

STUDY OF DEPRESSION IN SCHIZOPHRENIADharmesh V. Patel¹, Vinodkumar M. Darji², Manasvi Jariwala³**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: BACKGROUND: The presence of depression in schizophrenia has been recognized since the time of Kraepelin and Bleuler. Depressive symptoms associated with schizophrenia have received considerable attention in recent years. It has been suggested that patient may manifest depressive symptoms during the onset of psychotic symptoms, during course of chronic schizophrenia or after the psychotic symptoms has been abated. **AIMS & OBJECTIVES:** 1. To study the prevalence of depression in schizophrenia. 2. To study the correlation between depression and subtype of schizophrenia. **MATERIALS & METHODS:** 50 consecutive patients suffering from schizophrenia according to DSM-IV criteria, who were brought to psychiatric OPD were selected for this study. Patients between 15-55 years age were included in this study. HDRS (Hamilton depression rating scale) was administered to all patients to assess severity of depression. **RESULTS:** Out of 50 patients suffering from schizophrenia, 44% of patients suffering from schizophrenia were depressed. In this study the most common symptoms of depression were depressed mood, loss of interest on pleasure, sleep disturbance, loss of energy/fatigue, psychomotor disturbance, suicidal thought or death wish, feeling of hopelessness. **CONCLUSION:** Depression is common in patients suffering from schizophrenia. The severity of depression was mild to moderate, no one had severe depression. It is more common in patients who are living in nuclear family, who are divorced, who have paranoid type of schizophrenia, who were not on antipsychotic medicine.

KEYWORDS: DEPRESSION, SCHIZOPHRENIA, DSM-IV.

INTRODUCTION: The presence of Depression in schizophrenia has been recognized since the time of Kraepelin and Bleuler. Depressive symptoms associated with schizophrenia have received considerable attention in recent years.

It has been suggested that patient may manifest depressive symptoms during the onset of psychotic symptoms during course of chronic schizophrenia or after the psychotic symptoms has been abated. Though the epidemiological data of depression in schizophrenia are varies. Evidence suggest that prevalence of depression in schizophrenia is considerable and associated with poor outcome, an increase risk of relapse, and high rate of suicide which is 20 times higher than general population. It also contributes to social and occupational impairment.

Depressive symptoms need to be differentiated from a residual state of schizophrenia and negative symptoms of schizophrenia as the management of these conditions differs widely. However, little is known about determinants of depressive disorders in schizophrenia. Recently Dexamethason has on suppression test (ISMAIL K et al),⁽¹⁾ MRI & PET study have been carried in order to understand various aspects of the illness. But still more study is required.

DSM-IV has established research criteria for post-psychotic depressive disorder of schizophrenia. ICD-10 has included "Post schizophrenia depression 'as a new entity. With all above

consideration an attempt is made to study the various clinical aspects of schizophrenia patients with depression.

Affective symptoms are the least defined of the schizophrenia domains, and may represent various combinations of primary mood symptoms, demoralization, or secondary symptoms related to medication effects, neurological symptoms or comorbid conditions. Overlap between negative symptoms of schizophrenia and vegetative symptoms of depression, (e.g., apathy, amotivation) further complicates clinical decision-making. When negative symptoms improve with antidepressants, it often unclear whether the attenuation in negative symptoms is a consequence of improvement in depression (Ipsit V Vahia et al).⁽²⁾

OBJECTIVES:

1. To study the prevalence of depression in schizophrenia.
2. To study the correlation between depressive symptoms and various demographic factors in these patients.
3. To study the correlation between depression and subtype of schizophrenia.
4. To study the severity of depression.
5. To study the phenomenology of depression in schizophrenia.

MATERIALS AND METHODS: 50 consecutive patients with Schizophrenia (in whatever stage they come) according to DSM-IV criteria, who were brought to psychiatric OPD in general hospital from march 2013 to November 2013 were selected for this study. This is the cross-sectional study.

The basic criteria for inclusion of subjects in the sample were:

1. Patients with Schizophrenia according to DSM-IV criteria.
2. Patients between 15-55 years of age.

The basic criteria for exclusion of subjects in the sample were:

1. Patients with associated physical or with evidence of any other organic illness.
2. Those having substance use disorder.
3. Those who were on antidepressant at the time of interview.
4. Those who have co-morbid other psychiatric illness.

A special proforma was prepared to study demographic factors and clinical features of these patients. In this study p Kumar's modification of Prasad's social classification scale was used.

All the patients and their relatives were interviewed individually for the detail history and to collect the relevant data. DSM-IV criteria were used for evaluation of depression. (DSM -V has recently launched which was not available at the time of starting of this study).

HDRS (Hamilton depression rating scale) was administered to all patients to assess severity of depression.

STATISTICAL ANALYSIS: Statistical analysis was done for the study by using SPSS software. Statistical test used for the study was chi-square test.

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RESULT:

A- PREVALENCE OF DEPRESSION IN SCHIZOPHRENIA: Out of 50 patients of schizophrenia, clinically significant depression was found in 22 patients (44%).

No. of Patients with depression	No. of Patients without depression	Total
22(44%)	28(56%)	50

B- DEMOGRAPHIC VARIABLE: Patients with schizophrenia who had depression were put in Group-A and patients without depression were put in Group-B.

1. AGE:

Age Group [Yrs]	Group-A N=22	Group-B N=28	Total
15-25	4(25%)	12(75%)	16
26-35	6(33.3%)	12(66.6%)	18
36-45	8(80%)	2(20%)	10
46-55	4(66.6%)	2(33.3%)	6

Chi square: 9.688, $P < 0.01$ Difference is significant.

2. SEX:

Sex	Group-A N=22	Group-B N=28	Total
Male	18(42.8%)	24(57.7%)	42
Female	4(50%)	4(50%)	8

Chi square: 0.139, $P > 0.05$ Difference is not significant

3. EDUCATION:

Education	Group-A N:22	Group-B N:28	Total
Illiterate	7 (63.6%)	4 (36.36%)	11
Primary	8 (36.36%)	14 (63.63%)	22
Secondary	10(55.55%)	8 (44.44%)	18
Graduate	2(50%)	2(50%)	4
Above graduate	0	0	0

Chi square: 1.832, $P > 0.05$ Difference is not significant

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4. OCCUPATION:

Occupation	Group-A N:22	Group-B N:28	Total
Housewife	4(50%)	4(50%)	8
Student	0	0	0
Unemployed	2(33.33%)	4(66.6%)	6
Unskilled	6(37.5%)	10(62.5%)	16
Semiskilled	8(50%)	8(50%)	16
Skilled	2(50%)	2(50%)	4

Chi square: 0.9594, $P > 0.05$ Difference is not significant

5. SOCIO - ECONOMIC STATUS:

Social class	Group-A N:22	Group-B N:28	Total
I	1(50%)	1(50%)	2
II	3(42.8%)	4(57.1%)	7
III	5(45.45%)	6(54.54%)	11
IV	12(44.44%)	15(55.5%)	27
V	1(33.3%)	2(66.6%)	3

Chi square: 0.8801, $p > 0.05$ Difference is not significant

6. MARITAL STATUS:

Marital status	Group-A N:22	Group-B N:28	Total
Married	16(53.3%)	14(46.6%)	30
Unmarried	4(22.2%)	14(77.7%)	18
Divorced/ Separated	2(100%)	0	2

Chi square: 7.071, $P < 0.05$ Difference is significant

7. FAMILY CONSTELLATION:

Constellation	Group-A N:22	Group-B N:28	Total
Joint	8(23.52%)	26(76.47%)	34
Nuclear	14(87.5%)	2(12.5%)	16

Chi Square=18.07, $P < 0.001$ Difference is significant

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8. TYPE OF SCHIZOPHRENIA:

Type	Group-A N:22	Group-B N:28	Total
Paranoid	16 (80%)	4(20%)	20
Catatonic	0	1(100%)	1
Disorganized	0	2(100%)	2
Residual	6(24%)	19(76%)	25
Undifferentiated	0	2(100%)	2

Chi square=18.5, P<0.01 Difference is Significant

CLINICAL FEATURES OF DEPRESSION:

	Clinical feature	Group A	Group B
1	Depressed mood	22	6
2	Decreased interest/Pleasure	22	2
3	Sleep disturbance	20	10
4	Appetite (decreased /increased)	16	2
5	Psychomotor agitation or retardation	20	12
6	Loss of energy/fatigue	14	16
7	Worthlessness/Inappropriate guilt	12	0
8	Decreased ability to think or concentrate or Indecisiveness	8	0
9	Death wish or suicidal ideation/plan	20	4
10	Hopelessness	22	0

Treatment History:

	Treatment	Group-A N:22	Group-B N:28	Total
A	Not on Medication	12(75%)	4(25%)	16
B	On typical Antipsychotic	9(32.14%)	19(67.8%)	28
C	On atypical Antipsychotic	1(16.6%)	5(83.3%)	6

Chi square: 9.64 P value <0.01 Difference is significant

EXTRA PYRAMIDAL SYMPTOMS (EPS)

Extra pyramidal Symptoms	Group-A N:22	Group-B N:28	Total
Present	6(75%)	2(25%)	8
Absent	16(38%)	26(62%)	42

Chi square: 3.74, P >0.05 Difference is not significant

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PAST HISTORY OF DEPRESSION:

Past history of depression	Group-A N:22	Group-B N:28	Total
Absent	10(71.42%)	4 (28.57%)	14
Present	12(33.33%)	24 (66.66%)	36

Chi square: 5.937 p <0.02 Difference is significant

FAMILY HISTORY OF AFFECTIVE DISORDER:

Family history of affective disorder	Group-A N:22	Group-B N:28	Total
Present	2(50%)	2(50%)	4
Absent	20(43.47%)	26(56.52%)	46

Chi square: 0.064, P > 0.05 Difference is not significant

FAMILY HISTORY OF SCHIZOPHRENIA:

Family history of schizophrenia	Group-A N:22	Group-B N:28	Total
Present	2(25%)	6(75%)	8
Absent	20(47.61%)	22(52.3%)	42

Chi square: 1.396 P > 0.05 Difference is not significant

HDRS:

HDRS score	Group A
Mild (17 - 24)	12
Moderate (25 -39)	10
Sever (40 and above)	0
Total	22

DISCUSSION: Out of 50 patients suffering from Schizophrenia, Clinically significant depression was found in 22 patients (44%).

Mc Glashan et al,^(3,4) in their study on acute patients with schizophrenia, found 50% of having depressive symptoms at time of discharge from hospital.

S.S. Raju⁽⁵⁾ found 34% patients having noticeable depressive symptoms on presentation.

R.ELK et al⁽⁶⁾ found 30% patients having depression. Johnson in his study found 50% of patients having depressive symptoms in acutely admitted patients with schizophrenia.

Mandel et al⁽⁷⁾ found 22.3% of patients with schizophrenia who were depressed in one year follow up according to HDRS score of 16 or above. Thus prevalence of depressive symptoms in my study (44%) correlates with other's study.

This study shows that in 15-25 years age group 25% patients were found depressed. In 26-35 years age group 33.3% patients were found depressed. In 36-45 years age group 80% patients were

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found depressed and in 46-55 years age group 66.6% patients were found depressed. The difference in this study is significant. The high prevalence of depression in 36-45 years age group and 46-55 Years age group may be due to increasing age in which depression is more commonly seen or may be due to multiple exacerbations.

Anna thryan and K. kuruvilla⁽⁸⁾ also found higher number of older patients with schizophrenia having depression.

Out of 50 patients, 42 were male patients with schizophrenia. In this study 42.25% of male and 50% of female patients with schizophrenia was found depressed.

Thus the sex difference is not significant between the two groups.

Anna thryan and K. kuruvilla⁽⁸⁾ also did not found any significant difference between male and female.

No significant difference was found in the two groups as far as their education was concerned. No study was found to corroborate the finding in our review.

No significant difference was found in this study between two groups as far as the occupational status was concern. Annatharyan and K. kuruvilla,⁽⁸⁾ and Alec roy⁽⁹⁾ had not found any significant difference between two groups.

McGlashan et al^(3,4) in their study had not found any significant difference between two groups as far as the socio economic status was concerned. This study also had not found any significant differences between the two groups.

In this study 53.3% of married were found depressed, 22.22% of unmarried were found depressed and 100% of divorced patients were found depressed. The difference is significant between two groups. It suggests that marital status may affect the prevalence of depression significantly.

Mc Glashan et al^(3,4) in their study found that 59.9% unmarried patients were depressed as compared to that 36% of married patients who were depressed. This finding goes against the finding in this study. It may be due to in Indian setting there is good social support present. And other aspect is that most of the married patients I found in this study were living in nuclear family while unmarried patients were living in joint family.

In this study 23.52 % of patients staying in joint family and 87.5% of patients staying in nuclear family were depressed. The difference is significant which suggest that patients having nuclear family are more prone for depression than those having joint family.

Alec roy et al⁽¹⁰⁾ also found that patients with schizophrenia living alone have more chance of depression(61.6%) than who are living jointly. It suggests that good family support decrease the prevalence of depression in schizophrenia.

In this study 80% patient with paranoid schizophrenia and 24% patient with residual schizophrenia were found depressed while neither any patient with undifferentiated nor any disorganized or catatonic schizophrenia found depressed, The difference is significant which suggest that patient having paranoid symptoms (which usually present during acute worsening of disorder) have more chance of depression than residual schizophrenia (which develop after acute symptoms resolved).

Michael foster green et al⁽¹¹⁾ stated that onset of depressive period was concurrent with onset of psychosis more often than expected but was not associated with any other period. He had not found any distinctive post psychotic pattern of onset for depression.

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During this study, I found very few patients of Disorganized (4%), undifferentiated (4%) or catatonic schizophrenia. So from this study it is difficult to conclude why patients with disorganized, catatonic or undifferentiated schizophrenia do not develop depression. It requires further study on these types of patients with schizophrenia.

In this study, I found that those patients who were having persecutory delusion or delusion of infidelity were found more depressed. Among those having bizarre delusion, none of them were found depressed. Patients having auditory hallucination were more depressed.

All this suggest that when person feels that his or her existence on survival is in danger or he/she could not stop the things which are frightening or anxiety producing and helpless to cope up with his/her own surrounding environment, feels depressed. Those patients who had inappropriate affect were not depressed.

In this study the most common symptoms of depression were depressed mood, loss of interest on pleasure, sleep disturbance, loss of energy/fatigue, psychomotor disturbance, suicidal thought/ death wish feeling of hopelessness.

Nakaya M et al⁽¹²⁾ found that during acute phase, following symptoms from HDRS were significant: depressed mood, guilt, suicidal idea, retardation, three types of insomnia and two somatic symptoms. At the chronic stable phase, only four symptoms were significant: depressed mood suicidal idea, general somatic and loss of weight. Initial insomnia, middle insomnia, genital symptoms and loss of insight were poorly correlated.

Mc Glashan et al^(3,4) and S. S. Raju⁽⁵⁾ found most common depressive feature in their studies were depressed mood, loss of interest or pleasure, sleep disturbance, slowed thinking or indecisiveness, recurrent thought of death or suicidal idea, difficulty in concentration etc.

The two symptoms which are characteristic of endogenous depression, early morning insomnia and diurnal variation of mood were not found in patients with schizophrenia who had depression.

From these we can say that depression in schizophrenia may not be biological but related with some other factor, which require more and more study in this area.

In this study 75% of the patients who were not on any medication were depressed, 32.14% of the patients who were on typical antipsychotic were depressed. 16.6% of patients who were on atypical antipsychotic were depressed.

The rate of depression was highest on those patients who were not on any medication but also higher on those who were on typical antipsychotic than who were on atypical antipsychotic. Hirsch⁽¹³⁾ in his study found that depressive symptoms remit after treatment of schizophrenia begun. This study correlates with Hirsch study.

According to Galdi,⁽¹⁴⁾ depressive symptoms are due to the neuroleptic medication. The finding in my study are opposite to that. As in this study follow up was not done, it is very difficult to predict the role of drugs in causation of depression in schizophrenia.

In this study 75% of patients having EPS were depressed and 38% of patients having no EPS were depressed. The difference was not significant.

Johnson⁽¹⁵⁾ in his study failed to find association between development of depression and development of extra pyramidal symptoms which correlate with findings of this study.

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In this study 71.42% Of patients having past history of depression were depressed as compare to only 33.33%of patients having no past history of depression were depressed. The difference is significant.

Roy et al⁽¹⁰⁾ had also reported in his study that 83%of patients having past history of depression were depressed as compare to only 17% of patients having no past history of depression were depressed This finding correlate with finding in his study.

Study shows that patients with schizophrenia who had depression and patients with schizophrenia who did not have depression have equal (50%) family history of affective disorder. The finding is not significant.

In the study by Raju⁽⁵⁾ (1986) 34% of first contact patients with schizophrenia had depressive symptoms. This high rate could be due to the fact that, for diagnosing depression, either "one or more distinct period of dysphoric mood" or "pervasive loss of interest or pleasure" were sufficient. Since the second item may be present purely as part of the negative symptoms of Schizophrenia, It is possible that there may have been some degree of overlap.

Study shows that 25% of patients having family history schizophrenia were depressed as compare to 47.61% of patients having no family history of schizophrenia were depressed. The finding is not significant.

In this study, patients who have family history of affective disorder or schizophrenia were very low in number. So for exact conclusion further study is required.

Those patients with schizophrenia who were having depression were rated on HDRS to know severity of depression. Out of 50 schizophrenics, 24% patients have mild depression, 20% patients have moderate depression while none of the patients has severe depression.

Anna tharyan and K. kuruvilla⁽⁸⁾ found that depressive symptoms that occur in schizophrenia are mild.

CONCLUSION: Out of 50 patients suffering from Schizophrenia, clinically significant depression was found in 22 patients (44%).

Among different age group high prevalence of depression founded in 36-45years age group and 46-55years age group.

Compare to married or unmarried patients, depression was more common in divorced or separated patients.

Patients who live in joint family are less depressed as compared to patients live in nuclear family.

Among the type of schizophrenia, 80% of patients with paranoid schizophrenia were depressed while 24% of patients with residual schizophrenia were depressed. None of the patients with disorganized, catatonic or undifferentiated schizophrenia were depressed.

Most common clinical symptoms of depression were depressed mood, loss of interest/pleasure, sleep disturbance, suicidal thoughts/attempt, hopelessness, loss of concentration and loss of energy/fatigue.

Patients who were not on any medication were found more depressed compare to patients who were on neuroleptic medications. Patients who were on typical antipsychotic found more depressed as compared to atypical antipsychotic.

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Patients having past history of depression are more depressed as compared to patients who had no past history of depression.

Patients who were having extrapyramidal side effect were more depressed as compared to those having no extrapyramidal side effect.

24% patients were having mild depression and 20% patients were having moderate depression according to HDRS. No one has severe depression.

From this study it is been concluded that depression is common in patients suffering from schizophrenia. It also depends on the type of schizophrenia in which depressive symptoms are very common. So it is utmost important for us to find out the depression in patients suffering from schizophrenia so that we can treat it to the optimal level for the wellbeing of the patients with schizophrenia.

It is commonly found that we are ignoring the associated depressive symptoms in patients with schizophrenia which leads to poor outcome in patients with schizophrenia. So it is necessary to identify the underlying depression in patients with schizophrenia for better treatment, outcome and functionality.

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AUTHORS:

1. Dharmesh V. Patel
2. Vinodkumar M. Darji
3. Manasvi Jariwala

PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of Psychiatry, AMC MET Medical College, Ahmedabad.
2. Senior Resident, Department of Psychiatry, AMC MET Medical College, Ahmedabad.
3. Senior Resident, Department of Psychiatry, AMC MET Medical College, Ahmedabad.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Dharmesh V. Patel,
#46, Navyug Society,
Opposite Manekbaug Hall,
Ambavadi, Ahmedabad-15.
Email: dr1dharmesh1patel@yahoo.co.in

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