiatrists but also staff and other physicians in anticipating, de-escalating and coping with aggressive behaviour.

It is important to note that in our study, out of the 193 subjects presenting with aggressive behaviour, only about 12% of the subjects had been previously diagnosed with a psychiatric condition. Considering the current social realities, where mental illness and patients are stigmatized, and there is significant lack of awareness about mental disorders, initial consultation is often sought from faith healers and primary care physicians rather than specialized psychiatric services (Kate, Grover, Kulhara, & Nehra, 2012). However, in first-episode psychosis, emergency services become the first point of contact, serving as a vital entry point in to the medical system for these patients, a fact supported by various studies and systematic reviews (Anderson, Fuhrer, & Malla, 2010). A more recent study in the U.K. examining the pathways to care and first-episode psychosis has shown that first contact with emergency clinics is associated with the shortest duration of untreated psychosis (DUP) and consequently an improved long term prognosis (Bhui, Ullrich, & Coid, 2014). These findings call attention to the need for specialized 24 hour psychiatric services, which may be the most effective way of providing intervention.

In another significant finding, 15% of the aggressive subjects were referred back to the emergency medical services in view of organic brain syndromes. These finding highlights the need for consultation liaison (C-L) psychiatry in India for timely and effective management of organic syndromes with psychiatric presentations. Grover S, in his study has also highlighted the significance and need of C-L psychiatry in India (Grover, 2011). It is a subspecialty which is defined as the area of clinical psychiatry that encompasses clinical, teaching and research activities of psychiatrists and allied

mental health professionals in the non-psychiatric divisions of a general hospital (Lipowski, 1983). It was also noted in the present study that a significant proportion (76%) of patients presenting with aggressive behaviour did not require in-patient hospitalization and psychopharmacological interventions were sufficient to tide over the acute crisis. In several cases patients were evaluated and observed for extended periods of time (6-12 hours) in the emergency room, and followed up the next morning in the outpatient services, where a deeper assessment of the biological, psychological and social aspects of the patient’s problems were done and decision made on further hospitalization.

On comparing the pharmacotherapy used in emergency setting in the present study, benzodiazepines followed by antipsychotic medicines were most frequently prescribed. Similar pattern was noted in the study by Ernst et al., in 2006, with the exception of antidepressants use, which were not commonly prescribed in the present study (Ernst, Bird, Goldberg, & Ghaemi, 2006). Such findings showed compatible prescription of medicines with the diagnosis made i.e. psychotic disorder and substance dependence. Pharmacotherapy was used in approximately 76% of the total subjects in the present study. Previous studies have shown a much lower use of pharmacotherapy with prescription rates varying from 23 to 30% (Ballerini et al., 2007; Ernst, Bird, Goldberg, & Ghaemi, 2006). This discrepancy may be due to the specific characteristics of the population served and also of the service itself. As a general rule, prescription to psychotropic medications at our centre is initiated on the first visit itself due a high probability of no subsequent follow ups at the outdoor services upon discharge. Legal involvement was present in only 13% of the patients presenting with aggressive behaviour in the present study. Similar findings were noted in study by Bhogale et al. in 2000 with 16% of the cases being of medico-legal nature (Bhogale et al., 2000). A probable cause for this unexpectedly low finding could be the general tolerance and leniency of the legal authorities and also the general public in initiating legal proceedings against someone with a high probability of a mental disorder. Most of the medico legal cases brought to our centre involved subjects who were found on the streets in an aggressive state and had no informants.

Present study was not spared from limitations. First, the study was of cross sectional design, leading to high number of undiagnosed cases. Psychiatric diagnoses are often made using longitudinal follow ups and the cross sectional design led to high rates of missing data. Second, there is a lack of comparison data about aggressive behaviour from other pathways of care like inpatient interdisciplinary consultations and outpatient clinics besides emergency care. Third, the definition of aggressive behaviour in our study varied from verbal aggression to physical violence. Hence a greater specification in this regard might result in different results. Another limitation that needs to be pointed out is that although the clinical diagnosis was established by a consensus between the three treating psychiatrists, there is no certainty of equivalence to the diagnosis that was made on subsequent assessments.

It can be concluded from the present study that aggressive behaviour is the principal presentation in psychiatric emergency services, and schizophrenia & related psychosis contribute to the significant proportion of these cases. A high percentage of these patients are diagnosed for the first time in the emergency care setting, hence highlighting the role of emergency psychiatric department in not only crisis stabilization but also active initiation of treatment. Further research is needed to elucidate the heterogeneous aetiology and correlates of such aggression and discover how it can influence clinical practice. There is also an urgent need to strengthen resources, train staff and development of evidence based protocols in the management of such behavioural emergencies.

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