



# A Comparative Study of Quality-of-Life Measurements in Generalized Anxiety Disorder Versus Unipolar Depressive Disorder, before and after Treatment

Prashanth Boralingaiah<sup>1\*</sup>; Manoj Govindarajulu<sup>2\*</sup>; Saket Nath Tiwari<sup>3</sup>; Farook Valiyaveetil Mohammed<sup>4</sup>; Sindhu Ramesh<sup>2</sup>; Timothy Moore<sup>2</sup>; Muralikrishnan Dhanasekaran<sup>2\*</sup>

<sup>1</sup>Department of Psychiatry, ESIC Medical College, Bengaluru, India.

<sup>2</sup>Department of Drug Discovery and Development, Harrison School of Pharmacy, Auburn University, AL, USA.

<sup>3</sup>Department of Psychiatry, District MMG Hospital, Ghaziabad, India.

<sup>4</sup>Department of Psychiatry, St Joseph's Hospital, Ernakulum, Kerala, India.

**\*Corresponding Author(s): Manoj Govindarajulu<sup>1</sup> & Prashanth Boralingaiah<sup>2</sup>**

<sup>1</sup>Department of Drug Discovery and Development, Harrison School of Pharmacy, 116B 720 S. Donahue Dr. Auburn University, USA.

Tel: 334-444-6881; Email: myg0003@auburn.edu

<sup>2</sup>Department of Psychiatry, ESIC Medical College & Research Hospital, Bengaluru, India.

Email: drbprashanth@gmail.com

## Abstract

**Background and Objectives:** Quality of Life (QOL) is a broad multi-dimensional concept that usually includes subjective evaluations of both positive and negative aspects of life. This study was done to understand the relationship of Unipolar Depressive Disorder-QOL and Generalized Anxiety Disorder-QOL, before and after treatment and compare the degree of QOL outcomes in the two respective groups.

**Method:** 55 patients with Unipolar Depressive Disorder (UDD Group), 53 patients with Generalized Anxiety Disorder (GAD Group) and 54 Controls were studied using WHOQOL-BREF scale. It was administered once at the time of recruitment in the study and again after treatment for 3 months and once to the Controls. The comparisons of QOL were made within each Case Group (Intra-Case Group), before and after treatment, between the 2 Case Groups (Inter-Case Group) in terms of degree of improvement in QOL after 3 months of treatment to discern which of the two disorders show better QOL outcomes with treatment and then, between each Case Group and the Control Group, to see how close to the normal bench mark they bounce back, with treatment.

**Results:** The Mean scores of the Overall-QOL on the WHOQOL-BREF scale, were severely lowered in the patients in UDD Group and GAD Group, before starting the treatment. After treatment for 3 months the QOL scores of the UDD group raised close to the QOL levels of the normal Controls. While the GAD patients also improved quite well, they still lagged the benchmark scores of the general population.

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**Conclusions:** In both the UDD and the GAD groups, the pre-treatment QOL was profoundly lowered. After a comprehensive treatment for 3 months, the QOL in both the groups, improved significantly. But, while the UDD Group bounced back to near-normal scores of the QOL, the GAD patients still had a gap to catch up with the Controls. This indicates that the early recognition and prompt treatment of these two disorders are important in improving the Quality of Life of the patients.

## Introduction

The World Health Organization (WHO) defined health very broadly but health has traditionally been measured narrowly and from a deficit perspective, often using measures of morbidity or mortality. As per the WHO's definition, 'Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'[1]. Health is seen by the public health professionals as a multi-dimensional construct that includes physical, mental, and social domains. As medical and public health advances have led to cures and better treatments of existing diseases and delayed mortality, it was logical that those who measure health outcomes would begin to assess the population's health not only on the basis of saving lives, but also in terms of improving their quality. Today, QOL measures are increasingly employed as an outcome variable in clinical drug trials with the purpose of demonstrating how large the 'burden' of a specific mental disorder is [2].

Quality of Life (QOL) is defined, as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad concept, incorporating in a complex way the person's physical health, level of independence, social relationships, personal beliefs and their relationship to salient features of the environment. QOL includes both positive and negative dimensions embedded in the socio-cultural and environmental context [3]. Quality of Life (QOL) is also defined as 'the subjective satisfaction expressed or experienced by an individual in his physical, mental and social situation' or 'the capacity of an individual to realize his life plans' or 'the difference, at a particular period in time, between the hopes and expectations of an individual and his present experience (his current real life situation) or the Calman's Gap' [4].

The WHOQOL-100 and WHOQOL-BREF Quality of Life scales were developed by WHO with 15 international field centers (Australia, Japan, India, Spain, etc), simultaneously, to develop the Quality of Life assessment that would be applicable cross-culturally. The WHOQOL-100 allows a detailed assessment of individual facets relating to Quality of Life, it may be too lengthy for some uses, for example, in large epidemiological studies where quality of life is only one amongst many variables of interest. In these instances, assessments will be more willingly incorporated into studies if they are brief, convenient and accurate. The WHOQOL-BREF Field Trial Version has therefore been developed to look at domain level profiles which assess quality of life.

The WHOQOL-BREF Scale enables health professionals to assess changes in Quality of Life, over the course of treatment. Because the instrument was developed cross-culturally, health care providers, administrators and legislators in countries where no validated Quality of Life measures currently exist can

be confident that data yielded by work involving the WHOQOL assessments will be genuinely sensitive to their setting [5].

On an intuitive level, QOL and Depression can appear as opposing phenomena, crudely representing all the positive and negative aspects of well-being. Poor QOL is sometimes seen as a consequence of Depression. On the other hand, poor QOL may also be a precursor to Depression. In other formulations, Depression can be seen as a component of QOL. Whatever the implicit models of their interrelationships, there has been little theoretical attention or research to understand the relationship between Depression and QOL [6].

Generalized Anxiety Disorder was once considered to be associated with minimal impairment in QOL. But the link between GAD and QOL impairment, across a broad constellation of domains, is now well-established.

Many studies have been conducted to determine the improvement in the symptom profile with treatment for Depression and Generalized Anxiety Disorder, but there are relatively few studies which have tracked the Quality of Life in GAD and Depressive Disorders. Of particular clinical interest is whether the patients with Generalized Anxiety Disorder or the ones with Unipolar Depression will show more improvement in QOL with treatment. To address these issues, there have been relatively few formal research studies.

The present study seeks to advance the understanding about the conceptual relationship of Depression-QOL and Anxiety-QOL, before and after treatment and comparing the degree of QOL outcomes in the two respective groups i.e. Unipolar Depression and Generalized Anxiety Disorder, using standardized measurements.

## The aims and objectives of the study were

1. To assess the Overall Quality of Life among the patients with Unipolar Depressive Disorder before and after treatment using the WHOQOL-BREF Scale and measure the degree of improvement of QOL within this group (Intra-Group Comparisons).
2. To assess the Overall Quality of Life among the patients with Generalized Anxiety Disorder before and after treatment using WHOQOL-BREF Scale for finding the degree of improvement of QOL within this group (Intra-Group Comparisons).
3. To do Inter-Group comparisons of the Overall-QOL outcomes to see whether Depressive Group or the Anxiety Group benefits more in terms of QOL with the appropriate treatment.
4. To compare both the Case Groups (UDD Group and GAD Group) with the Control Group, as a benchmark for the QOL in the same socio-cultural milieu.

## Materials and methods

It was a Case-Control Longitudinal Study with the two Case groups, UDD Group (Unipolar Depressive Disorder Group) and GAD Group (Generalized Anxiety Disorder Group), drawn from the patients attending the Psychiatry OPD at MVJ Medical College and Research Hospital, Hoskote, Bangalore which is a Tertiary Care Referral Hospital. The study was approved by MVJ Medical College and Research Hospital. Informed consent to participate in the study was obtained from all patients partici-

pating in the study. From among the patients who were evaluated and diagnosed as either GAD or UDD cases by using ICD-10 criteria and consented voluntarily to participate in the study, were assigned to the respective Case Groups and the data was collected over a period of two years (Nov2014 - Sep2016). Age Group between 18-50 years was considered for homogeneity.

We could recruit, one by one over 2 years of study, 68 patients with UDD and 61 patients with GAD. Of them, 13 patients from UDD Group and 8 patients from the GAD Group dropped out of the study, for various reasons, over the course of 3 months follow-up in a staggered way. Finally, 55 patients with UDD, 53 patients with GAD, completed the study. For comparison, 54 Controls, who were psychiatrically asymptomatic and otherwise healthy, were taken in from the same socio-cultural milieu with closely matching socio-demographic profiles. Informed Consent was taken from them too.

For both the Case Groups and the Control Group, there was no randomization and the selection were made in a serial consecutive way, from among those who were volunteering.

A Semi-Structured Proforma was administered to assess their socio-demographic parameters. The Quality of Life (QOL) of these patients was assessed at the initial contact by using WHOQOL-BREF Scale.

The respective GAD or UDD Groups were offered standardized mainstream treatment consisting of appropriate Pharmacotherapy and Cognitive-Behavioral-Therapy sessions once a week with an emphasis on improving their QOL. Sufficient time was given for these therapies to work and consolidate the improvement in them, which is usually 3 months. QOL measurements were done again in all of those who stayed in the study, using the same scale at the end of 3 months.

WHOQOL-BREF Scale was administered to the matching Controls, for measuring their QOL as a benchmark for comparison.

Patients with other Anxiety Disorders (Social Anxiety Disorder, Phobic Anxiety Disorder, PTSD, etc) or other Depressive Disorders (Bipolar Depression, Dysthymia, etc) in the respective Anxiety & Depressive Groups, those who were suffering from clear cut psychotic disorders and substance abuse disorders, those suffering from serious or debilitating medical illnesses interfering with their responses to the questionnaire and those with Generalized Anxiety Disorder/Unipolar Depressive Disorder, who were already on treatment were excluded for avoiding heterogeneity.

Statistical analysis of the data using appropriate statistical methods, numerical and dimensional comparisons were made using the central tendencies like the Means with S.D. separately for GAD Group and UDD Group before and after the treatment. Means of each Case Group were compared with those of the other Case group as well as with the Control Group. Student's t- Test, Chi-Square Test and ANOVA were applied for finding out the significance of difference by 'p' values where appropriate. Descriptive data tables and pictorial illustrations were made.

## Results

### The data collected is summarized as follows

The Cases and the Controls, as shown in **Table 1**, did not differ significantly on any of the socio-demographic variables viz Age, Gender, Education, Occupation, Income per Month, Habitat, Marital Status, Children and the Type of Family they live in.

The Raw Scores obtained by applying WHOQOL-BREF Scale were converted to the Transformed Scores by using the Second Transformation Method as described in WHOQOL-BREF User Manual.

As revealed in the **Table 2**, The Mean Overall-QOL Score in UDD Group Before Treatment was 147.76 with a Standard Deviation of  $\pm 14.16$ . After Treatment for 3 months, the Score was 277.84 with a Standard Deviation of  $\pm 10.87$ . It means that, with treatment the Quality of Life of Depressed patients improved almost two-fold, with a 'p' value of 0.0001, which indicates Highly Significant improvement.

The Mean Overall-QOL Score in GAD before Treatment was 163.53 out of a max 400, with a Standard Deviation of  $\pm 15.04$ . After Treatment for 3 months, the Overall QOL Score amongst Anxiety Disorder patients, was 245.11 out of a max 400 with a Standard Deviation of  $\pm 13.51$ . The 'p' value at 0.0001 was Highly Significant as shown in **Table 3**. This indicates that the GAD patients improve substantially with treatment.

With the objective of knowing which Case-Group, whether Depressive patients or Anxiety Disorder patients, respond better to the relevant treatment in terms of Quality of Life, the two Case-Groups were compared with each other on their QOL scores at initial recruitment as well as after treatment.

As shown in the **Table 4**, the Overall-QOL Score for UDD Group was a Mean of 147.76 out of 400 with a Standard Deviation of 14.16 at the beginning of the study. While GAD Group, had an Overall-QOL of Mean 163.53 out of 400, with a Standard Deviation of 15.04. Though, to start with, the Depressive patients had worse QOL Scores than the Anxiety Disorder patients, with a 'p' value of 0.38 the difference was Not Significant statistically.

Depressive Disorder patients were treated with individually tailored Anti-Depressants and Cognitive-Behavioral-Therapy sessions for 3 months. Similarly, Anxiety Disorder patients were treated with individually suitable Anxiolytic medications and CBT sessions for 3 months. After the treatment, the QOL scores were measured again in both the Groups and compared with each other.

The Overall-QOL-Score for UDD Group was 277.84 with a Standard Deviation of  $\pm 10.87$ , whereas in GAD Group, the score was 245.11 with a Standard Deviation of  $\pm 13.51$ . It shows that though both the Case Groups improve in their QOL substantially with treatment, the Depressive patients are making bigger gains. With a 'p' value of 0.042, the difference is statistically Significant (**Table 5**).

**Table 6** shows the QOL comparisons between the UDD Group at the time of recruitment into the study and the Control Group. The Overall-QOL Score in UDD Group was 147.76 with a Standard Deviation of  $\pm 14.16$ , whereas for the Control Group it was 296.72 with a Standard Deviation of  $\pm 14.25$ . This showed that the UDD Group's Overall-QOL Score, Before Treatment, was just half of that of the Control Group.

After the treatment, the QOL scores were measured again in the UDD Group. The Post-Treatment QOL Scores of Depressed patients were compared with the benchmark QOL Scores of the Control Group. This comparison was aimed at knowing how far the Depressed patients catch up, in terms of QOL, with the normal population, with the benefit of treatment.

The Overall QOL Score in UDD Group, Post-Treatment, was 277.84 with a Standard Deviation of  $\pm 10.87$ , whereas the score of the Control Group was 296.72 with a Standard Deviation of  $\pm 14.25$ . That means that with just 3 months of treatment, the Depressive patients bounced back to near-normal QOL scores, catching up with the general population with a very narrow gap. Statistically too, at the end of 3 months of treatment, the difference between the Depressive and the normal population is Not Significant, with a 'p' value of 0.19 as revealed in **Table 7**.

The Overall QOL Score in GAD Group, prior to treatment, was 163.53 with a Standard Deviation of  $\pm 15.04$ . Whereas that of Control Group, it was 296.72 with a Standard Deviation of  $\pm 14.25$  (**Table 8**). This means that the Anxiety patients, to start with, have much lower Quality of Life than the normal population. Statistically, the difference was Highly Significant, with a 'p'

value of 0.0001.

After the treatment for 3 months, the QOL scores were measured again in the Anxiety Disorder patients and compared with the benchmark scores of Control Group. The overall purpose was to know to what extent the Anxiety Disorder patients catch up with the normal population, with respect to their QOL scores, after treatment.

As shown in the **Table 9**, the Overall-QOL Score In UDD Group was 245.11 with a Standard Deviation of  $\pm 13.51$  whereas that of Control Group, it was 296.72 with a Standard Deviation of  $\pm 14.25$ . This means that, though the Anxiety Disorder patients improve quite well with 3 months of treatment, they still lag behind the benchmark scores of general populations. The difference was statistically Significant, with a 'p' value of 0.024.

**Table 1:** Comparisons of the Case Groups (UDD, GAD) with the Control Group on their Socio-Demographic Profiles.

Socio-Demographic Variables	UDD Group (n=55)	Control Group (n=54)	'p' value	GAD Group (n=53)	Control Group (n=54)	'p' value
<b>Age</b>						
18-24 Yrs	13	10	0.78(NS)	9	10	0.55(NS)
25-34 Yrs	22	22		25	22	
35-50 Yrs	20	22		19	22	
<b>Gender</b>						
Male	26	29	0.56(NS)	25	29	0.49(NS)
Female	29	25		28	25	
<b>Education</b>						
Illiterate	9	16	0.06(NS)	12	16	0.17(NS)
Primary	13	12		13	12	
Secondary	14	14		9	14	
PUC	6	9		8	9	
Graduate	13	3		11	3	
Postgraduate	0	0		0	0	
<b>Occupation</b>						
Unemployed	3	1	0.60(NS)	2	1	0.53(NS)
Un/ Semi- Skilled	41	42		44	42	
Skilled	11	11		7	11	
<b>Income Per Month</b>						
<Rs. 10,000	24	16	0.15(NS)	20	16	0.46(NS)
Rs. 11,000 - Rs. 20,000	18	29		21	29	
Rs. 21,000 - Rs. 30,000	9	5		5	5	
>Rs. 30,000	4	4		7	4	
<b>Habitat</b>						
Rural	29	32	0.44(NS)	22	32	0.15(NS)
Semi-Urban	15	16		20	16	
Urban	11	6		11	6	
<b>Marital Status</b>						
Single	11	18	0.11(NS)	17	18	0.89(NS)
Married	44	36		36	36	
<b>Children</b>						
0-2 children	25	27	0.19(NS)	22	27	0.32(NS)
3-5 children	18	9		13	9	
>5 children	1	0		1	0	

Family						
Nuclear	25	24	0.91(NS)	21	24	0.61(NS)
Joint	30	30		32	30	

Note: p>0.05: Not Significant, p<0.05: Significant, p<0.01: Very Significant, p<0.001: Highly Significant.

**Table 2:** Intra-Group Comparison of Overall-QOL Scores of UDD Group: Before and After Treatment.

Overall-QOL Score in UDD Group: Before Vs. After Treatment (n=55)				
Type of QOL	Max. Possible Score	UDD Group's Scores Mean ± S.D		'p' value
		Before Treatment	After Treatment	
Overall-QOL	400	147.76 ± 14.16	277.84 ± 10.87	0.0001(HS)

Note: p>0.05: Not Significant, p<0.05: Significant, p<0.01: Very Significant, p<0.001: Highly Significant.

**Table 3:** Intra-Group Comparison of Overall-QOL Scores of GAD Group: Before and After Treatment.

GAD Group: Before Vs. After Treatment (n=53)				
Type of QOL	Max. Possible Score	GAD Group's Scores Mean ± S.D		'p' value
		Before Treatment	After Treatment	
Overall-QOL	400	163.53 ± 15.04	245.11 ± 13.51	0.0001(HS)

Note: p>0.05: Not Significant, p<0.05: Significant, p<0.01: Very Significant, p<0.001: Highly Significant.

**Table 4:** Inter-Group Comparisons (UDD Vs. GAD) on Overall-QOL Scores: Before Treatment.

Inter-Group (UDD Vs. GAD) Comparisons of Overall QOL: Before Treatment				
Type of QOL	Max. Possible Score	UDD Group's Score Mean ± S.D	GAD Group's Score Mean ± S.D	'p' value
Overall-QOL	400	147.76 ± 14.16	163.53 ± 15.04	0.38(NS)

Note: p>0.05: Not Significant, p<0.05: Significant, p<0.01: Very Significant, p<0.001: Highly Significant.

**Table 5:** Inter-Group Comparisons (UDD Vs. GAD) on Overall-QOL Scores: After Treatment.

Inter-Group (UDD Vs. GAD) Comparisons of Overall QOL: After Treatment				
Type of QOL	Max. Possible Score	UDD Group's Score Mean ± S.D	GAD Group's Score Mean ± S.D	'p' value
Overall-QOL	400	277.84 ± 10.87	245.11 ± 13.51	0.042(S)

Note: p>0.05: Not Significant, p<0.05: Significant, p<0.01: Very Significant, p<0.001: Highly Significant.

**Table 6:** UDD Group Vs. Control Group Comparisons on Overall-QOL Scores: Before Treatment.

UDD Group Vs. Control Group Comparisons on Overall-QOL Scores: Before Treatment				
Type of QOL	Max. Possible Score	UDD Group's Score Mean ± S.D	Control Group's Score Mean ± S.D	'p' value
Overall-QOL	400	147.76 ± 14.16	296.72 ± 14.25	0.0001(HS)

Note: p>0.05: Not Significant, p<0.05: Significant, p<0.01: Very Significant, p<0.001: Highly Significant.

**Table 7:** UDD Group Vs. Control Group Comparisons on Overall-QOL Scores: After Treatment.

UDD Group Vs. Control Group Comparisons on Overall-QOL Scores: After Treatment				
Type of QOL	Max. Possible Score	UDD Group's Score Mean ± S.D	Control Group's Score Mean ± S.D	'p' value
Overall-QOL	400	277.84 ± 10.87	296.72 ± 14.25	0.19(NS)

Note: p>0.05: Not Significant, p<0.05: Significant, p<0.01: Very Significant, p<0.001: Highly Significant.

**Table 8:** GAD Group Vs. Control Group Comparisons on Overall-QOL Scores: Before Treatment.

GAD Group Vs. Control Group Comparisons on Overall-QOL Scores: Before Treatment				
Type of QOL	Max. Possible Score	GAD Group's Score Mean $\pm$ S.D	Control Group's Score Mean $\pm$ S.D	'p' value
Overall-QOL	400	163.53 $\pm$ 15.04	296.72 $\pm$ 14.25	0.0001(HS)

**Note:**  $p > 0.05$ : Not Significant,  $p < 0.05$ : Significant,  $p < 0.01$ : Very Significant,  $p < 0.001$ : Highly Significant.

**Table 9:** GAD Group Vs. Control Group Comparisons on Overall-QOL Scores: After Treatment.

GAD Group Vs. Control Group Comparisons on Overall-QOL Scores: After Treatment				
Type of QOL	Max. Possible Score	GAD Group's Score Mean $\pm$ S.D	Control Group's Score Mean $\pm$ S.D	'p' value
Overall-QOL	400	245.11 $\pm$ 13.51	296.72 $\pm$ 14.25	0.024(S)

**Note:**  $p > 0.05$ : Not Significant,  $p < 0.05$ : Significant,  $p < 0.01$ : Very Significant,  $p < 0.001$ : Highly Significant.

## Discussion

In our study, both the Case Groups (UDD Group and the GAD Group) were compared to the Control Group, with regard to their Age, Education, Occupation, Income, Marital Status, Number of Children, Habitat and the Type of Family they live in. Statistically, No Significant differences were found when UDD Group was compared with the Control Group on their Socio-Demographic parameters, with the 'p' values in each of the parameters being above 0.05. Similarly; all the Socio-Demographic Parameters of GAD Group, on comparison with those of the Control Group, showed No Significant difference, as the 'p' value in each of the parameters was above 0.05. Thus, the 2 Case Groups (UDD Group and the GAD Group) and the Control Group were well matched in all the Socio-Demographic Parameters.

In the study population of 55 Depressive patients, the Quality of Life was measured twice i.e. Before and After the treatment. Before treatment, the Overall-QOL Score of the Depressive patients was 147.76 out of 400, which indicate that the QOL of the Depressed Patients is severely impaired. After treating the Depressive patients for 3 months with tailor-made Anti-depressants and Cognitive-Behavior-Therapy sessions, the QOL was assessed again. The Overall-QOL score was 277.84 out of 400. This means, with treatment, the Overall-QOL in Depressed patients improved almost two-fold. Statistically too, the difference was Highly Significant, with a 'p' value of 0.0001.

Our findings are supported by other studies, as follows: Simon et.al, 2000 [7], Yu Chen Chang et.al, 2015 [8], Berlim MT et.al, 2007 [9], Angermeyer MC et.al, 2015 [10], Miller et.al, 1998 [11], Margaret Moore et.al, 2005 [12]. However, the findings of this study, with respect to the QOL outcomes in the Depressed patients, differ from other study: Barge Schaapveld et.al, 2002 [13]. Coming to the GAD Group, among the 53 patients, the Overall-QOL measure before treatment was very low, with a Mean score of 163.53 out of 400. After treating the Anxiety Disorder patients for 3 months with appropriate Anxiolytics and CBT, their Overall-QOL improved from 163.53 to 245.11. This points out that there is almost one-and-a-half-fold increase in the Overall-QOL scores of the GAD patients, with treatment for 3 months.

These results affirm that the QOL measures in the Anxiety patients are very much lowered to start with; and after an appropriate treatment with Anxiolytics and CBT sessions, their Quality of Life can be improved to an appreciable extent. Our study is generally concordant with the following studies in see-

ing a significant relationship between the QOL and GAD: Terri L. Barrerra et al 2009 [14], Basil G. Bereza et al, 2009 [15], Juan M. Cabases et al, 2008 [16], Mauro V. Mendlowicz et al, 2014 [17], Lonnqvist et al, 2011 [18].

When it comes to the Inter-Group comparisons of the QOL outcomes between the Anxiety Disorder Group and the Depressive Group, with an aim to see which group benefits more in terms of QOL with an appropriate treatment, the interpretations are as follows:

Before starting the treatment, the Mean Overall-QOL score of UDD Group was 147.76. In the GAD Group, the score was 163.53. It means that, the Depressives had a worse QOL score than the Anxiety Disorder patients. But, statistically the difference was Not Significant, at a 'p' value of 0.38. These findings are supported by other study conducted Mark Hyman Rapaport et al, 2005, in their work on 'Quality of Life Impairment in Depressive and Anxiety Disorders' reported that Major Depressive Disorder sample had subjects with severe Quality of Life impairment. Whereas subjects in the Anxiety disorder sample are associated with mild to moderate levels of impairment on the Quality of Life Enjoyment and Satisfaction Questionnaire [19].

But, the findings of this study are at variance with those of some other studies such as Gretchen A. Brenes, 2007 Wherein they found that the impact of Anxiety and Depressive symptoms was pervasive across all domains of functioning: both Anxiety and Depressive symptoms were associated with poorer functioning in all domains of Quality of Life [20], Similarly, Deborah L et. al, 2008, reviewed 34 studies reporting data on associations between GAD and QOL, Role Functioning & Economic Costs. Results showed that the QOL, Role Impairments and Economic Burden of pure GAD were similar in magnitude to those of pure MDD [21].

After the treatment with the appropriate Anti-depressants in Depressive patients and Anxiolytics in Anxiety patients, along with Cognitive-Behavioral-Therapy sessions for both the Groups for a period of 3 months, the changes in the QOL scores were as follows: The post-treatment Overall-QOL score for UDD Group was 277.84, whereas in the GAD Group the score was 245.11. It shows that, though both the Case Groups improve in their QOL substantially, with treatment, the Depressive patients are making bigger and more impressive gains. With a 'p' value of 0.042, the difference is statistically Significant. It means that

the Unipolar Depressive patients show a bigger bounce in their QOL, with treatment, than the Anxiety Disorder patients. This can be understood by the fact that many UDD patients are only episodically ill with a return to normalcy in the interval periods, whereas the GAD patients are more chronically ill with a neurotic trait-anxiety underneath the frequently super imposed state-anxiety.

When the findings of this study on the Inter-Group comparisons between the UDD and the GAD Groups, over the QOL gains they make with treatment, were attempted to be contrasted with other studies in the literature, it became apparent that not many studies have been published, which studied the QOL outcome comparisons in these two specific groups viz., the Unipolar Depressive Patients Vs. the Generalized Anxiety Disorder patients. However, when compared with the few studies that could be accessed on this matter, the following observations can be made.

A study by Demyttenaere, 2008, administered Quality of Life Enjoyment and Satisfaction Questionnaire in Major Depressive Disorder and Generalized Anxiety Disorder, before and after treatment in a 8 week, double-blind, placebo-controlled clinical trial with Escitalopram. They observed that there is substantial improvement in patients treated with Escitalopram than with Placebo. In MDD, majority (89%) of the remitters reached 'Normal' QOL, enjoyment and satisfaction. Whereas in GAD, only 67% of the remitters reached 'Normal' QOL, enjoyment and satisfaction [22].

The findings of this study, is at variance with Wittchen HU et.al, 2000, who compared QOL in GAD and Depression and found that the impairments in QOL were similar in both the disorders [23].

Finally, when each of the two Case-Groups viz., UDD Group and GAD Group were compared with the socio-demographically-matched Controls, drawn from the general population, on the QOL measures the notable observations were as follows:

Before starting on treatment, the Overall-QOL score of the UDD Group was 147.76, whereas in the Control Group the score was 296.72 out of 400. This implied that the Overall-QOL was very much reduced in the Depressive patients when compared with the Control Group. Statistically too, the difference was Highly Significant, with a 'p' value of 0.0001.

After treating the Depressive patients for 3 months, the Overall-QOL in UDD Group improved to 277.84 against the benchmark Overall-QOL of the Control Group, which was 296.72. This reflected that with just 3 months of treatment, the Depressive patients bounced back to near-normal QOL scores, catching up with the general population with only a very narrow gap left. Statistically too, at the end of 3 months of treatment, the difference between the Depressive and the normal population is Not Significant, with a 'p' value of 0.19.

Coming to the comparisons of the GAD Patients vs. the Controls, on the QOL measures, the findings were as follows: The pre-treatment Overall-QOL score in the GAD was 163.53, whereas in the Control Group the score was 296.72, out of 400. This means that the Anxiety patients, to start with, have much lower Quality of Life than the normal population. Statistically, the difference was Highly Significant, with a 'p' value of 0.0001.

After treating the Anxiety patients for 3 months with suitable Anxiolytics and CBT, their Overall-QOL improved 245.11,

against the benchmark Overall-QOL score of the Control Group at 296.72. This means that, though the Anxiety Disorder patients improve quite well with 3 months of treatment, they still lag behind the benchmark scores of general populations. The difference was statistically Significant, with a 'p' value of 0.024.

This study has had a few limitations. The relatively small sample size did not allow for a more differential and detailed analysis of the QOL in the GAD and the UDD patients. More prolonged duration of the study with longer follow-up of each patient and further assessments of the QOL scores at 6 months, 9 months and 1 year of treatment would have probably shown further improvements in their QOL-levelling-off with the Controls. However, this was not possible in the limited scope of this study. This study used only a self-report/self-rating instrument to assess the QOL. Additional observer's reports are desirable to complement the self-report data. This study concentrated only on the assessments of the Quality of Life outcomes and has side-stepped looking at the other treatment outcomes like the symptom-relief and functional recovery. This research was done in a tertiary hospital setup, on those patients who sought high-level professional help. This poses some problems in generalizing the results to the routine Psychiatric practice in the community at large.

### Conclusions

The Pre-treatment Overall-QOL score of the Unipolar Depressive Disorder Group was severely low and the Post-treatment Overall-QOL score revealed Highly Significant improvement (almost two-fold increase). The Pre-treatment Overall-QOL score of the Generalized Anxiety Disorder patients was also very low and Post-treatment, the Overall-QOL score of the GAD patients improved almost one-and-a-half fold, which is Highly Significant.

On the Inter-Case Group comparisons i.e. UDD vs. GAD, prior to the treatment, the Overall-QOL score of the UDD Group was worse than that of the GAD Group. On the Inter-Case-Group comparisons of the Post-treatment QOL scores of the UDD patients and the GAD patients, the Overall-QOL scores showed that the UDD patients made more impressive gains than the Anxiety Disorder patients.

When the UDD Group was compared with the socio-demographically-matched Controls on their QOL measures, the Pre-treatment Overall-QOL was very much reduced in the Depressive patients. The Post-treatment Overall-QOL scores showed that the Unipolar Depressive patients bounced back to near-normal QOL levels, catching up with the general population, with only a very narrow gap left.

The GAD Group's QOL scores, when compared with those of the Control Group, the Pre-treatment Overall-QOL ratings showed that the Anxiety Disorder patients have a much lower Quality of Life than the normal population. The Post-treatment QOL scores showed that, though the Anxiety patients improve quite well with 3 months of treatment, they still lag behind the benchmark scores of the general population.

This study recommends that the Quality of Life Assessments should be routinely done in evaluating the treatment outcomes in the Depressive and Anxiety Disorder patients. The Quality of Life improvement should be one of the important therapeutic goals in treating the UDD and the GAD patients. All the Depressive and the Anxiety Disorder patients should receive a comprehensive treatment with suitable medication and psycho-social

therapies, to bring about all round improvements in them, including their Quality of Life. More studies with larger sample sizes and longer duration of follow-up of the Depressive and the Anxiety Disorder patients may be taken up to consolidate the consensus on the QOL issues affecting these patients.

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