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NEGATIVE SYMPTOMS IN DEPRESSION

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SUMMARY

Negative symptoms have been assessed in 34 cases of major depression (RDC) using the scale for assessment of negative symptoms. Negative symptoms were found to be quite frequently observed in these cases; common negative symptoms were inability to enjoy recreational interests and activities (76%), feelings of anhedonia (64.7%) and physical anergia (55.9%). Poverty of speech was found to be more in younger patients ($P < .001$). Avolition was seen more frequently in unmarried ($P < .05$) patients. No other significant correlation was noticed between demographic variables and negative symptoms. The implications of evaluating negative symptoms systematically in depressives are for future research especially for prognostication, treatment responses and classification of depression based on such symptoms.

Introduction

Negative symptoms are generally defined as "involving primarily an absence of normal functions" (Strauss, Carpenter and Bartko, 1974) with some writers using the terms "deficit symptoms" (Chapman and Chapman 1973) or "defect state symptoms" (Andreasen and Oslen 1982). In much of the literature negative symptoms have been indexed by behavioural signs such as flat affect and poverty of speech. These patterns of behaviour, which are observed and noted in a naturalistic interpersonal context, are considered to be negative symptoms because they represent behaviour relative to social expectations (Pogue-Geile and Harrow 1984). Negative symptoms should not be assumed to be specific to schizophrenia or pathognomonic of it. Many negative symptoms could be seen in patients with other diseases, particularly depression (Andreasen 1982).

Though no study has been conducted so far to study negative symptoms in depression, except one by Pogue-Geile and Harrow (1984), symptoms which have been considered as 'negative' have been dealt with in most phenomenological, nosological and outcome studies on depression. The frequency, nature and prognostic value of some negative symptoms have been examined though the symptoms were not termed as 'negative symptoms'. Hamilton (1982) has described common symptoms of depression among which are psychomotor retardation, loss of interest, lack of energy. Nelson et al (1984) evaluated 43 patients with DSM III criteria for major depression with Melancholia and reported depressed energy in 93%, decreased interest in work and activities in 80%, inability to experience pleasure (79%), lack of responsiveness (38%) and retardation in 21%. Mc Gee et al (1983) studied prevalence of self-reported depressive symptoms in 899 cases and found loss of interest in 7.4%, difficulty in concentration in 4.7%, feeling of being slowed down in 8.2% and reduced interest in social activities in 7.3%. Most studies on cluster analysis have discovered a retarded-endogenous-psychotic cluster which is mere likely to have negative symptoms (Grinker et al 1961, Overall et al 1966, Pilowsky et al 1969, Fleiss et al 1971, Paykel 1971, Lorr 1973, Raskin and Crook 1976,

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Paykel and Henderson 1977, Byrne 1978). Similarly, in a review on major depressive illness Nelson and Charney (1981) report that many factor analytic studies have shown strong factor loading on symptoms as *retardation* (Hamilton 1959, Kiloh 1963, Rosenthal 1966, Rosenthal 1967, Kay 1969), *lack of reactivity* (Kiloh 1963, Rosenthal 1967, Carney 1965, Garside et al 1971, Paykel et al 1971, Kiloh et al 1972), *loss of interest* (Hamilton 1959, Rosenthal 1966, Rosenthal 1967) and *difficulty in concentration or perplexity* (Rosenthal 1967). Discriminant function analysis by Copeland (1983) reveals that diminished sexual feelings, slow, muddled and inconclusive thinking, monotonous voice, expressionless face have positive loadings on discriminant function coefficients and help to discriminate psychotic from neurotic depression.

Venkoba Rao (1981) reported lack of energy in 80%, loss of ability to concentraate in 64%, psychomotor retardation in 55.5% and disruption of social functioning in 61% of psychotic depressives. Gupta (1982) in a similar group of depressives reported disruption of social functioning and lack of energy in more than 95% and inability to concentrate and psychomotor retardation in about 40% of cases. Pogue-Geile and Harrow (1984) investigated negative symptoms in depressives at 1½ years follow-up and reported poverty of speech in 9%, flat affect in 24%, psychomotor retardation in 9% and overall high score on negative symptoms in 27%. This is the only research atempting in evaluate negative symptoms in depressives, though only during follow-up period.

Thus, the above literature provides ample evidence about the presence of these symptoms in depressive disorders. Most of these symptoms and many other negative symptoms can be conveniently measured using the Scale for assessment of negative symptoms (Andreasen 1981). The scale has undergone tests for reliability, internal consistency and validation (Andreasen and Oslen 1982). The inter-rater and test-retest reliability of the scale have been assessed in the setting of present study and found to be significantly adequate (Mathai 1984).

Since, this is a potentially important subject of research and there is paucity of systematic study of negative symptoms in depression, the present study has been carried out. The objectives of this study are to determine the frequency of negative symptoms in major depression and to examine their socio-demographic and clinical correlates.

Material and Methods

Sample consists of patients diagnosed as definite, endogenous major depressive disorder according to R.D.C. (Spitzer 1978), between 16-55 years of age, either sex, presenting for the first time at the out patient clinic of National Institute of Mental Health and Neuro Sciences, Bangalore, India. Consequetive cases fulfilling the above criteria were included. Patients with associated organic problems, alcoholism or drug abuse, past history of non-affective psychotic disorder, and those who have received treatment elsewhere for the present episode, were excluded. The cases were assessed using the scale for assessment of Negative Symptoms (SANS by Andreason) at the time of entry into the study.

Clinical and demographic details were recorded on an interview proforma. Percentage freqency distribution of various negative symptoms was examined. The correlation between the total negative symptom scores and sub-scale scores and demographic

variables were computed by biserial co-efficient of correlation and Point biserial co-efficient of correlation (Guilford 1956).

Results

Thirty four cases fulfilling the criteria were included into the study. The distribution of sample and its demographic and clinical characteristics are given in Table 1. The duration of illness was less than 2 months in 41%, between 2 to 6 months in 35%, 6-12 months in 18% and more than one year in 6%.

Table 1

Description of Sample (N = 34)

Age	**n**	**Percent**
15-24 years	7	20.6
25-34 years	10	29.4
35-44 years	8	23.5
45-55 years	9	26.5
Sex		
Male	18	52.9
Female	16	47.1
Occupation		
Professional, semi-professional	6	17.6
Clerical	4	11.8
Labour/farmer	10	29.4
Housewife	10	29.4
Others	4	11.8
Education		
Primary School	19	55.9
Matriculate	4	11.8
Above Matric	11	32.3
Marital Status		
Unmarried	12	35.3
Married	22	64.7

Analysis reveals that frequently occuring negative symptoms are inability to enjoy recreational interests and activities (76%), subjective awareness of anhedonia-asociality (64.7%), inability to enjoy sex (64.7%), inability to form friendships (55.9%) and physical anergia (55.9%). The commonly occuring negative symptoms in endogenous depression are given in Table 2. Table 3 gives the mean, standard deviation and median scores on individual negative symptom sub-scales. In Table 4, mean scores in different demographic groups is presented. No significant difference is noticed between various groups.

Table 2

Common negative symptoms in Depression (N = 34)

	Symptom	**n**	**Percent**
1.	Inability to enjoy recreational activities and interests	26	76.5
2.	Inability to enjoy sexual interest and activity	22	64.7
3.	Subjective awareness of anhedonia, asociality	22	64.7
4.	Objective evidence of asociality, anhedonia	21	61.8
5.	Inability to form friendships	19	55.9
6.	Physical Anergia	19	55.9
7.	Inability to feel intimacy and closeness	18	52.9
8.	Feelings of apathy & avolition	18	52.9
9.	Impersistence at work	15	44.1
10.	Feelings of emotional emptiness or loss of feeling	13	38.2
11.	Increased latency of response	13	38.2
12.	Unchanging facial expression	12	35.3
13.	Poor personal care	12	35.3
14.	Social inattentiveness	12	35.3
15.	Decreased spontaneous movements	11	32.3
16.	Paucity of expressive gestures	11	32.3
17.	Affective non-responsivity	11	32.3

Table 3

Negative Symptom Scores

	Subscale	Mean	S.D.	Median
I.	Affective flattening	8.38	5.81	8
II.	Alogia	3.97	4.14	3
III.	Avolition-apathy	7.32	4.39	9
IV.	Anhedonai-asociality	9.79	3.93	11
V.	Attentional impairment	3.47	3.16	3
	Total Score	32.38	15.05	32

Table 4

Total Negative Symptom Scores in Different Demographic Categories

	n	Mean	S.D.	t test
Age				
Below 35 years	17	36.5	15.2	
Above 35 years	17	28.3	13.2	N.S.
Sex				
Male	18	32.2	15.6	
Female	16	31.8	14.0	N.S.
Education				
Illiterate	19	29.8	13.5	
Literate	15	35.6	15.8	N.S.
Marital Status				
Single	12	37.4	16.8	
Married	22	29.6	12.8	N.S.

Table 5

Correlation between Negative Symptom Sub-Scale Scores and Demographic Variables

Sub Scale	Age	Sex	Marital Status	Education
Sub Scale I	− 0.260	0.331 ***	− 0.006	0.222
Sub Scale II	− 0.579	0.022	0.159	0.085
Sub Scale III	− 0.042	0.032	0.370*	0.086
Sub Scale IV	− 0.197	0.109	0.288	0.214
Sub Scale V	− 0.303	0.083	0.221	0.047
Total Score	− 0.341	0.016	0.257	0.167

Point Biserial Coefficient of correlation for sex and marital status. Biserial co-efficient of correlation for age and education.

* $p < .05$
*** $p < .001$

There is a significant correlation ($p < .001$) between age and sub-scale II (alogia). Poverty of speech or alogia is more in younger age group (below 35 years) as compared to those above 35 years. Younger patients also tend to have more attentional impairment and total negative symptom score ($P < 0.1$). Avolition and apathy is significantly ($P < .05$) more in unmarried patients. There is no other significant correlation between demographic variables and sub-scale scores (Table 5).

Discussion

Negative symptoms are quite commonly seen in endogenous depression, is evident from the results. However, very few patients had marked or severe degree of negative symptoms but were usually of moderate intensity. The mean scores on various sub-scales (Table 3) give an idea of the severity of negative symptoms in this group of patients. It would be interesting to see the score in other groups of depressives or schizophrenic patients. The lack of any such data makes it difficult to compare the scores of this study. Pogue-Geile and Harrow (1984) have reported mean negative symptom scores on certain symptoms as poverty of speech, flat affect, psychomotor retardation and total negative symptom score, but these were scored during 1½ year follow-up and by a different measure.

Inability to enjoy recreational activities and interests is the commonest negative symptom in this study, followed by loss of libido and feelings of anhedonia, and asociality. The figures are comparable with Nelson et al (1984), Venkoba Rao (1981) and Gupta (1982) with minor differences. Physical anergia (55.9%) is however seen less frequently than in these three studies where it was observed in almost 90% of cases. Similarly, reduced ability to concentrate (35%) is less frequent than the figures reported by Nelson et al (76%) and 64% by Venkoba Rao. Psychomotor retardation was also more frequently reported by Nelson et al (1984) and Venkoba Rao (1981). However the frequencies are similar to those reported by Gupta (1982). These differences in the distribution of the negative symptoms could be due to the methodological differences as inclusion criteria or type

of depressives studied, the status at the time of study, the instrument used etc.

The issue of more relevance here is that this study documents the presence of negative symptoms in depressive disorders, that too with reasonable frequency. Though this aspect has not been the focus of interest in various studies on depression, some recent studies have emphasised the need of studying negative symptoms in depression (Andreasen 1982, Pogue-Geile and Harrow 1984, Lewine et al 1983). Lewine et al (1983) studied negative symptoms derived from NOSIE and SADS-C and indicated that negative symptoms and depression do not seem to be same though the precise relationship between depression and negative symptoms is not clear.

The implications of studying negative symptoms could have far reaching significance. Afterall, there still exist great disagreements concerning the definition and sub-typing of depressive disorders (Andreasen 1982 a) and negative symptoms might help in evolving a new classification of depression, as in case of schizophrenia. Study of negative symptoms open further avenues to study prognosis of depression, predictive ability of negative symptoms as regards long term prognosis, responses to drugs and physical treatments or studying etiological aspects of affective disorders. It also provides another dimension to examine the relationship between schizophrenia and affective disorders, or schizo-affective psychosis in terms of negative symptoms. We have already reported that negative symptoms predict poor prognosis in depression (Chaturvedi 1985).

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