

Frequency of Depression in Patients with Schizophrenia

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ABSTRACT

Objective: Schizophrenia is a psychiatric disorder involving chronic or recurrent psychosis. It is commonly associated with impairments in social and occupational functioning. Schizophrenia also associated with different comorbidities including depression. This study is design to determine the prevalence of depression and its severity in schizophrenia in local population.

Study Design: Cross sectional study.

Place and Duration of Study: This study was conducted at the Sir Cowasji Jehangir Institute of Psychiatry Hyderabad from Jan 2018 to Dec 2018.

Materials and Methods: One hundred and twenty-six (126) patients with schizophrenia were included in this study. Depression was assessed on Hamilton depression rating scale (HDRS).

Results: Prevalence of depression in patients with schizophrenia was 39.68% (50/126). Regarding severity of depression, 15.87% (20/126) were mild and 23.81% (30/126) were moderate to severe. Prevalence of depression was high in self-employed and skilled labor as compare to professional and in those who run their business (p=0.0005). Prevalence of depression was also high in illiterate and low educated patients (p=0.003) as well as those patients whose household income was below 25,000 Pakistani rupees. (p=0.008)

Conclusion: In this study, depression is prevalent schizophrenic patients, particularly in patients with low education level along with poor socio-economic background. It should be recommended that complete assessment of each patient should be done and symptoms & severity of depression should be excluded in every patient. For this screen, strategies could be developed thereby for better quality of life early diagnosis and prompt treatment could be lead.

Key Words: Schizophrenia, Psychiatric disorder, Depression

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INTRODUCTION

Global burden of schizophrenia is variable and ranges between the prevalence of 0.3 to 0.7 percent^[1]. Studies have shown that in patients of schizophrenia Quality of life (QOL) is increasingly important to the treatment outcome^[2]. QOL among patients of Schizophrenia affected by unmet needs, Social support and medication side effects^[3-5].

Schizophrenia associated with different comorbidities including depression. Different studies have shown to have incidence of symptoms of depression in schizophrenic patients ranges between 20 to 80 percent^[6,7]. In mid to late life patients non to minimal depression (Hamilton rating scale score 0-6) was found in 30% in males and 20% in females, mild depression (Hamilton rating scale score 7-16) was 63% and 60% in males and females respectively. Moderate to severe depression (Hamilton rating scale score ≥ 17) was 7% and 20% in males and females respectively^[8]. In schizophrenia, depressive symptoms can be associated with decreased functioning, re-hospitalization and suicide^[8-10]. Patients with schizophrenia and depressive symptoms have to face negative consequences, which affect their QOL^[11]. There is significant relationship between depressive symptoms and QOL in younger patients with schizophrenia^[12]. All patients with schizophrenia must be evaluated for the manifestation of depression symptoms^[13]. In such a scenario, with early detection of depressive symptoms in patients of schizophrenia, re hospitalization can be prevented and by doing so

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cost burden can be reduced this will help to improve the quality of life^[8]. Decrease functioning and suicide also associated with depressive symptoms, early detection of depressive symptoms in patients of schizophrenia can leads to decrease suicide and increase functioning. In order to improve quality of life in schizophrenia, focused must be on negative symptoms and depressive symptoms^[9,10,14].

As there is no local data available regarding prevalence of depression and its severity in schizophrenia in local population so the local burden is still unknown which is required for resource allocation and budgeting for psychiatric institutes. Furthermore, strategies could be developed to screen such patient's thereby early diagnosis and prompt treatment could lead to better quality of life.

MATERIALS AND METHODS

This cross-sectional study was carried out at psychiatry unit of Sir Cowasji Jehangir institute of Psychiatry from Jan 2018 to Dec 2018. Patients with documented evidence of diagnosis of schizophrenia, of either gender or aged between 18-60 years, were enrolled from outpatient departments via consecutive convenient non-probability sampling. Exclusion criteria included recent diagnosis of schizophrenia (less than 6 months). Patients taking drugs for other illnesses, patients with other neurological disease, mental retardation and significant physical morbidity were also excluded from study. With 95% CI, 7% bond on error and based on 20% prevalence of depressive symptoms in schizophrenia patients our sample size came out to be 126 schizophrenia patients⁶.

After ethical review approval, Depression was assessed on Hamilton depression rating scale (HDRS). The questionnaire was filled by the researcher himself and scores of 0-7 was taken as normal. 8 – 13 as mild, scores of 14 – 18 as moderate and scores > 19 as severe depressions. These findings and demographics were entered in the self-structure proforma.

Data was analyzed through statistical analysis of social packages (SPSS) version 20. Continuous variables like age and duration of schizophrenia was expressed as Mean \pm standard deviation. Whereas categorical variables like gender, marital status, education, occupation and monthly family income was presented as frequencies and percentages. Stratification was done on the basis of age, duration of disease, gender, educational status, marital status, occupation and monthly family income to control effect modifiers, Chi-Square test was applied and p value less than or equal to 0,05 was taken as significant.

RESULTS

In this study, mean age and duration of schizophrenia was 40 ± 10 years and 4 ± 1 years. Out of 126 cases,

72(57.14%) were male and 54(42.86%) were female. There were 20.63% patients were self-employed, 35.71% skill labor, 24.6% were professional and 19.05% were running business (Table 1).

Table No.1: Characteristics of Participants

Characteristics	Frequency (percentage)
Age group (in years)	
18-30	19 (15.0)
31-40	40 (31.7)
41-50	44 (34.9)
41-60	17 (13.4)
Gender	
Female	54 (42.86)
Male	72 (57.14)
Occupation	
Self-employed	26 (20.63)
Skilled Labor	45 (35.71)
Professional	31 (24.60)
Business	24 (19.05)
Educational Status	
Illiterate	6 (4.76)
Matric and below matric	33 (34.92)
Intermediate	47 (37.30)
Graduate	29 (23.02)
Marital Status	
Married	90 (71.43)
Never married	23 (18.25)
Widowed	10 (7.94)
Divorced	3 (2.38)
Household Income (in PKR)	
Less than 25,000	62 (49.21)
25,000 to 50,000	32 (25.40)
More than 50,000	32 (25.40)

Prevalence of depression (assessed by HADS score) in patients with schizophrenia was 39.68% (50/126). Regarding severity of depression, 15.87% (20/126) were mild and 23.81% (30/126) were moderate to severe (table 2).

Table No.2: Prevalence and Severity of Depression

HADS Depression	Frequency (percentage)
Depression	
Yes	50 (39.68)
No	76 (60.32)
Severity	
No Depression	76 (60.32)
Mild Depression	20 (15.87)
Moderate to Severe Depression	39 (23.81)

It was observed that prevalence of depression was high in self-employed and skilled labor as compare to professional and in those who run their business ($p=0.0005$). Prevalence of depression was also high in illiterate and low educated patients ($p=0.003$) as well as those patients whose household income was below 25,000 Rs. ($p=0.008$) (table 3).

Table No.3: Prevalence of Depression stratified according to variables

Variables	Depression		Total	P-Value
	Yes n=50	No n=76		
Age Groups				0.067
21to 30 Years	11(57.9%)	8(42.1%)	19	
31 to 40 Years	16(34.8%)	30(65.2%)	40	
41 to 50 Years	20(45.5%)	24(54.5%)	44	
51 to 60 Years	3(17.6%)	14(82.4%)	17	
Gender				0.83
Male	28(38.9%)	44(61.1%)	72	
Female	22(40.7%)	32(59.3%)	54	
Duration of Disease				0.51
≤ 3 Years	30(37.5%)	50(62.5%)	80	
>3 Years	20(43.5%)	26(56.5%)	46	
Occupation				0.0005
Self Employed	14(53.8%)	12(46.2%)	26	
Skilled Labor	30(66.7%)	15(33.3%)	45	
Professional	2(6.5%)	29(93.5%)	31	
Business	4(16.7%)	20(83.3%)	24	
Educational Status				0.003
Illiterate	3(50%)	3(50%)	6	
Matric and below matric	23(52.3%)	21(47.7%)	44	
Intermediate	21(44.7%)	26(55.3%)	47	
Graduate and Master	3(10.3%)	26(89.7%)	29	
Monthly household income (Rs.)				0.008
<25,000	32(51.6%)	30(48.4%)	62	
25,000 to 50,000	12(37.5%)	20(62.5%)	32	
>50,000	6(18.8%)	26(81.3%)	32	

Chi-Square applied for each stratified variables

Severity of depression was also not significant differences in these factors except monthly household income as shown in table 4.

Table No.4: Severity of Depression stratified according to variables

Variables	Depression		Total	P-Value
	Mild n=20	Moderate to severe n=30		
Age Groups				0.73
21to 30 Years	5(45.5%)	6(54.5%)	11	
31 to 40 Years	6(37.5%)	10(62.5%)	16	
41 to 50 Years	7(35%)	13(65%)	20	
51 to 60 Years	2(66.7%)	1(33.3%)	3	

Gender				0.48
Male	10(35.7%)	18(64.3%)	28	
Female	10(45.5%)	12(54.5%)	22	
Duration of Disease				0.55
≤ 3 Years	11(36.7%)	19(63.3%)	30	
>3 Years	9(45%)	11(55%)	20	
Occupation				0.056
Self Employed	2(14.3%)	12(85.7%)	14	
Skilled Labor	16(53.3%)	14(46.7%)	30	
Professional	0(0%)	2(100%)	2	
Business	2(50%)	2(50%)	4	
Educational Status				0.83
Illiterate	1(33.3%)	2(66.7%)	3	
Matric and below matric	8(34.8%)	15(65.2%)	23	
Intermediate	10(47.6%)	11(52.4%)	21	
Graduate and Master	1(33.3%)	2(66.7%)	3	
Monthly household income (Rs.)				0.007
<25,000	18(56.3%)	14(43.8%)	32	
25,000 to 50,000	1(8.3%)	11(91.7%)	12	
>50,000	1(16.7%)	5(83.3%)	6	

Chi-Square applied for each stratified variables

DISCUSSION

Although, depression in patients with schizophrenia is very common but remained mystery yet. The testified ratio of depression is 7% to 75%, with a modal rate of 25% in various studies ^[16,17]. Differences in cohort status, illness chronicity, and assessment methods all contribute to the variability of these estimates ^[18]. The significance of a concomitant disruption in mood amongst schizophrenic patients comprises enhanced menace of illness and death ^[18,19]. The rate of despair in schizophrenia is frequently correlated to depraved result, compromised working, intrusive distress, elevated degrees of deterioration or re-hospitalization, and even suicide, an event that ends the lives of an appraised 10% of patients with schizophrenia ^[18,20-24].

In this study the average age and duration of schizophrenia was 40.39±9.38 years and 3.64±0.96 years. Out of 126 cases, 72(57.14%) were male and 54(42.86%) were female. In Rocca et al study mean age was 36.13 ± 8.93 years; they were 32 females (41%) and 46 males (59%) ^[12].

In present study there were 20.63% patients were self-employed, 35.71% skill labor, 24.6% were professional and 19.05% were running business as reported. Most of the patients were intermediate and blow intermediate. Regarding monthly household

income of the patients, 49.21% income was below Rs. 25,000, 25.4% income was 25000 to 50,000 and 25.4% were earn more than 50,000. In Suttajit et al. study, the mean age of the 75 participants in this study was 46.0 ± 13.6 years, and from them, 26 (34.7%) were male, 23 (30.7%) were married, 33 (44.0%) had no income [25]. In same study, half of participants had been diagnosed with schizophrenia for more than ten years, 38 (50.7%) were using typical antipsychotic drugs and 44 (58.7%) had at least one side effect [25].

Schizophrenia associated with different comorbidities including depression. In this study prevalence of depression (assessed by HADS score) in patients with schizophrenia was 39.68% (50/126). In this study observed that prevalence of depression was not significant among different age groups, gender and duration of disease. Depression is reportedly common among both the genders suffering from schizophrenia and was unrelated to family history, negative symptoms, any movement disorders or use of narcoleptics [26,27].

There is a variety of symptoms of depression among schizophrenia patients. In our study, we noted different depressive manifestations in schizophrenia group vs. the normal group such as sense of futility, feebleness (depressive mood) and psychomotor impedance. Though many further signs of depression were found in schizophrenia, they are not matching with conditions of major depressive disorder (MDD) [28].

Approximately 20% women suffering from schizophrenia scored ≥ 17 on Hamilton depression rating scale, which signifies moderate to severe depression. These symptoms were the major depressive symptoms, however when minor depressive symptoms which did not fulfil MDD criteria were included, it was observed that majority of the schizophrenic patients suffered from these symptoms, such that it can be considered as a whole subsyndrome [28]. In contrast, several studies have ruled out the significance of this subsyndrome stating that these occurred in part due to social dysfunction and debility, suicidal attempts and chances of advanced major depressive disorder [29].

CONCLUSION

It is concluded that prevalence of depression is more common in schizophrenic individuals, and severity of depressive symptoms in schizophrenic individuals is mostly moderate to severe. So all the patients having schizophrenia should go for detailed evaluation to exclude the symptoms of depression. To screen such patient's strategies could be developed thereby for better quality of life early diagnosis and prompt treatment could be lead.

Author's Contribution:

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