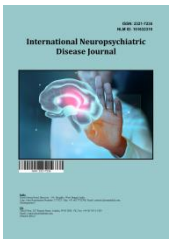

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Assessing Quality of Life: A Comparative Study among Patients with Schizophrenia, Bipolar Affective Disorder, and Healthy Control in a South Indian Tertiary Care Setting

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Aim: To assess and compare the quality of life (QOL) of patients with schizophrenia, bipolar affective disorder (BPAD) patients and healthy control.
Methods: This is an observational study carried out in MVJ Medical College and Research Hospital, Bengaluru, India. The WHOQOL-BREF questionnaire was administered to 139 patients with schizophrenia and 139 patients with BPAD that were diagnosed according to the ICD-10 diagnostic criteria, as well as 139 healthy subjects all of whom gave their informed consent. The data were analyzed using SAS 9.2 software.
Results: On comparing the three groups, the schizophrenia group scored the least in the physical (53.51±19.36), psychological (51.32±21.37) and environmental health domains (55.59±17.78). The QOL of the BPAD group was comparable to that of the healthy control group and significantly better as compared to that of the schizophrenia group (P<0.0001).
Conclusion: The study shows that patients with schizophrenia had significantly lower QOL than patients with BPAD and healthy subjects. Our study emphasizes the significance of addressing psychiatric patients' overall health and QOL in addition to symptom management.

Keywords: Schizophrenia; BPAD; QOL; WHOQOL-BREF.

1. INTRODUCTION

Schizophrenia, a psychiatric disorder impacts roughly 24 million people around the globe [1]. It is characterized by impairment in perceiving reality and includes positive symptoms like hallucinations, persistent delusions and negative symptoms like speaking difficulty, reduced interest or pleasure in otherwise enjoyable activities, and withdrawal from social interactions [1]. The primary goal of antipsychotic medications is to amplify the quality of life (QOL) for patients, alongside alleviating their symptoms [2]. Improvement of the patient's QOL is, therefore, a significant indicator for their recovery from schizophrenia [3].

Contemporarily, Bipolar Affective Disorder (BPAD) includes alternating depressive episodes like sadness, feeling of emptiness and loss of interest in otherwise enjoyable activities with manic episodes like euphoria and increased talkativeness [4]. BPAD has a fluctuating nature having periods of exacerbation along with periods of remission thereby affecting the QOL and overall general well-being of the patient [5]. Euthymic patients are also reported to have impaired quality of life [6]. Reduction of symptoms was the main goal of treatment for BPAD during early years. However, in recent times, the notion of QOL has been integrated into the course of therapy for BPAD [7].

Quality of life is defined by the World Health Organization as "An individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" [8]. QOL has been considered as a crucial indicator for treatment efficacy in psychiatric illnesses over the recent years [7]. QOL also tends to provide a humanistic approach to patient care [9]. Improvement in quality of life apart from alleviation of symptoms in diseases that run a chronic and debilitating course like schizophrenia and BPAD are seen as a key challenge [6]. Moreover, understanding the differences in QOL among those with psychiatric disorders is pivotal as it helps to devise effective treatment approaches [10]. Hence, there is an increasing need of QOL studies in schizophrenia and BPAD.

Several studies in the past have elucidated a marked reduction in the QOL of patients affected by these psychiatric illnesses. Prasad et al (2022) conducted a study that revealed the QOL of patients with schizophrenia to be significantly less compared to patients with BPAD [6]. Similarly, Akvardar et al. and Bhute et al. conducted separate studies, both of which revealed poor QOL in patients with schizophrenia compared to healthy control [9,11].

However, there is a deficit of studies among populations in the developing countries. Further, studies involving comparison of schizophrenia and BPAD are very few [6]. Of the QOL studies done on schizophrenia most of them employ disease-specific QOL instruments which have the limitation of being unable to compare with disease free subjects [12]. Therefore, the purpose of this study was to assess and contrast the QOL of those with diagnoses of

schizophrenia and BPAD with that of healthy controls in rural India by using the generic WHOQOL-BREF questionnaire that addresses the different domains of QOL of a person and their general well-being.

2. MATERIALS AND METHODS

2.1 Study Design and Participants

An observational study was conducted at MVJ Medical College and Research Hospital, Bangalore, India in the Department of Psychiatry. 139 subjects with schizophrenia and 139 BPAD subjects of either sex, were included in the study. 139 healthy subjects were also included in the study as control. Informed consent was obtained from all the participating subjects. The study was conducted for a period of six months, from February 2022 to July 2022. The Institutional Ethics Committee granted ethical approval for the study [MVJMC&RH/IEC-17/2022].

2.1.1 Inclusion criteria

Patients diagnosed with schizophrenia and BPAD according to ICD-10 diagnostic criteria irrespective of age and sex and admitted to the psychiatry ward.

2.1.2 Exclusion criteria

Patients with comorbid psychiatric disorders and those with unconfirmed diagnosis.

2.2 Measures

2.2.1 World Health Organisation Quality of Life- BRIEF Version

The study participants who consented for the study were given the WHOQOL-BREF questionnaire, a shorter variant of the WHOQOL-100 instrument comprising of 26 questions to assess and compare their QOL. Out of the 26 items, the first two items evaluate a person's general perception of their state of health and overall QOL while the remainder items evaluate the domains of physical health (7 items), psychological health (6 items), social relationships (3 items) and environmental health (8 items). The physical domain of the questionnaire asks about routine activities, symptoms of discomfort and pain, medicine use, sleeping habits and rest, and capacity for work. Questions relating to self-esteem, physical appearance, positive and negative emotions, body image, personal views, and attentiveness are all included in the psychological domain. Interpersonal ties, social backing, and sexual engagement are evaluated under the social relationships category. The environmental domain investigates potential of obtaining new knowledge and skills, monetary resources, access to healthcare and social services, engagement in leisure activities, and availability of transportation. Participants respond to each question using a 1-5 Likert scale. A final score is derived for each of the four domains, scaled in a positive direction, reflecting how an individual perceives their QOL in each specific domain [8].

2.3 Statistical Analysis

For the socio-demographic variables, descriptive data is presented in the form of mean ± SD and percentages. Quality of life comparison was conducted using the Wilcoxon signed-rank test, followed by post-hoc analysis. All analyses were conducted using SAS 9.2. Statistical significance was defined as $P<0.05$.

3. RESULTS

3.1 Socio-demographic Variables of Patient and Control Groups

139 subjects each from schizophrenia, BPAD and healthy control groups that were included in the study were assessed and compared for their QOL using the WHOQOL-BREF questionnaire. Table 1 presents the demographic information of the enrolled subjects. The three groups had comparable socio-demographic characteristics.

3.2 Comparison of QOL between Patient and Control Groups

Table 2 presents the average scores for the four domains of the WHOQOL-BREF questionnaire, depicting a correlation among the three groups: schizophrenia, BPAD and healthy control. The schizophrenia group exhibited lower QOL scores in almost all domains when compared to the BPAD and healthy control groups. Statistically significant differences were identified through the use of non-parametric tests and subsequent post-hoc analysis between the schizophrenia group and both the healthy control and BPAD groups in the physical, psychological, and environmental domains ($P<0.0001$). However, the difference among the groups in the social

relationships domain was not significant. Additionally, the differences in scores between the BPAD group and the healthy control group across all domains were statistically insignificant. It is noteworthy that all three groups achieved the highest scores in the environmental health domain and scored the lowest in the social relationships domain. Furthermore, on comparing the two psychiatric groups, the BPAD group obtained notably higher scores in the physical, psychological, and environmental health domains compared to the schizophrenia group and these differences were statistically significant (P<0.0001).

4. DISCUSSION

Individuals with mental illness often experience a receding QOL that may be at par with, or presumably, even more profound than the decline experienced by individuals with other medical disorders. This in turn affects a patient's adherence to treatment, relapse rates, and also their ability to be socially active [13].

Several clinical factors contribute to the poor QOL in people with psychiatric disorders. Some of these factors include a) depression as in BPAD, which has a substantial effect on QOL due to feeling of sadness and having a diminished sense of well-being. b) The presence of positive symptoms that include hallucinations and delusions, along with negative symptoms like social withdrawal and decreased motivation in schizophrenia, coupled with poor social support and disability, which collectively exerts a profound influence on the affected person's QOL [13].

In this study, the QOL of schizophrenia was assessed and compared to that of BPAD and healthy control using the WHOQOL-BREF questionnaire. The socio-demographics of the three groups were comparable.

Table 1. Description of demographic variables

Demographic Parameter	Schizophrenia n=139	BPAD n=139	Healthy Control n=139
Age (years)	38.95±10.96*	39.17±16.32*	37.50±7.28*
Gender (%)			
Male	47	66	34
Female	53	34	66
Marital Status (%)			
Married	74	68	77
Unmarried	22	24	23
Separated	04	08	00
Education (%)			
Primary	37	17	25
Secondary	21	38	30
Degree	22	36	35

**Data represented as Mean ± SD*

Table 2. Comparison of WHOQOL-BREF domain scores

DOMAIN	Group I SCHIZOPHRENIA (Mean±SD)	Group II HEALTHY (Mean±SD)	Group III BPAD (Mean±SD)	Post-hoc pair-wise comparison
Physical health	53.51±19.36	68.44±14.71	68.96±19.38	I<II* I<III*
Psychological health	51.32±21.37	68.30±16.29	62.55±20.52	I<II* I<III*
Social relationships	42.95±20.25	46.77±22.66	47.01±24.15	NS
Environmental health	55.59±17.78	69.10±15.40	69.05±19.86	I<II* I<III*

**P<0.0001 NS- Not Significant*

The study assessed the QOL scores based on four domains: physical health, psychological health, social relationships, and environmental health, among which, the groups demonstrated highest scores in the environmental health domain, while scoring the lowest in the social relationships domain. Interestingly, the social relationships domain showed insignificant difference between the three groups, which is in accordance to the findings of Chand et al. [14] where the QOL of remitted BPAD patients and patients with schizophrenia that were clinically stable was compared, and both groups had similar low scores in the social relationships domain. However, this finding contradicts another study conducted in Turkey by Yildiz Akvardar et al. [9] in 2001 where they compared the QOL of subjects who were diagnosed to have schizophrenia, BPAD, and alcohol dependence with diabetics and healthy control subjects. They found that the schizophrenia group performed much worse in the social domain as compared to BPAD and healthy control subjects.

Another finding of our study was that the schizophrenia group scored poorly in three of the four domains when compared to the BPAD group and healthy subjects. This indicates that it is thereby essential to provide comprehensive care that encompasses not only medical treatment but also support systems and strategies that can enhance the patient's well-being. In contrast, findings by Brissos et al. [15] suggested no comparable difference between the schizophrenia and BPAD groups in the physical, social, and environmental health domains.

In the present study, the environmental domain in the schizophrenia group had the highest score, 55.59±17.78, indicating a considerably higher QOL in this area. However, the social domain yielded a low score of 42.95±20.25, indicating a poorer QOL in terms of social interactions for this group. This result is comparable to that of Solanki et al. [16] who used the PANSS and WHOQOL-BREF scales to evaluate the QOL of 50 individuals with schizophrenia.

Similarly, the bipolar disorder group also scored poorly in the social relationships domain and had a better QOL in the environmental domain, consistent with Malini et al's [5] study results. In contrast, Sayujya et al. [17] reported that schizophrenia group exhibited higher scores in the social domain but lower scores in the environmental domain, while the BPAD group scored better in the social relationships domain and scored poorer in the psychological domain. The reason for the low social score in our study could be attributed to the taboo regarding mental health and mental illness in India, especially in rural settings where our study was conducted due to which the subjects may have difficulty in functioning in the social area [17]. Additionally, the BPAD group in the current study showed no significant difference in any of the domains when compared to healthy control. This result is in accordance with the results reported by Chand et al. [14] where BPAD patients stabilised on lithium were assessed.

Bipolar patients in remission have absent or minimal symptoms [18] while patients with schizophrenia experience residual symptoms [6]. Because the long-term course of the two disorders is different, it may contribute to the possibility of BPAD patients having a higher QOL than subjects with schizophrenia but a similar QOL to healthy subjects [7]. Further, Brissos et al. [15] found that among BPAD patients, there was a strong correlation between educational status and QOL. Contemporarily, in our study, 91% of the BPAD subjects had atleast primary level of education which could have contributed to their better QOL as compared to the schizophrenia group.

5. CONCLUSION

This study highlights the importance of prioritizing QOL as a crucial standard in treating and caring for psychiatric conditions, including schizophrenia and BPAD. Taking into account the impairments in various QOL domains (physical, psychological, social, and environmental aspects) is essential for enhancing the overall well-being and functioning of individuals suffering from psychiatric disorders. Future medical interventions and treatment strategies should aim to target these specific domains to enhance patients' quality of life with schizophrenia and BPAD, ultimately leading to improved outcomes and recovery. Along with pharmacological interventions, combining interventions that enhance social support can potentially improve the QOL of individuals with psychiatric disorders. Furthermore, social support can help alleviate the stigma associated with mental illness.

6. LIMITATIONS

Primarily, the study is constrained by a small number of participants in the sample and its

restriction to one treatment centre. Hence, generalizability can be improved by incorporating larger and more diverse cohorts from multiple healthcare facilities or conducting studies across multiple centres. Secondly, using self-rating instruments introduces the potential for participants to cause under-reporting or over-reporting of specific information. Thereby, the inherent subjectivity of self-rating instruments can be avoided by incorporating a blend of generic as well as specific instruments to evaluate and present better results for QOL.

CONSENT

Informed consent was obtained from all the participants included in the study.

ETHICAL APPROVAL

Ethical approval was granted by the Institution Ethics Committee of MVJ Medical College and Research Hospital, Bangalore, India [MVJMC&RH/IEC-17/2022].

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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