

A COMPARATIVE STUDY OF QUALITY OF LIFE IN PATIENTS SUFFERING WITH SCHIZOPHRENIA AND BIPOLAR AFFECTIVE DISORDER IN A TERTIARY CARE CENTRE AT VISAKHAPATNAM

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Abstract

Background: Worldwide, the burden of mental disorders is becoming ever more significant in recent years. Schizophrenia and bipolar disorder are two common severe psychiatric illnesses. Majority of the studies of QOL were conducted in developed countries, whereas very few studies were done in developing countries. **Materials and Methods:** In this cross-sectional observational study, 60 subjects each who are suffering from schizophrenia and bipolar belonging to age group of 15-45years who visit OPD were allocated into 2 groups. PANSS was used to determine remission status in the schizophrenia group. Young Mania Rating Scale and the Hamilton Depression Rating scale were used to know the remission status in the Bipolar Affective disorder group. Individuals who scored < 7 on HAMD-17 item scale³⁹ ≤ 2 on the YMRS scale were included in the study. Symptom-free period of two months was considered as remission period according to DSM 5 for BPAD group. The 2 groups were compared for various domains of quality of life using the WHO QOL- BREF scale. **Result:** Physical health in subjects with BPAD was better when compared to subjects with Schizophrenia. ($p<0.01$). The BPAD group had better psychological health when compared to the Schizophrenia group ($p<0.01$). Social relations were better in the BPAD group compared to the Schizophrenia group ($p<0.01$). Quality of life also was better in the BPAD group compared to the schizophrenia group in the environmental domain ($p<0.01$). **Conclusion:** There was a significant decline in the psychological and social domains BPAD patients. The overall quality of life showed better in the BPAD group compared to schizophrenia group. There was a significant decline in the quality of life among schizophrenic patients compared to patients with Bipolar Affective Disorder similar to this study hypothesis.

INTRODUCTION

Worldwide, the burden of mental disorders is becoming ever more significant in recent years.^[1] About 450 million people are currently suffering from different psychiatric conditions and neurological conditions, which place mental disorders among the most leading causes of ill-health and disability worldwide.^[2] Data from the National Mental Health Survey shows that the overall weighted prevalence for any mental morbidity was 13.7 % lifetime and 10.6% of current mental morbidity in India.^[3] Schizophrenia is a chronic severe mental disorder characterized by delusions, hallucinations, disorganized speech, grossly disorganized or

abnormal motor behavior, and negative symptoms.^[4] The lifetime prevalence of schizophrenia is about one percent worldwide.^[1] According to the National Mental Health Survey, the current prevalence of schizophrenia is 0.5% and 1.4 % for a lifetime experience in India.^[3] It is one of the most debilitating disorders affecting more than 21 million people worldwide.^[1] this will affect the general health, functioning, and subjective wellbeing.^[5] In schizophrenia, functional impairment is high, which leads to lost wages and work impairment further leading to personal social and economic burden.^[6] Bipolar disorder follows depression as the second cause of disability among psychiatric disorders.^[5] Prevalence of BPAD 0.3 % for current and 0.5% for lifetime experience in India.^[3] A bipolar disorder

characterized by intermittent episodes of depression and mania that can considerably disrupt the lives of patients and their families. The cyclical nature of the bipolar disorder, with its many remissions and productive symptom and periods of exacerbation, can affect individual's physical, emotional, social, and functional wellbeing and significantly impact their quality of life.^[7] Impairment of Quality of life has been reported to persistent in bipolar patients even when they are euthymic.^[8]

According to WHO, Quality of Life can be defined as an "individual's perception of their position in life in the context of the culture and value systems in which they live and concerning their goals, expectations, standards, and concerns". According to this definition, the Quality of Life comprises of 4 domains: a) physical health, b) psychological health, c) social relationships, and d) relationship to the salient features of the environment^[9] Quality of life has become an essential outcome of healthcare in recent years. The concept of quality of life is perhaps more important in those disorders which run in a chronic and debilitating course seen in schizophrenia and bipolar disorder. The key challenge is to improve the quality of life for these types of illnesses.^[10]

The concept of quality of life has become relevant in schizophrenia and bipolar disease research because our main motive is the reduction of symptoms without compromising the patient's quality of life.^[11] Therefore the focus of treatment has shifted from alleviating symptoms to improving the patient's satisfaction with Quality of Life and social activities.^[12]

In a study done by Sofia Brissol et al. (2008), it was shown that quality of life is worse of patients with schizophrenia. In bipolar disorder, patients' education level showed the strongest positive association with all quality of life domains.^[11]

In a study by A. Hofer et al. (2017), it was found that bipolar patients achieved higher scores in all quality of life domains compared to schizophrenic patients in WHOQOL - BREF scale.^[13]

Most studies of QOL were conducted in developed countries. Whereas very few studies are found in developing countries and the studies which are comparing these disorders in clinical remission are very few. So this study was undertaken to bridge this gap so that knowledge and understanding of the different domains in which quality of life has affected would help us to plan accordingly and appropriately for their management and rehabilitation concerned.

MATERIALS AND METHODS

Source of Data

Subjects who participated in the study were recruited from The Government Hospital for Mental Care, Visakhapatnam.

Study Design

It is an observational cross-sectional study.

Study Period

1 year (September 2018 to August 2019)

Sample Size

120 patients.

Inclusion Criteria

1. Subjects aged between 15 to 45 years.
2. Subjects who gave valid written and informed consent to the study
3. Patients who fulfill the ICD -10 diagnostic criteria for research for schizophrenia or bipolar disorder.

Exclusion Criteria

1. Subjects who have not given valid informed written consent.
2. Subjects with intellectual disability.
3. Subjects with physical illness.
4. Subjects with substance dependence.
5. Subjects diagnosed with organic mental illness.
6. Subjects who are diagnosed with schizoaffective disorder.

Operational Procedure

Informed and written consent was obtained from all the participants and their caregivers. For diagnostic assessment, all subjects underwent a structured clinical interview for ICD-10 Diagnostic criteria for Research. Subjects were divided into two groups, a schizophrenia group and another bipolar affective disorder group. After the diagnosis, rating scales were applied to know the severity of illness. PANSS was used to determine the status of remission in the schizophrenia group.

According to the Nancy Andreasen Remission status defined as a score of 3 or below for more than 6 months of period on the following PANSS items (8 critical items): Delusions (P1), unusual thought content (G9), hallucinatory behaviour (P3), conceptual disorganization, mannerism/posturing (G5), blunted affect, (N1), social withdrawal (N4), and lack of spontaneity (N6). The individuals who fulfilled these criteria were included in the study. Young Mania Rating Scale and the Hamilton Depression Rating scale were used to know the remission status in the Bipolar Affective disorder group. Individuals who scored < 7 on HAMD-17 item scale <= 2 on the YMRS scale were included in the study. Symptom-free period for two months was considered as remission period according to DSM 5 for BPAD group. Quality of Life was assessed by using the WHOQOL- BREF scale.

Statistical Analysis

Data was analyzed using SPSS version 23 (SPSS Inc., Chicago, IL). The significance of differences between mean values of two continuous variables was ascertained by using Student's t-test. Chi-square used to test for differences in proportions of categorical variables between two or more groups. The level $p < 0.05$ was considered as the cutoff value or significance.

RESULTS

Age-wise Distribution of the sample

Of the 60 subjects of BPAD group, 16.67 % (n=10) are in the age group of 15-25, 40% (n=24) are in the age group of 26 -35 and 43.33% (n=26) are in the age group of 36-45. Of the 60 subjects of the Schizophrenia group, 13.33% (n=8) are in the age group of 15-25, 45% (n=27) are in the age group of 26 -35, and 41.67% (n=25) are in the age group of 36-45.

Mean Age Distribution of the Sample

The mean age of schizophrenia and BPAD groups was 33.50 ± 6.35 years and 33.43 ± 7.08 years, respectively, and no statistical difference ($p=0.96$) was found between the mean age distribution of the sample. [Table 1]

Distribution of Sample based on Gender

In BPAD group of 60 subjects, 73.3% (n=44) were females and remaining 26.7% (n=16) were males, in schizophrenia group of 60 subjects 41.7% (n=25) were females and remaining 58.3% (n=35) were males. Thus in the BPAD group, there was a higher number of females than males, whereas, in the Schizophrenia group, males were more in number, and the difference was statistically significant (p -value <0.01) [Table 2]

Distribution of Sample based on Domicile

Distribution of sample based on domicile In BPAD group rural population accounts for 60.0% (n=36), remaining are from urban area 40% (n=24). In the schizophrenic group, most of the subjects from rural areas 66.7% (n=40) and 33.3% (n=20) from the urban area. This difference was not statistically significant.

Distribution of Sample based on Educational Status:

In the BPAD group 33.3% are illiterates (n=20) and subjects with primary education 11.7% (n=7), secondary education 33.3% (n=20), intermediate 11.7% (n=7), graduation 8.3% (n=5), postgraduation 1.7% (n=1) and diploma are 0%. In schizophrenia group illiterates accounts for 23.3% (n=14), subjects with primary education are 21.7% (n=13), secondary education 28.3% (n=17), intermediate 10% (n=6), graduation 11.7% (n=7), postgraduation 3.3% (n=2), diploma 1.7% (n=1). The statistical difference between two groups based on literacy was not significant.

Distribution of Sample Based on Occupation:

In the BPAD group, the majority of individuals, i.e., 60% (n=36), are unemployed, 40% (n=24), are employed. In schizophrenia group unemployed are 53.33% (n=32), employed are 46.67% (n=28). Unemployed patients were more in the BPAD group compared to the schizophrenia group, but the difference was not statistically significant.

Distribution of Sample based on Marital Status

Distribution In the 60 bipolar affective disorder group subjects, married were 68.3% (n=41) unmarried subjects represent 21.7% (n=13) and divorced are 6.7% (n=4), widowed 3.3% (n=2). In the 60-schizophrenia group married were 58.3% (n=35), unmarried were 33.3% (n=20), divorced were 3.3% (n=2), widowed were 3.3% (n=2), separated were 1.7% (n=1). Thus married people were more in BPAD group compared to schizophrenic group but the difference was not statistically significant.

Distribution of Sample based on Socioeconomic Status:

In the BPAD group most of the subjects belong to lower middle class 50% (n=30), 35% (n=21) belongs to middle class, 8.3% (n=5) belongs to upper-middle class, 5% (n=3) belongs to lower class, 1.7% (n=1) belongs to upper class. In the schizophrenic group, the majority belongs to lower middle class 30.0% (n=18); both upper-middle class and middle class were distributed in equal proportions, i.e., 28.3% (n=17) each. Subjects belong to the lower-class account for 10% (n=6), and the upper class constitutes around 3.3% (n=2), and there was a statistically significant difference with p -value 0.04.

Domain 1.

Physical domain

Of all the four domains, the score in the domain of physical health was higher. The mean score of Bipolar disorder patients was 78.55, with a standard deviation of 17.33 as compared to a mean score of 58.70 with a standard deviation of 12.97 in Schizophrenia patients, and the difference was statistically significant on independent t-test (p -value <0.0001). Thus physical health in subjects with BPAD is better when compared to subjects with Schizophrenia. [Table 3]

Domain 2 (Psychological Domain)

The scores in this domain were low in both groups compared to other domains. The mean score of the schizophrenia group was 52.52, with a standard deviation of 6.66, and the BPAD group had 59.92 with a standard deviation of 7.61, and the difference was statistically significant on independent t-test ($p < 0.0001$). Thus psychological health was better in the BPAD group compared to the Schizophrenia group. [Table 4]

Domain 3 (Social Relationships)

Social relationships also seemed to be consistently affected in both groups. The mean score was 68.30, with a standard deviation of 17.34 in the BPAD group & in the schizophrenic group, the mean score and standard deviation were 55.62 and 13.18 respectively. The difference was statistically significant on the independent t-test (p -value <0.001). Social relationships were better in the BPAD group compared to the other group. [Table 5]

Domain 4 (Environment)

In the environmental domain, the mean scores were 57.05 with a standard deviation of 12.03 and 73.35, with a standard deviation of 17.36 in the schizophrenia & BPAD groups, respectively. The

difference was statistically significant on the independent t-test (p -value <0.0001). The quality of life was better in the BPAD group compared to the schizophrenia group in the environmental domain.

Table 1: Mean age among the groups.

Groups	Age		P-value
	Mean	SD	
BPAD	33.43	7.08	0.96
Schizophrenia	33.50	6.35	

Table 2: Distribution of Sample based on Gender.

Gender	BPAD		Schizophrenia	
	Count	%	Count	%
Female	44	73.3%	25	41.7%
Male	16	26.7%	35	58.3%
Total	60	100.0%	60	100.0%

Chi-square value = 12.31 df = 1 P-value <0.01 *

Table 3: Comparing means of Physical Domains of both Groups

GRP	Groups	N	Mean	SD	Std. Error Mean	t-value	P-value
Physical	BPAD	60	78.55	17.33	2.24	7.10	<0.01 *
	Schizophrenia	60	58.70	12.97	1.67		

*indicates statistical significance at $P < 0.05$

Table 4: Comparing the Means of Psychological Domains of both Groups

GRP	Groups	N	Mean	SD	Std. Error Mean	t-value	P-value
Psychological	BPAD	60	59.92	7.61	0.98	5.67	<0.01 *
	Schizophrenia	60	52.52	6.66	0.86		

*indicates statistical significance at $P < 0.05$

Table 5: Comparing means social domains of both groups

GRP	Groups	N	Mean	SD	Std. Error Mean	t-value	P-value
Social relations	BPAD	60	68.30	17.34	2.24	4.51	<0.01 *
	Schizophrenia	60	55.62	13.18	1.70		

*indicates statistical significance at $P < 0.05$

Table 6: Comparing Means of Environmental Domains in both Groups

GRP	Groups	N	Mean	SD	Std. Error Mean	t-value	P-value
Environmental	BPAD	60	73.35	17.36	2.24	5.98	<0.01 *
	Schizophrenia	60	57.05	12.03	1.55		

*indicates statistical significance at $P < 0.05$

DISCUSSION

Socio-demographic Variables

Socio-demographic variables, such as gender, socioeconomic status, demonstrated statistically significant differences between the two groups. Other variables like marital status, domicile, religion, education, occupation did not differ much from one another since the sample was drawn from the same population.

In this study, in the bipolar group, patients from the lower middle class were more in number compared to the schizophrenia group, and the difference was statistically significant. The reason could be because most of the individuals in the BPAD group were unemployed.

Employment Status

In this study, a number of the patients were unemployed in both the groups, but unemployed people were more in the BPAD group compared to

the schizophrenia group. Contrastingly employed people were more in the schizophrenia group compared to the bipolar group. These results vary from the results of previous studies.

Marwah Johnson S et al,^[14] in 2007 studied the employment rates in schizophrenia and observed that unemployment was associated with schizophrenia. The continuous illness course and more severe non-psychotic symptoms reduced the odds of employment. They also proposed that only a few people had fully recovered their social functioning. They also found that even among those who had fully recovered after a single episode, the employment rate was just below 30%. The increased incidence of unemployment lead to loss of quality of life scores, which was depicted in this study.

In this study, about 40 percent of the people in the BPAD group were employed, the results of which were also similar to the findings in the previous literature. The observations of Marwaha S, Durrani A, et al,^[15] was that the rates of employment of

patients with bipolar disorder were somewhat better, with 36%–56% of patients employed (Fulford et al,^[16] Sanchez-Moreno et al).^[17] Findings showed that higher rates of unemployment and disability were found in patients of BPAD, which was similar to this study.

Marital Status

In both groups, married people were more in number, but those who were unmarried was more schizophrenia group compared to the BPAD group in this study.

In a study conducted in Costa Rica by Adriana Pacheco et al,^[18] in 2010, the social and clinical comparison between schizophrenia and bipolar disorder type I with psychosis concluded that there were a more number of individuals with unmarried status among the schizophrenic population when compared to the patients with bipolar disorder.

Nambi et al,^[19] a study in marriage, mental illness & legislation, asserted that patients with schizophrenia had greater probability to remain single and unmarried than the patients in the bipolar group.

Marriage is essentially a social process, in which two individuals relate on a personal & intimate basis. Marriage being a social process depends on the ability to connect socially for its success. Schizophrenia, which is a chronic illness characterized by severe psychosocial deficits, is often associated with poor outcome. Patients without regular employment and with compromised socioeconomic status are most often unmarried and they end up being cared by the other family members.

One plausible explanation regarding the difference in the marital status among the two groups is, schizophrenia is perceived as a continuous illness most often, and the patient is virtually never symptom free, even during the periods of remission. Whereas in affective disorders, the patient can return to his premorbid level of functioning, though bipolar disorder is often regarded as a disease of uncertainty. Thus, the marital outcome is better among patients with bipolar disorder compared to patients with schizophrenia.

Quality of Life

This study measured the quality of life, among the patients with schizophrenia & bipolar disorders using WHO quality of life (BREF) version 26 item scale on four domains viz. physical domain, psychological domain, social domain, environmental domains.

Of all the four domains, both the groups scored highest in the physical domain & the least in the psychological domain & the difference between the two groups was statistically significant in all the four domains.

Quality of Life in BPAD Group

In the current study, in BPAD group subjects showed a better quality of life in the physical domain and scored very low in the psychological domain. Scores

were better in the environmental and social domain, which follows the physical domain.

According to P. Sierra et al,^[7] quality of life was better in physical functioning than other domains with a mean of 87.7 ± 12.04 , which showed results similar to this study. According to Mohammed F.Eisa et al,^[5] quality of life was poorer in the social domain than the psychological domain, which was contradictory to this study results.

Poorer quality of life in bipolar patients, even in remission, maybe due to deficits in verbal memory, and deficits in executive function may act as an underlying reason for a poorer quality of life. This discrepancy may be due to the usage of different instruments for the assessment of the quality of life, and another reason could be due to a difference in criteria of remission that they have taken in their study.

Quality of Life in Schizophrenia Group

In this study, in schizophrenia group subjects showed a better quality of life in the physical domain and scored very low in the psychological domain. Scores were better in the environmental and social domain, which follows the physical domain.

The results of this study were in agreement with the findings from the study of Anna Gulappi et al,^[20] They observed that quality of life was not extremely negative, though schizophrenia is an impairing chronic illness, with the findings similar to the current study. According to kokacya et al,^[21] the quality of life was better in the physical domain than all other domains, which was similar to this study's results.

According to Selvaraj Madhavan et al,^[22] scores of quality of life are higher in the environmental domain whereas scored least in the physical domain, which is contradictory to this study results. The reason behind obtaining a poorer score in the psychological and social domain could be stigma related illness, increased demand for work, and these individuals often withdraw or react by lowering their social interaction.

Comparing the Quality of Life in Schizophrenia and Bipolar Affective Disorders

In this study, quality of life was better in physical and environmental domains in BPAD when compared to schizophrenia.

Prabhat K Chand et al,^[23] studied the quality of life of fifty bipolar patients in remission. They compared it with that of clinically stable patients with schizophrenia using QOL-BREF. It was found that compared to the schizophrenia group, the bipolar group had a significantly better quality of life in physical and psychological health domains.

A. Hofer et al,^[24] studied fifty-two patients with schizophrenia and sixty patients of bipolar disorder – I in remission using the WHOQOL-BREF scale. It was found that, the bipolar group had a significantly better quality of life compared to the schizophrenia group and significantly lower scores were found in

the psychological domain, which is similar to this study.

Brissios et al.^[25] reported lower quality of life scores in patients with bipolar disorder in the physical and environmental domain and of schizophrenic patients in the psychological domain, but the difference between the groups was not statistically significant.

Min Yi Sum et al, in their study, compared 43 patients with schizophrenia and 31 patients of bipolar disorder in remission using the WHOQOL-BREF scale. It was found that both patient groups in remission had similar QOL in all domains, which was contradictory to the current study.

Schizophrenia is considered as a continuous illness. The individual still had residual symptoms even during periods of remission, whereas in the BPAD group, mostly individuals reached their premorbid levels which may be an underlying cause for a better quality of life in the BPAD group.

Another reason could be in the schizophrenia group, individuals primarily associated with decreased energy and cognitive deficits that account for lower satisfaction with their ability to perform daily activities, lower satisfaction with themselves, social relationships, and enjoyment.

CONCLUSION

- There was a significant decline in the psychological and social domains among BPAD patients.
- The overall quality of life showed better in the BPAD group as compared to schizophrenia group.
- The quality of life among schizophrenic patients showed a significant decline when compared to patients with Bipolar Affective Disorder similar to this study hypothesis.

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