

# Catatonia in a Tertiary Care Center in Eastern Part of Nepal: A Descriptive Study

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## Abstract

**Introduction:** *Catatonia is still an ill-understood phenomenology and we could not find any case based publications from Nepal. This study was undertaken to observe the proportion of catatonic patients in a year, to describe their frequencies, and to relate catatonia to mode of onset of catatonia, stressors and to diagnostic categories.*

**Method:** *One-year prospective study was carried out in Psychiatry Ward of B. P. Koirala Institute of Health Sciences, Dharan. Socio-demographic variables were collected in structured Performa and Semi-Structured Performa was used for number of catatonic signs, life events, and mode of onset. Catatonia was screened and rated by Bush-Francis Catatonia Rating Scale. Psychiatric diagnoses were based on International Classification of Mental and Behavioral Disorder, Diagnostic and Research Guidelines, tenth version. Medical diagnoses were made by the consultant in Internal Medicine. Those who could not be admitted at least 24 hours for observation were not taken into study and 2 cases were excluded due to extreme of ages.*

**Result:** *The proportions of patients with catatonia were 9.3% in psychiatric in-patients. Mutism was the most common sign and larger proportion had retarded catatonia. Mode of onset of catatonia, stressors, and disorders were not related. Medical and psychiatric catatonia could not be differentiated from the pattern of catatonic signs, even though echolalia occurred only in seizure disorder in our sample.*

**Conclusion:** *The phenomenon of catatonia is common in our set-up. Mutism was the most common symptom. It is important to rule out organic etiology first. Depression is a common diagnosis with catatonia.*

**Keywords:** Catatonia, Phenomenology, Nepal

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## INTRODUCTION

Catatonia is a psychomotor syndrome, manifested either by lack of speech & motion or/and alternating with purposeless excessive motor activity. It may also manifest as resistance to all movements by the physician, rigidity automatic obedience & excessive meaningless cooperation to the physician, senseless repetition of motor acts or speech, maintaining difficult postures for longer duration without

any apparent meaning, grimacing, and stereotypies.<sup>1</sup>

Kahlbaum described catatonia in 1874 A.D. as a psychomotor syndrome. Since then, it has undergone various conceptualizations. In the past, as catatonia was associated with schizophrenia, electro-convulsive therapy and sedatives were not given to catatonic patients. Antipsychotics that are generally prescribed to

patients with schizophrenia have been mentioned as a risk factor in the development of fatal neuroleptic malignant syndrome. However, currently, it is generally accepted as a syndrome manifested in many medical and psychiatric disorders.<sup>2,3</sup> Specifically, apart from schizophrenia, it is also known to occur in mood disorders and dissociative disorders. Medical conditions in which catatonia can be present are of wide range and therefore recognition of catatonia is important.

Findings regarding the frequency, prevalence, and distribution have been inconsistent, including the neuropathological examinations and post-mortem examinations.<sup>4,6</sup> In Nepal, one study was done in Tribhuvan University Teaching Hospital, but the study was mainly related to stupor on dissociative disorder, and other catatonic signs were not included.<sup>7</sup>

This study was carried out in B.P Koirala Institute of Health and Science, a tertiary referral center in eastern part of Nepal, to provide some baseline information about catatonia from this region.

#### **MATERIAL AND METHOD**

It was a prospective and descriptive study over a year. Ethical clearance was taken from the Institutional Review committee of the institute. All patients coming in contact with the Department of psychiatry were screened & scored for catatonia with Bush-Francis Catatonia Rating Scale (BFCRS).<sup>8</sup> Informed consent was taken. Those who were below 16 years of age and above 60 years, refusal by patient and/ or attendants, patients with Parkinsonism, and those who could not be observed for at least 24 hours were excluded. Socio-demographic variables were recorded in a structured Performa and variables like mode of onset of catatonia, diagnoses, frequency of different catatonic symptoms in different disorders and life events were recorded in a semi-structured Performa prepared by the department for the purpose. The psychiatric diagnoses were based on International Classification of Mental and Behavioral Disorders, Diagnostic and Research Guidelines, tenth version (ICD-10), and medical diagnoses were based upon the judgment of at least one consultant from the Department of

Internal Medicine. All data were analyzed for descriptive analysis with SPSS 10.0.

#### **RESULT**

There were altogether 344 patients admitted under the care department of Psychiatry since the first of February 2003 A.D. till the first of February 2004 A.D. One hundred and eighty-three were male and 161 were female. Bipolar affective disorder was the most prevalent of all disorders constituting around 139 (40.41%) of all admitted patients. Next prevalent was depression 63 (18.31%), Acute & Transient psychotic disorder 33 (9.59%), Substance related disorders 18 (5.23%), Conversion-dissociation disorder 15 (4.36%), Seizure 8 (2.33%), Panic disorders 2 (0.58%), Obsessive-compulsive disorder 2 (0.58%), and in 7 (2.03%) cases diagnosis could not be verified.

Out of 344 total in-patients, 32 (9.3%) patients had catatonic syndrome. The mean duration of illness for catatonic patients was  $240 \pm 642$  (range, 1-2920) days. Nine patients presented within 1 week and 15 patients presented within 2 weeks. On the other hand, there were 4 patients who presented with 730 days of history, while other 2 at the extreme presented with history of illness for 1825 days and 2920 days respectively. The mean duration of hospital stay was  $14 \pm 9.02$  (range, 1-36) days.

**Socio- Demographic Variables of the Catatonic Patients:** The age of the patient ranged from 16 to 42 years. The mean was  $22.6 \pm 5.9$  years. Twenty-four (80%) patients were below 25 years of age. Twenty of the patients were single, and ten were married. There was only one patient from the upper socio-economic status. Other details are given in Table 1.

**Table 1: Socio- Demographic Variables of the Catatonic Patients (n=30)**

Variables	Frequency	%	Total %	
Age	<25 years	24	80	100
	>25 years	6	20	
Sex	Male	18	60	100
	Female	12	40	
Marital Status	Single	20	66.7	100
	Married	10	33.3	
Socio-economic status	Lower	18	60	100
	Middle	11	36.7	
	Upper	1	3.3	
Family Structure	Nuclear	11	36.7	100
	Joint	13	43.3	
	Extended	6	20	
Religion	Hindu	27	90	100
	Christian	3	10	
Education Level	Illiterate	4	13.3	100
	Primary	4	13.3	
	Intermediate	6	20	
	Secondary	13	43.3	
Occupation	Above SLC	3	10	100
	Unskilled work	6	20	
	Teaching	2	6.7	
	Farming	2	6.7	
	Household Work	5	16.7	
	Unemployed	15	50	

**Clinical Findings:**

Table 2 shows some of the clinical findings in catatonic patients. One patient with bipolar disorder was taking lithium which he had stopped 3 months back, and another patient

with depression was erratically taking amitriptyline 10 mg per day. Failure in the examination was the most common among stressors; death of a close family relative, loan, and in one case negative forecasting of future of the patient by astrologer were other stressors. In family history, two had history suggestive in mother, one of urticaria and another of dissociation; and third had a history suggestive of bipolar illness in second-degree relatives. Three had anxious trait and two schizoid traits in premorbid adjustment. One patient with post-encephalitic sequelae did not improve at the time of discharge.

**Table 2: Clinical findings of patients with catatonia, n=30 (%)**

Clinical Variable	Category	Number of Patients n (%)
History of previous medication	No	28 (93.60%)
History of precipitating stress	No	21 (70%)
Any history of illness in family	No	27 (90%)
Poor Premorbid adjustment	No	25 (83.37%)
Poor Outcome of hospital stay	No	29 (96.67%)

**Catatonic Sign & Diagnosis:**

As shown in Table 3, immobility, mutism, and staring were more observed in depression. Mannerism, excitement, impulsivity, autonomic abnormality, and echolalia were seen only in post-encephalitic sequelae disorder.

Altogether nine patients had abrupt onset of catatonia, eight had acute onset, and thirteen had insidious onset (Table 4).

**Table 3: Individual catatonic signs according to the diagnostic category (n=30) \*(n=) shows the number of catatonic patient with these diagnosis.**

Catatonic Signs	Depression* (n=15)	Conversion Dissociation Disorder* (n=4)	Seizure disorder*(n=3)	Schizophrenia* (n=4)	Meningitis* (n=1)	Post-Enceph. Sequelae* (n=1)	BPAD* (n=2)	Total (n=30)
Excitement			1					1
Immobility	14	3	1	1	1		2	22
Mutism	15	4	2	4	1		2	28
Staring	11	2	2	3			2	20
Catalepsy	8		2					10
Grimacing	1	2	1	1	1	1		7
Echolalia			3					3
Stereotypy				1		1		2
Mannerism						1		1
Rigidity	3			1	1		2	7
Negativism	4				1			5
Waxy Flexibility	4							4
Withdrawal	12			2	1		2	17
Impulsivity			1					1
Automatic Obedience	2		1					3
Mitgehen	2							2
Gegenhalten	3			2				5
Autonomic Abnormality			1					1

**Table 4: Diagnosis and Mode of Onset (n=30)**

Diagnosis	Mode of Onset			Total
	Abrupt	Acute	Insidious	
Depression	1	6	8	15
Conversion-Dissociation Disorder	4			4
Seizure Disorder	3			3
Schizophrenia			4	4
Meningitis	1			1
Post-Encephalitic Sequelae			1	1
BPAD		2		2
<b>Total</b>	<b>9</b>	<b>8</b>	<b>13</b>	<b>30</b>

**DISCUSSION**

**Prevalence**

Our study showed that out of 344 patients 32 (9.3%) showed catatonia. There are reports of 8-12% of total in-patients admission in psychiatry ward.<sup>9-12</sup> Our findings match with their findings confirming that it is a common phenomenon in psychiatric in-patients units. The reported decline in prevalence, it was suggested, could be due to evolving diagnostic systems that failed to capture catatonic syndromes and failure to screen for catatonia and perform an adequate neurological examination.<sup>13</sup>

**Frequency of Catatonic Signs**

The frequency of different catatonic signs in different studies has been tabulated below (Table 5).

Our study showed that 28 had mutism. Immobility, withdrawal, staring were other frequent signs. Moreover, these symptoms were most frequently seen in depression. Among the patients, depression was fifty percent and immobility, mutism, staring had fifteen, fourteen, and eight responses in this disorder alone. It might reflect the increasing severity of psychomotor retardation in depressive syndrome. Other studies also showed that mutism was above 90 %, and stupor/immobility, staring were frequent symptoms.<sup>14-16</sup>

The echolalia was present in the post-ictal phase of seizure disorder in three cases. It was reported to be more frequent in medical catatonia, and another study mentioned that encephalitis and seizures would generally indicate brain insult suggesting that there is an association between childhood brain injury and the syndrome of catatonia.<sup>17,18</sup>

Some discrepancies might have arisen because of different scales used in different studies.

**Mode of Onset**

Mode of onset of catatonia was considered to be abrupt if the catatonia appeared within forty-eight hour of the illness, acute within two weeks

and insidious if more than two weeks. Details are given in Table 4.

Mode on set of catatonia and the diagnosis were unrelated statistically, in the present study. However, it was difficult to find onset of catatonia in some cases due to confusion with the onset of the disorder, especially when the attendants were not available at the onset time.

**Table 5 Frequencies of catatonic signs in different studies.**

Signs	This Study in (%)	Payee et al. <sup>16</sup> (%)	Caroll et al. <sup>17</sup> (%)	Rosebush et al. <sup>9</sup> (%)	Braunig et al. <sup>19</sup> (%)
Mutism	93.3	96.6	88	85	79
Immobility	73.3	76.6	48	100	
Staring	66.7		27	92	
Withdrawal	56.7	70	89	78	
Posturing/Catalepsy	33.3		37	73	12
Grimacing	23.3	66		73	75
Rigidity	23.3			66	33
Negativism	16.7	93.3	43		29
Gegehalten	16.7	53			37
Waxy Flexibility	13.3	40			12
Echo phenomenon	10				
Automatic obedience	10				4
Stereotypy	6.7				96
Mitgehen	6.7				
Excitement	3.3	3.3			100
Mannerism	3.3	3.3			46
Impulsivity	3.3				79
Autonomic Abnormality	3.3				

Some suggested environmental changes preceding the onset of catatonia in patients with mood disorder may play a role, and stress-induced catatonia, though rare, exists.<sup>20</sup> In present study, seventy percent of the cases did not have any precipitating stress.

### **Catatonic Signs and Diagnosis:**

In the psychiatric group, unipolar depression, and in the medical group seizure disorder predominated, both the disorders claiming nearly half of the patients in each group in our study. In a prospective study of 26 patients, sixty-two percent patients with catatonia had psychiatric diagnosis, and thirty-eight percent had medical diagnosis. The same authors have identified seventy-four percent belonging to psychiatric group and twenty-six belonging to medical group, in another study.<sup>17,22</sup> In the study of 55 consecutive hospitalized manic patients with catatonia, Abrams and Taylor did factor analysis and suggested that mutism, negativism, and stupor would correspond to the syndrome of negativistic stupor which did not relate to any diagnosis, age at onset or diagnosis; whereas mutism, stereotypy, catalepsy, automatic obedience would correspond to the classical description of catatonia, would correspond to the diagnosis of mania ( with favorable treatment).<sup>22</sup>

Some reported catatonia to be more common in elderly patients with depression.<sup>23</sup> Fein and McGrath have maintained that catatonia as a syndrome, not as a diagnosis, seems more closely linked with bipolar disorder than with schizophrenia and unipolar depression.<sup>24</sup> Others showed an excess of schizophrenia with catatonic syndrome.<sup>3</sup> In contrary, on an average 20-40% percent of catatonia may be idiopathic.<sup>25</sup> Probably this needs more clarification carrying out the research with same instrument and methodology.

### **CONCLUSION**

The phenomenon of catatonia is common in our set-up. Mutism was the most common symptom. It is important to rule out organic etiology first. Depression is a common diagnosis associated with catatonia.

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