A Dissertation on

"STUDY OF THE DIFFERENCES IN THE QUALITY OF LIFE AND DISABILITY AMONG PATIENTS WITH SCHIZOPHRENIA AND BIPOLAR DISORDERS AND ASSESSMENT OF THE BURDEN AMONG THEIR CARE GIVERS"

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CERTIFICATE

This is to certify that this dissertation entitled **"STUDY OF THE DIFFERENCES IN THE QUALITY OF LIFE AND DISABILITY AMONG PATIENTS WITH SCHIZOPHRENIA AND BIPOLAR DISORDERS AND ASSESSMENT OF THE BURDEN AMONG THEIR CARE GIVERS",** Submitted by **DR.DEVI D** to the faculty of PSYCHIATRY, The Tamil Nadu Dr. M.G.R. Medical University, Chennai, in partial fulfillment of the requirement in the award of degree of M.D., Branch -XVIII (PSYCHIATRY), for the April 2013 examination is a bonafide research work carried out by her during the period of June 2012 to November 2012 at Government Stanley Medical College and Hospital, Chennai, under our direct supervision and guidance of Prof. **Dr. G.S.CHANDRALEKA**, Professor and Head of the department, Department of Psychiatry at Stanley Medical College, Chennai.

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This is to certify that the dissertation presented herein **"STUDY OF THE DIFFERENCES IN THE QUALITY OF LIFE AND DISABILITY AMONG PATIENTS WITH SCHIZOPHRENIA AND BIPOLAR DISORDERS AND ASSESSMENT OF THE BURDEN AMONG THEIR CARE GIVERS",** by **Dr.DEVI D,** is an original work done in the Department of Psychiatry, Government Stanley Medical College and Hospital, Chennai in partial fulfillment of regulations of the Tamilnadu Dr. M.G.R. Medical University for the award of degree of M.D. (PSYCHIATRY) Branch XVIII, under my supervision during the academic period 2010-2013.

DECLARATION

I, **Dr .DEVI D,** Solemnly declare that the dissertation **"STUDY OF THE DIFFERENCE IN THE QUALITY OF LIFE AND DISABILITY AMONG PATIENTS WITH SCHIZOPHRENIA AND BIPOLAR DISORDERS AND ASSESSMENT OF THE BURDEN AMONG THEIR CARE GIVERS",** is a bonafide work done by me during the period of May 2012 to November 2012 at Government Stanley Medical College and Hospital, under the expert supervision of **Prof.Dr.G.S.CHANDRALEKA, M.D, D.P.M.,** Professor and Head of Department Of Psychiatry, Government Stanley Medical College, Chennai.

This thesis is submitted to The Tamil Nadu Dr .M.G.R. Medical University in partial fulfilment of the rules and regulations for the M.D. degree examinations in Psychiatry to be held in April 2013.

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Date:

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CONTENTS

“STUDY OF THE DIFFERENCE IN THE QUALITY OF LIFE AND DISABILITY AMONG PATIENTS WITH SCHIZOPHRENIA AND BIPOLAR DISORDERS AND ASSESSMENT OF THE BURDEN AMONG THEIR CARE GIVERS”

INTRODUCTION

Mental disorders are health conditions that are characterized by alterations in thinking, mood or behavior associated with distress. Mental & behavioral disorders account for 12% of the global burden of the disease. In India, the prevalence of mental illnesses have estimated to be about 65/1000[1].Of which schizophrenia & mood disorders are the most disabling disorders in the category.

Schizophrenia is a clinical syndrome of variable but profoundly disruptive psychopathology that involves cognition, emotion, perception & other aspects of behavior. The prevalence of Schizophrenia is reported to be 2.3-3/1000.

Bipolar affective disorder is an episodic illness in which episodes of depression/mania/mixed/hypomania occur. BPAD s are dimensional illnesses in which patients experience during long term course of illness, fluctuating levels of severity if manic & depressive symptoms interspersed with symptom free periods[2]. The current prevalence of BPAD is 0.4 –o.5% ;1 year prevalence is 0.5-1.4% & lifetime prevalence is 2.6-7.8%.[3] In India ,the prevalence of affective disorder ranges from 0.51/thousand population[4]. Quality of life is essentially understood as a wholesome concept, encompassing all the spheres of life such as physical ,emotional ,material ,social well being ,development and activity and not merely an absence of disease or infirmity.QOL can help the clinical care in the assessment impact of the illness and its treatment

,functioning & well being. Quality of life is essentially understood in terms of psychosocial wellbeing and the perception of one's own life situations.

In his work, on the quality of life by Sullivan G, he noted the severe psychosocial deficits experienced by the people with mental illnesses and their vulnerability to stress. Decline in the quality of life, especially in the domains of environment, social relationships & employment were reported among the people with psychiatric disorders [5].

According to international classification of impairment, Disability & Handicap (ICDH ,1980),Disability is defined as interference with activities of the whole person in relation to the immediate environment [6] .Within the ambit of definition of disability under the persons with disabilities act 1995,mental illness means a disorder of the mind that results in partial/complete disturbance in thinking ,feeling & behavior which may also result in recurrent /persistent inability or reduced ability[7].

Given the magnitude and pervasiveness of the impairments associated with schizophrenia ,(Tandon et al)[8] only limited effectiveness of existing treatments and the prevalence of stigma , people with schizophrenia commonly experience a wide and diverse array of psychosocial difficulties reaching far beyond the symptoms of the disease[9].

Schizophrenia is associated with various physical abnormalities (eg. enlarged ventricles and sulci , neuronal disarray ,excess of dopamine ,and reduced frontal

blood flow) and psychological abnormalities (eg. Hallucinations , delusions, disorganized cognition ,and basic cognitive disturbances ,including input ,memory and abstraction).These abnormalities (i.e. impairments)may lead to various difficulties (i.e., activity limitations)for persons with schizophrenia, including the inability to speak in coherent sentences ,to concentrate ,and to remember and organize details. Without some or all of these abilities, an individual with schizophrenia will have great difficulty meeting certain public services. Such contextual issues as stigma and impaired social support networks can exacerbate participation restrictions by limiting access to resources and opportunities.

Bipolar affective disorder has been found to be associated with the following types of disability: increased suicidal behavior, higher unemployment, higher dependence on public assistance, lower annual income, increased work absenteeism owing to illness, decreased work productivity ,poorer overall functioning, lower quality of life and decreased life span[10].

Burden is defined as presence of problems, difficulties or adverse events which affect the (lives) of the psychiatric patient ‘s significant others[11].

Families of patients with mental illness face stigmatization, long term economical and emotional burden taking care of the patient. Illness in the patient has impact on work, social relationship and leisure activities of the

family members. This evokes different feelings in the family members, which can have an impact on the course and prognosis of the illness[12].

The concept of Quality of life, disability and burden are interrelated. These concepts have received more attention with the advent of newer drugs and better therapeutic outcome among the patients. Thus it is more prudent to concentrate on these factors to help the patients, make a constructive living.

AIM:

To assess the differences in the quality of life and disability among patients with schizophrenia and bipolar disorders and to study the burden of care among their caregivers

OBJECTIVES:

- To assess the quality of life in persons with schizophrenia in comparison with bipolar disorder.
- To evaluate the disability among persons with schizophrenia in comparison with bipolar disorder.
- To describe the burden of care among the caregivers of persons with schizophrenia in comparison with bipolar disorder.

HYPOTHESIS:

1) Quality of life remains the same between patients with schizophrenia & bipolar disorders.

2) The disability experienced between the patients of schizophrenia & bipolar disorders are similar.

3) No significant difference in the perception of the burden experienced by the caregivers of schizophrenic & bipolar disorder patients.

4) The functioning capacity of the individuals with schizophrenia and bipolar disorder are akin to each other

REVIEW OF LITERATURE:

WHO defines QOL as individual's perception of their life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. (1998).

In a study conducted in National institute for health & welfare**,** based on the health 2000 survey, 8028 Finns were interviewed in the home settings. Health-related quality of life was measured with two preference-based questionnaires, the 15D and EQ-5D. The psychotic diagnoses of the participants were assessed in the Psychoses in Finland survey, a sub study of Health 2000.The conclusions of the study were, Of all the psychotic disorders, schizoaffective disorder was associated with the largest losses of quality of life and health-related quality of life, and bipolar I disorder with equal or smaller losses than schizophrenia. However, the subjective loss of quality of life and health-related quality of life associated with psychotic disorders may be smaller than the objective disability, which warrants attention. Depressive symptoms were the most important determinant of poor quality of life in all psychotic disorders. Regarding functional limitations they observed that People with psychotic disorder and especially with schizophrenia, have a significantly lower level of functioning than general population. Schizophrenia was associated with by far the most severe functional limitations, whereas persons with affective psychoses did not

differ much from the remaining study population in many of the functions examined[13].

Lower everyday functioning capacity and greater severity of positive, negative, and depressive symptoms have been associated with worse QOL (Hofer et al., 2005b; Norman et al., 2000; Palmer et al., 2002; Sciolla et al., 2003; Corrigan & Buican, 1995; Jin et al., 2001; Ruggeri et al., 2005; Twamley et al., 2002)[14.]

Zouaril.et.al (2012) evaluated the Quality of life in outpatients with Schizophrenia & identified the factors & correlated it to an impaired QOL among them. Revealed that most affected dimensions in decreasing order were; four factors appeared strongly correlated with the impaired QOL: the professional inactivity, the episodic course with inter episode residual symptoms, the presence of side effects moderately influencing the daily performance, and a general psychopathology score for 26 at least[15].

Many researchers have acknowledged that age, sex, severity of psychopathology, side effects, patient's subjective response to medication and psychosocial adjustment are the various factors that influence the quality of life[16] .

Awad et al, proposed that the most important aspect of quality of life is how a person feels and functions in everyday life; thus patients are to be evaluated on their subjective rating of the quality of life.[17]

Lambert at al studied about the current issues in psychiatry, regarding the quality of life, functioning capacity among individuals with Schizophrenia & concluded that personality factors degree of social support and treatment interventions are protective factors in preserving the functioning capacity of the individual[18] .

The impact of psychopathology, attitude towards medication & side effects in the quality of life in schizophrenia was studied by Alex Hofer & Georg Kemmler et al in 2004. The depression/anxiety component of the PANSS, parkinsonism , and a negative attitude toward antipsychotic medication negatively influenced the patients' QOL, while cognitive symptoms and employment status correlated with higher QOL. They suggest that special attention should be paid to patients who experience anxiety and depressive symptoms or parkinsonism , to those who are unemployed, and to those with negative feelings and attitudes toward antipsychotics[19].

Quality of life in bipolar disorder:

Robb et al in , studied the illness intrusiveness, one of the quality of life measure in patients with bipolar disorder under euthymic state. He concluded that quality of life, as determined by illness intrusiveness, is compromised in subjects with BD even during periods of euthymia. BD is at least as intrusive as several chronic medical conditions. Those with a type II BD report greater impairment in all domains compared with type I[20.]

Arnold et al, compared the quality of life among patients with chronic back pain & bipolar disorders, observed that Patients with bipolar disorder had substantial impairment in health-related quality of life in comparison with the general population. Bipolar patients were less compromised in areas of physical and social functioning than chronic back pain patients but had similar impairment in mental health[21.]

Erin E Michalak[*], Lakshmi N Yatham and Raymond W Lam and his colleagues, conducted meta analytic studies on the quality of bipolar disorder on the basis of the studies met criteria for more than one category[21].

i) Assessment of QoL in patients with BD at different stages of the disorder

ii) Comparisons of QoL in patients with BD with that of other patient populations

iii) QOL instrument evaluation in patients with BD

iv)Treatment studies using QOL instruments to assess outcome in patients with BD .He concluded that, some patients with BD now experience fewer side effects and less physical symptomatology, allowing the focus to shift to other concerns, including improving inter-episode functioning and perceived[22] .

Colom et al in 2004,acknoweledged that there has been paradigm shift in the management of bipolar disorders ,considering the quality of life ,social and cognitive functioning, focus on the therapy should be changed from symptomatic recovery to functional recovery[23]

Comparison of QOL in Schizophrenia & BPAD ;

Klara Latalova , Jan Prasko ,in 2010 conducted a study on quality of life in patients with bipolar disorder ,in comparison to Schizophrenic patients & healthy controls in an outpatient department ,in of Psychiatry of Olomouc University Hospital. Patients diagnosed with bipolar disorder & schizophrenia under ICD -10 ,were recruited in to the study. After the psychiatrist's evaluation, the patients filled in the self-administered questionnaires & Q-LES-Q. His conclusions were , that the subjective quality of life in patients with bipolar disorder in clinical remission is the same as or higher than that of

healthy controls, and that the subjective quality of life in bipolar patients in clinical remission is higher than that of schizophrenic patients in clinical remission[24.]

Colin et al (2006) studied the health related quality of life among patients with schizophrenia, bipolar disorder and normal population. His observations were , Compared with schizophrenia, bipolar disorder was associated with better educational and work histories but similar QWB and SF-36 scores and more medical co morbidity[25.]

Atkinson et al made an observation that, when patients with bipolar disorder were compared with patients with schizophrenia using the Quality of Life Interview (QLI), bipolar patients reported significantly less satisfaction with their quality of life than patients with schizophrenia. In view of the findings that on objective measures of life quality (i.e., level of education, financial situation, health impairment), bipolar patients reported higher levels of achievement than schizophrenic patients.[26]

Our results suggest that the paths from clinical factors to real-world disability are consistent in a number of important ways between patients with schizophrenia and those with bipolar disorder, even when there are differences between disorders in the severity of real-world deficits. Neurocognition clearly

has an important role in functional outcomes across both disorders, although the direct and total effects are larger in schizophrenia[26.]

Disability in Schizophrenia;

Sofia Brissios et al ,studied the importance of psychosocial functioning in schizophrenia in 2011 ,observed that symptoms & the cognitive deficits affect the psychosocial functioning to a large extent[27]. Deficits in psychosocial functioning is a core feature of schizophrenia.

Carpiniello et al studied the intrinsic factors & prediction of psychosocial outcome in the disability of schizophrenia & concluded that male gender, poor social and occupational premorbid adjustment ,younger age of onset of illness, non paranoid ,deficit subtypes of schizophrenia are the factors associated with disability[28]. Higher levels of negative symptoms and neuropsychological deficits, predicts greater levels of disability compared to individuals with lesser symptoms.

Piotr Świtaj & Marta Anczewska studied the psychosocial difficulties in schizophrenia and emphasized the need to focus more towards the functioning capacity ,temperament ,personality dimensions of the schizophrenic patients[29].

Thomas H Jobe at al, on his study of long term outcome of patients with schizophrenia ,who demonstrated that people with schizophrenia consistently showed poorer course & outcomes than patients with other psychotic & non psychotic disorders[30]

FAMILY BURDEN IN BPAD :

Chakraborti et al administered Family Burden Interview Schedule to the relatives of 78 patients with affective disorder (BPAD, Recurrent MDD) and 6O patients with schizophrenia [Relatives were those who were staying with the patient currently and at least for 3 previous years and who were healthy adult aged 18 years **or** more]. They found that both the groups reported financial burden, disruption of family routine, family leisure and family interaction as burdensome. In the affective disorder group, maximum burden was experienced in the area of disruption of family routine followed by disruption of family interactions. The extent of both subjective & objective burden was significantly more in schizophrenics. Burden was principally felt in the areas of family routine, family leisure family interaction & finances. The emotional health of the care takers was affected in a number of cases, with many reporting loss of sleep or appetite & worrying[31.] .

Perlick et al employed Social Behavior Assessment Scale (SBAS) to family members of 1934 patients diagnosed as Bipolar disorder. SBAS was used to assess care givers experience of objective and subjective burden over the previous 7 months in three domains- the patient's problem behaviors (violence, unpredictability), his or her social role dysfunction at home or work, his or her adverse effects on others (the of the illness on the caregivers work, social and leisure time). They found that about 91% caregivers considered

problem behaviors as moderate to severe burden, 82 % caregivers considered adverse effects on others as burdensome, and 65% caregivers considered role dysfunction of patients as burdensome. The three most frequently cited moderately distressing behaviors were misery, irritability and 'withdrawal. 93% of caregivers reported at least a moderate degree of burden in at least one domain.54% reported severe distress in one or more, 33% in two or more ,13% in all burden domains[32].

Gupta et al reported that the total annual National Health Service (NHS) cost of managing bipolar disorder was estimated to be £ 199 million of which hospital admissions accounted for 35%. The annual direct non health care cost was estimated to be £ 86 million annually and the indirect societal cost was estimated to be 1770 million annually. The total annual cost is approximately £ 6919 per person with bipolar disorder[33].

Hirschfield et al reported the most frequently experienced psychological problems were relationship problems, including interpersonal conflicts with family & friends ,marital difficulties, job & school related problems, physical health problems alcohol and substance abuse[34].

Wang et al" has given following reasons for high cost of mood disorders. That they are chronic diseases and tend to strike earlier in the life course than other conditions with comparable prevalence[34].

Mood disorders are associated with very large decrements in multiple aspects of work performance. This leads to large aggregate losses again because mood disorders tend to strike before or during prime working years. The chronicity of mood disorders further adds to these substantial losses in productivity.

Another reason is that few people with mood disorders receive adequate care, despite the availability of effective treatments that could otherwise lead to improved clinical and work outcomes.

DISABILITY IN BPAD:

Long term outcome studies have found that nearly one third of manic patients have poor work performance & adjustment in other areas at 30 years follow- up. It has been reported that, on an average, a women with onset of the illness at 25 years of age may lose 9 years of life, 12 years of normal health and 14 years of effective functioning without sufficient treatment[35].

Coryell et al studied both unipolar and bipolar subjects and reported psychosocial impairment to be pervasive. Both groups continued to have deficits in social & leisure activities. Bipolar patients were as likely as unipolar patients to have been divorced or separated. It was concluded that psychosocial impairment associated with manic and major depression extends to all areas of

functioning and persists for years, even among individuals who experienced sustained resolution of clinical symptoms[36].

Goldberg, et al observed that many bipolar patients do not have the remitting course and favorable long term outcome. The bipolar patients had significantly poorer work functioning than the unipolar patients and the non psychotic bipolar patients had a significantly poorer overall outcome and a higher frequency of re hospitalization than the non psychotic unipolar depressed patients[37]. Mood incongruent psychotic had poor outcome. Some bipolar patients achieved remission of symptoms but had difficulty in resuming adequate psychosocial functioning after a very severe and disruptive affective syndrome has subsided. Both the bipolar & unipolar patients had some improvement in functioning from 2years to 4.5 years follow up. These data suggest, that many patients with affective disorder may have better psychosocial adjustment as they move further in time from an acute episode. A possible explanation given for this improved functioning was that many of the patients may benefit from their life experiences over time, developing more resilient and effective strategies for coping with recurrent illness.

Robb et al administered Illness Intrusiveness Rating Scale (IIRS) on 68 bipolar patients. The most highly disrupted domains were self expression, self improvement, relationships, social relationships and work. Moderately affected domains were self expression, self improvement , family relationships ,social

relationships and work .Moderately affected domains included financial situation ,marital relations ,health and diet. Least affected domains were passion ,recreation ,religious expression and community and civic involvement[38].

Burden perceived by the caregivers of schizophrenic patients;

Chien et al studied the perception of the burden among the family members of the schizophrenic patients and correlated it with the demographic variables. His observations were that the family burden correlated positively with the age, poor socio economic status, lack of social support. Negative correlation factors were the household income and the number of family members for support[39].

Magliano et al concluded that the burden perceived by the caregivers correlated positively with the symptoms, time spent with the patient and negative correlation with the levels of professional support obtained[40].

Thomas et al on the assessment of psychosocial dysfunction and family burden in patients with schizophrenia and bipolar disorder demonstrated positive correlation the burden and dysfunction, disruption of family interaction[41].

Thara et al studied about the burden perceived by the family members and devised an instrument to assess the burden among the

family members ,since family is the tremendous support for the individuals with mental illnesses in developing countries like India[42].

METHODOLOGY :

This is a comparative study assessing and evaluating some key behavioral characteristics between persons with schizophrenia in comparison with bipolar disorder attending a tertiary psychiatric facility attached to a teaching hospital.

MATERIALS:

CASES (PATIENTS)

30 patients with schizophrenia satisfying the criteria for WHO ICD 10 -F20 Schizophrenia

INCLUSION CRITERIA:

(1) Male and female patients attending the outpatient psychiatry department Stanley medical college hospital Chennai who satisfy the criteria for WHO ICD 10 - F20 Schizophrenia

(2) Participants between 20-50 years of age

(3) Willing to provide informed consent for the interview

(4) Willing to allow a caregiver to be assessed

EXCLUSION CRITERIA :

Un-cooperative patients

Refusal to participate in the research

Refusal to provide informed consent for assessment

Refusal to allow a caregiver for evaluation

CASES (CAREGIVERS):

INCLUSION CRITERIA:

Male and female individuals providing care for persons with schizophrenia

EXCLUSION CRITERIA:

Refusal to participate in the research

Refusal to provide informed consent for assessment

CONTROLS GROUP:

30 patients with bipolar disorder satisfying the criteria for WHO ICD 10 - Bipolar disorder

INCLUSION CRITERIA:

(1) Male and female patients attending the outpatient psychiatry department Stanley medical college hospital Chennai who satisfy the criteria for WHO ICD 10 – Bipolar disorder

(2) Participants between 20-50 years of age

(3) Willing to provide informed consent for the interview

(4) Willing to allow a caregiver to be assessed

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CONTROLS GROUP (CAREGIVERS):

INCLUSION CRITERIA:

Male and female individuals providing care for persons with Bipolar disorder

EXCLUSION CRITERIA:

Refusal to participate in the research

Refusal to provide informed consent for assessment

MATERIALS USED**:**

Materials used include:

A) Clinical diagnostic interview to determine case and control

B) Semi structured proforma to elicit socio economic and other information - past history, family history, personal history, premorbid personality details

C) World health organization quality of life (WHO QOL) BRFF

D) Global Assessment of Functioning (GAF)

F) Indian disability evaluation assessment scale (IDEAS)

G) Burden assessment schedule.

World health organization quality of life (WHO QOL) BREF:

WHO quality of life scale is a highly validated instrument, purports to measure the individuals perception of their life in terms of their goals, achievements and satisfaction in their social cultural and economic background. WHO QOL is a 100 item scale measuring about 24 facets of life, with 4 questions in each. WHO QOL BREF is an abbreviated version with about 26 items measuring the quality of life across four domains viz, physical, psychological ,social relationship and environmental domains. The responses range from 1 (very dissatisfied) to 5 (very satisfied) .High internal consistency with cronbach's alpha values were ranging from, .71 to .86 were established in many studies .

Burden Assessment Schedule (BAS)

This is an instrument to assess burden on caregivers of chronic mentally ill. It was developed by Thara et al to assess subjective burden in Indian population .This schedule has 20 items , focusing on the domains of spouse related issues, physical & mental health ,External support ,caregiver routine ,support of patient ,taking responsibility ,other relations ,patient's behavior and caregivers strategy. Each of these 20 items was rated on a 3 point scale marked 1-3.The responses were not at all, to some extent ,to some extent and very much.

Indian Disability Evaluation and Assessment Scale (IDEAS) ;

IDEAS was developed by the Rehabilitation committee of the Indian Psychiatric society to measure and quantify disability in mental disorders. Has four domains such as self care, interpersonal activities, communication and understanding, work .The scoring of these domains are as follows;

0- No disability

1- Mild

2- Moderate

3- Severe

4- Profound

5- **Global Assessment of Functioning Scale;**

Global assessment of functioning is based on the Axis V of DSM IV Considering psychological, social, and occupational functioning of hypothetical continuum of mental health-illness. Do not include

Impairment in functioning due to physical (or environmental) limitations.

Statistical Analysis;

Results obtained were analyzed using descriptive and interferential methods. Chi square test was used for categorical data and students t test for continuous data & Pearson's correlation for assessing the correlation between variables.

RESULT

Socio-demographic characteristics of samples and controls

TABLE-1

MEAN AGE

	Schizophrenia	**Bipolar Disorder**
Mean	33.53	33.27
Sd	8.756	11.157
t-Value	**0.103**	
p-value	**0.918 (NS)**	

The mean age was found to be greater in schizophrenic patients compared to BPAD patients, but this difference was not statistically significant.

TABLE-2

SEX DISTRIBUTION OF THE SAMPLE

Sex	**schizophrenia**		**Bipolar Disorder**		**Total**	
	N	**%**	**N**	**%**	**N**	**%**
Male	19	63.3	15	50	42	70.00
Female	11	36.7	15	50	18	30.00
Chi-square value	**1.08**					
p value	**0.3 (NS)**					

BPAD group, had equal distribution of male & female sexes. In Schizophrenia group, males were more in number but the difference was not statistically significant.

TABLE-3

OCCUPATIONAL STATUS

Occupation	**schizophrenia**		**Bipolar disorder**	
	Number	Percentage	Number	Percentage
Professional	1	3.3	1	3.3
Clerk/Farmer	2	6.7	1	3.3
Skilled Worker	6	20	6	20
Semi Skilled Worker	8	26.7	12	40
Unemployed	13	43.3	9	30
Semiprofessional			1	3.3
Chi-square	**2.86**			
p-value	**0.7 (NS)**			

In Schizophrenia group, most of the patients were unemployed ,whereas in BPAD there were more number of semiskilled workers, the distribution of professionals, semiprofessionals & skilled workers were equal in both groups.

TABLE-4

LOCALITY

Locality	**Schizophrenia**		**Bipolar Disorder**	
	Number	Percentage	Number	Percentage
Urban	4	13.3	4	13.3
Semi urban	10	33.3	8	26.7
Suburban	5	16.7	5	16.7
Semi Rural	1	3.3	1	3.3
Rural	10	33.3	12	40
Chi-square	**0.4**			
p-value	**0.9(NS)**			

In terms of locality, the distribution among the semi urban & rural groups were equal in Schizophrenia, whereas in BPAD most of them were belonging to the rural background ,but the difference was not statistically significant..

TABLE – 5

EDUCATION

Education	**Schizophrenia**		**Bipolar Disorder**	
	Number	Percentage	Number	Percentage
Illiterate	2	6.7	3	10
Primary	6	20	6	20
Secondary	13	43.3	16	53.3
Hsc	2	6.7	3	10
UG	6	20	1	3.3
PG	1	3.3	1	3.3
Chi-square	**4.28**			
p-value	**0.5**			

With reference to education, both the groups have passed through the secondary level.

TABLE – 6

SOCIO ECONOMICS STATUS

Per Capita Income	**Schizophrenia**		**Bipolar Disorder**	
	Number	Percentage	Number	Percentage
<1000			1	3.3
1000 - 5000	11	36.7	8	26.7
5000 - 10000	12	40	12	40
>10000	7	23.3	9	30
Chi-square	**1.7**			
p-value	**0.6 (NS)**			

In both the groups, most of them were belonging to middle socio economic status; the difference between the groups was not statistically significant.

TABLE – 7

FAMILY TYPE

Family Type	**Schizophrenia**		**Bipolar Disorder**	
	Number	Percentage	Number	Percentage
Nuclear	14	46.7	16	53.3
Joint	16	53.3	14	46.7
Chi-square	**0.26**			
p-value	**0.6**			

Among the Schizophrenic patients, most of them belonged to the joint family type, whereas among bipolar patients most of them belonged to nuclear family type & the difference was meager.

TABLE – 8

MARITAL STATUS

Marital Status	Schizophrenia		Bipolar Disorder	
	Number	Percentage	Number	Percentage
Married	9	30	17	56.7
Unmarried	14	46.7	12	40
Widowed			1	3.3
Divorced	3	10		
Separated	4	13.3		
Chi-square	**10.6**			
p-value	**0.03 (Significant)**			

Majority of the patients were unmarried & divorced in the Schizophrenic group of patients. In the BPAD group, most of the patients were married & the difference was significant.

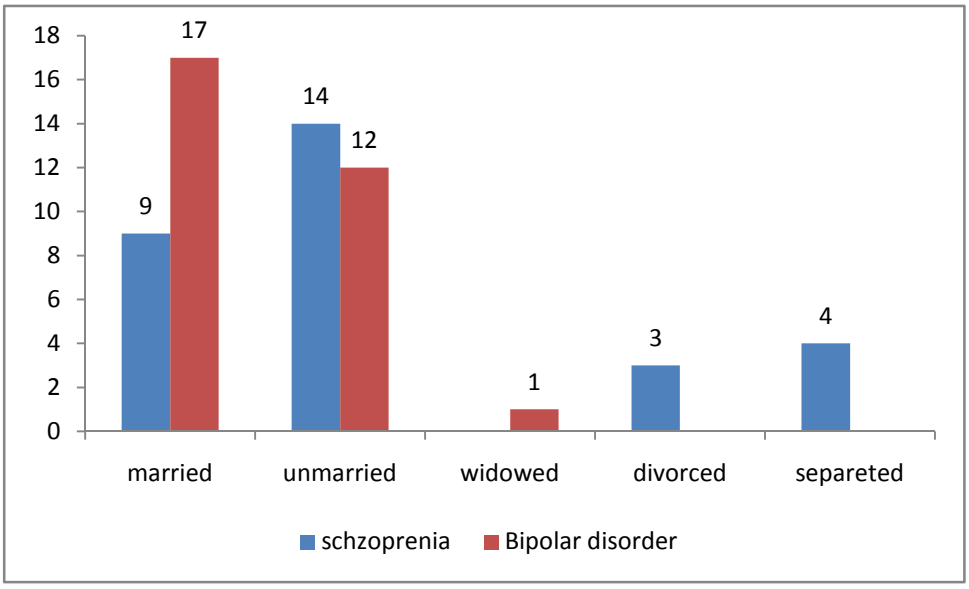


TABLE – 9

CAREGIVER

Care Giver	Schizophrenia		Bipolar Disorder	
	Frequency	Percent	Frequency	Percent
Self	1	3.3		
Spouse	9	30	17	56.7
Parents	20	66.7	11	36.7
Siblings			2	6.7

In case of schizophrenic patients, parents were the care givers for most of them & in case of BPAD, spouses were the care givers.

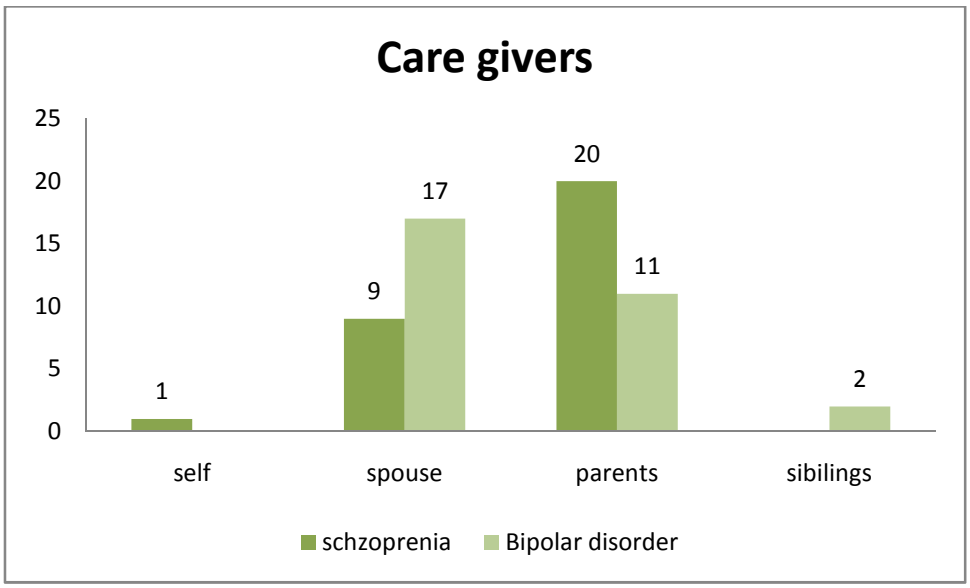


TABLE – 10

DURATION

Duration	**Schizophrenia**	**Bipolar Disorder**
Mean	2.73	2.43
Std.Deviation	0.828	0.728
t value	**1.491**	
p-value	**0.141(NS)**	

The mean duration of the illness is greater in schizophrenia is greater than bipolar disorder& is about 2.73 years, but the difference is not statistically significant.

TABLE – 11

NUMBER OF EPISODES

Number	Schizophrenia	Bipolar Disorder	
	N/A	Frequency	Percent
2		4	13.3
3		13	43.3
4		12	40
5		1	3.3
Total		30	100

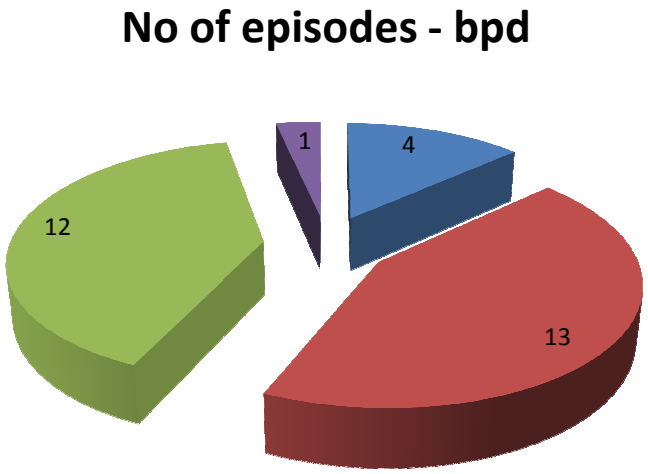


TABLE – 11

TYPES OF EPISODES

Types of Episodes	Schizophrenia	Bipolar Disorder	
	N/A	Frequency	Percent
Mostly Depressive Episodes		6	20
Mostly Manic Episodes		17	56.7
Both Depressive & Manic Episodes Of Equal Frequency		7	23.3

Episodes in Bipolar disorder; About 44% of the people experienced more than 3 episodes & in about 57 percent of the people ,it was mostly manic episodes.

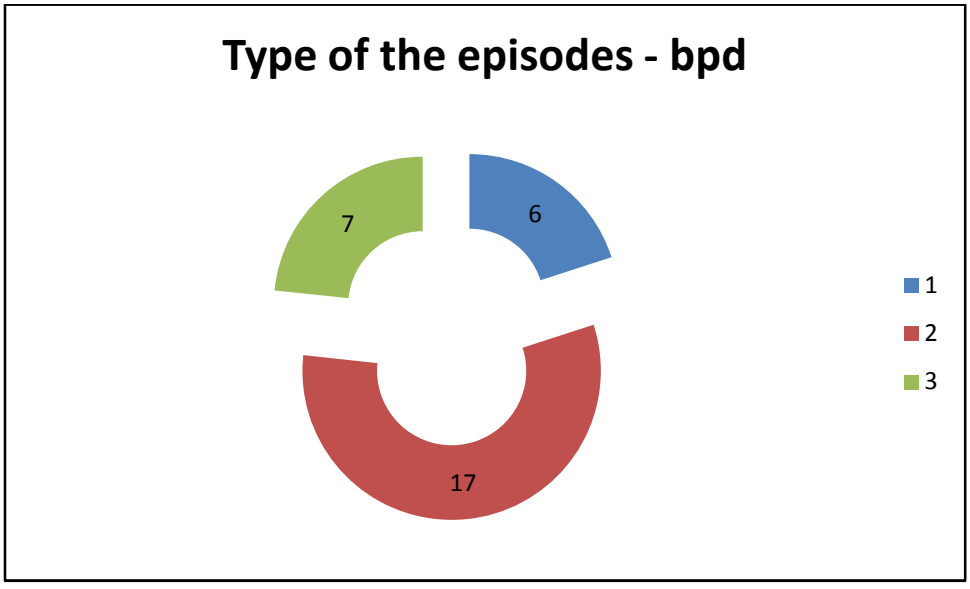


TABLE – 13

ADMISSIONS

No . Admissions	**Schizophrenia**		**Bipolar Disorder**	
	Frequency	Percent	Frequency	Percent
1	7	23.3	6	20
2	15	50	21	70
3	6	20	3	10
4	1	3.3		
5	1	3.3		
Chi-square	**4.08**			
p-value	**0.3**			

TABLE – 14

ADHERENCE TO TREATMENT

Adherence to Rx	Schizophrenia		Bipolar Disorder	
	Frequency	**Percent**	**Frequency**	**Percent**
Good	3	10	4	13.3
Fair	22	73.3	22	73.3
Poor	5	16.7	4	13.3
Chi-square	**0.25**			
p-value	**0.8**			

In both the groups, about 75% of the people were fairly adherent to the treatment.

TABLE – 15

CO MORBID MEDICAL ILLNESSES

Illness	**Schizophrenia**		**Bipolar Disorder**	
	Frequency	Percent	Frequency	Percent
Hypothyroidism	0	0	1	3.3
Hyperthyroidism	1	3.3	0	0
Diabetes mellitus	4	13.3	3	10
Hypertension	4	13.3	4	13.3
Bronchial asthma	0	0	1	3.3
Cardiovascular disorders	0	0	0	0
Seizure disorder	0	0	0	0
None	21	70	21	70
Chi-square	**3.1**			
p-value	**0.6**			

In both the groups, the most common co morbid medical illnesses were diabetes & hypertension, the incidence of hypothyroidism is higher among bipolar disorders.

TABLE – 16

SUBSTANCE USE

Substance	**Schizophrenia**		**Bipolar Disorder**	
	Frequency	Percent	Frequency	Percent
Alcohol	2	6.7	6	20
Cannabis	4	13.3	2	6.7
Lsd	0	0	0	0
Amphetamine	0	0	0	0
Cocaine	0	0	0	0
Phenycycline	0	0	0	0
None	24	79.2	22	72.6
Chi-square	**4.76**			
p-value	**0.3**			

In terms of substance use, cannabis was reported more commonly among the schizophrenic patients & alcohol among the patients with affective disorders.

TABLE – 17

SEXUAL PRACTICES

	Schizophrenia		Bipolar Disorder	
	Frequency	Percent	Frequency	Percent
Premarital	1	3.3	4	13.3
Conjugal	8	26.7	13	43.3
Extramarital	0	0	3	10
None	21	70	10	33.3

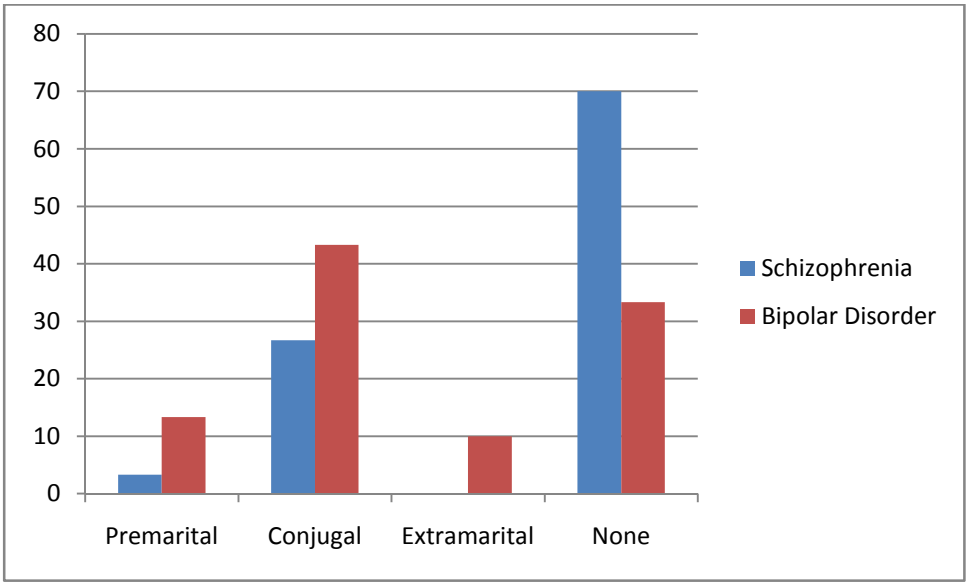


TABLE – 19

FAMILY HISTORY

Family History	**Schizophrenia**		**Bipolar Disorder**	
	Frequency	Percent	Frequency	Percent
Present	15	50	14	46.7
Absent	15	50	16	53.3
Chi-square	**0.067**			
p-value	**0.7(NS)**			

In case of family history, both the groups had positive family history in about 50% of the patients.

TABLE – 20

SUICIDE ATTEMPTS

Suicide Attempts	**Schizophrenia**		**Bipolar Disorder**	
	Frequency	**Percent**	**Frequency**	**Percent**
Present	16	53.3	20	66.7
Absent	14	46.7	10	33.3
Chi-square	**1.11**			
p-value	**0.2(NS)**			

The incidence of suicide attempts, is higher among the patients with bipolar disorders ,but patients with schizophrenia had multiple attempts if there were any.

TABLE – 21

NUMBER OF SUICIDE ATTEMPTS

No op attempts	**Schizophrenia**		**Bipolar Disorder**	
	Frequency	**Percent**	**Frequency**	**Percent**
Not applicable	14	46.7	10	33.3
Single	8	26.7	14	46.7
Multiple	8	26.7	6	20
Chi-square	**2.58**			
p-value	**0.2**			

TABLE – 22

QUALITY OF LIFE SCORE

Quality of Life Scores	Group	N	Mean	Std. Deviation	Std. Error Mean	T	P value
Quality of Life Score (Domain 1)	Sch	30	63.049	11.1308	2.0322	5.072	**0.00**
	Bpd	30	76.682	9.6376	1.7596		
Quality of Life Score (Domain 2)	Sch	30	57.17	9.44	1.723	4.444	**0.00**
	Bpd	30	68.95	11.04	2.016		
Quality of Life Score (Domain 3)	Sch	30	57.52	9.811	1.791	3.625	**0.001**
	Bpd	30	68.04	12.505	2.283		
Quality of Life Score (Domain 4)	Sch	30	59.849	9.82075	1.79302	4.037	**0.00**
	Bpd	30	70.4333	10.47684	1.9128		

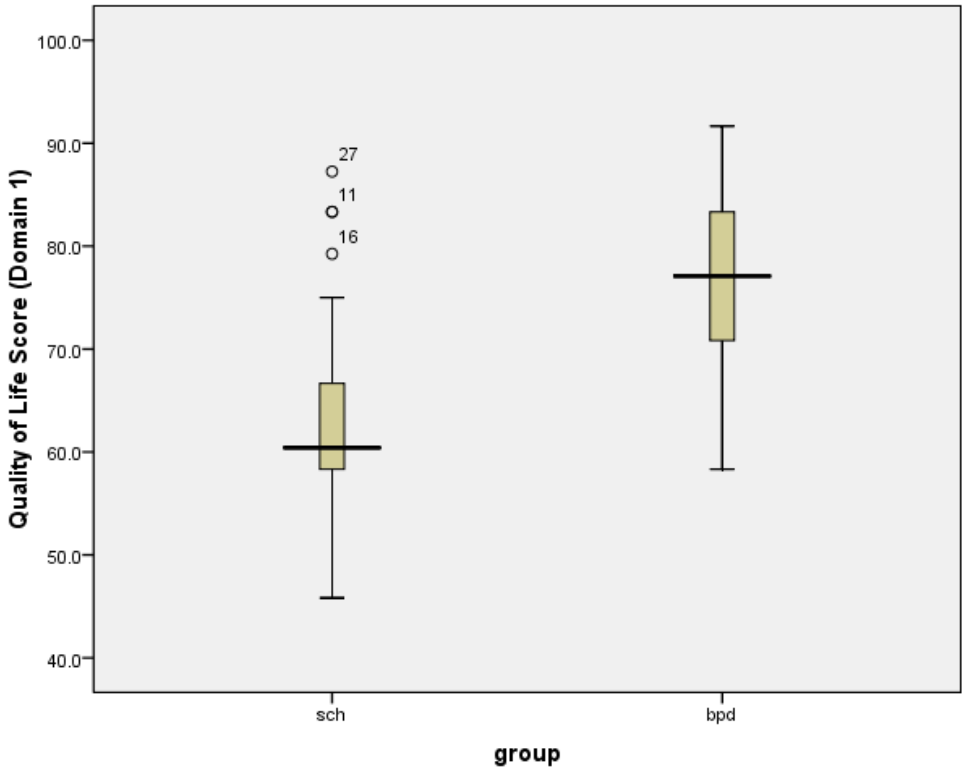
Quality of life was certainly found to be better among the patients with bipolar disorders with mean score ranging from 68-77.Where as in Schizophrenia, the mean score was found to be in the range of 57-63.In both the groups, the scores were highest in the physical domain & least in the psychological domain & social relationships. The difference in the quality of life in both the groups was statistically significant in all the domains.

Domain 1,(physical health);Of all the four domains, the score in the domain of physical health was higher. The mean score of Bipolar disorder patients was 76.682 compared to 63.049 in Schizophrenic patients. The difference was found to be statistically significant to the level of 0.00.

Domain 2(psychological domain); The scores in this domain was consistently low, compared to the other domains, in both the groups. The mean score in the group of schizophrenic patients was, 57.17 & in the bipolar group, it was found to be 68.95 and the difference was statistically significant.

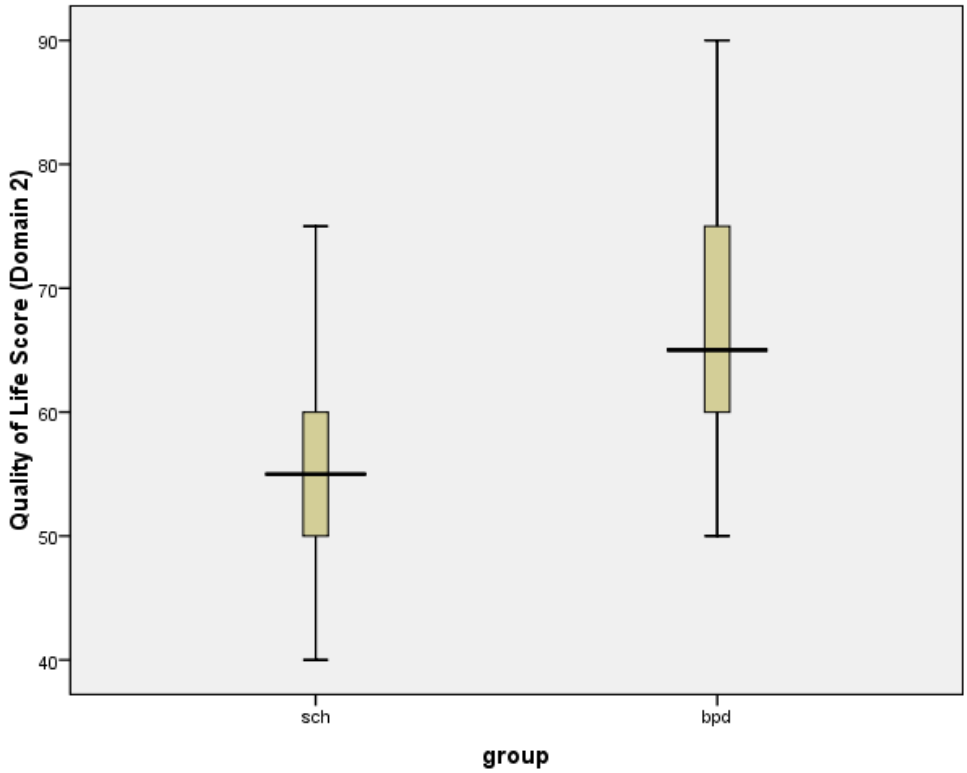
Domain 3(social relationships); Social relationships were also seemed to be consistently affected in both the groups. The mean score was 57.52 & 68.04 among schizophrenic group & patients with affective disorders respectively & the difference was statistically significant.

Domain 4(Environment); In the environmental domain the mean scores were 59.85 and 70.43 in the schizophrenia & BPAD groups respectively. The difference between the two groups were statistically significant **(0.00)**

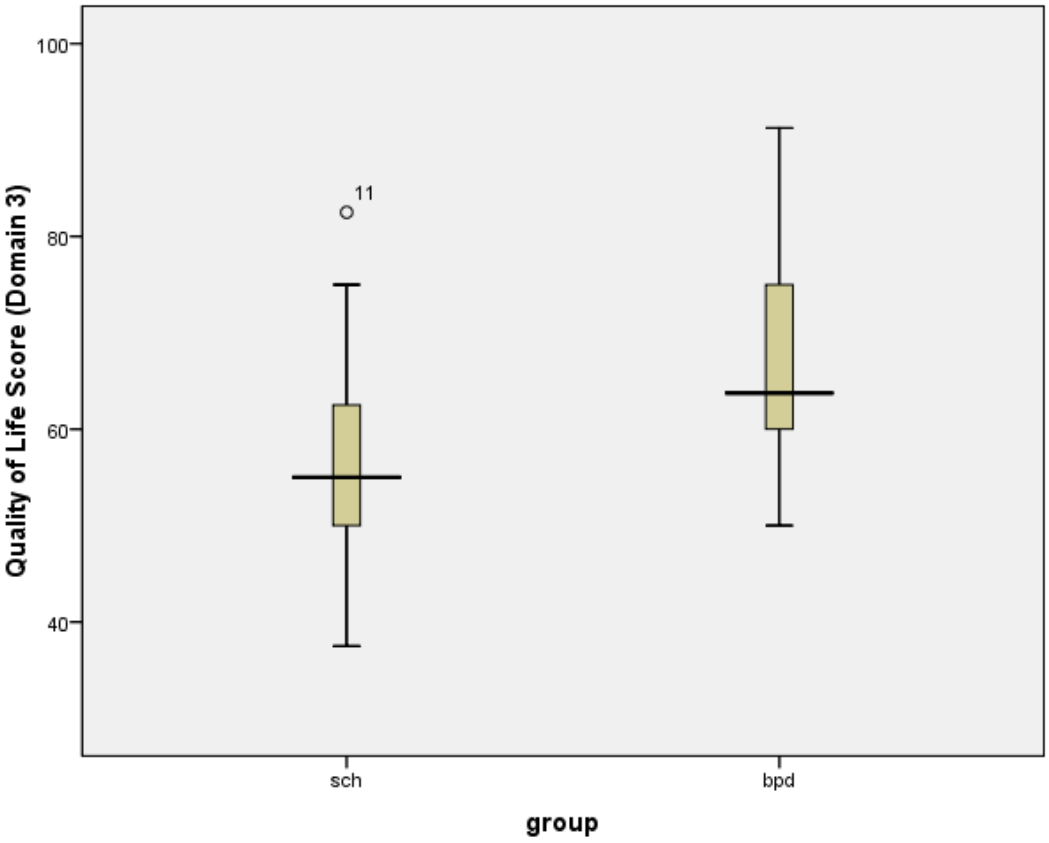


DURATION OF THE ILLNESS & THE QUALITY OF LIFE

Duration of illness had no major impact on the quality of patients with schizophrenia, where as it had significant negative correlation among patients



with bipolar affective disorders in all the four domains. Duration of illness has high correlation, in bipolar affective disorder manly in the physical domain and also in the psychological & environmental domains. Duration of the illness correlated least with the domain of social relationship.


Quality of Life Score (Domain 3)
100
80
60
40
11
sch
bpd
group

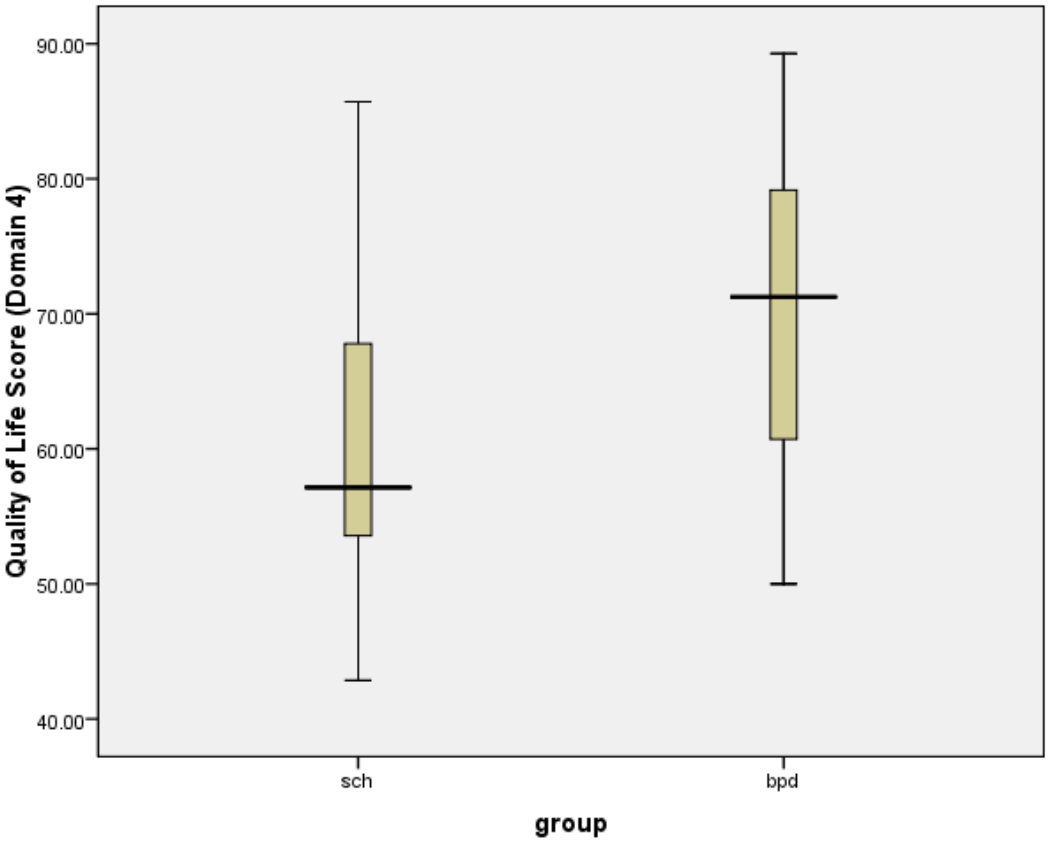

Quality of Life Score (Domain 4)
90.00
80.00
70.00
60.00
50.00
40.00
sch
bpd
group

TABLE – 23

QUALITY OF LIFE SCORE VS DURATION OF ILLNESS

QOL Score		**Schizophrenia**	**Bipolar Disorder**
		Duration	Duration
Quality of Life Score (Domain 1)	Pearson Correlation	-0.328	-.655**
	Sig. (2-tailed)	0.077	0.00
	n	30	30
Quality of Life Score (Domain 2)	Pearson Correlation	-0.232	-.533**
	Sig. (2-tailed)	0.216	0.002
	n	30	30
Quality of Life Score (Domain 3)	Pearson Correlation	-0.131	-.370*
	Sig. (2-tailed)	0.49	0.044
	n	30	30
Quality of Life Score (Domain 4)	Pearson Correlation	-0.289	-.592**
	Sig. (2-tailed)	0.122	0.001

TABLE – 24

QUALITY OF LIFE SCORE VS BURDEN AMONG THEIR CARE GIVERS

	Schizophrenia		**Bipolar Disorder**	
	BAS Score			
	Pearson Correlation	**Sig. (2-tailed)**	**Pearson Correlation**	**Sig. (2-tailed)**
QOL1	-.546**	0.002	-0.343	0.064
QOL2	-.458*	0.011	-.598**	0.00
QOL3	-.447*	0.013	-.412*	0.024
QOL4	-.683**	0.00	-.384*	0.036

Quality of life has significant negative correlation with the perceived burden among the care givers ,in all the four domains among the patients with affective disorders, whereas in the schizophrenic group, psychological domain, environmental domain & the domain of social relationships were most affected.

Lower the quality of life of the patients , severe is the burden perceived by their care givers.

TABLE – 25

QUALITY OF LIFE VS FUNCTIONING CAPACITY OF THE PATIENTS

	Schizophrenia		**Bipolar Disorder**	
	GAF Score			
	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)
QOL1	.417*	0.022	.658**	0.00
QOL2	.433*	0.017	.656**	0.00
QOL3	0.162	0.391	.482**	0.007
QOL4	0.293	0.116	.522**	0.003

There was a definite correlation between the quality of life & functioning capacity of the individuals in both the groups. The correlation between global functioning capacity of the individual is significant especially in the physical & psychological domains, compared to the other two domains among the

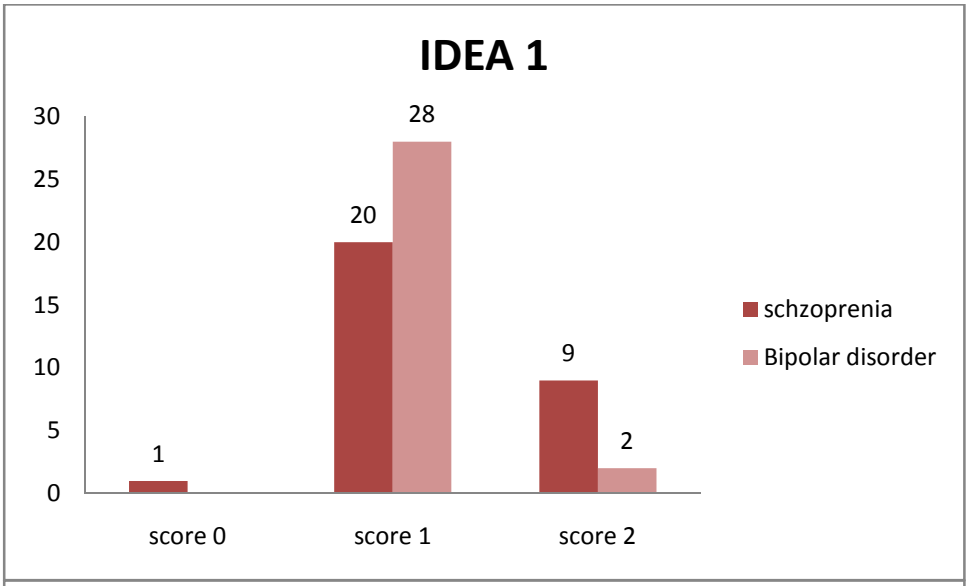
schizophrenic patients. whereas among the group of BPAD ,the correlation is significant in all the four domains.

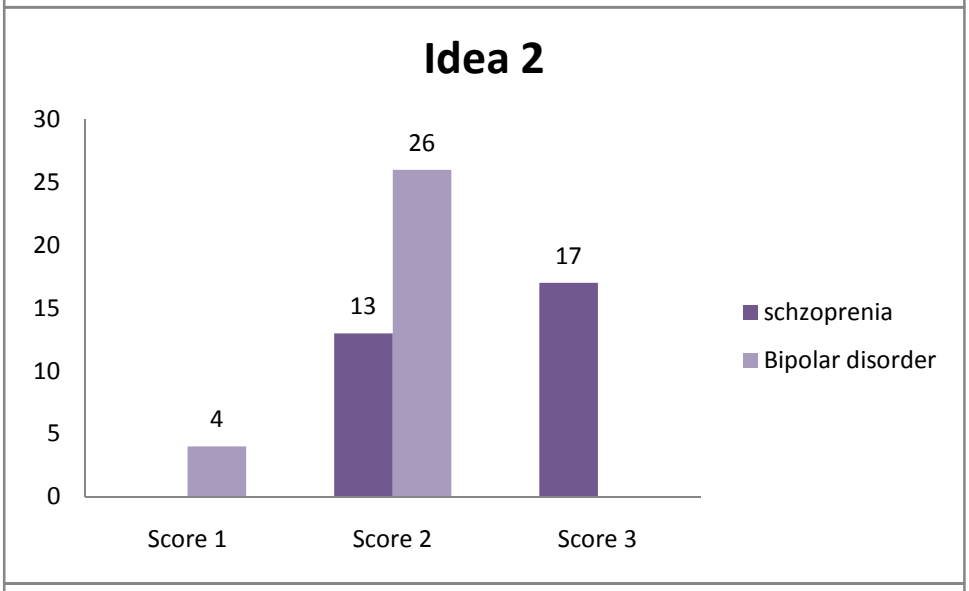
TABLE – 26

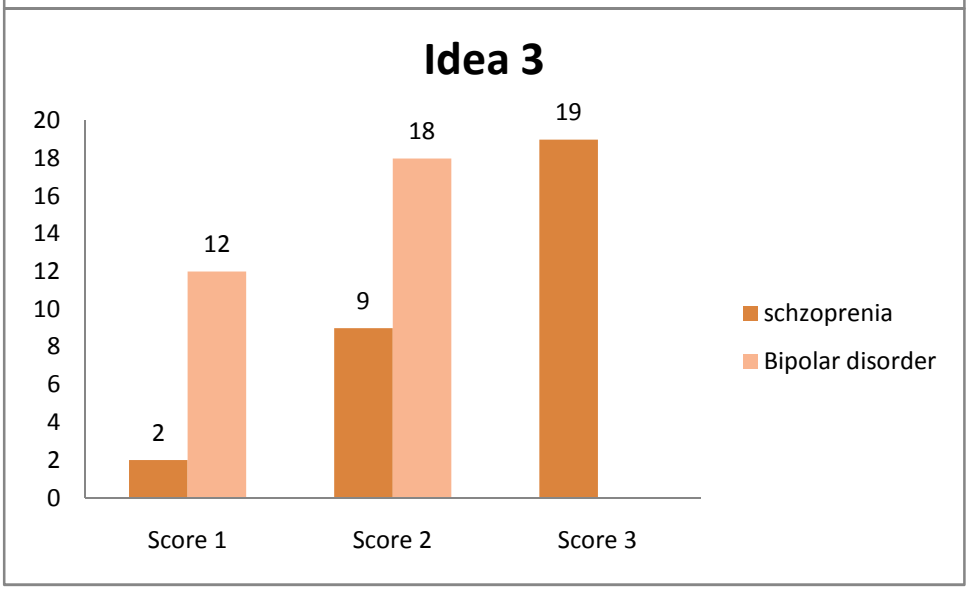
DISABILITY

	Schizophrenia		**Bipolar Disorder**	
	Frequency	Percent	Frequency	Percent
IDEAS 1				
0	1	3.3		
1	20	66.7	28	93.3
2	9	30	2	6.7
Chi-square	**6.79**			
p-value	**0.03**			
IDEAS 2				
1	0	0	4	13.3
2	13	43.3	26	86.7
3	17	56.7	0	0
Chi-square	**25.3**			
p-value	**0.00**			
IDEAS 3				
1	2	6.7	12	40
2	9	30	18	60
3	19	63.3	0	0
Chi-square	**29.14**			

p-value	**0.00**			
IDEAS 4				
1	2	6.7	4	13.3
2	13	43.3	18	60
3	14	46.7	8	26.7
4	1	3.3	0	0
Chi-square	**4.1**			
p-value	**0.2**			


IDEA 1
30
25
20
15
10
5
0
1
20
28
9
2
score 0
score 1
score 2
schzoprenia
Bipolar disorder


Idea 2
30
25
20
15
10
5
0
4
13
26
17
Score 1
Score 2
Score 3
schzoprenia
Bipolar disorder


Idea 3
20
18
16
14
12
10
8
6
4
2
0
2
12
9
18
19
Score 1
Score 2
Score 3
schzoprenia
Bipolar disorder

Disability in Schizophrenia; More than 50% of the individuals are affected in the domain of interpersonal relationship, communication & understanding with disability falling predominately in to the moderate category. The domains of self care & work are intact, when comparatively in most of the individuals.

Disability in Bipolar disorder; Disability in Bipolar affective disorder group was predominantly in the, moderate category, with most of the individuals affected in the domain of interpersonal relationships. While most of the individuals reported only mild disability in the other domains.

Self care; In the domain of the self care, about 67% of the schizophrenic patients' experienced mild disability, 30% of the patients experienced moderate disability. In the group of bipolar affective disorders, 90% of the patients experienced mild disability, whereas the rest experienced moderate disability. The difference between the groups , was found to be statistically significant.(**0.03**).

Interpersonal relationships; In the category of interpersonal relationships, 43.3% of the schizophrenic patients were moderately disabled & 56.7% of the patients were disabled. Among the category of bipolar affective disorder patients, 13.3% of the patients, experienced mild disability & 86.7% of the

patients experienced moderate disability. The difference between the two groups was found to be statistically significant **(0.00).**

Communication & Understanding; About 30% of the patients experienced moderate disability & 63.3% of the patients experienced severe disability in the schizophrenia category. Among the BPAD patients, 40% experienced mild disability & 60% moderate disability. The difference between the two groups was found to be statistically significant **(0.00).**

Work; In the domain of work & household activities , about 43.3% of the schizophrenic patients experienced moderate disability ,46.7% of the patients experienced severe disability & 3.3 % profound disability. About 13.3% experienced mild disability,60% moderate disability , 26.6% severe disability & none of them experienced profound disability in the bipolar affective disorder patients. But, the difference was not statistically significant

TABLE – 27

DISABILITY & THE DURATION OF THE ILLNESS

		Schizophrenia	**Bipolar Disorder**
		Duration	Duration
IDEAS 1	Correlation Coefficient	0.358	0.034
	Sig. (2-tailed)	0.052	0.859
	N	30	30
IDEAS 2	Correlation Coefficient	0.174	0.243
	Sig. (2-tailed)	0.358	0.196
	N	30	30
IDEAS 3	Correlation Coefficient	0.245	**.437***
	Sig. (2-tailed)	0.192	**0.016**
	N	30	30
IDEAS 4	Correlation Coefficient	.620**	0.315
	Sig. (2-tailed)	0	0.09
	N	30	30

Duration of the illness had positive correlation with all the four domains in both the groups, but the correlation was significant in the domain of work & household activities (0.00) in the schizophrenic pts .Among the BPAD patients ,the disability in the communication & understanding was best correlated with the duration of the illness & it was significant **(0.016)**

TABLE – 28

PERCEPTION OF THE BURDEN AMONG THE CAREGIVERS

Burden Score	Schizophrenia	Bipolar Disorder
	Frequency	Frequency
N	30	30
Mean	44.72	37.23
Median	45	38
Std. Deviation	4.323	3.401
t value	**7.453**	
p value	**0.00**	

In the group of schizophrenic patients,66.7 percent of the care givers were the parents & 30 percent were spouses.In the other group,about 56.7 percent of them had spouses as their caregivers.Thus the perception of the burden among their caregivers in each of the groups also varies.The mean burden assessment score among the care givers of schizophrenic patients,was found to be 44.72

and among BPAD patients ,it is 37.23 with a difference between the groups**.(0.00).**

TABLE – 29

DURATION OF THE ILLNESS VS PERCEPTION OF BURDEN AMONG THEIR CAREGIVERS

		Schizophrenia	**Bipolar Disorder**
		Duration	**Duration**
BAS Score	Correlation Coefficient	0.296	.362*
	Sig. (2-tailed)	0.112	0.05

Duration of the illness has a positive correlation in both the group of the patients, however in the BPAD patients there appears to a statistically significant correlation to score of 0.362 & p value **(0.05).**

TABLE – 30

FUNCTIONING CAPACITY AND PERCEPTION OF THE BURDEN AMONG THEIR

CAREGIVERS

		Schizophrenia	**Bipolar Disorder**
	BAS Score		
GAF Score	Pearson Correlation	**-.510****	**-.451***
	Sig. (2-tailed)	**0.004**	**0.012**

The functioning capacity of the individual has significant negative correlation with the perception of the burden among their caregivers in both the groups. Among the schizophrenic patients, the correlation score was -.510 & it was significant to the level of 0.004.In the BPAD patients, the correlation score between the functioning capacity & the perception of the burden was -.451 & it was significant to the level of 0.012.

TABLE – 31

FUNCTIONING CAPACITY OF THE INDIVIDUALS

Functioning Capacity	**Schizophrenia**	**Bipolar Disorder**
	Frequency	**Frequency**
N	30	30
Mean	49.47	62.67
Median	47.5	60
Std. Deviation	11.518	9.535
t Test	**4.835**	

p-value	**0.00**

Functioning capacity of the individuals, assessed by the GAF score, showed significant difference between the two groups. The mean score among the patients with Schizophrenia was 49.47 & in BPAD, it was 62.67 & the difference was found to be statistically significant **(0.00).**

DISCUSSION;

Socio demographic variables;

Socio demographic variables, such as marital status, care giver & the sexual practices demonstrated statistically significant differences between the two groups. The other socio demographic variables like socio economic status, education, occupation did not differ much from one another since the sample was drawn the same population. Age and Gender showed minor variations amongst, the groups but the difference was not statistically significant.

In Schizophrenia group, most of the patients were unemployed, whereas in BPAD there was more number of semiskilled workers. This concurred with the results of the previous studies conducted on the employment issues & socio psychological deficits in schizophrenia.

Rosemarie mallet, Dinesh Bhughra et al in 2002 studied the social environment and ethnic factors in schizophrenia and observed that unemployment is associated with schizophrenia, at first contact with services regardless of the ethnicity. He also proposed that increased risk of unemployment, as a consequence of altered behavior, prior to the development of frank psychosis. The increased incidence of unemployment leads to increased disability, loss of quality of life scores & impaired functioning capacity of the individual, which is also the case in our study[43.]

In our study, about 30 percent of the people were unemployed, the results of which were also similar to the findings in the previous literature. The observations of Dion et al was that, six-month follow-up of a group of patients hospitalized for a manic episode showed that only 43% of patients were employed, although 80% were symptom free or mildly symptomatic[44.]

Harrow et al 's findings showed that another group of patients hospitalized for mania were evaluated 1.7 years later, and 42% of the patients reported having steady employment throughout the follow-up period. Moreover, 23% had been unemployed for the entire period[45].

In view of the family type, most of the schizophrenic patients belonged to the schizophrenic subtype, whereas among the bipolar disorder patients, it was predominantly the nuclear family subtype. One of the plausible explanations that could attributed be, most of the patients in the schizophrenic subgroup are unmarried, separated & divorced, who are cared mostly by the parents & siblings .Thus joint family system provides the much needed security & care for these individuals with such severe psychosocial deficits.

Marital status;

In his study, Social and clinical comparison between schizophrenia and bipolar disorder type I with psychosis in Costa Rica by Adriana Pacheco et al in 2010 concluded that there were more number of individuals with singleton status

among the schizophrenic population .in comparison to the patients with bipolar disorder. Findings in our study are also consistent with the previous studies that the singleton status was predominant among the schizophrenic population[46].

Nambi et al on his study in marriage ,mental illness & legislation asserted that Patients with schizophrenia are more likely to remain single and unmarried than patients in other diagnostic groups[47]. This is particularly true of male patients and can probably be explained by the fact that women tend to be younger than men when first married and are less likely to have experienced an initial psychotic episode

Marriage is essentially a social process, in which two individuals relate on a personal & intimate basis. Marriage being a social process may depend on the ability to relate socially for its success. Schizophrenia ,a chronic illness characterized by severe psychosocial deficits , is often associated with poor outcome. Patients without regular employment & compromised socio economic status are most often unmarried & they end up being cared by the other family members. One plausible explanation regarding the difference in the marital status among the two groups, schizophrenia is perceived as a continuous illness most often ,and the patient is virtually never free of symptoms ,even during the periods of remission .Whereas in the case of affective disorders the patient is able to return to his pre morbid level of functioning, although Bipolar

disorder is often regarded as disease of uncertainty. Thus , marital outcome is better among patients with bipolar disorder compared to patients with schizophrenia.

Care givers:

Since there is significant difference in the marital status between the two groups, the types of caregivers also differ. In case of schizophrenics, the caregivers are largely parents and siblings. Whereas more than half of the patients are being cared by the spouses. Thus the two groups differ significantly based on the type of caregivers.

In an extension to this finding, the type of family also differs largely among the groups. Since Parents and siblings are more common caregivers among schizophrenics, Joint Family system is more common among this group Whereas more common caregivers for Bipolar disorder are married, hence we come across nuclear family system in the group more often.

In our study, there were statistically significant differences among the patients with schizophrenia and Bipolar disorder. Among the Schizophrenics, about 70% of the patients are not engaged in sexual relationship where as in BPAD, most of them preferred conjugal relationships and about 13.3% premarital relationships and about 10% indulged in extramarital contacts .Presence of negative symptoms, peripheral disturbances, severe social deficits could lead to the lack of sexual relationships and intimacy in most of the

patients. Premarital and Extramarital contacts can be explained on the basis of pleasure seeking behavior/increased sexual desire during the manic episodes in Bipolar affective disorder.

Co morbid Medical illnesses:

In consistent with the established studies, both Schizophrenia and BPAD had higher incidence of diabetes mellitus and hypertension compared to other chronic medical illnesses. Ryan, Thakore et al, in his study on the physical consequences of Schizophrenia and its treatment discussed about metabolic syndrome; Causative factors such as life style, poor diet and lack of exercise. Overactivity of the hypothalamic pituitary adrenal axis, leading to hypercortisolemia[48] can also result in excessive unusual fat accumulation and the effects of antipsychotic drugs also cause impaired glucose tolerance, by an effect on the leptin, which regulates the appetite and thus monitoring of lipid and glucose levels during the treatment is indicated.

Co morbidities in Bipolar disorders studied by Ranga Rama Krishnan et al, discussed about obesity, diabetes mellitus(Type 2),hypothyroidism and polycystic ovarian syndrome as the common co morbid conditions. Genetic Relationship, hypercortisolemia induced changes, effects of psychotropic medications are the possible causative factors[49].

Incidence of hypertension was high in Schizophrenia and diabetes mellitus, hypothyroidism in Bipolar disorders in our studies. The patients included in our study had mean illness duration 5years duration, Various factors such as poor diet, sedentary life style, genetic factors and psychotropic medication use need to be considered.

Substance Use in Chronic medical illnesses:

Our study revealed the findings of increased alcohol consumption about 20 percent in BPAD group and 6.7% in Schizophrenia whereas the consumption of cannabis was high among the Schizophrenic patients. This is in conjunction with the studies conducted by Rigen, Lagerberg et al, on differences in prevalence and patterns of substance use is Schizophrenia and Bipolar disorder which reported that bipolar disorder patients had higher rates of alcohol consumption and Schizophrenic patients more often use non-alcoholic drugs[50].

Loberg at al in 2009, postulated the relationship between cannabis use and Schizophrenia based on the endogenous cannabinoid system involved in the development of the effects of cannabis on symptoms of psychosis and cognition. Our study also demonstrated the higher prevalence of cannabis in the schizophrenic population[51].

Our study also demonstrated higher incidence of suicide attempts among patients with Bipolar affective disorder compared to Schizophrenic patients. However, Schizophrenic patients had many attempts compared to BPAD

patients and the suicide intent was also high. This is in tandem with the studies conducted by Nakagawa, Kawanish et al in 2011,on the comparison of characteristics of suicide attempters with schizophrenic disorders and those with mood disorders concluded that patients with schizophrenia spectrum disorders showed a lower incidence of deliberate self harm and a higher incidence of a subsequent suicide attempt as well as a higher lethality of index suicide attempt compared to patient with mood disorders[52.]

Quality of life;

Our study measured the quality of life, among the patients with schizophrenia & bipolar disorders using WHO quality of life (BREF) version 26 item scale on four domains. Viz, physical domain, psychological domain, social domain , environmental domains. Of all the four domains ,both the groups scored highest in the physical domain & least in the psychological domain & the difference between the two groups was statistically significant in all the four domains.

The results of the study is in agreement with the findings from the study of Anna Gulappi et al .(Gulappi) Anna Gulappi et al observed that quality of life is not extremely negative ,though schizophrenia is often an impairing chronic illness is results coincided with our results in the fact that patients scored better on environment and physical domains[53]. Prabhat.k.chand et al studied the

quality of life of fifty bipolar patients in remission and compared it with that of clinically stable patients with schizophrenia using QOL-BREF and Q-LES-Q scales. It was found that compared to schizophrenia group the bipolar group had significantly better quality of life in domains of physical and psychological health (WHOQOL) and all domains (Q-LES-Q). The quality of life in the bipolar group was better in the patients who were younger and had a lesser severity of daily hassle[54].

Brissios et al reported lower quality of life scores in patients with bipolar disorder in the physical and environmental domain and schizophrenic patients in the psychological domain but the difference between the groups was not statistically significant [55].

Our study results differed from the observation made by Yen et al in 2008 on quality of life and its association with insight in patients with bipolar disorder and schizophrenia in remission[56] .He reported that both bipolar disorder and schizophrenia patients had poor quality of life in all four domains.

QUALITY OF LIFE AND THE DURATION OF ILLNESS:

Quality of life was correlated with the duration of the illness in both the groups .the quality of life declined with the increase in duration of illness in both the group, however the correlation was significant among patients with bipolar affective disorder . an understandable reason can explained in this regard would

be schizophrenia is essentially a continuous illness punctuated by exacerbations whereas bipolar illness is relatively an episodic illness marked by symptom free periods in between marked by symptom free period in between . thus patients with bipolar affective disorders are relatively symptom free and even remission criteria for schizophrenia is different from other psychotic disorder and those patients are virtually never free of symptoms .the neuro cognitive functioning is impaired within few years of duration of illness in case of schizophrenia which is also associated with severe psychosocial deficits .in the bipolar disorder category if illness is of longer duration the episodes are relatively many in number leading to a poor social outcome . these findings concur with at the findings of anna et al who observed that the duration has only a minor influence on the quality of life among the patients with schizophrenia .this is possibly due to the increased knowledge about the illness and the treatment possibilities with better coping strategies as the duration of illness increases . The quality of life in the bipolar group was better in the patients who were younger and in those whom the number of episodes were few according to Prabhat et al.

DISABILITY COMPARSION – BETWEEN SCHIZOPHRENIA AND BIPOLAR DISORDER PATIENTS:

Our study assessed the level of disability , among schizophrenia and bipolar patients using Indian disability evaluation and assessment scale . our study

reported moderate to severe disability among schizophrenic patients in comparison to bipolar disorders in all four domains such as self care interpersonal relationship communication understanding and work .among the domains of self care interpersonal relationship, communication understanding the difference observed is statistically significant between the two groups .this is inconsistent with the results obtained from the study of disability in schizophrenia and bipolar mood disorder at general hospital psychiatry unit by Ismail et al in2011[57] . the results obtained from the study quoted above were such that majority of the persons with schizophrenia had severe , moderate ,profound disabilities in psycho social functions compared to bipolar disorder who reported only mild to moderate disability.

This study is also in accordance with the results of Bowie et al ,who studied the prediction of real world functional disability in chronic medical illnesses & observed that greater disability was noted among patients with schizophrenia & neuro cognitive outcome was worse in both schizophrenia & bipolar disorders [58].

Our study findings were concurrent with the observations of Thomas H Jobe at al, on his study of long term outcome of patients with schizophrenia, who demonstrated that people with schizophrenia consistently showed poorer course & outcomes than patients with other psychotic & non psychotic disorders[59].

Disability in schizophrenia ,could be explained on the basis of ,psychopathological symptoms ,emotional problems ,cognitive deficits ,temperament ,personality functions & socio demographic variables such as male gender & unemployment, which were concurrent with the observations from the previous studies .(Piotr Sultaj et al) [60]. And disability in bipolar disorder is conceived on the basis of sub syndromal symptoms & neuro cognitive impairments, which persist beyond the acute phases of the illness [61].

Our study also demonstrated the findings of significant association between , the duration of illness with disability especially in the professional front ,among schizophrenic patients. Disability in the domains of communication & understanding correlated significantly with increase in the duration of illness among patients with bipolar disorders. These findings are similar to the conclusions derived from the study “Disability in schizophrenia and its relationship with duration of illness & age of onset by Arif Ali et al, in 2009[62].The conclusions were such that the duration of illness has a significant correlation with personal areas of disability and age of onset has positive correlation with personal & occupational areas of disability.

Perception of burden among the caregivers of schizophrenics & patients with bipolar disorders;

Our study evaluated the burden perceived by the caregivers of the schizophrenic patients & bipolar affective disorders, by the burden assessment

schedule ,Thara et al .Burden among the caregivers of schizophrenic patients was comparatively high ,when compared with ,perceived patients with bipolar affective disorders.

This is in accordance with the results concluded by Chakraborti et al[31], based on the comparison of the extent & pattern of family burden among patients with schizophrenia & affective disorders. Our study concluded that financial difficulties & physical health of the family was the most affected among the patients with schizophrenia, whereas family leisure activities and family routine was the most disturbed in bipolar affective disorders. Emotional health, family interactions was affected among both the groups.

Study on caregiver coping in Bipolar disorder and Schizophrenia in 2005 by Ritu Nehra et al revealed that burden experienced by the caregivers of both BPAD and Schizophrenia and their coping strategies are the same, whereas our study demonstrated the results of perception of increased burden among the caregivers of schizophrenics.

Chakraborti et al concluded that the extent of both objective and subjective burden in relatives of schizophrenia was however significantly more than that in families with affective disorders. The reason for the perception of the increased burden among the caregivers of the schizophrenics could be attributed to the chronic nature of the illness in contrast to discrete nature of the affective disorders.

Giel et al(1983) has pointed out that a chronic illness with severe loss of insight would significantly increase the burden. Brown et al (1966)[63] also concluded that chronic course of schizophrenia comparatively imposes more burden than the schizophrenic type with episodic course.

Faden et al[64] explained this finding on the basis of discrete nature of the episodes in BPAD, the ability of the spouse to identify a forthcoming episode early during the course in BPAD, and the expectation that in between the episodes the patent will return to the normal level of functioning.

Correlation between the duration of Illness and perceived burden among their caregivers

Our study results showed weak positive correlation between the duration of illness and perceived burden among the caregivers of schizophrenia. This is in tandem with the observations made in the following studies (Srivasta et al, Nirmala et al, Trivedi et al)[65,66] caregivers of patients with BPAD showed a strong positive correlation between the burden perceived by them and the duration of illness of their patients. This can be understood on the basis that schizophrenia is associated with severe disturbances of thought and psychosocial deficits right from the onset of the illness and it is essentially an illness with chronic course. Among patients with BPAD, those with a history of longer duration of illness experienced number of episodes, severe financial difficulties, disturbances in the interpersonal milieu, disruption in the family

environment in course of time. Thus the duration of illness has a major impact on patients with BPAD compared to schizophrenic patients

.Correlation between the quality of life of the patients and the burden perceived by the caregivers.

There is significant negative correlation between the quality of life of the patients and the burden perceived by their caregivers in both the groups. Significant negative correlation is appreciated in the physical and environmental domains predominantly among the schizophrenics. Whereas the domains of psychological health & social relationships are the most correlated ones with the burden perceived among the BPAD patients.

This is explained with reference to the difference in the pattern of burden in these 2 groups of patients. In concurrence with Chakraborti et al, the burden experienced among the patients with schizophrenia was mainly financial difficulties and emotional indifference. But in case of BPAD, disruption in the family routine and disturbance in the interpersonal relationships were perceived as most troublesome factors by their key relatives.

Thus when the quality of life is being affected in the physical and environmental domains, the burden perceived by the family members is essentially high. This explains the high perceived burden among the caregivers of schizophrenics.

Burden among the caregivers and functioning capacity of the patients

The Burden perceived by the caregivers among the patients with schizophrenia and BPAD had negative correlation with the functional capacity of the individuals. The correlation was statistically significant among both the groups.

Better the functioning capacity, the burden perceived by the caregivers would be less as the individual is capable of an independent living. This correlation is more significant among schizophrenic patients compared to BPAD and the reason which can be attributed is that the patients with BPAD are most often symptom free in between the periods of remission and is able to mange without external support.

Functioning capacity of individuals with schizophrenia and Bipolar disorders

The study demonstrated that functioning capacity of the schizophrenics was more affected in relation to the individuals with BPAD assessed by GAF score. The results are similar to the one demonstrated by Bowie et al (2010). Higher incidence of disability was reported in schizophrenia and worse neuro-cognitive outcome in both schizophrenia and BPAD. Deficits in psychosocial functioning as a core feature of schizophrenia which can be observed in early stages during acute exacerbations and as part of the residual syndrome. The

functioning capacity of the individuals declined with the duration of the illness among both the groups and was better when the quality of life was maintained. Poor functioning capacity of the individuals was associated with the increased burden perceived by the caregivers and the correlation was more significant in the schizophrenic population.

Conclusion

In the era of shift in focus from the treatment and management strategies towards the improvement in quality of life and functioning capacity of the individual, this study emphasizes the need for the assessment of such variables among the patients with mental illnesses even after the prolonged periods of remission.

Both schizophrenia and bipolar disorder being chronic mental illnesses, with the persistent need for perpetual treatment ,attention towards these factors on the improvement of quality of life , reduction of disability and lowering the burden on the caregivers would expedite the process of integration of these individuals in to the community & make an effective living

SUMMARY

Schizophrenia and Bipolar Disorders are the most recognized disabling mental illnesses worldwide. This study is aimed at comparing the differences in

the quality of life and disability among the patients with schizophrenia and bipolar disorders and assessment of burden among their caregivers.

The patients were recruited into study from the psychiatry OPD of Stanley Medical College, Chennai. Consecutive sampling method was used Group 1 (cases) consisted of 30 patients diagnosed to have schizophrenia under DSM-IV TR and ICD – 10. Group 2 (controls) consisted of 30 patients diagnosed to have Bipolar Affective disorder. Written informed consent was taken from the patients to participate in this study. Sociodemographic data was collected using self designed proforma. Quality of life was measured using WHO QOL (BREF) scale. Disability assessed using Indian Disability Evaluation and Assessment Scale (IDEAS). Burden of the caregivers was measured Burden assessment schedule. Functioning capacity of the individuals was assessed by the Global assessment of functioning scale.

Quality of life among schizophrenic patients showed significant decline compared to patents with Bipolar Affective Disorder contrary to our hypothesis. The domains of physical health and environment were most affected among patients of schizophrenia. BPAD patients showed significant decline in the domain of psychological health and social relationships. Quality of life showed negative correlation with the duration of illness in both the groups. However the correlation was more significant among patients with BPAD.

Disability evaluated by IDEAS demonstrated significant difference in the disability profile of patients with schizophrenia and BPAD. Disability was more marked in the categories of interpersonal relationship, communication and understanding.

Caregivers of schizophrenics perceived more burden compared to those with BPAD patients. Burden perceived by the caregivers showed significant positive correlation with the scores of the duration of illness and disability and negative correlation with the quality of life and capacity of the individuals in both the groups.

Our approach towards the patients should focus more towards these indicators such as quality of life, disability and family burden to facilitate an overall improvement in the psychosocial functioning of the individuals with mental illnesses.

LIMITATIONS

The Limitations of the study are its small sample size and the cross sectional analysis, hence the results are not to be generalized for the whole disease population. Follow up studies would give a better picture and wholesome view of the patient's quality of life, idea about disability and the burden perceived among their caregivers. Bibliography;

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Ismail Shihabuddeen TM*, Harpreet Mehar**, Denzil A Pinto***

Delhi psychiatry journal vol. 14 no.2

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66) Expressed Emotion and Caregiver Burden in Patients with Schizophrenia

B. P. Nirmala, M. N. Vranda, and Shanivaram Reddy

PROFORMA

1)NAME

2)AGE

3)SEX 1)MALE 2)FEMALE

4)OCCUPATION ; 1)PROFESSIONAL 2)SEMI PROFESSIONAL 3)CLERKS,SHOP OWNERS ,FARMERS 4)SKILLED WORKER 5)SEMI SKILLED WORKER 6)UNEMPLOYED

5)ADDRESS; 1)URBAN 2)SEMI URBAN 3)SUBURBAN 4)SEMI RURAL 5)RURAL

6)EDUCATION; 1)ILLITERATE 2)PRIMARY 3)SECONDARY 4)HIGHER SECONDARY 5)GRADUATE 6)POST GRADUATE

7)SOCIO ECONOMI STATUS; 1)<1000 2)1000-5000 3)5000-10000 4)>10000

8)FAMILY TYPE; 1)NUCLEAR 2)JOINT

9)MARITAL STATUS; 1)MARRIED 2)UNMARRIED 3)DIVORCED 4)SEPARATED 5)WIDOWED

10)CAREGIVER;1)SELF 2)SPOUSE 3)PARENTS 4)SIBLINGS 5)FRIENDS

11)PRESENT ILLNESS; 1)SCHIZOPHRENIA 2)BIPOLAR DISORDER

12)DURATION OF THE ILLNESS IN YEARS

13)PREVIOUS EPISODES 1)1 2) 2 3)3 4) 4 5)5 6)>5

14)DETAILS OF THE PREVIOUS EPISODES;

1)MOSTLY DEPRESSIVE EPISODES

2)MOSTLY MANIC EPISODES

3) BOTH DEPRESSIVE & MANIC EPISODES OF EQUAL FREQENCY

15)FREQUENT EPISODES OF EXACERBATION 1) PRESENT 2)ABSENT

16)DETAILS ABOUT ADMISSION; 1)1 2)2 3)3 4)>3 5) NONE

17)TREATMENT ADHERENCE ;1)GOOD 2)FAIR 3)POOR 4)WORSE

18)MEDICAL ILLNESS 1)HYPOTHYROIDISM 2) HYPERTHYROIDISM 3)DIABETES MELLITUS 4)HYPERTENSION 5)BRONCHIAL ASTHMA 6) CARDIOVASCULAR DISORDERS 7) SEIZURE DISORDER 8)NONE

19)ILLICIT DRUG USE ; 1)ALCOHOL 2)CANNABIS 3)LSD 4)AMPHETAMINE 5)COCAINE 6)PHENYCYCLINE 7)NONE

20)SEXUAL PRACTICES ;1)PREMARITAL 2)CONJUGAL 3)EXTRAMARITAL 4)NONE

21)FAMILY HISTORY ; 1) PRESENT 2) ABSENT

22)SUICIDE ATTEMPT ;1)PRESENT 2)ABSENT

23)NO OF SUICIDE ATTEMPTS; 1)SINGLE 2)MULTIPLE

24)QUALITY OF LIFE SCORE ;DOMAIN 1

25) QUALITY OF LIFE SCORE ;DOMAIN 2

26) QUALITY OF LIFE SCORE ;DOMAIN 3

27) QUALITY OF LIFE SCORE ;DOMAIN 4

28)INDIAN DISABILITY EVALUATION ASSESSMENT SCALE ; SELF CARE SCORE

29) INDIAN DISABILITY EVALUATION ASSESSMENT SCALE;INTERPERSONAL ACTIVITIES

30) INDIAN DISABILITY EVALUATION ASSESSMENT SCALE;COMMUNICATION&UNDERSTANDING

31) INDIAN DISABILITY EVALUATION ASSESSMENT SCALE;WORK PERFORMANCE

32)BURDEN ASSESSMENT SCHEDULE SCORE

33)GLOBAL ASSESSMENT OF FUNCTIONING SCORE

Name	Age	Gender	Occupation	Address	Education	Socio-Economic Status	Family Type	Marital Status	Care Giver	Diagnosis	Duration	No of Episodes	Type Of the Episodes	Exacerbations	No of Admissions
Lilavathy	24	2	5	5	2	2	2	2	3	1	2	N/A	N/A	2	1
Gopi	45	1	6	1	4	2	2	1	2	1	4	N/A	N/A	1	3
SakthiVel	36	1	4	5	3	2	2	1	2	1	3	N/A	N/A	1	3
Kumar	34	1	4	1	3	3	2	4	3	1	3	N/A	N/A	1	2
Govindhan	42	1	5	5	1	2	1	2	2	1	3	N/A	N/A	1	2
srinivasulu	34	1	5	2	3	2	1	1	2	1	3	N/A	N/A	1	2
Shankar	35	1	6	3	3	3	2	2	3	1	3	N/A	N/A	1	3
Dharmaraj	38	1	6	2	2	3	2	3	3	1	4	N/A	N/A	1	4
Prathap	29	1	6	2	2	3	2	2	3	1	3	N/A	N/A	1	2
Kamal	21	1	5	5	3	3	2	2	3	1	3	N/A	N/A	1	2
Vijayalakshmi	29	2	4	1	6	4	1	2	3	1	2	N/A	N/A	1	1
Prem kumar	26	1	5	3	3	2	1	2	3	1	2	N/A	N/A	1	3
Shanthi	44	2	4	2	2	3	1	1	2	3	1	N/A	N/A	1	2
Meena	34	2	6	5	4	2	2	3	3	1	3	N/A	N/A	1	2
Prema	45	2	6	5	3	2	2	4	3	1	4	N/A	N/A	1	1
Devendran	26	1	5	5	3	3	1	2	3	1	2	N/A	N/A	1	2
Vijayaraghavan	25	1	1	2	5	4	2	2	3	1	2	N/A	N/A	1	1
Saritha	30	2	6	5	5	3	1	4	3	1	3	N/A	N/A	1	3
Rajashekar	26	1	4	3	3	3	2	1	2	1	2	N/A	N/A	1	1
Vijaya	48	2	5	5	1	3	1	1	1	5	3	N/A	N/A	1	2
Saravanan	27	1	6	4	3	2	1	2	3	1	3	N/A	N/A	1	1
Siddhu Reddy	39	1	3	1	5	4	1	1	2	1	2	N/A	N/A	1	2
Sridevi	24	2	3	2	5	4	1	2	3	1	2	N/A	N/A	1	5
Rabiya	34	2	6	2	5	4	2	2	3	1	2	N/A	N/A	1	2
Ashraf Ali	50	1	6	3	3	4	2	1	2	1	4	N/A	N/A	1	3
Jegan	22	1	6	2	3	3	1	2	3	1	2	N/A	N/A	1	2
Shakthivel	41	1	4	2	5	4	1	4	3	1	4	N/A	N/A	1	2
Sumathi	22	2	6	5	2	2	1	2	3	1	2	N/A	N/A	1	2
Yusuf sulekha	28	2	5	2	2	2	2	3	3	1	2	N/A	N/A	1	2
Narendran	48	1	6	3	3	3	2	1	2	1	4	N/A	N/A	1	1

Name	Age	Gender	Occupation	Address	Education	Socio-Economic	Family Type	Marital Status	Care Giver	Diagnosis	Duration	No of	Type Of the	Exasberations	No of
Rekha	25	2	1	1	6	4	2	2	3	2	2	3	2	N/A	2
Sonia	21	2	4	5	3	3	1	1	2	2	2	2	2	N/A	2
Purushotham	22	1	5	1	2	4	1	2	3	3	2	3	3	N/A	2
Raja Shekh M	47	1	3	2	3	4	2	1	2	2	3	4	2	N/A	2
Malarvizhi	35	2	6	5	3	3	2	2	3	2	2	4	3	N/A	3
Saravanan	38	1	4	2	3	3	1	2	3	2	3	3	2	N/A	2
Sarathy	24	2	6	5	5	3	2	2	3	2	2	3	1	N/A	2
Uma	29	2	5	5	2	2	2	5	3	2	2	4	3	N/A	2
SriPaul	34	1	5	2	3	2	2	2	4	2	3	4	3	N/A	2
Silambarasan	21	1	5	5	3	2	1	2	3	2	2	3	2	N/A	1

Eshwari	28	2	4	2	3	4	1	1	2	2	1	2	2	N/A	1
Lakshmanan	53	1	6	3	3	3	2	1	2	2	3	4	3	N/A	2
Raju	36	1	5	3	1	2	1	1	2	2	3	3	2	N/A	1
Azhageshwari	32	2	6	1	3	4	2	1	2	2	2	2	2	N/A	1
Seniyammal	48	2	5	5	2	2	1	1	2	2	3	5	1	N/A	3
KalaiSelvi	22	2	5	5	3	2	2	1	2	2	2	3	2	N/A	2
Amul	38	2	5	5	1	1	1	1	2	2	2	4	2	N/A	2
Soundaravalli	44	2	6	2	4	4	2	2	4	2	4	4	1	N/A	2
Sivaprakasam	19	1	6	5	4	3	1	2	3	2	2	3	1	N/A	2
Harikrishnan	33	1	5	3	3	3	2	1	2	2	3	3	2	N/A	2
Jennifer	19	2	2	2	3	3	1	2	3	2	1	2	2	N/A	1
Thyagarajan	46	1	6	4	2	2	1	1	2	2	3	4	3	N/A	2
Vijay	30	1	4	1	2	4	1	1	2	2	2	3	2	N/A	1
Parthasarathy	55	1	6	3	4	3	1	1	2	2	3	4	3	N/A	2
Venkatesh Ba	41	1	4	2	3	4	2	1	2	2	3	4	2	N/A	3
Maragadham	51	2	5	5	1	2	2	1	2	2	4	4	1	N/A	2
Jeyalakshmi	38	2	5	5	2	3	1	1	2	2	3	4	1	N/A	2
Rajesh Khann	32	1	4	3	3	4	1	1	2	2	2	3	2	N/A	2
Parvathi	18	2	6	5	3	3	2	2	3	2	2	3	2	N/A	2
Aravind	19	1	5	2	3	3	1	2	3	2	2	3	2	N/A	2