Original Research Paper

Volume - 11 | Issue - 11 | November - 2021 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Psychiatry

# TO COMPARE QUALITY OF LIFE AMONG NORMAL CONTROLS, BIPOLAR AFFECTIVE DISORDER AND SCHIZOPHRENIA PATIENTS DURING REMISSION IN UDAIPUR REGION"

**Dr. Pooja Dixit**

**Dr. Anil Pahadia**

**ABSTRACT** **Background:** In the past, the first goal of bipolar disorder treatment was the reduction of symptoms of mania or depression, rather than the recovery of social functioning. Recently, as a result of an increased emphasis on patient needs, the concept of quality of life (QoL) has been brought into the treatment of physical illnesses. Subjects and methods: The purpose of the present study was to examine QoL data in patients with bipolar disorder in clinical remission and to determine the extent of the effects of demographic and clinical data on QoL in these patients. The second aim was to compare the QoL data of these patients to that of patients with schizophrenia in clinical remission and to that of healthy controls. Data were obtained using who quality of life for 54 bipolar patients in clinical remission. The data were then compared with the data of 60 schizophrenic patients in clinical remission and with 118 healthy controls.

**Results:** There were higher mean scores in who quality of life scales in the bipolar patients than in the schizophrenic patients. There were higher mean scores in the bipolar patients in some summary scales than in the healthy controls.

**Conclusions:** Our results suggest the same or higher subjective QoL in bipolar patients in clinical remission in comparison with healthy controls and higher subjective QoL in bipolar patients in clinical remission than in schizophrenic patients in clinical remission.

**KEYWORDS :** quality of life - bipolar disorder – schizophrenia – remission - controls

## INTRODUCTION

Bipolar affective disorder (BPAD) is characterized by repeated (i.e. at least two) episodes in which the patient's mood and activity levels are significantly disturbed, this disturbance consisting on some occasions of an elevation of mood and increased energy and activity (mania or hypomania), and on others of a lowering of mood and decreased energy and activity (depression). In this disorder, the fundamental disturbance is a change in mood or affect, usually to depression or to elation. This mood change is normally accompanied by a change in the overall level of activity, and most other symptoms are either secondary to, or easily understood in the context of, such changes. Characteristically, recovery is usually complete between episodes.[1]

During the periods of complete recovery or remission the mood state is sometimes described by the term "*euthymia*" The origin of word euthymia is from Greek. In Greek, the prefix *eu-* means "good or well," while *–thymia* is derived from the Greek word "thymus," meaning "mind." Meaning that a person in a euthymic state is in a good state of mind.[2]

Remission is defined as Hamilton Depression Rating Scale (HDRS) scores <8 and Young Mania Rating Scale(YMRS) score <6 maintained over a period of 8 weeks.[3]

### Prevalence Of Bipolar Affective Disorder

According to national mental health survey of India 2015-16 the overall weighted prevalence of bipolar affective disorder is 0.3% for current and 0.5% for lifetime experience. Males had a slightly higher rate for current prevalence of bipolar affective disorder (0.3%) when compared to females (0.2%). Among various age groups and residence categories, those in the 40-49 (0.4 %) and urban metro residents (0.7%) had a higher prevalence for current experience of bipolar affective disorder.[4]

Despite having an episodic course, The world health organization labelled bipolar affective disorder as one of the 10 main causes of disability.[5] Even when asymptomatic, persons with BPAD report QoL below normative levels.[6]

### Schizophrenia

Among the various mental illnesses Schizophrenia has been described since early times with varying descriptions and explanations for the cause of illness. People with schizophrenia were described to be outcasts in society; they suffered from significant stigma related to theillness. They were doomed to a life of illness, financial disability, neglect and isolation in the community, thereby never having what we would describe as a good quality of life.

The concept of schizophrenia evolved from Kraeplins '*Dementia praecox* to its current status in the DSM –5 and ICD – 10 and the future ICD-11. Schizophrenia, however emerged as a medical condition worthy of research and management only in the 18th century.[7]

### The subtypes of schizophrenia described are

paranoid, hebephrenic, catatonic, undifferentiated, post-schizophrenic depression, residual, simple, other and unspecified schizophrenia.The classification of the course is divided into the following – continuous, episodic with progressive deficit, episodic with stable deficit, episodic remittent, incomplete remission, complete remission, other and course uncertain, period of observation tooshort.[8]

**Remission** in schizophrenia was defined using PANSS SCORE less than or equal to 3. For defining operational criteria of remission, an expert working group reviewed available definitions and assessment instruments to provide a conceptual framework for symptomatic, functional and cognitive domains in schizophrenia as they relate to remission of illness. Given the long term course and intrinsic character of schizophrenia, the working group consensus defined a period of 6 months as a minimum time threshold during which aforementioned symptom severity must be maintained to achieve remission.[9,10]

### Prevalence Of Schizophrenia

According to National mental health survey 2015-16, the lifetime prevalence for schizophrenia is 1.4% and current is 0.5%.

The rates among males was slightly higher than those among females (0.5% in males v/s 0.4% in females).

Compared to other age groups, 40-49 age groups (0.6%) had a higher prevalence for current experience of schizophrenia and other psychotic disorders. The rate for current experience was higher for urban metro residents (0.7%) than for others.[4]

It is a disabling illness which is associated with relapses and increased number of hospitalization.[11] The economic implications of the disease extend beyond the use of health and personal social services to its morbidity and mortality implications as well as its impact on the quality of life of patients and their families. Many people with schizophrenia experience stigma caused by other people's knowledge, attitudes, and behavior; this can lead to impoverishment, social marginalization, and low quality of life.[12]

In treating and managing Schizophrenia, clinicians often focus on treating psychotic symptoms and ignore factors that are directly related to quality of life and prognosis of disease. Evaluation of patient's quality of life can help a lot in improving quality of care in Schizophrenic patients.[13]

However with the advent of antipsychotic medication symptoms of illness were beginning to get under control and the focus shifted to the reintegration of such individuals into society. Along with this, interest grew in other aspects of the individual's life such as the patient's own perceptions of the illness and the quality of their life in the background of a disabling, stigmatizing and chronicillness.[14]

**Quality of life (QOL)**

Quality of life has emerged as the ideal of modern medicine viewed from a biopsy chosocial perspective. The concept has been increasingly used as an important attribute in patient care and clinical studies as well as the basis in many health economic evaluations.
The World Health Organization has described QoL as

*'Individuals' 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''*[15]

QoL is a multidimensional concept that emphasizes an individual's satisfaction with all aspects of life and includes physical, social, environmental, and psychological well-being.[16]

In BPAD QoL of patients is more impaired during depressive than manic or hypomanic episodes.[17] When measured subjectively QoL in bipolar disorder is lower than that found in depressive disorders, anxiety disorders, schizophrenia.[18]. Various factors contributing to poor QoLinclude prolonged illness duration[19], young age of onset[20], history of suicide attempts[21], poor insight[22], high nicotine dependence[23] absence of a social support system[24], comorbid alcohol dependence[25], comorbid anxiety disorders[26], numerous previous depressive episodes[27,28] and an extended undiagnosed period[29]. Residual depressive symptoms are also associated with poor QoL.[30] Despite full recovery more than one third patients of bipolar affective disorder experience poor or very poor life satisfaction[31], which lead the researchers to explore various variables related to QoL.

In Schizophrenia QOL of patients is affected by race, educational and occupational status, marital status, whom the patient is living with , homelessness, having children or not, severity of symptoms, hospitalization, pharmacotherapy and duration of stay.[32,33]

**AIM AND OBJECTIVES**

**AIM:** To compare quality of life among normal controls, bipolar affective disorder and schizophrenia patients during remission in Udaipur region".

**OBJECTIVES:**

1. To assess quality of life in bipolar affective disorder patients in remission.
2. To assess quality of life in schizophrenia patients in remission.
3. To compare quality of life in normal controls, bipolar affective disorder and schizophrenia patients in remission.

**MATERIAL AND METHODS**

**1. Research Setting**

This study was conducted in Department of Psychiaty in tertiary care center in north india.

**2. Study Population:**

There were three groups:

**Case Group:**

There were two case groups. Subjects were recruited from psychiatry department visiting for follow up and were already diagnosed cases of bipolar affective disorder or schizophrenia according to ICD-10 criteria, having adequate past treatment record and full-filling the inclusion and exclusion criteria**.**

**Control Group:**

Age matched normal controls without a family history of schizophrenia and bipolar affective disorder accompanying the patient but not blood relative or family members and those visiting hospital for other purposes.

**3. Duration Of Study**

One year

**4. Study Design:**

A comparative cross sectional observational study.

**Inclusion Criteria:**

1. The patient/control who gave informed consent.
2. The patient who were in remission.
3. Age of patient /control was between 18-60 years.
4. Patient/control was literate enough to understand the purpose and to take part in this study.

**Exclusion Criteria-**

1. Patients/control who did not consent
2. Age of patient was less than 18 or more than 60 years.
3. Patients suffering from any other neurological disorders or co-morbid psychiatric disorder as per detailed clinical history, examination and routine investigation.
4. Illiterate
5. Patients who did not have adequate past record.

**Selection Criteria For Controls:**

1. Were free from any lifetime personal history of psychiatric disorder or chronic medical illnesses.
2. Age 18-60 years, either sex.
3. Had no family history (first degree relative) of any Axis I disorder or bipolar spectrum disorder or schizophrenia.
4. Literate enough to understand questionnaires.
5. Willing to participate in the study.

**OBSERVATIONS**

A total of 133 patients were approached for the study. Out of which 11 patients did not consent due to various reasons and 8 were excluded as they did not meet the inclusion criteria. The remaining 114 patients participated in the study, out of which 60 were schizophrenia patients group and 54 were BPAD patients group.

For selecting the control group we approached 143 subjects , out of which 25 were excluded as few refused and few did not meet the inclusion criteria , 118 subjects participated in the study as control group.

**Quality Of Life Scores**

**Table 1. Comparison Of Cases And Controls**

| Quality of life domains | Transformed score | | | P value |
|---|---|---|---|---|
| | Control | Schizophrenia | BPAD | |
| Physical health | 68.37±14.14 | 48.87±15.32 | 62.31±14.98 | 0.000 |
| Psychological health | 68.35±15.19 | 52.58±17.00 | 62.87±16.10 | 0.000 |
| Social relationship | 72.56±15.91 | 55.12±17.57 | 68.69±20.12 | 0.000 |
| Environmental health | 66.24±14.97 | 49.83±14.25 | 60.22±12.99 | 0.000 |

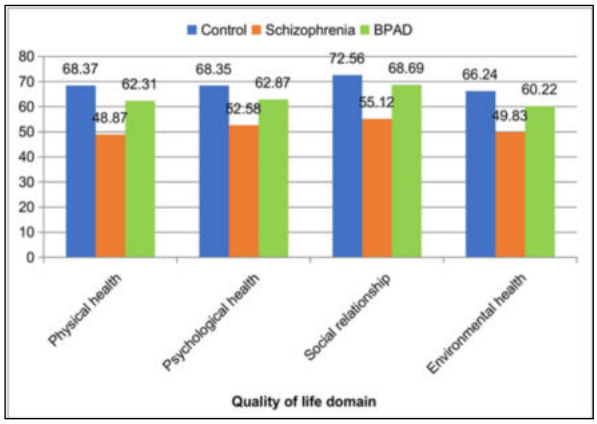


**Fig.7:** Quality Of Life Scores

Quality of life scores were highest for control group followed by BPAD patients group and lowest for schizophrenia patient group in all four domains**.**

On post hoc analysis the difference in mean scores of the three groups was found to be statistically significant in all domains , except in social health domain where difference between mean scores was statistically significant between the control and schizophrenia group but not statistically significant between control and bipolar group(p= 0.177).

**Table 2. Correlation In Schizophrenia**

| Quality of life domains | Age at onset | Total duration of illness |
|---|---|---|
| Physical health | 0.403** | -0.202 |
| Psychological health | 0.494** | -0.115 |
| Social relationship | 0.359** | -0.085 |
| Environmental health | 0.449** | -0.120 |

** Correlation is significant at 0.01 level.

Age at onset for schizophrenia patients is significantly positively correlated with all four domains of quality of life.

Total duration of illness is negatively correlated with all four domains of quality of life but this correlation is statistically not significant.

**Table 3. Correlation Of BPAD Variables With Domains Of Quality Of Life**

| Domains of QOL | Age at onset | Total duration of illness | Total no. of episodes | Total manic episodes | Total depressive episodes |
|---|---|---|---|---|---|
| Physical health | 0.011 | -0.238 | -0.404** | -0.233 | -0.467** |
| Psychological health | 0.023 | -0.223 | -0.352** | -0.321* | -0.436** |
| Social relationship | 0.297* | -0.053 | -0.373** | -0.168 | -0.287* |
| Environmental health | 0.007 | -0.376** | -0.320* | -0.241 | -0.320* |

** Correlation is significant at 0.01 level.
* Correlation is significant at 0.05 level.

Age at onset was positively correlated with QOL with statistically significant correlation in social domain.

Total duration of illness was negatively correlated with QOL with statistically significant correlation in environmental domain.

Total number of episodes was negatively correlated with QOL with statistically significant correlation in all four domain.

Total number of manic episodes was negatively correlated with QOL with statistically significant correlation in psychological domain.

Total number of depressive episodes was negatively correlated with QOL with statistically significant correlation in all four domain.

## DISCUSSION

The present study included 60 patients with diagnosis of schizophrenia in remission, 54 patients with diagnosis of bipolar affective disorder (BPAD) in remission, to find out quality of life and to compare it with each other as well as with 118 age matched normal controls in Udaipur region.

### Sociodemographic Characteristics Of Control Subjects And Patient Groups:

Out of 118 control subjects, 69 were male (58.5%) and 49 were females (41.5%).

Out of 60 schizophrenia patients, males and females were 46(76.7%) and 14 (23.3%) respectively.

Out of 54 BPAD patients, males and females were 36(66.7) and 18 (33.3%) respectively.

A clear male preponderance in distribution is probably a reflection of India being a male dominated society where majority of them are sole bread earning person. Illness of males affect the entire family. Probably this leads to more treatment seeking in males than females.[52]

Mean age was 37.75, 37.53, 34.59 for control, schizophrenia and BPAD patients respectively and the difference was not statistically significant. Thus controls were age matched and age was eliminated as aconfounding factor between the groups in determining quality of life.

Religion distribution was predominated by Hindus, 96.6% among control subject, 93.3% among schizophrenic patients, 96.3 % among BPAD patients. This was probably due to Muslims being a minority population.[53]

Marital status of most of the participants was married, 86.4 %, 41.7%, 66.7% in control subjects, schizophrenia and bipolar patients respectively.

Regional distribution came out to be variable in the three groups. Control subjects were mostly from rural background(96.6%), while schizophrenia patients were mainly from urban areas(65%) probably owing to more awareness about medical treatment while more prevalence of faith healing practises in rural areas for treatment of psychotic illness like schizophrenia, although among BPAD patients the distribution was nearly equal (55.6% rural and 44.4% urban).

Most participants were from nuclear families (85.6% in control group, 78.3% in schizophrenia group and 61% in BPAD group) of lower middle socio economic class (50%, 60% and 44.4% in control, schizophrenia and BPAD group respectively) and literate, illiterate were not included in the study due to self- administered nature of scale. These finding of socio-demographic profile of sample were similar to another study in Rajasthan **(RK Solanki, Paramjeet Singh, 2008)**[51] although family type of most patients was joint family in their study. This might be reflecting the changing propensity towards nuclear families over the last decade.

### Comparison Of Quality Of Life

The mean values for QOL scores in physical domain were 68.37±14.14, 62.31±14.98, 48.87±15.32 for control, BPAD, schizophrenia group respectively. In psychological domains sores were 68.35±15.19, 62.87±16.10, 52.58±17.00 for control, BPAD, schizophrenia group respectively. Social domain scores were 72.56±15.91, 68.69±20.12, 55.12±17.57 for control, BPAD, schizophrenia group respectively.

Environmental domains scores were 66.24±14.97, 60.22±12.99, 49.83±14.25 for control, BPAD, schizophrenia group respectively. These results showed that mean QOL scores were in the order of highest to lowest for control group then BPAD and least for schizophrenia. These finding were similar to previous studies by **Lee et al, 2017; V.V. Dias et al, 2008; Cheng- Fang Yen et al, 2008 ; Hofer A et al. (2007) - Akvardar Y et al, 2006**.[36,38,41,43,44] All these studies reported QOL scores to be in the similar sequence i.e. worst for schizophrenia patients, intermediated for BPAD and highest for control group. The study conducted by **S. Brissos et al 2008**[35] also reported similar results although the difference was not significant between the two patientgroups. The study by **Chand et al (2004)**[39] reported comparable QOL for remitted bipolar patients with normal controls.

This finding in our study is contrary **to Klatalova et al, 2011**[34] who reported similar or better QOL in BPAD patients than control group. They discussed it as because fewer of the bipolar patients were employed than the healthy controls. They speculated that the higher QLES-Q scores can be explained psychologically by a higher satisfaction in remission and the fact of having a job despite a serious disorder for the 15 employed bipolar patients, or the fact of having social insurance benefits without the stress of unemployment and with a lot of free time in the other 26 patients. The healthy unemployed controls are under stress from looking for a job.[34]

The difference in mean Quality of life in physical, psychological and environmental domain (except social domain) for controls, schizophrenia and BPAD was statistically significant ($p<0.05$) as found out through Post Hoc Tests.

The mean QOL in social domain was in lowest to highest order for schizophrenia, BPAD, control group. The difference was statistically significant between schizophrenia and other two groups but not significant between BPAD and control. This was contrary to other studies **Lee et al (2017)[41]; V.V. Dias et al. (2008)**[44] which reported statisticallysignificant low mean QOL in social domain for BPAD patients as compared to normal controls.

### Quality Of Life And Its Correlates In Schizophrenia Patients

The mean of QOL in all four domain was higher for male patients than female patients of schizophrenia in remission although the difference was not statistically significant, similar to **MHS Mahmud, 2015**[46] study. In contrast to our study, the study by **Nishi Suchita Kujur, Rajeev Kumar, 2010**[49] reported statistically significant higher WHO-QOL scores in males than females. Probable reason for not significant difference in QOL of males and females may be that in our study the sample was from a government institute where most of the drugs are provided free of cost which probably encourages treatment seeking behaviour and equal treatment opportunities irrespective of the gender. Another cause may be attributed to rise in women equality as well as awareness about psychiatric illness in the last decade.

The marital status of patients of schizophrenia was observed to affect the QOL in all four domains.

Highest scores were obtained for married and lowest for divorced or separated with statistically significant difference, similar to **MHS Mahmud, 2015[46], RK Solanki, Paramjeet Singh (2008)[51]**. They explained it as patients never married or separated and divorced mayreflect their deficits when interacting and coping with their social and physical environment and complexity of modern society.[51]

The mean QOL in all four domains was lower for rural locality and lower socio economic classes patients than urban and higher socio economic classes but the difference was not significant as found in study by **V. Adomaitiene (2010).[48]**

The observed results could not find significant difference in QOL scores based on the type of family, whether nuclear or joint.

Presence of a positive family history indicated a lower QOL but difference was not significant.

In our study we observed that the patients with positive symptoms at illness onset reported significantly higher scores for QOL (52.94±14.08 v/s 34.15±9.98 in physical ; 56.45±16.73 v/s 38.62±8.82 in psychological ; 59.06±17.39 v/s 40.85±8.81 in social ; 53.77±13.15 v/s35.62±7.51 in environmental health) than those with negative symptoms in all four domains. Similar findings were concluded by the study by **RK Solanki, Paramjeet Singh, 2008[51]** and **Narvaez JM et al (2008)**.[50]

This observation reaffirms the conclusion made in the study by **Zouari et al (2012)[47]** that management of schizophrenic patients should go beyond the remission of the symptoms; it has also to target the improvement in QOL. This needs an action over the factors that affect theQOL, among which are residual symptoms and side effects. The atypical antipsychotics would contribute preciously in this way, due to their efficacy on negative symptoms and their better tolerance than the conventional ones.[47]

In our study sample of sixty schizophrenia patients in remission, two patients accepted of having history of suicide attempt. The scores of QOL were lower for both of them than the rest of the patients but difference was not significant.

The observed correlation between total duration of illness was negative with QOL in all four domains, implying that quality of life decreases with increasing duration of illness but the correlation was not significant. This finding is similar to the study by **RK Solanki, Paramjeet Singh (2008).[51]**

Age at onset of illness was significantly positively correlated with quality of life in all four domains, suggesting that younger the age of patient at onset of illness, poorer is the quality of life. These similar observations were made by **Yu-Chen Kao and Yia-Ping Liu (2010)[36]** that patients with an early onset of schizophrenia were likely to have worse QOL than those with adult onset. It is a predictor of unfavourable prognosis, more severity, higher rate of chronicity and more impairment in cognitive performance.[54,55] As it can be understood that onset atyounger age interferes with the attainment of education, stable career and strong social relationship like marriage hence impairing QOL.

Total duration of illness was found to be negatively correlated with mean scores of QOL, which means that QOL decreases with increasing duration of illness.

### Quality Of Life And Its Correlates In BPAD Patients

The mean QOL between male and female patients of BPAD in remission was not significantly different in all four domains of QOL. Though the males have slightly higher mean than females in physical and psychological domains, while females have higher mean value for social domain than males. The mean for environmental domain came out to be equal for males and females, while **LG Sylvia et al (2017)[40]** reported lower QOL for females.

The observation of impact of marital status on domains of QOL in BPAD patients revealed that single person scored a higher mean value in all four domains and difference was significant on physical and psychological domains. The probable reason may be that in our sample of BPAD group the mean age of married was 35.5 years while that of unmarried patients was 25.46 years, implying that due to younger age, less responsibilities and social obligations the unmarried patients reported better quality of life than married ones. **LG Sylvia et al (2017)[40]** also reported similar observations.Locality and family type did not significantly affect mean QOL significantly though social domain scores were higher for urban locality patient. Those living in joint families had slightly higher mean values for physical, psychological and environmental domains.

QOL varied across the different socioeconomic class. In our study we could observe significant difference in psychological and environmental domains among different classes (67.17±16.32, 66.17±14.00, 55.61±16.94 for upper middle, lower middle and upper lower respectively for psychological domain; 63.67±12.08, 62.96±11.55, 54.28±13.96 for upper middle, lower middle and upper lower respectively for environmental domain) while physical and social domain scores were not significantly different. The findings were similar to the study by **Thomas et al (2016)**.[42]

Among the illness related variables, total duration of illness is negatively correlated to scores in all four domains with high significance in environmental domain (-0.238 in physical, -0.223 in psychological, -0.053 in social, -0.376** in environmental health). This means that as the duration of illness increases quality of life decreases in all domains and significantly in environmental domain.

We also observed that QOL scores were negatively correlated with total number of episodes (-0.404** in physical, -0.352** in psychological, -0.373** in social and-0.320*in environmental domain) as the number ofepisodes increased QOL decreased. This correlation was significant for environmental domain and highly significant for all three other domains.

Correlation with number of manic episodes was also negative with significance in psychological domain (-0.233, -0.321*, -0.168, -0.241 in physical, psychological, social and environmental domain respectively).

Depressive episodes were also negatively correlated with QOL with high significance in physical and psychological domains and significant in social and environmental domains (-0.467**,-0.436**,-0.287*,-0.320* respectively). Study by **Thomas et al[42]** found no significant relation between number of total/ manic/ hypomanic/ depressive episodes, and QOL scores.

Both schizophrenia and bipolar disorder being chronic mental illnesses, present with a persistent need for perpetual treatment which goes beyond remission, action over residual symptoms, side effects of drugs. Attention towards these factors for the improvement of quality of life would expedite the process of integration of these individuals in to the community & make an effective living.

## CONCLUSIONS

Following conclusions can be made :

1. The quality of life of schizophrenia patients is low as compared to normal controls, even during remission
2. The quality of life of bipolar affective disorder patients even during euthymic state is low as compared to normal controls.
3. The quality of life of schizophrenia patients in remission is low as compared to bipolar affective disorder patients in remission.
4. All four domains of quality of life i.e. physical, psychological, social and environmental demonstrated impairment for schizophrenia patients in remission in comparison with normal controls.
5. All four domains of quality of life i.e. physical, psychological, social and environmental demonstrated impairment for bipolar affective disorder patients in remission in comparison with normal controls, although impairment in social domain was not significant.

In the era of shift in focus from the treatment and management strategies towards the improvement in quality of life and functioning capacity of the individual, this study emphasizes the need for improvement in quality of life of the patients with mental illnesses even after the prolonged periods of remission.

## LIMITATIONS

Sample size was small. Most of the previous studies have included small sample as in the present study. So further studies with larger sample size are needed.

Scale used was a subjective scale so illiterate population could not be included in the study.

Scales were rated by the patient which could lead to bias in the study.

Samples were collected at one centre only, so it is difficult to establish the generalizability of the findings.

The participants were on maintenance treatment so side effect of drugs may have altered the responses.

This is a cross sectional study where data regarding quality of life in patients was obtained at a single point of time. But quality of life is a dynamic construct that changes from time to time depending on various factors of day to day life.

This is a cross sectional study where data regarding quality of life in patients was obtained at a single point of time. But quality of life is a dynamic construct that changes from time to time depending on various factors of day to day life.

## REFERENCES


1. ICD 10 Pg no116 -119
2. www.healthline.com/health/euthymic
3. E Bora, M Yucel, C Pantelis- Journal of affective disorders, 2009 Elsevier.
4. National Mental Health Survey 2015-16
5. The Global Burden of Disease. Mathers C, Fat DM, Boerma J. Geneva : World Health Organization, 2008.
6. Sierra P, Livianos L, Rojo L. Quality of life for patients with bipolar disorder: relationship with clinical and demographic variables. Bipolar Disord., 2005, Vol. 7. PubMed: 15762857.
7. Andreasen NC. The evolving concept of schizophrenia: from Kraepelin to the present and future. Schizophr Res. 1997 Dec 19;28(2-3):105-9.
8. ICD 10 Pg 87-89
9. Andreasen NC, Carpenter WT, Kane JM, Lasser RA, Marder SR, Weinberger DR: Remission in schizophrenia: proposed criteria and rational for consensus. Am J Psychiatry. 2005, 162: 441-449.
10. Kay SR, Fiszbein A, Opler LA: The positive and negative syndrome scale (PANSS) for schizophrenia. Schizohr Bull.
11. Almond. S., Knapp, M., Francois, C., Toumi, M. & Brugha, T. 2004.
12. Thornicroft, G., Brohan, E., Rose, D., Sartorius, N. & Leese, M.
13. Relapse in schizophrenia: costs, clinical outcomes and quality of life.
14. INDIGO Study Group. 2009. Global pattern of experienced and anticipated discrimination against people with schizophrenia: A crosssectional survey. Lancet 373, 408-415.
15. WHOQOL Group. The World Health Organization quality of life assessment (WHOQOL): position paper from the World Health Organization. Soc Sci Med. 1995; 41:1403–1409.
16. R. D. Hays, B. G. Vickrey, B. P. Hermann et al. Agreement between self reports and proxy, reports of quality of life in epilepsy patients. Quality of Life Research, 1995, Vols. vol. 4, no. 2, pp.159–168.
17. Coryell W, Scheftner W, Keller M, Endicott J, Maser J, Klerman GL. The enduring psychosocial consequences of mania and depression. Am J Psychiatry. 1993; 150:720–727.
18. Cramer JA, Rosenheck R, Xu W, Thomas J, Henderson W, Charney DS. Quality of life in schizophrenia: a comparison of instruments. Department of Veterans Affairs Cooperative Study Group on Clozapine in Refractory Schizophrenia. Schizophr Bull 2000; 26:659-666.
19. Is Hak WW, Brown K, Aye SS, Kahloon M, Mobaraki S, Hanna R. Health-related quality of life in bipolar disorder. Bipolar Disord 2012; 14:6-18.
20. Sierra P, Livianos L, Rojo L. Quality of life for patients with bipolar disorder: relationship with clinical and demographic variables. Bipolar Disord 2005;7:159-165.
21. Dias VV, Brissos S, Frey BN, Kapczinski F. Insight, quality of life and cognitive functioning in euthymic patients with bipolar disorder. J Affect Disord 2008;110:75-83.
22. Perlis RH, Miyahara S, Marangell LB, Wisniewski SR, Ostacher M, DelBello MP, et al. Long-term implications of early onset in bipolar disorder: data from the first 1000 participants in the systematic treatment enhancement program for bipolar disorder (STEP-BD). Biol Psychiatry 2004;55:875-881
23. Robb JC, Young LT, Cooke RG, Joffe RT. Gender differences in patients with bipolar disorder influence outcome in the medical outcomes survey (SF-20) subscale scores. J Affect Disord 1998; 49:189-193.
17. de Abreu LN, Nery FG, Harkavy-Friedman JM, de Almeida KM, Gomes BC, Oquendo MA, et al. Suicide attempts are associated with worse quality of life in patients with bipolar disorder type I. Compr Psychiatry 2012;53:125-129.
24. Gutierrez-Rojas L, Gurpegui M, Ayuso-Mateos JL, Gutierrez- Ariza JA, Ruiz-Veguilla M, Jurado D. Quality of life in bipolar disorder patients: a comparison with a general population sample. Bipolar Disord 2008; 10:625-634.
25. Singh J, Mattoo SK, Sharan P, Basu D. Quality of life and its correlates in patients with dual diagnosis of bipolar affective disorder and substance dependence. Bipolar Disord 2005;7:187- 191.
26. Albert U, Rosso G, Maina G, Bogetto F. Impact of anxiety disorder comorbidity on quality of life in euthymic bipolar disorder patients: differences between bipolar I and II subtypes. J Affect Disord 2008;105:297-303.
27. MacQueen GM, Young LT, Robb JC, Marriott M, Cooke RG, Joffe RT. Effect of number of episodes on wellbeing and functioning of patients with bipolar disorder. Acta Psychiatr Scand 2000;101:374-381.
28. Fenn HH, Bauer MS, Altshuler L, Evans DR, Williford WO, Kilbourne AM, et al. Medical comorbidity and health-related quality of life in bipolar disorder across the adult age span. J Affect Disord 2005;86:47-60.
29. Gazalle FK, Andreazza AC, Cereser KM, Hallal PC, Santin A, Kapczinski F. Clinical impact of late diagnose of bipolar disorder. J Affect Disord 2005;86:313-316.
30. Ttiana Fernandes Carpinteiro da silva, Vanessa Masson, Lucia Abelha, Giovanni Marcos Lovisi, Maria Tavares Cavalcanti.
31. Shaun M. Eack and Christina E.Newhill psychiatric symptoms and quality of life in schizophrenia:A Meta-analysis.
32. Ttiana Fernandes Carpinteiro da silva, Vanessa Masson, Lucia Abelha, Giovanni Marcos Lovisi,Maria Tavares Cavalcanti.
33. Shaun M. Eack and Christina E. Newhill psychiatric symptoms and quality of life in schizophrenia: A Meta-analysis.
34. Latalova K, Prasko J, Diveky T, Kamaradova D, Velartova H. Quality of life in patients with bipolar disorder--a comparison with schizophrenic patients and healthy controls. Psychiatr Danub. 2011 Mar; 23(1):21-6.
35. Brissos, S., Dias, V. V., & Kapczinski, F. Cognitive Performance and Quality of Life in Bipolar Disorder. The Canadian Journal of Psychiatry, 2008, Vol. 53. 517–524.
36. Cheng, Chung-ping & Huang, Chi-Fen & Yen, Ju-Yu & Ko, Chih- Hung & Chen, Cheng-Sheng. (2008). Quality of life and its association with insight, adverse effects of medication and use of atypical antipsychotics in patients with bipolar disorder andschizophrenia in remission. Bipolar disorders. 10. 617-24. 10.1111/j.1399-5618.2007.00577.x.
37. Hofer A, Mizuno Y, Wartelsteiner F, Wolfgang Fleischhacker W, Frajo-Apor B, Kemmler G, Mimura M, Pardeller S, Sondermann C, Suzuki T, Welte A, Uchida H. Quality of life in schizophrenia and bipolar disorder: The impact of symptomatic remission and resilience. Eur Psychiatry. 2017 Oct;46:42-47. doi: 10.1016/j.eurpsy. 2017.08.005. Epub 2017 Sep 1.
38. Akvardar, Yildiz & Akdede, Berna & Ozerdem, Ayşegül & Eser, Erhan & Topkaya, Sule & Alptekin, Koksal. (2007). Assessment of quality of life with the WHOQOL-BREF in a group of Turkish psychiatric patients compared with diabetic and healthy subjects. Psychiatry and clinical neurosciences. 60. 693-9. 10.1111/j.1440- 1819.2006.01584.x.
39. Chand, P. K., Mattoo, S. K. and Sharan, P. Quality of life and its correlates in patients with bipolar disorder stabilized on lithium prophylaxis. Psychiatry and Clinical Neurosciences, 2004, Vol. 58:311-318.
40. Sylvia, L. G., Montana, R.E., Deckersbach, T., Thase, M. E., Tohen, M., Reilly-Harrington, N., Nierenberg, A.A. Poor quality of life and functioning in bipolar disorder. International Journal of Bipolar Bisorders, 2017; 5(1), 10. doi:10.1186 /s40345-017-0078-4
41. Dongyun Lee, Boseok Cha, Chul-Soo Park, Bong-Jo Kim, Cheol- Soon Lee, So-Jin Lee, Ji-Yeong Seo, Young Ah Cho, Jong Hun Ha, Jae-Won Choi. Effects of resilience on quality of life in patients with bipolar disorder. Journal of Affective Disorders, 2017, Vol. 207: 434-441, ISSN 0165-0327.
42. Thomas, S. P., Nisha, A., & Varghese, P. J. Disability and quality of life of subjects with bipolar affective disorder in remission. Indian Journal of Psychological Medicine, 38(4), 336-340, 2016.
43. Xiang, Y., Li, L., Zhou, J., Wang, C., Dixon, L. B., Dickerson, F., Zhou, F., Ungvari, G.S., Zhang, X., Shum, D. H., Au, R. W., Tang, W. , Man, D. and Chiu, H.F. Quality of Life of Patients With Euthymic Bipolar Disorder. Perspect Psychiatr Care, 50: 44-50, 2014.
44. Dias VV, Brissos S, Frey BN, Kapczinski F. Insight,quality of life and cognitive functioning in euthymic patients with bipolar disorder. J Affect Disord , 2008, Vol. 110: 75–83
45. Mohandoss AA. Quality of life in schizophrenic patients: Comparative study from South India. J NTR Univ Health Sci 2017; 6:224-31
46. Mahmud, Mir & Yeasmin, Bushra & Mandal, Shipra. (2017). Quality of life of schizophrenic patients in a tertiary care hospitalin Bangladesh. Bangladesh Journal of Psychiatry. 29. 30. 10.3329/bjpsy.v29i1.32749.
47. Zouari L, Thabet JB, Elloumi Z, Elleuch M, Zouari N, Maâlej M. Quality of life in patients with schizophrenia: a study of 100 cases] Encephale. 2012 Apr; 38(2):111-7.
48. V. Adomaitienė V. Taranda A. Jaras K. Dambrauskienė A. Lygnugarytė L. Andriuškevičienė. Comparison of the quality of life of patients with schizophrenia in urban and rural districts. European Journal Volume 25, Supplement 1, 2010, Page 1603
49. Kujur NS, Kumar R, Verma AN. Differences in levels of disability and quality of life between genders in schizophrenia remission. Ind Psychiatry J. 2010; 19(1):50–54. doi:10.4103/0972-6748.77638
50. Narvaez JM, Twamley EW, McKibbin CL, Heaton RK, Patterson TL. Subjective and objective quality of life in schizophrenia. Schizophr Res. 2008; 98(1-3):201–208.
51. Ram Kumar Solanki, Paramjeet Singh, Aarti Midha, Karan Chugh Schizophrenia: Impact on quality of life. Indian Journal of Psychiatry 2008; 50(3):181-186
52. Martin Carrasco M, Gonzalez Pinto A, Galan JL, Ballesteros J, Maurino J, Vieta E. Number of prior episodes and the presence of depressive symptoms are associated with longer length of stay for patients with acute manic episodes. Ann Gen Psychiatry, 2012.
53. http://censusindia.gov.in/Office of the Registrar General & Census Commissioner, India Ministry of Home Affairs, Government of India.
54. Hafner H. Onset and early course as determinants of the further course of schizophrenia. Acta Psychiatr Scand. 2000; 102:44–48.
55. Bender S, Muller B, Oades RD. Conditioned blocking and schizophrenia, a replication and study of the role of symptoms, age, onset-age of psychosis and illness-duration. Schizophr Res. 2001; 49:157–170.