Disability and Quality of Life in Euthymic Patients with Bipolar Affective or Recurrent Depressive Disorder

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Abstract

**Background:** There are major health care implications of Quality of Life and Disability in long-standing disorders such as bipolar affective disorder and recurrent depressive disorder. **Objectives:** To compare the inter episode Quality of life (QOL) and Disability in patients with the diagnosis of Bipolar affective disorder or Recurrent depressive disorder in remission. **Methods:** The two groups were assessed cross-sectionally. Euthymic bipolar or recurrent depressive disorder subjects were included in the study. QOL assessment was done using the World Health Organisation (WHO) QOL – Bref Kannada version. Disability was assessed using the Schedule for assessment of psychiatric disability (SAPD), which is an Indian modification of the WHO Disability assessment schedule-II. **Results:** There were 80 patients enrolled into the study. The mean QOL scores did not differ significantly in the two groups except for the RDD subjects experiencing higher environmental domain QOL (p=.05). The mean disability scores in the BAD group was significantly more in ‘social role’ (p<.0001) and ‘overall behavior’ (p=.001) and in the RDD group it was more in ‘home atmosphere’ (p<.0001) and ‘assets and/or liabilities’ (p=.001). There were more frequent intercorrelations between the illness variables and to a lesser extent between the illness variables and the QOL / DAS variables in the bipolar group. In contrast, the RDD group showed more correlations between QOL and DAS variables and very few intercorrelations between the illness variables. **Conclusions:** Quality of life did not differ significantly between the two groups in periods of euthymia. However disability measures differed significantly in the two groups (German J Psychiatry 2007; 10: 111-116).

Keywords: Quality of life, disability, bipolar disorder, depression

Received: 21.3.2007
Revised version: 6.9.2007
Published: 7.11.2007

Introduction

The concept of “Disability” and “Quality of life” offers a broad perspective for assessing the needs and outcome of chronic mental patients. QOL research in bipolar disorders has evolved over the years and is fast gaining popularity as an important morbidity index along with disability (Yatham; 2003). Bipolar disorder leads to impaired functioning and Quality of life, even in the stable phase (Robb et al.; 1997). A recent estimate by the World Health Organisation suggested that bipolar disorder was the fifth leading cause of disability world wide among young adults in the year 2004 (Murray and Lopez). Studies have reported that being symptom free does not equate to functional recovery in bipolar disorder (Yatham et al.; 2004). A number of studies have demonstrated that the subjective quality of life is particularly poor in depressed patients (Hays et al. 1995, Atkinson et al. 1997, Ormel 1999). Disability and Quality of life are increasingly recognized as crucial factors in assessing mental health. Disability associated with affective illness may have a considerable impact on the personal well being, social relationships and work productivity. Scott (1995) in a review summarized that an adult developing bipolar disorder in his / her mid 20’s effectively loses 9 years of life, 12 years of normal health and 14 years of working life. Therefore, it is likely that the psychosocial impairment associated with mania, depression extends to all areas of functioning, and patients show high level of disability. There is a dearth of literature however comparing the inter episode
disability and Quality of life in remitted unipolar and bipolar patients in our context.

So the primary purpose of this study was to compare the inter episode Quality of Life (QOL) and Disability in euthymic subjects with a diagnosis of Bipolar affective disorder or Recurrent depressive disorder in remission.

Materials and Methods

Subjects

The sample comprised of two groups of 40 subjects each, aged 18 years and above – bipolar disorder group (BAD), recurrent depressive disorder group (RDD). The period of remission required to enter the study was taken as two months. The patient groups were recruited from the outpatient department of psychiatry at Kasturba Hospital, Mangalpal, India. The target population consists of patients fulfilling ICD-10 DCR (WHO; 1994) criteria of bipolar affective disorder or recurrent depressive disorder in remission. The consultant psychiatrists in the department using the ICD-10 DCR delineated the diagnosis and duration of remission of two months. All psychiatric disorders including substance use existing as a comorbid diagnosis was excluded.

Assessment

Data was collected on the basis of a single cross-sectional interview of the subjects who fulfilled the inclusion, exclusion criteria and provided written informed consent. The diagnoses were ascertained by face-to-face clinical interview of the patients and their informants by psychiatrists following the ICD – DCR criteria. All consenting adults who fulfilled the inclusion criteria were first administered the socio-demographic proforma and the life chart by the investigator. The life chart was adapted from the National Institute of Mental health life chart method (Byrne et al.; 1985).

The disability was assessed by using the Schedule for assessment of psychiatric disability (SAPD), which is an Indian modification of the WHO Disability assessment schedule-II. The schedule was rated and disability scores were obtained. The period of assessment was taken as the last month. The SAPD items are grouped into four (or five) main areas of disability including personal, social role, occupational, and global disability. Ratings are done on a six point scale (0 to 5). It has been used previously in patients with psychiatric disorders, as well as in those with diabetes mellitus. Adequate reliability and ability to discriminate between different patient groups have been shown. This instrument has four sections. At the end of the schedule a global judgment about the level of disability of the patient should be made.

Section 1 deals with overall behavior and section 2 deals with social role performance. The ratings for the above 2 sections are from 0 (no dysfunction) to 5 (maximum dysfunction). Therefore, the mean scores are likely to range from zero to five.

Section 3 (patient in the hospital) has not been used in the study.

Section 4 is modifying factors, which includes items designed to describe specific assets (5 items) / specific liabilities (3 items) as well as salient features of his/her home environment (3 items). These are rated as 0 (no) and 1 (yes) or 8 (impossible to make a judgement) and 9 (not known / not enquired). In the present study the scores of these two components have been summed excluding rating of eight and 9 – hence the mean scores may range from 0-8. The Home Atmosphere and Outside Support component (3 items) was rated on a 0-5 scale (no dysfunction to maximum dysfunction).

Finally the global evaluation subscale is rated from 0-5 (no dysfunction to maximum dysfunction).

The QOL assessment was made with World Health Organisation (WHO QOL) Bref Kannada version. This scale was chosen because it is a generic scale, developed simultaneously in 15 field centers around the world (India was one of the participating countries). It is a subjective assessment for adults with a reading age of eight years and above and can be completed with interviewer assistance. This 26-item self administered scale measures four domains of QOL. They are physical health (item nos. 3, 4, 10, 15–18) psychological health (item nos. 5–7, 11, 19, 26), environment (item nos. 8, 9, 12–14, 23-25) and social relationships (item nos. 20–22). Item numbers 1(QOL) and two (QOL) reflect a general factor named ‘general well being’ which is not considered a specific domain. The items are scored from 1 to 5 with total scores ranging from 26 to 130, higher scores indicating better QOL in each domain and in total score. The psychometric properties of WHO-QOL Bref have been found to be comparable with those of the full version of WHO-QOL 100. High correlation of domain scores (0. 89 or above) for the two scales has been obtained using a four domain structure. This scale has shown good discriminant validity, content validity, internal consistency and test-retest reliability.

Statistical Analysis

SPSS software package (Version 10, SPSS Inc. Chicago, USA) was used to analyze the data. Descriptive statistics were used for all variables. Group comparison for the categorical variables was done using chi square test and Fisher’s exact test of probability. Group comparisons for continuous variables were done using independent t test. Bivariate correlations were done using Pearson’s correlations between quality of life scores, disability scores and illness variables.
Results

Sociodemographic Characteristics

Table 1 presents the distribution of the sociodemographic variables across the BAD and RDD groups. They did not differ significantly on variables of age, gender, marital status, residential status and family type. There was a statistically significant difference between the groups on a) educational status (p = .004) with persons of BAD reporting higher educational levels than those with the RDD b) income levels (p = .001) with more persons of BAD reporting lower income levels and c) family history (p = .008) a positive family history being reported more frequently by a subject in the BAD group.

Illness Variables

The two groups did not differ significantly in the age of onset of illness (BAD mean 24.05, SD 6.3 and RDD mean 26.1 years, SD 2.9), total illness duration in months (time since first onset of illness), total symptomatic ill period (total period of time spent symptomatically ill in months, total well period since onset of illness (total illness duration – total symptomatic ill period) in months and the mean of the ratios of symptomatic ill period / illness duration (MRSI)). The ill period and well period were derived by life chart review and from case records of the patients. MRSI scores were calculated in order to see if the proportion of ill period to total period since onset which reflects actual differences in duration of illness across patients, could capture significant differences if any. Each subject’s ratio of symptomatic ill period / illness duration since the onset of illness was computed and multiplied by 100. The resulting values for all patients in the group was summated and mean derived for each group designated as MRSI.

The two groups differed significantly (p < .0001) on the number of episodes of illness so far with the BAD group having a higher mean number 5.22 versus the RDD mean of 3.62.

QOL and Disability Variables

Table 3 illustrates the mean comparison scores of Quality of Life (QOL) and Disability Assessment Schedule (DAS) variables of the two groups. There is nearly significant difference (p = .05) on the QOL ‘environment domain’ score, the BAD mean being less than the RDD mean suggesting a
Table 3: Distribution of the mean Quality of life (QOL) and Disability Assessment schedule (DAS) scores in all the BAD and RDD subjects (N = 80, BAD, Bipolar Affective Disorder, RDD, Recurrent Depressive Disorder. T-test, df=78)

<table>
<thead>
<tr>
<th>Variables</th>
<th>BAD (n =40)</th>
<th>RDD (n =40)</th>
<th>t (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>QOL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QOL 1</td>
<td>3.3 (.46)</td>
<td>3.3 (.47)</td>
<td>.238 (N.S.)</td>
</tr>
<tr>
<td>QOL 2</td>
<td>3.5 (5)</td>
<td>3.4 (5)</td>
<td>.892 (N.S.)</td>
</tr>
<tr>
<td>Physical Domain</td>
<td>81.2 (3.03)</td>
<td>81.4 (3.07)</td>
<td>.293 (N.S.)</td>
</tr>
<tr>
<td>Psychol. Domain</td>
<td>74.1 (2.56)</td>
<td>73.9 (2.21)</td>
<td>.374 (N.S.)</td>
</tr>
<tr>
<td>Social Domain</td>
<td>35.2 (3.09)</td>
<td>35.4 (2.94)</td>
<td>2.96 (N.S.)</td>
</tr>
<tr>
<td>Environmental Domain</td>
<td>89.4 (7.33)</td>
<td>92.9 (8.37)</td>
<td>1.98 (.05)</td>
</tr>
<tr>
<td>DAS Overall Behavior</td>
<td>4.7 (2.99)</td>
<td>3.35 (1.64)</td>
<td>3.38 (.001*)</td>
</tr>
<tr>
<td>Social Role</td>
<td>4.85 (2.34)</td>
<td>3.05 (1.01)</td>
<td>4.45 (&lt;.0001)</td>
</tr>
<tr>
<td>Assets /Liabilities</td>
<td>3.8 (1.41)</td>
<td>4.8 (1.4)</td>
<td>3.3 (.001)</td>
</tr>
<tr>
<td>Home Atmosphere</td>
<td>3.5 (5.1)</td>
<td>4.8 (7.3)</td>
<td>9.04 (&lt;.0001)</td>
</tr>
<tr>
<td>Social Support</td>
<td>1.2 (971)</td>
<td>1.23 (966)</td>
<td>.0 (N.S.)</td>
</tr>
<tr>
<td>Global Evaluation</td>
<td>1.87 (.334)</td>
<td>1.92 (.271)</td>
<td>.739 (N.S.)</td>
</tr>
</tbody>
</table>

Significant negative correlations were found between a) total illness duration and MRSI (r = -.793**, b) well period and MRSI (r =-.813**, c) ‘social role’(DAS) and ‘assets and /or liabilites’ (DAS) (r=-.564**), d) age of onset and social domain of QOL (r =-.319*), e) QOL 2 with total illness duration (r =-.320 *) and QOL 2 with well period (r =-.314 *), f) DAS ‘overall behavior’ is negatively correlated with QOL environmental domain scores (r=-.396*), g) QOL ‘social domain’ is negatively correlated with ‘social supports’ dysfunction on the DAS (r=-.354*).

Discussion

The study centre caters to a predominantly rural / suburban catchment area. So the majority of persons in both the groups were from rural area and did not differ in various sociodemographic variables studied (Table1) except for education and income. Coryell and associates (1993) examined bipolar and unipolar patients with comparison groups and observed no differences in the socioeconomic variables in both bipolar and unipolar disorder patients. A significantly higher positive family history of mental illness in persons with BAD is in keeping with the earlier research (Gershon, 1984). The mean age of onset described in literature are consistently lower for bipolar disorders and later for unipolar disorders (Paykel; 1992). In the present study although the difference in the mean age of onset does not reach statistical significance, BAD group show a trend to have a earlier onset. The MRSI (mean ratio of symptomatic ill period / total illness duration) was determined to evaluate the percentage of time spent symptomatically ill in the course of illness. This reflects the actual proportion of the ill to well periods across the subjects. This does not differ significantly in BAD and RDD. No literature evidence for such a ratio can be found. In this study population, both the groups despite having different number of episodes have suffered similar periods of illness and wellness and ratio of ill period /total illness duration. The overall similarity of QOL in the two groups if not artefactual or attributable to sampling limitations, could suggest that the two illnesses by themselves do not differentially affect QOL. The patients of RDD in this study had a higher economic status than BAD and the environmental domain of QOL measures financial resources, physical safety etc so a higher rating in this domain could be explained in them. Robb et al. (1997) using the Illness intrusiveness scale (IIRS) reported that illness intrusiveness is...
compromised in bipolar disorders in periods of euthymia. Illness intusiveness has been investigated in relation to QOL. Robb (1997) reported that the illness intusiveness experienced by 87 euthymic patients with bipolar disorder was similar to that of subjects with multiple sclerosis and greater than subjects with end stage renal disease and rheumatoid arthritis.

The DAS variables studied show that persons with BAD had significantly higher disability in ‘overall behavior’ and ‘social roles’. This finding is consistent with earlier studies on disability in bipolar disorders. The person with RDD had significantly higher dysfunction in ‘home atmosphere’ and in ‘assets and / or liabilities’. There is a wide variance in the literature in the nature of differences in disability between BAD and RDD.

All the illness variables correlate among each other meaningfully and in the same direction suggesting homogeneity in the BAD sample. This is in keeping with literature reports regarding course of BAD (Coryell et al., 1993). The expected correlation between the MRSI (an innovation in this study) and the other illness variables is also robust. The highly negative correlation of the MRSI with total illness period and well period underlines the fact that as the value of total illness duration or well period increases the ratio becomes smaller which is in keeping with the assumptions behind this measure. The positive correlations between the age of onset and QOL ‘psychological domain’ suggest that an increase in the latter occurs if there is an increase in the former or vice versa as noted by Bauwens et al. (1991). Negative correlations between age of onset and dysfunction scores on DAS ‘assets and /’ or liabilities, home atmosphere and global evaluation suggest an inverse relationship of an increased dysfunction in these areas with decreasing age of onset. This is in line with observations regarding most chronic disorders as noted by Goldberg (1995). The correlations between MRSI and the DAS scores on ‘assets and /or liabilities’ reiterates the same point. The positive correlations between self report on health (QOL 2) and dysfunction on DAS ‘social support’ is difficult to interpret due to the bidirectional content of the DAS item. However the negative correlation between perceived health and dysfunction in DAS “home atmosphere” reflects improving home atmosphere correlating with higher health quality perception or vice versa. The striking finding appears to be the illness variables in the BAD group correlating among themselves whereas correlations amongst QOL and DAS variables or between illness and QOL/DAS variables are few which is not in keeping with studies addressing similar issues with different instruments and methodologies (Bauwens et al. 1991; Coryell et al. 1992; Goldberg 1985).

The RDD group had similar significant correlations between illness duration, well period and MRSI. Number of episodes and age of onset do not figure in the correlations as also with other intercorrelations unlike in case of the BAD group where all illness variables seem to intercorrelate. This may be a reflection on the greater difficulty in delineating RDD episodes than BAD episodes. The negative correlations between age at onset and QOL ‘social domain’ suggest that later age at onset would associate with higher ‘social domain’ QOL. Age at onset is positively correlated to perceived quality of mental health (QOL 1) – so shorter the duration of illness, better quality of mental health is perceived by the person. Illness period and number of episodes correlates positively with dysfunction on DAS ‘assets and/or liabilities’ suggesting that as ill period or number of episodes increases so does dysfunction in this area and vice versa. QOL 2 perceived health negatively correlates with illness duration and well period – hence there is higher perceived health with lesser illness duration; however, the association with well period is difficult to explain.

DAS ‘social role’ dysfunction is positively correlated with DAS ‘overall behavior’ dysfunction and DAS dysfunction on ‘social supports’. Hence, they tend to move in the same direction. DAS ‘social roles’ scores relate inversely with the ‘assets and /or liabilities’ scores. Furthermore DAS ‘overall behavior’ is negatively correlated to QOL ‘environmental domain’ scores. QOL ‘social domain’ is negatively correlated to DAS dysfunction ‘social supports’.

In summary there is a pattern of correlations positive and negative between the illness variables and QOL /DAS variables and between QOL and DAS variables but not so obviously between the illness variables themselves. This is in striking contrast to the findings evident in the BAD group and is in keeping with literature in this area (Coryell et al. 1992; Bauwens et al. 1992; Goldberg 1995). Despite the use of direct enquiry, life charts and reviewing available records there may be difficulty in delineating illness variables especially in the RDD group.

The present study indicates that the two groups did not differ significantly in their Quality of life but more significantly in Disability measures in their interepisode period. Larger sample frame, assessment for chronic comorbid medical illnesses and comparison with healthy controls may produce more robust statistical findings and would provide explanations for the stray contradictory observations that have emerged in this study.

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