

A comparative study of quality of life among adolescent with bipolar affective disorder, skin disease and normal controls

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Quality of Life (QOL) measures are useful methods to understand the impact of illness and outcome of treatment. The aim of any therapeutic intervention is not just symptom alleviation but overall improvement. The number of studies on the Quality of Life in bipolar affective disorder, especially in adolescent, is very less considering the prevalence rate of this disorder. Material and In the present study effort has been made to understand the QOL among adolescent patients with Bipolar Affective Disorder (BPAD) (N=30), skin diseases (N=30) and normal controls (N=30). They were rated on WHOQOL BREF. Results of statistical analysis indicates that patients with BPAD have been found to have poorer QOL than adolescent with skin diseases and normal controls. Understanding the quality of life of psychiatric illness like BPAD vis a vis other medical disorders like skin disease (which is usually a chronic disease and QOL is reported to be poor in it also) throws new light in terms of the impact of illness, course, out come and intervention strategies.

Keywords: quality of life, bipolar affective disorders, adolescent

The quality of life (QOL) of the mentally ill has been a matter of concern for centuries. Quality of life refers to the subjective well being of the person. It is a concept which encompasses physical health, psychological state, level of independence, social relationship, belief and their relationship to salient features of their environment.

The main rationale of applying the concept of QOL in the medical field is to understand whether a particular treatment-just alleviates symptoms or it improves the subjective well being also. To understand this aspect various approaches have been proposed, where QOL is studied in relation to health care both, within mental health and general health care.

The psychosocial well being and development of children and adolescents have received a great deal of attention, in terms of research, care and policy. Using quality of life as an overarching concept for this age group has only recently been recognized as useful, mainly in the context of health care. Consequently children's QOL is under investigation compared to that in adults. Prior studies reported that adults with bipolar disorders exhibit poorer health related QOL as compared to the general population (Hakkaart-Van et al., 2004., Sierra et al., 2005., Maina et al., 2007., Gutierrez-Rojas et al., 2008). Only 9% of the studies on children involved evaluations of QOL by the children themselves (Wallander & Schmitt, 2001).

Patients with bipolar disorder have high rates of disability and psychological disturbance (Calabrese et al., 2003., Lopez et al., 2006., Olsen et al., 2012). Compared to adult onset bipolar disorder, the onset of bipolar illness in youth was associated with a more severe illness (Carlson et al., 1994; Kutcher, 1994), poorer recovery from both manic and depressive episodes (Strober, 1994) and high rates of relapse despite optimized psychosocial and psychopharmaceutical interventions (Papatheodorou & Kutcher, 1996; Olsen et al., 2012). Patients with skin diseases were chosen as a comparison group for the present study as it has also have high rates of disability and psychological disturbance (Jowetta & Ryan, 1985; Finlay & Ryan, 1996). The present study aims to see if the recurrence of the disease does have any effect in the inter episode period of these patients who are maintaining well on medication. Comparing the bipolar affective disorder patients with patients of skin diseases would give us an understanding of quality of life of patients of a major psychiatric disorder vis-à-vis an equally disabling physical disorder.

Aims of the study

The present study was aimed to compare and assess the quality of life in adolescent with bipolar affective disorder with two other groups namely, one group of adolescents with skin diseases, second normal adolescents group and assess those variables affecting quality of life in these three groups.

Method

Participants

A cross sectional design was used to collect the data. Sampling technique was purposive. This cross sectional study was conducted at the inpatient and outpatient's department of child psychiatry unit and weekly skin clinic of Central Institute Psychiatry, Ranchi.

Experimental group consisted of 30 adolescents with bipolar disorder with ICD-10 criteria (World Health Organization, 1992) and stable on medication for at least four weeks and 30 adolescents patients suffering from skin and venereal diseases at least with one month duration and stable on medication for at least four weeks. Control group consisted of normal adolescents. All these groups were matched respective of age (aged between 12-18 yrs), sex, education (minimum 5th pass), socio-economic status and etc.

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Instruments

Subjects were administered the following instruments as per the group needs.

Socio demographic data schedule was used for all the groups : It is a semi-structured proforma which included various socio demographic variables (age, sex, education level, marital status, socio economic status), clinical variables (i.e., diagnosis and treatment details number of episode, number of hospitalization, duration of illness) family type and family history of psychiatric morbidity was applied.

Young Mania Rating Scale (YMRS) (Young et al. 1978) was used in the first group: To rate the severity of mania 11 items YMRS was used. There are 5 rates of severity of each symptoms. It has been found useful as mania rating score in children and adolescents (Fristad et al. 1992).

Hamilton Depression Rating Scale(HDRS) (Hamilton, 1960) Was used in the first group : 21 item HDRS was used to assess the level of depression. In it clinicians have to consider both the intensity and frequency of symptoms. Symptoms are graded from a 0-2 to 0-4 points and may yield a maximum score of 64 points. This scale has been proven to be reliable and to have a high degree of concurrent and differential validity.

World Health Organization Quality of life scale (WHOQOL BREF, Hindi version, Orley et al. 1998): for all the groups.

General Health Questionnaire 5: (Shamsunder et al., 1986) was used for second and third group.

Procedure

The guardians' as well as patients' consent was taken before conducting the study. Information regarding socio-demographic details was collected on socio-demographic data sheet specifically designed for this purpose and each patient was evaluated either on YMRS and HDRS depending on the clinical diagnosis at the time of intake. Then they were given WHOQOL, BREF.

In case of second and third group, their socio-demographic data were collected on socio-demographic data sheet and they were assessed on WHOQOL, BREF and general health questionnaire.

Statistical analysis

Data were subjected to descriptive statistics (mean, chi-square and standard deviation) in order to analyze the socio-demographic data and scores on clinical rating scales. Independent 't' test was used to determine the difference between the groups on quality of life. ANOVA was used to determine the effect of socio-demographic variable on quality of life between and within the groups.

Results

Table 1A: Socio-demographic profile of the sample

Variables	Group			x ² /F	df	P-value
	BPAD (n=30) n(%) / m ± SD	Skin (n=30) n(%) / m ± SD	Normals (n=30) n(%) / m ± SD			
Age (years)	15.800 ± 1.215	15.800 ± 1.610	15.667 ± 1.295	.162	2	.850
Sex						
Male	22 (73.3)	24 (80.0)	22 (73.3)	.481	2	.786
Female	8 (26.7)	6 (20.0)	8 (26.7)			
Education						
Primary	7 (23.3)	6 (20.0)	9 (30.0)	1.750	4	.782
Matric	19 (63.3)	18 (60.0)	18 (60.0)			
Intermediate & above	4 (13.3)	6 (20.0)	3 (10.0)			
Socio-economic status						
LSES	15 (50.0)	12 (40.0)	15 (50.0)	4.472	4	.346
MSES	15 (50.0)	16 (53.3)	15 (50.0)			
HSES		2 (6.7)				
Domicile						
Urban	12 (40.0)	21 (70.0)	14 (46.7)	10.526	4	.032
Rural	14 (46.7)	3 (10.0)	12 (40.0)			
Semi-urban	4 (13.3)	6 (20.0)	4 (13.3)			
Family type						
Nuclear	9 (30.0)	17 (56.7)	16 (53.3)	5.089	2	.079
Non nuclear	21 (70.0)	13 (43.3)	14 (46.7)			
Family history of mental illness						
Present	11 (36.7)	1 (3.3)	3 (10.0)	13.440	2	.001
Absent	19 (63.3)	29 (96.7)	27 (90.0)			

Table 1A: shows the socio-demographic characteristics of the sample:

The study included 30 adolescents with Bipolar Affective Disorder henceforth to be called group 1, 30 adolescents with skin disease henceforth mentioned as group 2, and 30 normals mentioned as group 3.

The mean age of the group 1 was 15.80±1.215, group 2 was 15.80±1.61 while that of the group 3 was 15.67 ± 1.30.

The sex of the subjects in 3 groups were 22 (73.3%), were males in group 1 and group 3 where as in group-2, 24 (80.0%) were males. No significant differences were found in the 3 groups.

Education : 63.3% of the subjects in group 1 and 60% in group 2 and group 3 were educated upto matriculation. 23.3% in group1, 20% in group-2 and 30% in group-3 were educated upto primary level. While 13.3% in group-1, 20% in group-2, and 30% in group-3 were educated upto intermediate level and above. No significant differences were found in the 3 groups.

Socio-economic status : 50% of the subjects in group-1 and 3 groups were from low socio-economic status and same number were from middle socio-economic status. While in group-2, 40% were from low socio-economic status, 53.3% from middle socio-economic status and only 6.7% from high socio-economic status. No significant differences were found in the 3 groups.

Domicile : with regard to their domicile- 40%, 70% and 46.7% in

group 1,2 and 3, respectively belonged to urban areas. 46.7%, 10% and 40% in group-1, 2 and 3 respectively belonged to rural areas. And rest of them were from semiurban areas. No significant differences were found in the 3 groups.

Family type : 21 (70%), 43.3% and 46.7% were from non nuclear type family set up in group 1,2 and 3 respectively and rest belonged to nuclear type family set up. No significant differences were found in the 3 groups.

Family history : 36.7%, 33.3% and 10% subjects had family history of mental illness in group-1,2 and 3 respectively. While 63.3% subjects in group-1, 96.7% in group 2 and 90% in group-3 had no family history of mental illness (significant differences were found between two groups (P=.004).

Table 1B: Group difference for the different clinical variables

Variables	Group		t	df	P value (2 tailed)
	BPAD (n=30) m ± SD	Skin (n=30) M ± SD			
Duration of illness (Years)	1.733 ± .450	1.367 ± .490	3.019	58	.004
Number of episodes	1.733 ± .450	1.667 ± .479	.551	58	.581

This table shows group differences in the clinical variables- BPAD, skin disease based on the duration of illness and number of episodes. 't' test results reveal, there was no significant difference between the two clinical groups in terms of the number of episodes

of the illness. However the 2 groups differed significantly (P=.004) in the duration of illness. BPAD subjects had a longer duration of illness (1.733 ± .450) than those in the skin group (1.367 ± .490).

Table 2: Group difference in WHOQOL domains

Variables	Group			F (df=2)	P value (2 tailed)
	BPAD (n=30) m ± SD	Skin (n=30) M ± SD	Normals (n=30) m ± SD		
WHOQOLBREF 1	3.3000 ± .837	3.533 ± .860	3.267 ± .691	.990	.376
WHOQOLBREF 2	3.000 ± .910	3.267 ± 1.201	3.433 ± .898	1.397	.253
Physical domain 1 ^{ab}	21.133 ± 4.485	25.033 ± 2.100	25.767 ± 3.191	14.203	.000
Psychological ^{ab} domain 2	18.033 ± 3.846	20.767 ± 3.013	20.967 ± 3.728	6.400	.003
Social domain 3	9.633 ± 2.580	10.800 ± 1.955	23.333 ± 73.839	.950	.391
Environmental domains 4	22.800 ± 4.604	24.733 ± 4.653	23.833 ± 4.094	1.413	.249
Total QOL ^{ab}	71.333 ± 12.195	24.733 ± 4.653	23.833 ± 4.094	8.474	.000

a = Significant difference (< 0.05) between patients with BPAD and skin disease. b= Significant difference (< 0.05) between BPAD and normals. c = Significant difference (< 0.05) between skin and normals.

This table shows the differences in the 3 groups BPAD, skin disease and normals in the WHOQOL domains. ANOVA's results reveal significant differences at 0.05 level between the groups. The subjects with skin disease and normal (controls) had

significantly better QOL in physical domains, psychological domain and the total quality of life than BPAD. However, there were no significant differences between skin disease subjects and normal controls.

Table 3: QOL among urban, rural and semi-urban

Variables	Domicile group			F-(df=2)	P-value
	Urban (n=47) m ± SD	Rural (n=29) m ± SD	Semi-urban (n=14) m ± SD		
WHOQOLBREF 1	3.404 ± .825	3.482 ± .738	3.000 ± 7.84	1.865	.161
WHOQOLBREF 2b	3.510 ± .906	3.138 ± .953	2.500 ± 1.160	6.149	.003
Physical domain 1	24.700 ± 3.344	22.793 ± 4.981	23.786 ± 4.228	2.125	.126
Psychological domain 2a	20.000 ± 3.566	18.551 ± 4.085	19.357 ± 2.735	4.060	.021
Social domain 3	10.042 ± 58.908	9.517 ± 2.849	10.143 ± 2.349	.532	.589
Environmental domain 4	24.447 ± 4.353	22.793 ± 4.609	23.643 ± 4.551	1.238	.295
Total QOL	79.830 ± 9.865	74.172 ± 12.042	76.929 ± 11.125	2.489	.089

a = Significant difference (.02) between urban and rural b = Significant difference (.003) between urban and semi-urban

Table 3: to find out differences, in any, in quality of life among all groups on the basis of their domicile. ANOVA's results reveal significant differences between subjects from urban and rural

background in psychological domain of QOL (p=.02). And significant differences were also noticed between urban and semi-urban subjects (p=.003) level in the overall perception of health.

Table 4: QOL among different socio-economic status subjects

Variables	Socio-economic status			F (df=2)	P- value
	LSES (n=42) m ± SD	MSES (n=46) m ± SD	HSES (n=2) m ± SD		
WHOQOLBREF 1	3.405 ± .767	3.326 ± .845	3.500 ± .707	.132	.876
WHOQOLBREF 2	3.357 ± 1.055	3.173 ± .950	2.000 ± 1.414	1.897	.156
Physical domain 1	23.881 ± 4.717	24.152 ± 3.596	22.000 ± 2.828	.278	.758
Psychological domain 2	19.476 ± 4.122	20.326 ± 3.452	20.000 ± 2.828	.556	.575
Social domain 3	9.929 ± 2.383	18.056 ± 59.596	12.000 ± 4.242	.490	.614
Environmental domain 4	23.119 ± 4.517	24.283 ± 4.470	26.500 ± 2.121	1.119	.331
Total QOL	75.929 ± 12.000	78.913 ± 9.960	80.500 ± 12.020	.883	.417

Table 4: this table shows the difference, if any in QOL among all subjects on the basis of their socio-economic status. ANOVAS results reveal that social domain of QOL were better among middle socioeconomic status as compared to low-socio-economic status. However, it was not statistically significant overall, no significant differences were found.

Discussion

Understanding QOL would help us in identifying the probable factors, which adversely affect the positive quality of life. Since, better quality of life has been shown to have a negative correlation with future relapses (Wells et al. 1989). This data on the factors affecting QOL can be used a preventive measure to lessen the number of recurrence.

The comparison of socio-demographic data of patients with BPAD, skin disease and normal controls showed that they were identical with respect to age, sex, education, socio economic status, domicile and type of family, though they differed significantly in the presence or absence of mental illness in the family members. Family history of mental illness was significantly higher in BPAD patients as compared to skin disease patients and normals. It is consistent with the findings of Nurnberger and Gershon, 1992, which indicate genetic loading in bipolar disorder patient (Table-1A). Significant difference was found between domicile and specific domains of QOL. Subjects from urban background had better overall perception of health than the semi-urban. In psychological domain - subjects from urban background had better QOL as compared to those from the rural background. This may be due to better availability of facilities and services provided by mental health professionals in urban setting (Table -3). It has been noticed that in the social relationship (Domain-3), QOL were better among middle socioeconomic status subjects as compared to low socio-economic status, although it was not statistically significant (Table-4).

This finding is consistent with Thakkar (2000). However it is contrary to the study of Carpinello et al. (1997) who found that there was no consistent correlation between socio-economic status and QOL. The reason could be that the subjects in the present study were adolescent and who were not directly responsible for the socio-economic status.

BPAD subjects had a longer duration of illness than those in the skin disease group (Table 1B). However, there was no significant difference found between the two clinical groups in terms of number of episodes of the illness. This finding is in accordance with the findings of Sullivan (1992). The difference found in the present study may be attributed to the mental set that they are not capable of enjoy life because of their prolonged period of illness

(Lehman, 1983).

Significant differences were found among patients with BPAD, skin disease and normal in terms of QOL. Patients with BPAD had poorer quality of life as compared to skin disease subjects and normal controls in the physical domain, psychological domain and total quality of life (Table -2). The present finding is consistent with previous studies (Cooke et al., 1996; Well et al., 1989; Joseph et al., 1999.,Olsen, 2012). Interestingly the QOL was found to be significantly lower in BPAD than the skin disease. It indicates the disabling consequences of psychiatric illnesses per se. probably the reason could be, as offered by Hirschfeld (1994), that patients with mood disorders experience high levels of criticism, expressed emotions and low levels of emotional support, which lead to poorer response to a particular treatment and relapses in the first six months of treatment. Study has reported (Tollefson et al., 1999), that patients with mental disorders are less satisfied with all aspects of their life than members of general population. However, in the present study, no differences was found among the subjects of BPAD, skin disease and normal in specific domains of QOL such as social relationship domain, environmental domain, overall perception of QOL and health.

Limitations of the study

Though this study was conducted with a refined methodology, the following are the limitations:

- The sample size of the study was small and hence the generalization of the result remains doubtful.
- Females were under represented in all subject groups. Hence one cannot be certain to what extent our findings can be generalized to community samples.
- Only subjective measure of QOL was used and study was based on single interview.

Future direction

In future such a study should be carried out with a larger sample size with comparable representation of both sexes. Along with subjective reports of QOL, objective QOL could have been assessed to compliment the patients own assessment and a longitudinal study could be planned.

Conclusion

The study shows that Bipolar Affective Disorder (i.e. psychiatric disorder) has been found to have poor QOL than a chronic physical condition like skin disease and normals. This result confirms that mood disorder is a major public health problems and thus, more emphasis has to be given in allocating resources to health care research, education and service provision by policy makers.

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