

More than Half of Bipolar Patients attending Emanuel Mental Specialized Hospital has Poor Quality of Life, Emanuel Mental Specialized Hospital, Ethiopia: Facility-Based Cross-Sectional Study Design

Telake Azale¹, Tesfalem Araya^{2*} and Elsa Melaku³

¹College of Medicine and Health Sciences, University of Gondar, Gondar, Ethiopia

²School of Nursing, College of Health Sciences, Mekelle University, Mekelle, Ethiopia

³Emanuel Mental Specialized Hospital, Addis Ababa, Ethiopia

Abstract

Background: Bipolar disorders are mental illnesses where changes in brain functions transform normal emotions into dramatic mood swings between mania and depression. Severity in mood swings may lead to impairment in normal social and occupational functioning. Quality of life is lower in patients with bipolar disorder than in the general population. Poor quality of life is associated with the length of illness and lack of social support. This study was aimed at assessing the prevalence of quality of life and associated factors among people with bipolar disorder in Emanuel Mental Specialized Hospital, Addis Ababa, Ethiopia.

Methods: We employed a facility-based cross-sectional study among 423 bipolar patients attending Emanuel Mental Hospital from April-May 2016. We used a systematic random sampling technique to get respondents. We used a standardized, structured and pretested questionnaire, WHO quality of life-BREF, Simpson-Angus Scale, and Morisky medication adherence screening tool to collect data. The collected data were coded and entered into Epi-Info 3.5.3 and analyzed using SPSS version 20. A bivariate and multivariate analysis was carried out in order to see an association between independent and outcome variables. The strength of association was interpreted using odds ratio and 95% Confidence Interval at P-value <0.05 level of significance.

Results: Four hundred eleven respondents participated in the study making a response rate of 97.1%. Out of those, 240 (58.4%) had poor quality of life. Rural residence (AOR=1.94, 95% CI: 1.12-3.34), Primary education (AOR=3.08, 95% CI: 1.45-6.53), <200 birr monthly income (AOR=3.57, 95% CI: 1.48-8.57), >10 years duration of illness (AOR=3.42, 95% CI: 1.19-9.77), 2-4 episodes of illness (AOR=3.45, 95% CI: 1.61-7.38), and antipsychotic & antidepressant medication (AOR = 2.15, 95% CI: 1.04-4.45) were significantly associated with poor quality of life.

Conclusion: We found that the prevalence of a poor quality of life among bipolar patients was high. Rural residence, primary education, <200 birr monthly income, >10 years duration of illness, 2-4 episodes of illness, those who were on antipsychotic & antidepressant medication were significantly associated with poor quality of life. There should be continuous psychoeducation and through behavioral change communication and advocacy at all levels focusing on bipolar disorder patients.

Keywords: Bipolar disorder; Quality of life; Emanuel Mental Hospital; Ethiopia

Introduction

According to the WHO, quality of life is defined as individuals' perceptions of their position in life in the context of their culture, values, goals, expectations, standards, and concerns. Person's physical health, psychological state, level of independence, and social relationships, to most important features of their environment were most affected quality of life (QOL) [1].

Bipolar disorders are a mental illness where changes in brain functions transform normal emotions into dramatic mood swings between mania and depression [2-4].

These results in a poor global functioning reduced quality of life and high relapse rates without treatment, patients with bipolar face substantial distress and impairment and have a significant risk of morbidity and mortality [5]. It has been associated with difficulties in work-related performance, employment, family and social interactions. This disorder was associated with an increase in lifetime health service utilization with financial difficulties, and problem in educational achievement [6].

Bipolar disorder (BD) is usually accompanied by increased morbidity and mortality that appear early in the course of the illness.

Living with a bipolar disorder has a patient can put considerable burdens and restrictions on the rest of the patients as well as among primary caregivers and their family members [7,8].

The physical quality of life (QOL) is frequent and low in bipolar disorder patients than in the general population. Low QOL is also associated with increased length of illness, lack of social support [9,10], reduction in health-related QOL and functional impairment even in the absence of active symptoms [11,13].

Between 25% and 80% of patients fail to take their drugs correctly at some point in their treatment. Poor adherence to drugs was major

***Corresponding author:** Tesfalem Araya, School of Nursing, College of Health Sciences, Mekelle University, Mekelle, Ethiopia, Tel: +251344410964; E-mail: tesfayearaya8@gmail.com

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problem in patients with bipolar disorders, associated to increased rates of readmission to health institution and high treatment costs [14]. The lifetime prevalence of bipolar disorder (BD) was reported between 0-2.4% and for full bipolar spectrum between 2.6-7.8% [15,16].

The disorder has a chronic course, recurrent episodes, and high rate of mortality as well as loss of function and cognitive impairment that produce significant burden to patients' family, society and health systems [17]. Quality of life is markedly impaired even when they are considered to be clinically euthymic persons [18].

Caregivers have a high level of difficulties in interfamilial relationships and social restrictions and financial difficulties. Though much has been written on this subject among developed countries, little research has been done in developing countries particularly in Africa. Therefore, this study was assessed the prevalence and identifies factors associated with quality of life among adult bipolar patients, generate necessary data to support and guide for bipolar disorder management policies and also provide a base line for further similar studies to allow a detailed description of unique factors that facilitate or inhibit the quality of life in bipolar patients.

Materials and Methods

Study design and area

The institution-based Cross-sectional study design was employed among bipolar disorder patients attended in Emanuel Mental Hospital from April-May 2016. Emanuel Mental Specialized Hospital is located in western part of Addis Ababa in Addis Ketema sub-city kebele 08. The Hospital was established on an area of 15,660 m² with two G+1 building & 15 blocks. There are around 512 staffs. The hospital has 300 beds that serve for all type of mental disorder patients who fulfill admission criteria. The hospital serves a total of 11,115 bipolar patients per year. On average 926 patients get services per month. The hospital is working on increasing the efficiency & effectiveness of the services to make itself the center of mental health care excellence by giving core mental clinical services, conducting research and training and other administrative services.

Sample size determination and sampling procedure

The respondents were all bipolar disordered patients' attended in Emanuel Mental Specialized Hospital during the study period. The sample size was determined using the formula for a single population proportion based on the assumption for calculating sample size was a 95% confidence level, 5% degree of precision and 50% the proportion of quality of life among bipolar patient. Then by adding 10% of non-response rate, the final sample size became 423. The systematic random sampling method was used to select 423 patients from a total of 926 bipolar Adult patients who visit Emanuel Hospital. In average 926 patients visit every month, this makes the sampling fraction (k-interval) $926/423=2$. The first study population was selected by lottery method and study populations were chosen at regular intervals (every other patient) and the selected respondents were interviewed by data collectors.

Data collection tools and quality controls

Data were collected using standardized, structured, and pre-tested questionnaire. The questionnaire was first prepared in English then translated to local language (Amharic) and back-translated into

English to maintain the consistency of the questionnaire by local language translator expertise. Good quality of life was operationalized as individuals who scored greater than median on WHO QOL BREF on the whole data. Trained supervisors and data collectors participated in the data collection process from the study area who knows the culture and language of the society. Concerning the quality of life, nondrug adherent and drug side effect, WHOQOL-BREF, Non adherent and Simpson-Angus Scale respectively were used and face to face interview was employed to obtain the data.

WHOQOL-BREF contains 26 items and a sound cross-culturally valid assessment of QOL, consisting of four domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items); it also contains the first two questions on general perception of life and health [27].

Each individual item of the WHOQOL-BREF is scored from 1 (very dissatisfied/very poor) to 5 (very satisfied/very good). According to the instruction manual, raw scores for the domains of WHOQOL-BREF were calculated and were transformed on the scale ranging from 0 to 100, where 100 the highest and 0 the lowest QOL [28]. The median score for each domain and the total score were also calculated since the quality of life measures in studies are often presented as median.

Therefore, categorization was done using the median scores of WHOQOL-BREF. Subjects were categorized as having GOOD QOL in WHOQOL-BREF, those scores greater than or equal to the median (M) while having less than the median (M) was categorized as poor QOL.

Drug non-adherence was also assessed using the 8 item version of a self-reporting questionnaire of Morisky medication adherence rating scale (MMARS) [29]. An extrapyramidal symptom was assessed using the 10 item version of a self-reporting questionnaire of Simpson-Angus Scale (SAS) [30]. All of the data collectors were diploma holder and have experience of data collection in a mental health survey. Two days of intensive training was given to the data collectors and supervisors on how to conduct the data collection. A brief introduction to data collectors, supervisors, and caregivers had been given before and during the collection process.

Data analysis

Each completed questionnaire was entered into Epi Info 3.5.3 statistical software and then exported to SPSS version 20.0 packages for analysis. Frequencies, proportions, and cross-tabulations were used to summarize descriptive statistics of the data. All variables which were significant at bivariate analysis were entered into multiple Logistic regression and finally, the variables which had a significant association was identified on the basis of AOR with 95% CI and *p*-value less than 0.05 to fit the final regression model.

Results

Four hundred eleven respondents were participated in the study making response rate of 97.1%. Of those, 122 (29.7%) were above 40 years of age. The mean age of the respondents was 34.34 (SD ± 11.50) years ranging between 18- 65 years. Male were 215 (52.3%), Orthodox 222 (54.0%) and Amhara 140 (34.1%) by ethnicity reside in urban area accounting for 285 (69.3%). Of the study, 218 (53.0%) respondents were not getting married, 146 (35.5%) had attended secondary school, 279 (67.9 %) were unemployed and 172 (41.8%) participants fail in the first quartiles (< 200 birr) monthly income (Table 1).

Regarding the clinical characteristics of the respondents, 133 (32.4%) had a duration of the illness between six and ten years, and 263(64%) of respondents had an onset of illness before 25 years age. Of the respondents, 222(54%) had less than two episodes per year and 344 (83.7%) do not use the substance. One hundred ninety-three (47%) study subjects were using mood stabilizer, antipsychotics and antidepressants. Of those respondents; 378 (92%) had no drug side effects, 390(94.9%) were adherent to the drug and (97.3%) had no extra pyramidal symptoms.

Concerning duration of treatment, 36.3% were on treatment for one up to five years, followed by 27.7% between 6 and 10 years. One hundred thirty-four, (32.6%) of participants feel that people treat them like an inferior because of their illness and 32.6 prefer to avoid them because of their illness (Table 2).

Regarding the WHOQOL-BREF scale, the range of scale in this study was from 40–105 with a median value of 74 ± 13.6. Out of the total study participants, 240 (58.4%) had a poor quality of life (Figure 1).

Variables with Categories	Frequency	Percent (%)
Age		
18-24	81	19.7
25-29	92	22.4
30-34	65	15.8
35-39	51	12.4
≥ 40	122	29.7
Sex		
Male	215	52.3
Female	196	47.7
Religion		
Orthodox	222	54
Muslim	113	27.5
Other**	76	18.5
Ethnicity		
Amhara	140	34.1
Oromo	126	30.7
Guragie	105	25.5
Others*	40	9.8
Residence		
Urban	285	69.3
Rural	126	30.7
Marital status		
Never married	218	53
Ever married	193	47
Educational status		
Illiterate	56	13.6
Primary	136	33.1
Secondary	146	35.5
College and above	73	17.8
Occupation		
Employed	122	29.7
unemployed	279	67.9
Monthly income		
≤ 200	172	41.8
201-400	36	8.8
401-600	35	8.5
601-1000	77	18.7
≥ 1000	91	22.1

* Tigray, Welyta, Hadiya, **protestant, catholic

Table 1: Socioeconomic and demographic factors of bipolar patients attending in Emanuel Specialized Hospital, Addis Ababa, Ethiopia; May, 2016(N=411).

Variables with Category	Frequency(n)	Percentage (%)
Duration of illness		
<1 year	26	6.3
1-5 years	123	29.9
6-10 year	133	33.4
>=10	129	31.4
Age of onset		
<25	263	64
26-34	95	23.1
35-44	27	6.6
>=40	26	6.3
Frequency of episode		
>=4	33	8
3-Feb	97	23.6
<2	222	54
0	59	14.4
Current drug use		
Mood stabilizer	46	11.2
antipsychotic	64	15.6
Ant psychotic & antidepressant	108	26.3
Mood stabilizer, Anti-psychotic & antidepressant	193	47
Drug side effect		
No	378	92
Yes	33	8
Duration of treatment		
<1 year	37	9
1-5 years	149	36.3
6-10 years	114	27.7
>10 years	111	27
Substance use		
No	344	83.7
Yes	67	16.3
Extra pyramidal symptom		
No	400	97.3
Yes	11	2.7
Drug adherence		
Adherence	390	94.9
No adherence	21	5.1

Table 2: Clinical characteristics of bipolar patients attending in Emanuel Mental Specialized Hospital, Addis Ababa, Ethiopia; May, 2016 (N=411).

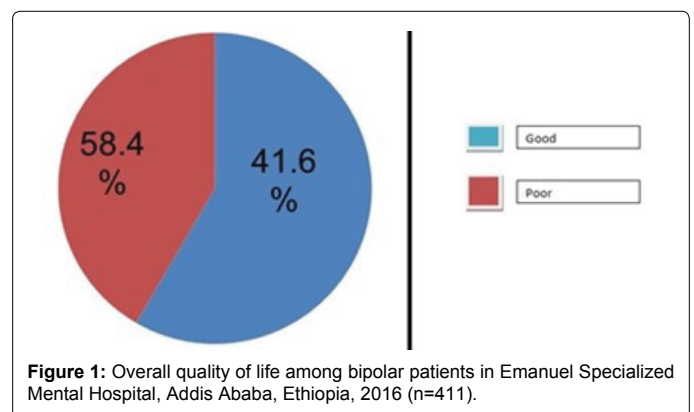


Figure 1: Overall quality of life among bipolar patients in Emanuel Specialized Mental Hospital, Addis Ababa, Ethiopia, 2016 (n=411).

The WHOQOL BREF covers four different domains of quality of life, physical, psychological, social and environmental. In this study physical, psychological, social and environmental aspects of life 56.2%,

62.5%, 50.1% and 55.0% scored the poor quality of life respectively (Figure 2).

Based on bivariate analysis variables including residence, education, ethnicity, occupation, monthly income, duration of illness, the frequency of episode, duration of treatment, current drug use, substance use, marital status, religion and extrapyramidal were found to be significantly associated with quality of life. To avoid many variables and unstable estimates, only variables reached a p-value less than 0.25 at the bivariate analysis were entered into multivariate logistic regression for further analysis in order to control confounding effects.

The results of multivariate analysis showed that quality of life among bipolar patients was significantly associated with the residence, education, occupation, monthly income, duration of illness, a frequency of episode and current drug use.

It was found that residence has been significantly associated with quality of life. Being rural reside were 1.94 times (AOR=1.94, 95% CI: 1.12-3.34) more likely had a poor quality of life as compared with urban. Respondents who learned primary education were 3 times at risk for poor quality of life (AOR=3.08, 95% CI: 1.45-6.53) as compared to diploma & above the holder.

Regarding monthly income of respondents; those who had a monthly income of <200 Birrs were 3.5 times at risk (AOR 3.57, 95% CI: 1.48-8.57) for a poor quality of life compared to those who had a monthly income of above 1000 Birrs.

Duration of illness was found to be significantly associated with poor quality of life. Respondents who had 10 years and above duration of illness were about 3 times more likely to be affected (AOR=3.42, 95% CI: 1.19-9.77) compared to those who had less than one year of duration of illness. Respondents who had more than 2 episodes were about 3 times more likely affected on their quality of life (AOR=3.45, 95% CI: 1.61-7.38) as compared to those with no episode. Current medication use was also significantly associated with poor quality of life among bipolar patients. Those patients with antipsychotic and antidepressants were found to be about 2 times more likely affected as to their quality of life than those with the only mood stabilizer (AOR=2.15, 95% CI: 1.04-4.45) (Table 3).

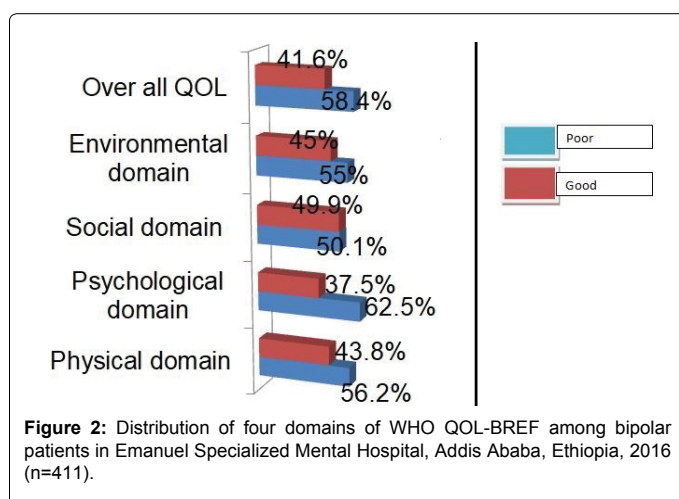


Figure 2: Distribution of four domains of WHO QOL-BREF among bipolar patients in Emanuel Specialized Mental Hospital, Addis Ababa, Ethiopia, 2016 (n=411).

Variable	Quality of life		COR 95% CI	AOR 95% CI
	Poor	Good		
Residence				
Rural	76	50	1.73(1.132-2.66)**	1.94(1.12-3.34)**
Urban	133	152	1	1
Education				
No formal education	34	22	3.36(1.62-6.96)***	2.06(0.83-5.11)
Primary education	82	54	3.3(1.80-6.02)***	3.08(1.45-6.53)***
Secondary education	70	76	2.00(1.11-3.61)	1.63(0.81-3.28)
Diploma and above	23	50	1	1
Occupation				
Jobless	98	87	1.57(0.94-2.6)	0.47(0.20-1.13)
Daily labor	43	16	3.7(1.84-7.61)***	1.81(0.69-4.7)
Farmer	16	19	1.2(0.53-2.57)	0.28(0.10-0.81)**
Merchant	4	27	0.72(0.33-1.55)	0.4(0.16-1.00)
Government employ	38	53	1	1
Monthly income				
<200	102	70	3.1(1.82-5.32)***	3.57(1.48-8.57)***
200-400	23	13	3.78(1.68-8.50)***	1.83(0.65-5.15)
401-600	23	18	2.26(1.02-5.02)*	1.09(0.39-3.03)
601-1000	23	40	1.97(1.05-3.70)	1.21(0.58-2.55)
>1000	29	62	1	1
Duration of illness				
<1 year	7	19	1	1
1-5 years	57	66	2.65(0.10-0.67)***	1.83(0.64-5.22)
6-10 years	70	63	0.62(0.37-1.02)	2.62(0.92-7.49)
>10 years	75	54	0.80(0.49-1.30)	3.42(1.19-9.77)***
Frequency of episode				
>4	20	13	2.58(1.07-6.20)	2.26(0.84-6.11)
4-Feb	67	30	3.75(1.9-7.42)***	3.45(1.61-7.38)***
<2	100	122	1.37(0.76-2.48)	1.47(0.75-2.87)
0	22	37	1	1
Current drug use				
Mood stabilizer	25	21	1	1
Anti-psychotic	31	33	0.78(0.36-1.68)	1.39(0.58-3.28)
Anti-psychotic & anti-depressant	74	34	1.82(0.90-3.71)	2.15(1.04-4.45)*
Anti-psychotic, anti-depressant & Mood stabilizer	79	114	0.58(0.30-1.11)	0.63(0.33-1.21)

N.B.P-value <0.05 represents variables that have statistically significant association on multivariate analysis.
*** P-value <0.001, ** p-value < 0.01, * p-value < 0.05

Table 3: Association of Socio-economical and demographical factors among bipolar patients attending at Emanuel specialized mental hospital, Addis Ababa, Ethiopia; 2016(n=411).

Discussion

Bipolar Disorder has a chronic course, recurrent episodes, and high rate of mortality as well as loss of function and cognitive impairment that produce significant burden to patients' family, society and health systems [17]. The underlying reason for using QOL measures in clinical practice is to ensure that treatment plans and evaluations focus on the patient rather than the disease. Therefore this hospital-based cross-sectional study was conducted to assess the quality of life and associated factors by using WHOQOL- BREF, extrapyramidal symptom was assessed by using Simpson-Angus Scale and Morisky medication adherence screening was also used to assess drug adherent.

In this study, the WHO QOL-BREF showed that bipolar patients were significantly associated in poor quality of life in physical domain (56.2%), psychological domain (62.5%), social domain (50.1%) and

environmental domain (55.0%) which was consistent to other study findings [21,24-26].

This study finding revealed that bipolar patients who lived in rural areas were about 1.94 times more affected in terms of their quality of life than those who lived in urban areas. This study is in line with a study conducted in Norway and other areas [23,25]. The result could be mainly due to a poor mental health service and low awareness of mental illness in rural settings than in urban areas.

This study revealed that education was a determinant factor for quality of life. Primary education was about 3 times more likely affected in their quality of life as compared to patients with a diploma and above education level. This is similar to a study conducted in Canada and Norway [22,25]. This might be due to an influence of education; that is an individual with high level of education might have the ability to think critically than those who are with the low level of education. In other words, increasing educational level can improve awareness and health seeking behavior of patients which contribute to good quality of life.

The monthly income of the respondent had a significant association with quality of life. Participants who had less than 200 Birr monthly incomes were 3.5 times more affected than those who earn more than Birr 1000 per month [AOR=3.57 95% CI:1.48-8.57]. This is related to other studies [19,20]. The result could be mainly due to the fact that those with better monthly income can access and afford health services which later contribute to improving quality of life.

Duration of illness, the frequency of episode, and the age of onset, current drug use, drug side effect, and the duration of treatment, substance use, extrapyramidal symptom and drug adherence are common clinical factors affecting the quality of life of the bipolar patient. This is similarly related to other studies [16,21]. The result could be mainly due to the fact that those with long duration of illness can have a chance to lose their job, social interaction, unable to manage their overall life and increase the frequency of episode. This may be the absence of mood stabilizer will result in increased frequency of episode and couldn't revive easily from illness. A bipolar patient may stay with only mood stabilizer drugs for a relatively long period of time than other drugs.

In our study sex of the patient was not significantly associated with quality of life. But study did in USA show females had lower quality of life than males [31].

This difference could be due to the difference in socio cultural issues and difference in coping mechanisms.

Age of the participants was not significantly associated with quality of life. This study was in line with study done in UK. Participants with higher educational attainment appeared to have good quality of life [22-32]. People with bipolar disorder have poor quality of life than the general population which is in line with study done in pristine, England [33].

The investigator does not assess quality of life between the sub types of bipolar disorder. So we did not differentiate whether their quality of life differs or no. This is the limitation of this study.

Conclusion

This study revealed that poor quality of life was found to be high on bipolar patients. In conclusion, low level of educational status, low monthly income, high duration of illness, high frequency of episode and current drug use were significantly associated with poor quality of life. Health facilities should have trained mental health professionals.

Promote ongoing skill-based health information dissemination to increase awareness of the community on mental health in general and bipolar disorder in particular. Provide occupational therapy to bipolar patients like income generating activities. Emphasis should be given in follow up of patients with appropriate management. Further prospective Cohort and mixed study should be conducted regarding the quality of life in the different sub types of bipolar disorders.

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Conflict of Interest

None

Reference

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