J. Mountain Res. P-ISSN: 0974-3030, E-ISSN: 2582-5011 DOI: https://doi.org/10.51220/jmr.v18i2.9
Vol. 18(2), (2023), 75-78

The Effect of Sociodemographic Factors on the Quality of Life of Patients with Acute Phase Bipolar Depression in the Uttarakhand Region of Northern India

Gunjan Malik* • Shobit Garg • Preeti Mishra

Department of Psychiatry, Shri Guru Ram Rai Institute of Medical and Health Sciences, Dehradun, Uttarakhand 248001

*Corresponding Author Email id: gunjanmalikddn@gmail.com

Received:15.08.2023; Revised: 10.12.2023; Accepted: 12.12.2023

Abstract: This cross-sectional study was carried out to assess the effect of sociodemographic factors on domains of quality of life of the individuals living in the Uttarakhand region of northern India and diagnosed with moderate to severe acute phase bipolar depression (HAM-D scores>18). A semi-structured sociodemographic proforma, clinical profile sheet, and WHO Quality of Life Scale brief version (WHOQOL BREF) were applied to evaluate the overall quality of life of subjects in different domains including physical health, psychological health, social relationships, and environment. The mean HAM-D score for the study sample was 27.93 (SD, 8.035) and the mean overall quality of life score was 60.55 (SD,10.964). There was a significant difference between physical (t=2.209, p=0.033) and psychological domains (t=2.044, p=0.047) of the WHOQOL scale among genders. Marital status has a significant effect on the environmental domain (t=2.942, p=0.005), whereas respondents residing in hilly areas had a lower quality of life compared to non-hilly areas, although the difference is not statistically significant.

Keywords: Quality of life • Sociodemographic factors • Bipolar depression • Acute Phase

Clinical Trials Registration- This study is registered in the CTRI (Clinical Trials Registry India, Number: CTRI-2021-07-035182).

Introduction

Bipolar Disorder (BD), previously known as manic depression, is a mental disorder that is associated with episodes of depressive lows to manic highs (DSM-V 2013). The cyclical nature of bipolar disorder, with its many remissions, can affect an individual's physical, emotional, social, and functional well-being and significantly impact their overall quality of life. Major depressive episodes prevail throughout the progression of the ailment. It affects the social interaction and occupational functioning of patients suffering from depressive episodes (Parker et al., 2013; Ferrari et al. 2013). The global prevalence of bipolar depression is very high which affect the quality of life of the individual in various aspects (Murray and Michalak, 2012; Morton et al., 2018).

Quality of life (QoL) pertains to an individual's mental and physical well-being along with satisfaction in social life. It gives an individual's holistic perception toward their own life, which could be seen from the context of environmental, cultural, behavioral, and belief systems where they are living and have connection with standards of life, such as support system, happiness, hope, and individual judgment about their life status (Skevington et al., 2004). However, QoL is subjective and can vary from person to person based on their values, goals, and personal experience.

While many researchers have directed their attention toward determining the impact of Major Depressive Disorder (MDD) on the QoL of patients (Revicki et al. 1998; Kennedy et al. 2001) only a limited number have illuminated the aspect of quality of life in Bipolar Depression (Yatham et al. 2004; Perlis et al. 2004) rare in the Indian context. Patients living in mountainous regions are at a higher risk of experiencing a diminished quality of life due to the limited accessibility of treatment. Efforts were made to examine the sociodemographic variables and their influence on the quality of life of patients with bipolar depression in India. Thus aim of our study is to evaluate the quality among patients with acute phase bipolar depression from the Uttarakhand region of Northern India and relate it to habitat, gender, and marital status.

Methodology

The study was conducted using a cross-sectional design at Shri Guru Ram Rai Institute of Medical and Health Sciences, Dehradun. The type of sampling technique employed was purposive. The study design was clinical and instrumental-rated.

Participants: Participants were recruited at the OPD of the Department of Psychiatry**,** Shri Guru Ram Rai Institute of Medical and Health Sciences Dehradun, India from June (2022) to December (2022). Participants aged 18-59 years, meeting the diagnostic criteria for acute phase bipolar depression (moderate to severe) using the diagnostic criteria for research (DCR) of the International Classification of Diseases- tenth edition (ICD-10) with at least moderate severity (Hamilton depression rating scale (HAM-D) Score >18) were recruited. Psychiatric evaluations were conducted by a psychiatrist who was also the evaluator of the scales used for this study. Exclusion criteria included subjects with a history of any other psychiatric disorder, history of organicity, and substance dependence except for nicotine and caffeine. On MSE, cases with significant cognitive deficits were excluded. A written and signed informed consent was taken from the patient and caregivers before enrolment and those who did not give informed consent were excluded from the study. The sociodemographic and clinical questionnaire was designed, with the objective of characterizing both sociodemographic and clinical profiles. This study is registered in the CTRI (Clinical Trials Registry India, Number: CTRI-2021-07-035182). Out of the total 60 patients screened, 5 patients were excluded as per exclusion criteria. Subsequently, 10 patients declined to participate. A total 45 patients were assessed for the study. Baseline clinical measures data of the recruited subjects registered in the trial has been presented in this study.

Clinical measures: In this study, the severity of depression was measured using HAM-D. The HAM D has 21 items but the patient is scored on the first 17 items; each item is scored on a 5-point scale. The WHOQOL-BREF is a short version of the WHOQOL-100. This self-report questionnaire contains 24 items, which are categorized into four domains: physical health (7 items), psychological (6 items), social relations (3 items), and environmental (8 items). Each individual item of WHOQOL is scored from 1-5 on the response scale. The scores are then transformed to a 0-100 scale in a positive direction with higher scores indicating better quality of life (Skevington et al., 2004).

Statistical analysis: The data was analysed using Statistical Package for Social Sciences software (SPSS) Version 28. Quantitative variables were analyzed by means and standard deviations, while frequencies and percentages were used to assess and measure qualitative variables. The assumption of normality was verified by normal probability plots and the Skewness test. Group differences for sample characteristics were examined with an independent t-test.

Results

Sample characteristics: There were 45 respondents in the study. The mean age of the study sample was 38.71 (SD ±12.23) years, the mean age of onset was 31.44 (SD ±11.24), the mean duration of the current episode was 4.09 (SD ±1.63) months, mean number of manic episodes was 1.93 (SD ± 2.094), and the mean number of depressive episodes was 4.36 (SD ± 2.82). The number of male participants (51.1%) was slightly more than female participants (48.9%). The majority of the participants were married (57.8%), and residing in non-hilly areas (64.4%). However, the mean HAM-D score for the study sample was 27.93 (SD ±8.03), and the mean overall QoL score was 60.55 (SD ±10.96). (Table 1)

Table 1. Socio-demographic and clinical characteristics of the respondents (n=45)

Variables		Whole Sample (n=45) MEAN ± SD/ N (%)
Age (in years)		38.71 ± 12.23
Age at onset		31.44 ± 11.24
Depressive episodes in past		4.36 ± 2.82
Manic episodes in past		1.93 ± 2.09
Current episode duration (in months)		4.09 ± 1.63
HAM D*		27.93 ± 8.03
WHO-QOL (overall)**		60.55 ± 10.96
Gender	Male	23(51.1)
	Female	22(48.9)
Marital Status	Unmarried	19(42.2)
	Married	26(57.8)
Habitat	Non-hilly	29(64.4)
	Hills	16(35.6)

*__HAM-D__ (Hamilton Depression Rating Scale), **__WHO-QOL__ (World Health Organization Quality of Life Scale)

Clinical Measures

The skewness/SE values for all four domains are less than 1.96 (Table 2). Hence, the data distribution is fairly normal. The analysis of gender influence on different domains of WHOQOL showed statistical significance between physical (t=2.209, p=0.033) and social domains (t=2.044, p=0.047), with superior mean values in all domains for males except in the psychological domain in which the mean value was high in females (10.50±2.01). (Table 3)

No statistical difference was found between patients living in hilly and non-hilly areas. However, variances were not homogeneous for psychological (p=1.935, t=0.060) and environmental (p=1.715, t=0.093) quality of life domains. We observed that the subjects living in hilly areas score less on psychological and environmental domains compared to subjects living in non-hilly areas. (Table 4)

The analysis of the association of marital status with different domains of quality of life did not yield statistically significant differences ($p<0.05$) on any quality of life domains except environmental (t=2.942, p=0.005). The findings demonstrate that unmarried patients experience better quality of life outcomes across all domains compared to their married counterparts. (Table 5) There was a negative correlation between the duration of the current depressive episode with all the domains of quality of life, whereas age at onset exhibited a positive correlation with almost all domains.

Table 2. Skewness and Kurtosis values for Quality of life domains (n=45)

Variables	Whole Sample (n=45) MEAN ± SD	Median	Skewness	Kurtosis
Physical Domain	9.41±1.808	9.5	0.216	0.148
Psychological Domain	9.66±1.928	9	0.307	0.978
Social Domain	8.43±2.182	8	0.332	0.436
Environmental Domain	10.43±2.317	11	0.097	0.967

Table 3. Comparison between Gender and WHO-QOL domains (n=45)

Variables	Male MEAN ± SD	Female MEAN ± SD	t	df	p
Physical Domain	10.48 ±2.274	10.32 ±2.378	2.209	43	**0.033***
Psychological Domain	9.30 ±1.820	10.5± 2.012	1.287	43	0.205
Social Domain	9.04± 2.225	7.77± 1.926	2.044	43	**0.047***
Environmental Domain	10.48 ±2.274	10.32± 2.378	0.231	43	0.819

* p< 0.05 levels (2 tailed), ** p <0.01 levels (2 tailed)

Table 4. Comparison between Habitat and WHO-QOL domains (n=45)

Variables	Non-Hilly areas MEAN ± SD	Hilly areas MEAN ± SD	t	df	p
Physical Domain	9.45±1.975	9.38±1.455	0.13	43	0.897
Psychological Domain	10.07±1.904	8.94±1.806	1.935	42	0.06
Social Domain	8.34±2.272	8.56±1.999	0.321	43	0.75
Environmental Domain	10.83±2.285	9.63±2.187	1.715	43	0.093

* p< 0.05 levels (2 tailed), ** p <0.01 levels (2 tailed)

Table 5. Comparison between Marital status and WHO-QOL domains (n=45)

Variables	Unmarried MEAN ± SD	Married MEAN ± SD	t	df	p
Physical Domain	9.56±1.822	9.31±1.828	0.443	42	0.66
Psychological Domain	10.18±1.944	9.35±1.917	1.381	41	0.175
Social Domain	8.67±2.326	8.15±2.034	0.775	42	0.442
Environmental Domain	11.50±2.149	9.58±2.120	2.942	42	**0.005****

* p< 0.05 levels (2 tailed), ** p <0.01 levels (2 tailed)

Discussion

The present study is a cross-sectional study that evaluates the quality of life in patients with acute-phase bipolar depression. The main aim of the study was to determine the associations between the aforementioned sociodemographic factors and different domains of quality of life assessed with the WHOQOL-BREF. Our study was conducted in a sample of 45 people aged 18-59 years living in the Uttarakhand region of north India. The index study analyzed the difference between the quality of life of acute phase bipolar depression patients living in hilly and non-hilly areas, and we found that patients from hilly areas score low on psychological and environmental domains of quality of life. Our findings revealed that the hill and

mountainous regions often have limited access to healthcare, support services, and basic resources. This contributes to higher levels of stress and depression affecting the overall environmental quality and influencing patients' psychological well-being. There is a dearth of literature examining the gender-wise effect of acute phase bipolar depression on quality of life. Though studies have reported men with bipolar depression to have higher mean values compared to females in quality of life domains (Robb et al. 1998; Gobbens and Remmen, 2019). However, the result of our study is in contradiction with an Indian study which report higher QOL in females in comparison to males (Moirangthem and Ojha, 2022).

The findings of the index study of married individuals scoring lower on all domains of quality of life goes in accordance with previous research on mental health by age group which showed that the mental health of single people was better than that of married people in individuals younger than 30 years of age, however, this relationship appeared to be differed by gender and age (Han et al. 2014). The result of the present study challenges the societal assumption that marriage universally leads to a better quality of life, Instead, it illustrates the necessity of recognizing the advantages of being unmarried while evaluating the quality of life for patients experiencing the acute phase of bipolar depression and developing a suitable treatment plan.

Conclusion

To summarize, our research highlights the notable influence of both gender and marital status on the quality of life among patients with bipolar depression. We observed that gender was found to be a significant predictor of quality of life. However, marital status holds a pivotal role in determining the overall functioning and well-being of individuals with bipolar depression. Moreover, the habitat in which patients reside influences their quality of life, with psychiatric patients living in non-hilly environments leading to a better quality of life with more resources and health support compared to patients from hilly areas.

Moving forward further research is warranted to delve deeper into the specific mechanism through which gender, marital status, and habitat affect the quality of life of patients with bipolar depression.

Limitations of this study, at the onset, would be the small sample size and cross-sectional design, which may limit the generalizability of the findings. Second, the complex nature of bipolar depression demands more clinical and sociodemographic variables to be explored to assess their effect on quality of life. Future research with larger, diverse samples, assessing some more variables, and longitudinal designs would provide a more comprehensive understanding of these associations and could help to tailor treatment approaches and treatment programs to address unique challenges faced by individuals on their gender, marital status, and habitat.

References

American Psychiatry Association, (2013) *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.) Arlington: American Psychiatric Publishing; pp.123-154.

Ferrari, A. J., Stockings, E., Khoo, J. P., Erskine, H. E., Degenhardt, L., Vos, T., & Whiteford, H. A. (2016). The prevalence and burden of bipolar disorder: findings from the Global Burden of Disease Study 2013. *Bipolar disorders*, *18*(5), 440–450.

Gobbens, R. J., & Remmen, R. (2019). The effects of sociodemographic factors on quality of life among people aged 50 years or older are not unequivocal: comparing SF-12, WHOQOL-BREF, and WHOQOL-OLD. *Clinical interventions in aging*, *14*, 231–239.

HAMILTON M. (1960). A rating scale for depression. *Journal of neurology, neurosurgery, and psychiatry*, *23*(1), 56–62.

Han, K. T., Park, E. C., Kim, J. H., Kim, S. J., & Park, S. (2014). Is marital status associated with quality of life?. *Health and quality of life outcomes*, *12*, 109.

Kennedy, S. H., Eisfeld, B. S., & Cooke, R. G. (2001). Quality of life: an important dimension in assessing the treatment of depression?. *Journal of psychiatry & neuroscience : JPN*, *26 Suppl*(Suppl), S23–S28.

Moirangthem, Sarju Ojha, Gita Jyoti (2022). Gender Differences in Quality of Life and Subjective Happiness in Indian Elderly: A Cross-Sectional Survey. The Indian Journal of Occupational Therapy 54(2):p 51-56. | DOI: 10.4103/ijoth.ijoth_32_21

Morton, E., Murray, G., Michalak, E. E., Lam, R. W., Beaulieu, S., Sharma, V., Cervantes, P., Parikh, S. V., & Yatham, L. N. (2018). Quality of life in bipolar disorder: towards a dynamic understanding. *Psychologicalmedicine*, *4 8*(7), 1111–1118.

Murray, G., & Michalak, E. E. (2012). The quality of life construct in bipolar disorder research and practice: past, present, and possible futures. *Bipolar disorders*, *14*(8), 793–796. https://doi.org/10.1111/bdi.12016

Parker, G., McCraw, S., Hadzi-Pavlovic, D., & Fletcher, K. (2013). Costs of the principal mood disorders: a study of comparative direct and indirect costs incurred by those with bipolar I, bipolar II and unipolar disorders. *Journal of affective disorders*, *149*(1-3), 46–55.

Perlis, R. H., Miyahara, S., Marangell, L. B., Wisniewski, S. R., Ostacher, M., DelBello, M. P., Bowden, C. L., Sachs, G. S., Nierenberg, A. A., & STEP-BD Investigators (2004). 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). *Biological psychiatry*, *55*(9), 875–881.

Revicki, D. A., Simon, G. E., Chan, K., Katon, W., & Heiligenstein, J. (1998). Depression, health-related quality of life, and medical cost outcomes of receiving recommended levels of antidepressant treatment. *The Journal of family practice*, *47*(6), 446–452.

Robb, J. C., Young, L. T., Cooke, R. G., & Joffe, R. T. (1998). Gender differences in patients with bipolar disorder influence outcome in the medical outcomes survey (SF-20) subscale scores. *Journal of affective disorders*, *49*(3), 189–193.

Skevington, S. M., Lotfy, M., O'Connell, K. A., & WHOQOL Group (2004). The World Health Organization's WHOQOL-BREF quality of life assessment: psychometric properties and results of the international field trial. A report from the WHOQOL group. *Quality of life research : an international journal of quality of life aspects of treatment, care and rehabilitation*, *13*(2), 299–310.

World Health Organization (1992). The ICD-10 classification of mental and behavioural disorders: diagnostic criteria for research. Geneva.

Yatham, L. N., Lecrubier, Y., Fieve, R. R., Davis, K. H., Harris, S. D., & Krishnan, A. A. (2004). Quality of life in patients with bipolar I depression: data from 920 patients. *Bipolar disorders*, *6*(5), 379–385.

******