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NEGATIVE SYMPTOMS AND NEGATIVE SCHIZOPHRENIA

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SUMMARY

This study determines the frequency distribution of prominent negative symptoms in a group of chronic, hospitalised schizophrenics. Thirty chronic Schizophrenic (D.S.M. III) patients were rated on the scale for Assessment of Negative Symptoms (SANS) and the prominent negative symptoms were correlated with age, sex and certain illness variables. Majority (80%) of patients had some or the other negative symptom, except thought blocking which was found in none. The subjective awareness of the symptoms was poor. Most negative symptoms were present to a severe degree in about 40% of cases. However, no significant correlation was found between severe negative symptoms and age or sex. Similarly, duration of illness, duration of hospitalisation or current medications did not influence negative symptoms to any appreciable degree. The implications are discussed.

Schizophrenia researchers have recently expressed renewed interest in the assessment, etiology and treatment of negative symptoms (Andreasen, 1982; Andreasen and Oslen, 1982; Strauss and Carpenter, 1974; Crow, 1980; Lewine *et al.*, 1983). Negative symptoms, defined as deficits or losses in function are emphasised as important features of the schizophrenic syndrome. They are common in chronic schizophrenia (Andreasen, 1982). Current thinking about the phenomenology of schizophrenia stresses the importance of distinguishing between positive and negative symptoms (Crow, 1980; Strauss and Carpenter, 1974). Schizophrenics presenting with predominant negative symptoms have been variously called as Negative Schizophrenia (Andreasen and Oslen, 1982), type II Syndrome (Crow, 1980), Clinical Poverty Syndrome (Wing, 1978) or Defect State (Crow *et al.*, 1979). These so-called negative or unproductive symptoms are described as typical of schizophrenic deterioration (Ciompi, 1983).

The exact etiopathogenesis of negative symptoms is unclear. Negative symptoms might be a consequence of positive symptoms that occur over extended periods, a result of social or institutional responses to these symptoms or relatively intrinsic to the individual personality structure (Strauss and Docherty, 1979). Biological and organic factors as structural brain lesions are also implicated as being responsible for these negative symptoms (Johnstone et al., 1976; Andreasen et al., 1982; Crow, 1980). Social understimulation and Institutionalisation are other factors considered as influencing production of negative symptoms (Wing, 1978; Bhaskaran et al., 1972). Or it could be a multi-determined state which occurs mainly after, but sometimes before the acute productive schizophrenic manifestations (Ciompi, 1983).

Preliminary research suggests negative symptoms may be useful in predicting long term outcome and response to treatment, in distinguishing between

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mania and schizophrenia and in identifying patients with structural brain lesions (Andreasen, 1982; Johnstone et al., 1976; Johnstone et al., 1978). Although these various studies are of interest and are certainly important, they raise further questions, principally about the frequency of these symptoms and about the extent to which they are associated with factors as duration of illness, duration of hospitalisation and treatment given.

The present study attempts to provide some new information on this important aspect. The aim is to determine the prevalence of various negative symptoms, in chronic hospitalised schizophrenics. The second objective is to study the relationship between patients with marked or severe intensity of negative symptoms on more than two subscales and certain demographic as well as illness variables. Such patients with marked negative symptoms on more than two sub-scales can be considered as Negative Schizophrenia (Andreasen and Oslen, 1982).

MATERIAL AND METHOD

This study was conducted at the National Institute of Mental Health and Neuro Sciences, Bangalore. Thirty patients diagnosed as Chronic Schizophrenia as per DSM-III (A. P. A., 1980) were selected at random as the sample. For the purpose of this study patients between the ages of 20 and 55 years and who were long stay inpatients (more than one year) of this hospital were selected. Patients with Epliepsy, Mental Retardation, Organic Mental disorders and major physical diseases were excluded from the study. To remove any bias in selection, a list of cases meeting the above criteria was prepared, from shich thirty cases were selected randomly. The sample consisted of 7 males and 23 females.

The negative symptoms in these patients were rated using the scale for Assessment of Negative Symptoms "SANS" (Andreasen, 1981) by two clinical psychiatrists. The scale has undergone tests for reliability, internal consistency and validation (Andreasen and Oslen, 1982). We have also evaluated the inter-rater and test-retest reliability of the scale and found it applicable in our setting (Mathai et al., 1984). The rating of each of the components was made based on multiple sources of information including direct observation by the investigators and the nurse incharge of ward, and from reports of the patients. Patients were rated on all the five sub-scales, Affective flattening, Alogia, Avolition-apathy, Anhedonia -asociability and Attentional impairment. For this study, patients having marked to severe degree of the negative symptoms on more than two sub-scales, have been correlated with the patients' age, sex and certain illness variables as duration of illness, duration of hospitalisation and status of current medication.

RESULTS

Table I gives the distribution of the sample studied. The patient percentage distribution on various scales and subscales according to severity are given in Table II. Majority of patients have some negative symptoms to be present definitely except blocking, which we found in none of our patients. The common negative symptoms are found to be unchanging facial expression, impersistence at work, inability to feel intimacy and closeness and asociability in about 80% of patients. Lack of sexual interest and activity and poverty of speech was reported in 35-40% of cases. However the subjective complaints or awareness

TABLE I. *Distribution of Sample*

Sex	
Male	7
Female	23
Age (in years)	
20—29	7
30—39	8
40—55	15
Duration of Illness (in years)	
5—9	9
10—15	11
More than 15	10
Current Medication	
Yes	21
No	9

TABLE II. *Frequency of patients with varying severity of negative symptoms.*

	Percentage of patients		
	Symptom definitely present	Moderate Intensity	Severe Intensity
Affective flattening or blunting :			
Unchanging facial expression	80.0	60.0	20.0
Decreased spontaneous movements	73.3	56.6	13.0
Paucity of Expressive Gestures	66.6	46.6	6.6
Poor Eye contact	66.6	50.0	13.3
Affective Non-Responsivity	70.0	43.3	10.0
Inappropriate Affect	56.6	40.0	16.6
Lack of vocal infections	66.6	30.0	10.0
Subjective rating of Affective Flattening	3.0	0.0	0.0
Global rating	83.3	60.0	33.3
Alogia :			
Poverty of speech	50.0	40.0	10.0
Poverty of content of speech	73.3	63.3	26.6
Blocking	0.0	0.0	0.0
Increased latency of Response	40.0	20.0	0.0
Subjective rating of Alogia	6.6	0.0	0.0
Global rating of Alogia	76.6	53.3	13.3
Avolition-Apathy :			
Grooming and Hygiene	70.0	43.3	13.3
Impersistence at work or school	80.0	56.6	16.6
Physical Anergia	73.3	46.6	16.6
Subjective complaints of avolition-apathy	23.3	13.3	0.0
Global Rating of Avolition-apathy	80.0	46.6	23.3
Anhedonia-Associability :			
Recreational interests and activities	76.6	56.6	10.0
Sexual interest and activity	36.6	26.6	13.3
Ability to feel intimacy and closeness	80.0	46.6	23.3
Relationships with Friends & Peers	70.0	60.0	30.0
Subjective Awareness of Anhedonia-Associability	16.6	13.3	0.0
Global rating of Anhedonia Asociability	83.3	53.3	26.6
Attentional Impairment :			
Work Inattentiveness	73.3	40.0	10.0
Inattentiveness during Mental Status Testing	63.3	53.3	43.3
Subjective complaints of Inattentiveness	3.3	0.0	0.0
Global rating of inattentiveness	70.0	53.3	30.0

of various negative symptoms is very poor in most cases.

Twenty cases (66.7%) have marked to severe negative symptoms on more than two subscales. The comparison between patients with negative symptoms on more than two subscales and those with minimal or absent negative symptoms in relation to age, sex, and certain illness variables are given in Table III.

TABLE III. *Negative symptoms with age, sex and illness*

Variable	Number of Patients	Negative symptoms	
		Absent or Minimal (n=10)	Marked to severe (n=20)
Sex :			
Male	7	3	4
Female	23	7	16
Age (in years)			
20—30	7	2	5
31—40	8	3	5
41—55	15	5	10
Duration of Illness (in years)			
5—10	9	4	5
11—15	11	2	9
More than 15	10	4	6
Duration of hospitalisation (in years)			
Less than 2	8	3	5
2—5	8	2	6
6—9			
More than 10	14	5	9
Current Medication :			
Given	21	6	15
Not given	9	4	5

There is no significant statistical association between severe negative symptoms and any of the variables.

DISCUSSION

This report shows that a large majority (84%) of patients have definite negative symptoms and in about two-thirds these were present to a marked or severe degree and fulfill the criteria of negative schizophrenia as described by Andreasen and Oslen (1982). None of the patients had any positive symptoms dominating the clinical picture. The extensive prevalence of these symptoms justifies the subtyping as negative schizophrenia as has been done by certain researchers (Andreasen, 1982; Crow, 1980). The exact frequency of negative symptoms in schizophrenia is not reported in literature, hence a comparison with the present results cannot be attempted. Symptoms like flatness of affect, other negative and non-specific symptoms were reported from all centres of the International Pilot Study of Schizophrenia and its 2 year follow up(WHO, 1974; WHO, 1979). Certain disabling negative symptoms as inattentiveness, inability to feel intimacy, inadequate social relations, poverty of speech and affective flattening present in a servere intensity in almost 25% of the patients in this study, were noticed to be present in many subjects in Owens and Johnstones (1980) study. Negative symptoms as apathy and withdrawal were difficult to treat in another report (Strauss and Docherty, 1979).

Interestingly, there is no significant correlation between negative schizophrenia and age or sex. Bhaskaran et al., (1972) reported more severe deficits in females and positive relationship between age and deficits was reported by Owens and Johnstone (1980) and Johnstone et al., (1981). The difference

is probably due to the nature of the sample, Owens and Johnstone examined mainly elderly patients with mean age 60 years. Similarly, duration of illness and duration of hospitalisation have no significant association with severe negative symptoms in this study as was noticed by Bhaskaran et al. (1972) also. Some clinicians believe that negative symptoms increase as illness becomes more chronic (Strauss and Docherty, 1979; Johnstone et al., 1981) and some implicate hospitalisation and hospital environment to be responsible for causing deficits and negative symptoms as avolition or apathy (Wing and Brown, 1961; Wing and Brown, 1970; Bhaskaran, 1970; Bhaskaran et al., 1972; Strauss and Docherty, 1979). The present study does not lend support to this opinion as there is no significant differential distribution of patients with negative schizophrenia in relation to duration of illness of hospitalisation. Similar results were reported by Andreasen and Oslen (1982).

The role of continuing medications in chronic schizoprenics has been a controversial area. Some surveys found no difference of outcome between patients discontinuing medications and those continuing (Johnson, 1976, Johnson, 1979; Johnson et al., 1983). Andreasen and Oslen (1982), Wing and Brown (1970) and Owens and Johnstone (1980) reported that neuroleptic medication as such does not contribute to development of deficits or negative symptoms. This study also has found no difference in severity of negative symptoms between patients continuing or not continuing medications. These patients were not on any medication for more than two years as the clinical status, had been stable and the symptoms were not showing even slightest improvement. Other patients were receiving long term depot preparations (Fluphenazine decanoate).

Probably, additional investigation is required to determine the frequency of negative symptoms in a relatively larger sample of schizophrenic patients, their possible predictive validity and possible remedial measures. This study certainly proves that negative symptoms are very common in chronic schizophrenia as was reported by Andreasen (1982) also. Also, it makes clearer the absence of role of duration of illness, hospitalisation, medication, age or sex in producing negative symptoms. The area of research is interesting and more work from the Indian Culture and background as well as cross-cultural studies would prove to be illuminative.

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