International Journal of Community Medicine and Public Health
Swain SP et al. Int J Community Med Public Health. 2022 Dec;9(12):4528-4534
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20223209

Original Research Article

Quality of life and disability: a study on bipolar disorder patients in remission

Sarada Prasanna Swain[1]*, Sushree Sangita Behura[2], Manoj Parida[3]

[1]Department of Psychiatry, Mental Health Institute (COE), SCBMCH, Cuttack, Odisha, India
[2]Odisha Digital Academy of Mental Health, Mental Health Institute (COE), SCBMCH, Cuttack, Odisha, India
[3]District Head Quarter Hospital, Jagatsinghpur, Odisha, India

Received: 17 September 2022
Revised: 22 October 2022
Accepted: 31 October 2022

***Correspondence:**
Dr. Sarada Prasanna Swain,
E-mail: drspswain@rediffmail.com

ABSTRACT

Background: Throughout the world bipolar disorder is one of the leading causes of mental disability. But there are only few literature studies found on quality of life (QoL) and disability of patients with bipolar disorder. The study aims to assess inter-relationship between QoL and disability of patients with bipolar I disorder in remission and to assess the pathways of help seeking behaviors by the family members of bipolar I disorder patients.
Methods: This study involves non-experimental research design with purposive sampling method. A total of 62 participants from clinical group (outpatient department of mental health institute (Centre of excellence), S. C. B. medical college) and 48 participants from matched healthy control group included. World health organization quality of life assessment (WHO-QoL) Bref Odia version and WHO disability assessment schedule (WHO DAS) 2.0 used.
Results: Statistically significant differences ($p<0.05$) were found in all the four domains of QoL. Statistically significant differences ($p<0.05$) were found in cognition, mobility, life activity and participation in society domains of WHO DAS. There were significant negative correlations found in different domains of QoL and disability. A majority of family members consulted mental health professionals directly as the first modality of treatment.
Conclusions: Both the QoL and mental disability burden are equally affected in chronic suffers of bipolar I disorder, which requires mental health intervention at earliest as possible.

Keywords: Bipolar I disorder, QoL, Disability, Pathway of care

INTRODUCTION

Bipolar disorder is one of the leading causes of mental disability across the world. The WHO estimated that it was the 46th greatest cause of disability and mortality in the world among 291 diseases.[1] It affects at least 1% of the population.[2] From literature review, a number of studies could be found related to clinical course, safety and efficacy of various treatments of bipolar disorder. Whereas research studies on QoL and disability of patients with bipolar disorder are quite sparse.[3]

The QoL refers to the subjective satisfaction experienced by an individual with regard to his physical, mental, and social sphere in the context of culture and value system.[4] The WHO 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."[5] Compared with the general population, health-related QoL scores have been lower for bipolar patients.[6,7] Several QOL studies on bipolar patients revealed that they experience lower functioning and well-being even in the euthymic phase of the disorder.[8-10]

In 1980, the WHO defined disability "as an individual limitation or restriction of an activity as the result of an impairment."[4] It was found that five of the ten leading

causes of disability worldwide are in the category of mental illnesses: Major depression, alcohol dependence, schizophrenia, bipolar affective disorder and OCD.[11] The link between BPAD and the important outcome measure of social disability is under-researched in India.[12]

Since long years bipolar disorder was observed to a disorder where cognitive function is least affected. But after years of research in the last decade, it has been observed that the cognitive domain of the patients is affected after long term sufferings predicting a detrimental effect in the QoL of the patients. In addition to this fact, a number of recent studies have concluded that even after recovery from an acute affective episode, when a patient does not meet the symptomatic criteria of BPAD, the patient continues to suffer from different degree of functional impairment. Besides the psychiatric symptoms, other stress related parameters which contribute towards lower QoL and disability is because of social disadvantage of being a patient in a community. Social advantage is a composite measure comprising of educational level, employment status, income level and occupational prestige.[13]

bipolar disorder is associated with high rate of disability, unemployment and greater social disadvantage have been associated with high level of stress and decreased access to health care.[14] Hence it remains unclear till now with regard to association of QoL, disability and their interrelation with different personal and social disadvantages being a patient of BPAD.

It is our endeavor to study the QoL and mental disability of chronic patients with bipolar disorder (who are long term suffers) with remission phase.

This study has the following objectives: To assess and compare QoL in between patients of bipolar I disorder in remission and matched healthy controls. To assess and compare disability in between patients of bipolar I disorder in remission and matched healthy controls. To study inter-relationship between QoL and disability of patients with bipolar I disorder in remission. To study interrelationship between duration of illness and QoL. To study interrelationship between duration of illness and disability. To assess pathways of help seeking behaviors by the family members of bipolar I disorder patients.

METHODS

Type of research design

The present research study involves a comparative descriptive design and a correlational design.

Sampling method

In this research study purposive sampling method was used to collect the data. A total of 62 participants from clinical group and 48 participants from matched healthy control group were included in the study.

Inclusion criteria

The diagnosed cases of bipolar I disorder-currently in remission according to the international classification of diseases, tenth revision (ICD-10) research criteria, who are in the follow-up service at regular intervals, are selected for the study. Age group of patients and matched healthy controls are 25 years to 55 years. Duration of illness of the patient is 10 years to 30 years. To ensure remission, those patients who scores of <8 and <12 on the Hamilton depression rating scale (HAM-D) and the Young's mania rating scale (YMRS), respectively. Also, episodes of mood disturbance should not be present over the past 2 months. For matched healthy controls, who score below the cut off score of SRQ-20 are included in the study. Those persons who are willing to provide written consent to take part in the research study were included in the study.

Exclusion criteria

Those persons who have comorbid chronic physical or psychiatric illness. The presence of any other psychoactive substance use other than tobacco, amounting to harmful use/dependence were excluded from the study.

Tools used

Self-reporting questionnaire-20 (SRQ-20): This instrument has been developed by WHO 15. It consists of 20 items designed to screen for psychiatric disturbances in primary health care settings. Each item is to be scored as "0" for "No" and "1" for "Yes. The maximum score is 20. The cut off score is 7/8. The inter-rater reliability coefficient is 0.963. The validity of the scale is also high.

The Hamilton rating scale for depression-21 item:[16] Developed by Max Hamilton in 1960, is the most widely used assessment scale for depression. The strengths include its excellent validation/ research base and ease of administration. Total scores range from 0 to 53 (the sum of the first 17 items).

Young's mania rating scale (YMRS):[17] It is a clinician rated scale to assess the severity of manic symptoms. Information for assigning scores is gained from subjectively reported symptoms over the past 48 hours and observation during the interview. YMRS is appropriate for assessing baseline severity and response to treatment. Total score is 60 and a score of ≤12 indicates remission of symptoms.

Socio-demographic data sheet: This is used to collect socio-demographic details such as sex, education, religion, marital status, occupation, family type, domicile,

socio-economic status and family history of psychiatric illness of the study population.

Socioeconomic status scale by Kuppuswamy (Modified for Feb 2019): Modified Kuppuswamy scale commonly used to measure SES in urban and rural areas. This scale devised by Kuppuswamy in 1976. This scale classifies the study populations into five SES, i.e., Upper, upper middle, lower middle, upper lower and lower class.[18]

WHO-QoL Bref Odia version: WHO-QOL Bref is a short version of WHOQOL-100, which measures the QoL of an individual.[19] WHOQOL Bref has been translated into Odia language by Kar et al.[20] This scale consists of 26 items and four domains, i.e., Physical health, psychological, social relationships and environment. Each item is to be rated on a 5-point scale (1 to 5). Higher the scores, higher will be the QoL of an individual. The Cronbach's alpha is 0.89.

WHO DAS 2.0:[21] is constructed on the conceptual framework of the International Classification of Functioning, Disability, and Health. It assesses the level of functioning in the six major life domains: (i) cognition, (ii) mobility, (iii) self-care, (iv) getting along, (v) life activities, and (vi) participation in society. Here 36 items of interviewer version were used.

Procedure

This research study was carried out from 2019 to 2020 at outpatient department of mental health institute (Centre of excellence), S.C.B. medical college, Cuttack, Odisha. Patients diagnosed with bipolar I disorder-currently in remission phase, who met the inclusion criteria, were recruited for the study. The information was collected from both patients and the family members. Participants of Matched healthy control group were selected from the community depending upon the cut off scores of SRQ-20. Socio-demographic data sheet was used to collect information of different socio-demographic variables of both groups. Socio-economic status scale by Kuppuswamy was administered to measure socio-economic status of both study groups. WHOQoL Bref (Odia version) and WHO DAS were administered to measure QoL and disability of both groups.

Statistical analysis

Data was analyzed by using SPSS, Version 22.0 (SPSS Inc. Illinois, USA). The qualitative variables were compared using Chi-square and the quantitative variables were compared by using t test. The relationship between domains of QoL and disability of each group were analyzed by using Pearson correlation.

RESULTS

A total of 110 participants (62 from bipolar I disorder group and 48 from matched healthy control group) were included in the study. Participants from each group were assessed for specific domains on two separate scales, i.e., WHOQOL Bref scale and WHO DAS. The socio-demographic parameters of both the groups were compared. The differences between the groups were found not to be statistically significant, thereby implying that the study groups were inherently comparable (Table 1). The mean duration of illness of bipolar I disorder group is 18 years. Family history of mental illness was found in 40.32% of patients diagnosed with bipolar I disorder (Figure 1).

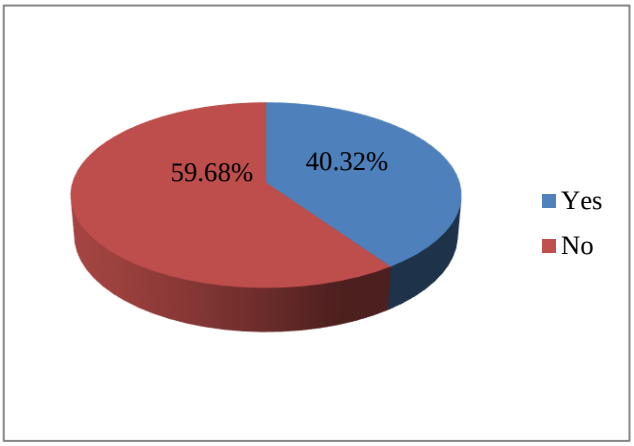

Figure 1: Family history of mental illness in bipolar I disorder.

Table 2 shows comparison of scores of four domains, i.e., Physical health, psychological, social relationships and environment of WHO QoL Bref scale in between bipolar I disorder group and matched healthy control group. Statistically significant differences ($p<0.05$) were found in all the four domains of QoL in between these two groups.

Table 3 shows comparison of scores of six domains (i.e., cognition, mobility, self-care, getting along, life activity and participation in society) of WHO-DAS in between bipolar I disorder group and matched healthy control group. Statistically significant differences ($p<0.05$) were found in cognition, mobility, life activity and participation in society domains.

Table 4 shows the correlation between domains of QoL and disability of bipolar I disorder patients. There were significant negative correlations found in case of physical health domain of QoL with cognition, mobility, self-care, getting along and life activity domains of disability. Significant negative correlations were found between social relationships domain of QoL with cognition, mobility, getting along, life activity and participation in society domains of disability. Similarly, significant negative correlations were found between environment domain of QoL with cognition, life activity and participation in society. Significant negative correlations were also found between psychological domain of QoL with cognition and life activity domains of disability.

Table 1: Comparison of socio-demographic profiles of patients with bipolar I disorder and matched healthy controls.

Characteristics		Bipolar I, (n=62)	Matched controls, (n=48)	X^2	P value
Age (years)	20-30	11	18	0.40	0.94*
	31-40	16	9		
	41-50	17	12		
	51-60	18	9		
Gender	Male	46	14	0.40	0.34*
	Female	16	34		
Religion	Hindu	37	27	2.94	0.08*
	Muslim	25	21		
Marital status	Married	40	22	1.78	0.18*
	Unmarried	22	26		
Education	HSC or below	28	18	3.56	0.16*
	CHSE	20	12		
	Graduation and above	14	18		
Socio-economic status	Upper lower	20	12	3.81	0.28*
	Lower middle	10	11		
	Upper middle	18	15		
	Upper	14	10		
Family type	Nuclear	30	28	0.32	0.56*
	Joint	32	20		
Domicile	Urban	20	12	4.38	0.11*
	Semi-urban	19	12		
	Rural	23	24		

*p>0.05 (Statistical non-significance at 0.05 level).

Table 2: Comparison of WHOQOL Bref scores between patients of bipolar I disorder and matched healthy controls.

Domains	Bipolar I, (n=62), mean±SD	Matched controls, (n=48), mean±SD	T value	P value
Physical health	68.62±14.53	91.45±10.17	-9.262	<0.001*
Psychological	63.53±12.96	84.22±13.24	-8.226	<0.001*
Social relationships	61.04±16.88	83.43± 16.10	-7.038	<0.001*
Environment	59.29±14.87	84.45±14.10	-8.999	<0.001*

*p<0.05 (Statistical significance at 0.05 level).

Table 3: Comparison of WHODAS scores between patients of bipolar I disorder as well as the matched healthy controls.

Domains	Bipolar I, (n=62) mean±SD	Matched controls, (n=48), mean±SD	T value	P value
Cognition	8.93±3.22	7.45±2.90	2.48	0.01*
Mobility	6.77±2.36	5.83±1.73	2.31	0.02*
Self-care	4.22±1.12	4.54±1.47	-1.27	0.20
Getting along	6.35±2.09	6.39±3.00	-0.08	0.93
Life activity	14.74±5.27	12.37±3.82	2.61	0.01*
Participation in society	15.59±4.82	10.45±4.49	5.70	<0.001*

*p<0.05 (Statistical significance at 0.05 level).

Table 4: Correlations between domains of QoL and disability assessment schedule.

Domains of WHOQol bref	Domains of WHODAS					
	Cognition	Mobility	Self-care	Getting along	Life activity	Participation in society
Physical health	-0.29*	-0.25*	-0.33**	-0.32**	-0.35**	0.00
Psychological	-0.29*	-0.12	0.01	-0.05	-0.30*	-0.19
Social relationships	-0.39*	-0.25*	-0.11	-0.33**	-0.47**	-0.38**
Environment	-0.38*	-0.04	-0.01	-0.07	-0.45**	-0.42**

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

There was a significant negative correlation found between duration of illness and psychological domain of QoL as shown in Table 5. However, there was no statistically significant correlation found in between duration of illness and QoL.

Table 5: Correlations between duration of illness and domains of QoL.

Domains of WHOQOL Bref	Duration of illness	
	Pearson correlation	P value
Physical health	-0.13	0.30
Psychological	-0.29	0.02*
Social relationships	-0.18	0.15
Environment	-0.09	0.48

*Correlation is significant at 0.05 level.

There was no significant correlation was found between duration of illness and domains of disability assessment schedule as shown in Table 6.

Table 6: Correlations between duration of illness and domains of disability.

Domains of WHODAS	Duration of Illness	
	Pearson correlation	P value
Cognition	0.01	0.91*
Mobility	0.01	0.88*
Self-care	-0.11	0.39*
Getting along	-0.01	0.89*
Life activity	0.00	0.95*
Participation in society	-0.02	0.87*

*p>0.05 (Statistical non-significance at 0.05 Level).

In the pathway of help seeking most of the family members (61.29%) came directly to consult mental health professionals either in district hospital or tertiary care hospital as the first modality of treatment. However, 17.74% of family members resorted to faith healer/gunia and 6.45% were involved in religious behaviors. The remaining 14.51% of people preferred consultation of general physician as the first modality of treatment (Figure 2).

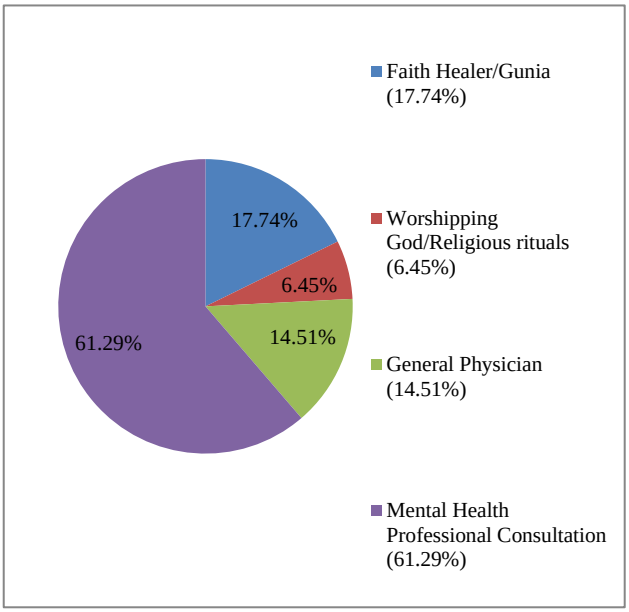

Figure 2: Different pathways of help-seeking behaviors by family members of bipolar I disorder patients.

DISCUSSION

This study was carried out to assess the impact of illness on different aspects of QoL and disability of persons diagnosed with bipolar I disorder in remission and to compare them with matched healthy controls.

Analysis of domains of QoL revealed significant differences in all four domains, (i.e., physical health, psychological, social relationships and environment) in bipolar I disorder in comparison with control population which clearly indicates that the morbidity burden itself have a substantial effect on physical and psychological health of sufferers ultimately causing impairment in QoL. This finding is consistent with other previous studies.[22,23]

Similarly, mental disability is equally affected to a substantial extent like QoL, after a chronic course of bipolar disorder when compared with normal population. Mental health components like cognition, mobility, life activity and participation in society are affected by which work and activities get affected to a larger extent. Studies conducted by Thomas et al, Chacko et al and Tharoor et al have similar results as found in our study.[22-24]

Significant negative correlations found between QoL and disability burden in case of patients with bipolar I disorder in remission, which is the most important finding of our study. This indicates increase in disability burden leads to poor QoL of an individual. This finding is corroborated with previous studies.[22,25] There is an emergency to focus on disability and QoL areas of persons with bipolar I disorder in remission phase. As result, proper psychosocial interventions could be taken by mental health professionals after chronic course of illness to reduce disability and improve QoL of those who are suffering.

The study also revealed a significant negative correlation between duration of illness and psychological domain of QoL. This can be further explained, as the duration of illness increases, it simultaneously affects psychological wellbeing of an individual. This finding is consistent with previous study.[22] However, study revealed no statistically significant correlation found between duration of illness and disability burden, as sample was included remitted bipolar, I disorder patients who were under treatment. This finding is contradicted by findings of Thomas et al.[22]

The study findings revealed that majority of family members consulted mental health professionals directly as the first modality of treatment followed by faith healer/gunia and general physician. This indicates help seeking behavior of people for mental health in the community. Also, it could be due to the presence of family history of psychiatric illness in nearly half of the patients. Presence of previous family history of mental illness may lead family members to early psychiatric consultation for patients' illness. This finding is consistent with a study conducted by Sahu et al.[26]

After a chronic course of illness, the QoL of the persons suffering from bipolar I disorder has significant impairment in all four domains, i.e., physical health, psychological, social relationships and environment domains leading to substantial impact on the activities of daily living in comparison to general population. Similarly, the mental disability burden after the chronic course of bipolar I disorder is substantially affected that has both direct and indirect impact on QoL. Both QoL and mental disability burden are equally affected in chronic suffers of bipolar I disorder, which requires mental health intervention. As the study sample was taken after remission phase of the disorder who were under treatment, hence, the duration of illness has no impact on the physical health, social relationships and environment domains of QoL and mental disability. The pathway of help seeking behaviors of caregivers of bipolar I disorder are mostly in tertiary care hospital indicates mental health awareness in community, although minor percentages of caregivers first consulted at local hospitals.

The results of this study could be more generalized if the data collection involves multiple tertiary care hospitals as well as the community samples.

CONCLUSION

In last 20 years, research on mental health has clearly implicated about long term disability in different cognitive disorders in psychiatric illnesses, i.e., schizophrenia, schizoaffective disorder, dementia and obsessive-compulsive disorder. But in the recent years, different studies suggest impairment in the different domains of QoL creating mental health disability in the chronic patients with bipolar disorder. Although QoL, mental disability and cognitive domains are interrelated with each other, but long-term disability is a major concern for the patients of bipolar disorder which will be the focus of our research. For which Preventive measures would be taken by the mental health professionals for the wellbeing of the individual suffering from chronic mental illness. In Care pathway, the early consultation for the mental illness is a positive indication of mental health awareness in the community.

ACKNOWLEDGEMENTS

Author would like to thanks to the co-operation and patience of all the participants who gave their kind consent to participate in the study.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Murray CJ, Vos T, Lozano R, Naghav M, Flaxman AD, Michaud C, et al. Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010: A systematic analysis for the Global Burden of Disease Study 2010. Lancet. 2012;380:2197-223.
2. Weissman MM, Bland RC, Canino GJ, Faravelli C, Greenwald S, Hwu HG, et al. Cross-national epidemiology of major depression and bipolar disorder. JAMA. 1996;276:293-9.
3. Dean BB, Gerner D, Gerner RH. A systematic review evaluating health-related quality of life, work impairment, and healthcare costs and utilization in bipolar disorder. Curr Med Res Opin. 2004;20:139-54.
4. Swain SP, Behura SS. A comparative study of quality of life and disability among schizophrenia and obsessive-compulsive disorder patients in remission. Ind Psychiatry J. 2016;25:210-5.
5. The World Health Organization Quality of Life assessment (WHOQOL): Position paper from the World Health Organization. Soc Sci Med. 1995;41:1403-9.
6. Arnold LM, Witzeman KA, Swank ML, McElroy SL, Keck PE Jr. Health-related quality of life using the SF-36 in patients with bipolar disorder compared

with patients with chronic back pain and the general population. J Affect Disord. 2000;57:235-9.
7. Cotrena C, Branco LD, Kochhann R, Shansis FM, Fonseca RP. Quality of life, functioning and cognition in bipolar disorder and major depression: A latent profile analysis. Psychiatry Res. 2016;241:289-96.
8. Leidy NK, Palmer C, Murray M, Robb J, Revicki DA. Health-related quality of life assessment in euthymic and depressed patients with bipolar disorder. Psychometric performance of four self-report measures. J Affect Disord. 1998;48:207-14.
9. Namjoshi MA, Buesching DP. A review of the health-related quality of life literature in bipolar disorder. Qual Life Res. 2001;10:105-15.
10. Harvey PD, Wingo AP, Burdick KE, Baldessarini RJ. Cognition and disability in bipolar disorder: Lessons from schizophrenia research. Bipolar Disord. 2010;12:364-75.
11. Murray CJ, Lopez AD. The Global Burden of Diseases: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries and Risk Factors in 1990 and Projected to 2020. Boston: Harvard School of Public Health. World Health Organization and World Bank. 1996;325.
12. Goswami U, Sharma A, Khastigir U, Ferrier IN, Young AH, Gallagher P, et al. Neuropsychological dysfunction, soft neurological signs and social disability in euthymic patients with bipolar disorder. Br J Psychiatr. 2006;188:366-73.
13. Sylvia LG, Montana RE, Deckersbach T, Thase ME, Tohen M. Poor quality of life and functioning in bipolar disorder. Int J Bipolar Disord. 2017;5:10.
14. Brennan S, Williams L, Berk M, Pasco J. Socioeconomic status and quality of life in population-based Australian men:data from the Geelong Osteoporosis study. Aust NZ J Public Health. 2013;37(3):226-32.
15. Beusenberg M, Orley J, World Health Organization. Division of Mental Health. A User's guide to the self-reporting questionnaire. World Health Organization. 1994. Available at: https://apps.who.int/iris/handle/10665/61113. Accessed on 25 August, 2022.
16. Hamilton M. A rating scale for depression. J Neurol Neurosurg Psychiatr. 1960;23:56-62.
17. Young RC, Biggs JT, Ziegler VE, Meyer DA. A rating scale for mania: Reliability, validity and sensitivity. Br J Psychiatr. 1978;133:429-35.
18. Wani RT. Socioeconomic status scales-modified Kuppuswamy and Udai Pareekh's scale updated for 2019. J Family Med Primary Care. 2019;8:1846-9.
19. WHOQOL group. Development of the World Health Organization WHOQOL-BREF Quality of life assessment. Psychological Med. 1998;28:551-8.
20. Kar N, Swain SP, Patra S, Kar B. The WHOQOL-BREF: Translation and Validation of the Odia Version in a Sample of Patients with Mental Illness. Ind J Social Psychiatr. 2017;33(3):269-73.
21. WHO Disability Assessment Schedule 2.0 (WHODAS 2.0). WHO. Available at: http://www.who.int/classifications/icf/whodasii/en/. Accessed on 25 August, 2022.
22. Thomas SP, Nisha A, Varghese PJ. Disability and quality of life of subjects with bipolar affective disorder in remission. Indian J Psychol Med. 2016;38:336-40.
23. Tharoor H, Chauhan A, Sharma PS. A cross-sectional comparison of disability and quality of life in euthymic patients with bipolar affective or recurrent depressive disorder with and without comorbid chronic medical illness. Ind J Psychiatr. 2008;50:24-9.
24. Chacko D, Narayan KT, Prabhavathy KS. Disability in patients with bipolar and recurrent depressive disorder in remission: A comparative study. Ind J Psychol Med. 2011;33:49-53.
25. Tharoor H, Narasimhana SPS, Chauhan A. Disability and quality of life in euthymic patients with bipolar affective or recurrent depressive disorder. Ger J Psychiatr. 2007;10:111-6.
26. Sahu A, Patil V, Purkayastha S, Pattanayak RD, Sagar R. Pathways to care for patients with Bipolar I disorder: An exploratory study from a tertiary care centre of North India. Indian J Psychol Med. 2019;41:68-74.

Cite this article as: Swain SP, Behura SS, Parida M. Quality of life and disability: a study on bipolar disorder patients in remission. Int J Community Med Public Health 2022;9:4528-4534.