

## PRESENCE AND SEVERITY OF DEPRESSIVE SYMPTOMS IN SCHIZOPHRENIA

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### ABSTRACT

**Objectives:** The present study aims to assess the presence and severity of depressive symptoms in persons suffering from schizophrenia as compared to normal healthy controls.

**Material and Methods:** This case control comparative study was carried out at the Department of Psychiatry, Postgraduate Medical Institute, Lady Reading Hospital Peshawar from January to December 2005. One twenty subjects were included in the study by non probability convenient sampling. Group 1 (the study group) included sixty patients suffering from schizophrenia between the ages of 15-60 and Group 2 (the control group) included sixty normal subjects without any major psychiatric disorder proportionally matched for age and gender. Those suffering from schizoaffective illness, major depression and organic brain damage were excluded. Hamilton Depression Rating Scale (HDRS), a 21 item scale was used to assess the presence and severity of depressive symptoms.

**Results:** The spectrum of depressive symptoms was broad in the schizophrenic sample. The difference in two groups was observed specially in depressed mood i.e., 19 patients in the study vs. 3 subjects in the control group with a p value of 0.0001 and in psychomotor retardation i.e., 19 patients in the study vs. 4 subjects in the control group, again with a p value of 0.0001.

**Conclusion:** The results of this study suggest that depressive symptoms are a part and parcel of schizophrenia and every patient suffering from schizophrenia should be assessed in detail for the presence and severity of depressive symptoms.

**Key Words:** Schizophrenia, Depressive symptoms, Hamilton Depression Rating Scale (HDRS).

### INTRODUCTION

Ever since Kraepelin it was considered that depressive symptoms occur commonly in schizophrenia, both in the acute and the chronic stage.

Mayer Gross felt the gloom occurring as a result of the Psychological reaction to acute psychotic episode and Bleuler considered depression to be one of the essential features of schizophrenia<sup>1</sup>.

These clinical observations have been confirmed recently by using standardized methods of assessment<sup>1-3</sup>. Depressive symptoms in schizophrenia are important because they contribute significantly to the suffering caused by

the illness; whether positive psychotic symptoms are acute or not prominent, they flare up the deficit in psychosocial functioning and commonly precede attempted and/ or completed suicide<sup>3</sup>.

The assessment and treatment of depressive symptoms in schizophrenia remains clinically challenging as depressive symptoms seem to be a part and parcel of schizophrenia even in a specifically designed study not to be having schizoaffective disorder patients<sup>1</sup>.

As there is increasing evidence, that the depressive symptoms in schizophrenia can be treated effectively by recent advances in psychopharmacology and this in turn can reduce the morbidity and mortality in schizophrenic

**SOCIODEMOGRAPHIC CHARACTERISTICS OF MID TO LATE LIFE, PATIENTS WITH SCHIZOPHRENIA AND NORMAL COMPARISON SUBJECT**

Dependent variable	Schizophrenia Group (N= 60)				Normal compassion group (N= 60)				Diagnostic effect			
	Men (n= 30)		Women (n=30)		Men (n=30)		Women (n=30)		for X <sup>2</sup>	df	P	Effect size
Continuous variable	Mean	SD	Mean	SD	Mean	SD	Mean	SD	F	df	P	d
Age (years)	58	9.9	59.8	10.1	59.8	10.0	59.5	9.5	0.02	1.116	0.88	0.03
Education years	11.9	3.2	12.8	2.5	13.8	2.1	12.8	2.9	3.71	1.116	0.06	03.5
Mini mental State score	26.9	3.1	26.7	3.1	28.9	1.2	29	1.1	25.16	1.1222	0.001	0.93
Categorical Variables	N	%	N	%	N	%	N	%	X <sup>2</sup>	af	P	n
Family history of mood disorder	7	23	9	30	3	10	3	10	5.30	1	0.02	0.44
Non Caucasian	8	27	7	23	8	27	14	27	1.85	1	0.17	0.25
Independent living situation	9	30	13	43	5	17	14	47	0.32	1	0.7	0.16
Currently married	6	20	4	13	18	60	9	30	11.18	1	0.0008	0.63
Ever married	19	63	24	80	27	90	28	93	7.38	1	0.007	0.41
Had previous psychiatric hospitalization	26	87	29	97	0	0	0	0	88.42	1	0.0001	2.13
Family history of Schizophrenia	3	10	6	20	0	0	3	10	3.05	1	0.08	0.34

Table 1

population<sup>4-8</sup>, present study was therefore designed as to assess the presence and severity of depressive symptoms in the patients suffering from schizophrenia as compared to the normal subjects.

**MATERIAL AND METHODS**

This comparative study was carried out in the department of Psychiatry, Postgraduate Medical Institute, Lady Reading Hospital, Peshawar from January to December 2005. One twenty subjects, sixty each in two groups were included in the study using non probability convenient sampling. Group 1 (the study group) included sixty patients suffering from schizophrenia and Group 2 (the control group) included sixty normal subjects without any major psychiatric disorder proportionally matched for age and gender.

In Group 1, all those persons fulfilling the Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> Edition, Text Revised (DSM-IV TR) criteria for schizophrenia, between the ages of 15-

60 years were included<sup>9</sup>, while normal subjects, the medical attendant of the patients, were included in Group 2. All those suffering from schizoaffective disorder, major depressive disorder and gross brain damage were excluded from the study.

Details were recorded on semi structured questionnaire prepared in accordance with the objectives of the study including the record of any previous psychiatric hospitalization, family history of mood disorder or schizophrenia, current living situation and details of availability of system of support.

Along with administering the semi structured clinical interview, sociodemographic information and information regarding depressive symptoms by using Hamilton Depression Rating Scale was gathered<sup>10</sup>.

Initially the score of the first 17 items on the Hamilton Depression Rating Scale was considered but since the first 17 items of the scale

**RATES OF MODERATE/ SEVERE DEPRESSIVE SYMPTOMS OR CLINICAL SIGNIFICANT DEPRESSION IN MID TO LATE LIFE PATIENTS WITH SCHIZOPHRENIA AND NORMAL COMPARISON SUBJECTS**

Dependent variable	Schizophrenia Group (N= 60)				Normal compassion group (N= 60)				Diagnosis effect		
	Men (n= 30)		Women (n=30)		Men (n=30)		Women (n=30)				
	N	%	N	%	N	%	N	%	X <sup>2</sup> (df)	P	Effect Size
Depression variable Based on Hamilton Depression Rating Scale											
Score >2 on first 17 items											
1. Depressed Mood	12	40	7	23	2	7	1	3	14.44	0.0001	0.75
2. Feelings of Guilt	9	30	10	33	4	13	2	7	8.28	0.004	0.55
3. Suicidal ideation	2	7	3	10	0	0	0	0	4.18	0.04	0.58
4. Early Insomnia	8	27	7	23	4	10	0	0	9.17	0.003	0.60
5. Middle Insomnia	7	23	8	27	4	13	0	10	3.36	0.07	0.35
6. Late Insomnia	5	17	8	27	5	17	3	10	1.34	0.25	0.22
7. Work and activities	3	10	7	23	1	3	2	7	3.91	0.05	0.39
8. Retardation	9	30	10	33	1	3	0	0	20.29	0.0001	0.93
9. Agitation	0	0	1	3	0	0	0	0	0.35	0.55	0.25
10. Anxiety-Psychic	12	40	12	40	0	20	5	17	6.62	0.01	0.49
11. Somatic Anxiety	4	13	2	7	1	3	0	0	3.19	0.07	0.38
12. Gastrointestinal Somatic Symptoms	2	7	1	3	1	3	0	0	0.72	0.04	0.19
13. General Somatic Symptoms	5	17	6	20	2	7	1	3	4.78	0.03	0.43
14. Genital Symptoms	2	7	1	3	0	0	0	0	2.01	0.16	0.44
15. Hypochondriasis	5	17	9	30	2	7	3	10	4.83	0.03	0.42
16. Loss of Weight	0	0	3	10	0	0	0	0	2.03	0.15	0.44
17. Loss of Insight	2	7	4	13	0	0	0	0	5.39	0.02	0.64
<b>Additional items</b>											
18. Diurnal Variation	5	17	9	30	2	7	0	0	10.12	0.002	06.4
19. Depersonalization and Derealization	9	30	9	30	1	3	0	0	18.74	0.0001	0.90
20. Paranoid Symptoms	0	17	5	17	1	3	0	0	7.60	0.0006	0.58
21. Obsessive Compulsive Symptoms	2	7	6	20	1	3	0	0	5.20	0.02	0.49

Table 2

have been criticized for its bias towards somatic symptoms, which may increase with normal aging,

a total score was calculated including the last four items i.e. 18-21 which are Diurnal variation,

**SEVERITY OF DEPRESSION AMONG MID TO LATE LIFE PATIENTS WITH SCHIZOPHRENIA AND NORMAL COMPARISON SUBJECT**

Severity according to sum of scores on First 17 items Hamilton Depression Rating Scale	Schizophrenia Group				Normal Comparison Group			
	Men (n=30)		Women (n=30)		Men (n=30)		Women (n=30)	
	N	%	N	%	N	%	N	%
None to Mild (Sum < 6)	9	30	6	20	26	87	27	90
Mild to Moderate (Sum=7-10)	19	63	18	60	3	10	3	10
Moderate to Severe (sum > 17)	2	7	6	20	1	3	0	04

Table 3

Depersonalization and Derealization, Paranoid Symptoms and Obsessive Compulsive Symptoms.

The data obtained was analyzed both qualitatively and quantitatively by using Statistical Package for Social Sciences (SPSS 10) with results showing mean, standard deviation, degree of freedom and p value, which was considered significant below 0.05.

**RESULTS**

The two groups each with 60 respondents were well matched on most demographic features. Schizophrenic patients were more likely to have had previous psychiatric hospitalization i.e., 26 as compared to none in males and 29 as compared to none in females had previous psychiatric hospitalization. They were likely to be currently having lower mean scores on the mini-mental state than normal group i.e., 26.9 as compared to 28.9 in males and 26.7 as compared to 29 in females. No diagnosis by gender interaction effects was significant. Table 1 shows the demographic break up and details of semi structured clinical interview of both the groups. (table 1 )

A list for each of the groups with percentage of depressive symptoms (score of 2 or more) rated on each of the first 17 items of the Hamilton Depression Rating Scale is given in table 2. The difference in two groups was observed specially in depressed mood i.e., 19 patients in the study vs. 3 subjects in the control group with a p value of 0.0001 and in psychomotor retardation i.e., 19 patients in the study vs. 4 subjects in the control group, again with a p value of 0.0001. Four additional items that may reflect some of the more severe psychological symptoms were also tabulated. The difference in two groups was most

significant in depersonalization and derealization i.e., 18 patients in the study vs. 1 subject in the control group with a p value of 0.0001. Over all, each of the depressive symptoms was more frequent in schizophrenic patients than in the normal subjects. (table 2 )

The percentage of individuals with scores of 17 or more, between 7 and 16 and 6 or less on the first 17 items of the Hamilton depression scale are given in table 3. These cut off points were selected because they have previously been shown to represent moderate to severe depression on a score of 17 or more, mild to moderate depression on a score of 7 to 16 and none to mild severity on a score of 6 or less. (table-3)

**DISCUSSION**

To our knowledge, present study is the first of its kind looking at the break down of various depressive symptoms on HDRS, although depression in general has been studied extensively in Schizophrenia and has been found to be common. So the comparison of these symptoms is not possible with other studies that just show depression as a whole and not the variety of symptoms of depression.

Recent advances in psychopharmacology and other treatment approaches elevate the importance of establishing the diagnosis in the initial part of illness. The final treatment goal in schizophrenia is to significantly reduce the mortality and morbidity and if the associated depressive symptoms are diagnosed earlier, they can well be treated and thus will help in reducing the mortality and morbidity over all.

During acute phase of the illness adequate anti-psychotic medication, good psycho-social

support and if indicated hospitalization will successfully ameliorate both depressive as well as positive symptoms. There is compelling evidence to try antidepressant, when patient has persistent depressive symptoms and is not in a phase of acute illness<sup>11-13</sup>. As far as electroconvulsive therapy (ECT) is concerned, no significant improvement in depressive symptoms has been reported in patients suffering from schizophrenia. Rehabilitation, social support and meaningful social role can have favorable effects. Cognitive Behavioral Therapy has been shown to have positive effect on depressive symptoms in schizophrenia<sup>14</sup>.

For both men and women with schizophrenia, depressive symptoms were frequent and did not appear to be a by product of age, neuroleptics, family history, negative symptoms or movement disorder<sup>1, 15</sup>. The spectrum of depressive symptoms seen in schizophrenic patients was wide-ranging. The differences in depressive symptoms between the schizophrenics and normal groups were observed in terms of the severity of feeling of hopelessness, helplessness (depressed mood) and psychomotor retardation. Other depressive symptoms were also frequent in schizophrenia although they did not meet the criteria for major depressive disorder. One fifth of the female schizophrenics had 17 or more on score on 17 items Hamilton depression rating scale which shows moderate to severe depression. When lesser degrees of depression were also taken into account, the overwhelming majority of both men and women with schizophrenia had at least sub-syndrome symptoms of depression. The clinical importance of this finding is underscored by several studies that describe sub syndrome depressive symptoms in non psychotic patients being associated with considerable social dysfunction and disability, suicidal attempts and risk of later major depressive disorder<sup>16-18</sup>.

It is also worth mentioning that 10% rate of mild depressive symptoms in our normal comparison group is well in line with the rate of sub syndrome depression<sup>17, 18</sup>.

There are several reasons why depressive symptoms may be associated with schizophrenia:

1. As an adverse effect of antipsychotic medications. Although these can occur in patients not on antipsychotics but a kinetic side effect of medication may be wrongly attributed as depressive retardation<sup>15</sup>.
2. These may be a response to the recovery of insight into the illness and the problems to be faced. Again, this might take place at times, but provide an influential general justification<sup>3</sup>.
3. Depression being an integral part of

schizophrenia<sup>2</sup>.

In a study of patients after the acute onset of schizophrenia, the investigators have found depression to be most common in the acute phase, decreasing during the following three months. They concluded that depression is a symptom of schizophrenia although it may be recognized only after more striking psychotic symptoms have improved, of people who have suffered a depressive disorder at any time during the illness, and out of these 17 percent will be suicidal<sup>17,18</sup>.

## CONCLUSION

The results of this study suggest that depressive symptoms are a part and parcel of schizophrenia and every patient suffering from schizophrenia should be assessed in detail for the presence and severity of depressive symptoms. However further studies with a larger sample size will be required to find out the most common depressive symptoms in schizophrenia and the approach to overcome them.

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