Original Research Article

Severity of Depression and Relational Functioning

Jaymin Suthar[1], Chintan Solanki[2], Minakshi Parikh[3]

[1]Senior Resident, [2]Assistant Professor,
Psychiatry Department, GMERS, Sola Civil Hospital, Ahmedabad.
[3]Professor and Head of the Unit, Psychiatry Department, Civil Hospital, Ahmedabad, India.

Corresponding Author: Jaymin Suthar

ABSTRACT

Introduction: Major Depressive Disorder (MDD) is the most prevalent psychiatric disorders among general population. According to WHO it will be 2nd most disabling disease by 2020 after Ischemic Heart Disease.MDD has recurring and relapsing course and causes significant functional impairment.
Aims & Objective: To assess association between severity of depression and functional impairment as per patient's and relative's view.
Methodology and Analysis: Hundred patients diagnosed as having MDD according to DSM IV TR were assessed for severity of depression by administering   HAM-D scale. Disability was assessed by Global Assessment of Relational Functioning (APA,1994).
Result: Compared to patients with moderate depression, those with severe and very severe depression had significantly higher scores on Global Assessment of   Relational Functioning Scale from both patient as well as family member interviews. The difference was statistically highly significant ($p<0.0001$). This directly proportional correlation is uniformly seen across gender, age, education and occupation.
Conclusion: As severity of depression increases, patient becomes more disabled in functioning as per both the patient and informant. Therefore, the more severe the depression, the more prompt and aggressive the treatment needs to be to minimize the extent and length of disability.

Key words: major depressive disorder, Global Assessment of Functioning

INTRODUCTION

Major depressive disorder (MDD) is one of the most prevalent psychiatric disorders. Nearly 1 in every 5 people in general population suffers from MDD in their lifetime. [1] It has chronic relapsing course and it is associated with significant psychosocial disability, often exceeding that noted in common medical illnesses. [2-10] According to WHO, MDD is the 4th most disability associated disorder and will be the 2nd most disabling disease by 2020 after Ischemic Heart Disease (IHD). [11]

Due to chronic nature of illness and having many relapses and recurrences, MDD is associated with marked functional impairment not only limited to the patient but also to those persons who are close to patient's life. This leads to impairment in whole relational unit's functionality in all aspects of personal, social, occupational and daily living of life. Sadly and surprisingly as per our knowledge there are no any published studies in India which is related to severity of depression and functional impairment of relational unit as a whole.

This prompted us to take up this first of its kind study ever done with Indian depressed patients.

Aims and Objectives
- To study socio-demographic aspects of depression and functional impairment in our set up.
- To assess the association between severity of depression and functional impairment from both patient and relative's viewpoint.
- Find the association between severity of depression and level of relational functioning.

MATERIALS AND METHODS

Study setting: Study was conducted at psychiatric OPD, Civil hospital, Ahmedabad. Ethics committee approval was taken for the study.

Subjects and Method: Patients presenting with depression in psychiatric OPD in our hospital seeking treatment were recruited. Written informed consent was obtained prior to enrollment of subjects into the study. Patients were diagnosed as having Major Depressive Disorder (MDD) based on DSM-IV TR diagnostic criteria. Exclusion criteria were depression secondary to schizophrenia and dementia, co morbid general condition directly contributing to depression (e.g. hypothyroidism), co morbid substance use disorder or presence of bipolar mood disorder.

A total of hundred patients were recruited over a period of 11 months. Baseline socio-demographic and clinical variables of each patient were recorded at the time of presentation.

Instruments:

Hamilton Depression Rating Scale (HDRS) [12]

The version used in our study was 17-item interviewer rated questionnaire. The scale is already previously validated and it has high specificity and reliability. Items are scored 0 to 2 or 0 to4 with total score ranging from 0 to 50.

Global Assessment of Relational Functioning (GARF) [13]

The GARF scale can be used to indicate an overall judgment of the functioning of a family or other ongoing relationship on a hypothetical continuum ranging from competent, optimal relational functioning to a disrupted, dysfunctional relationship.

Dysfunctionality of relational unit was graded as follow: 1-20 totally dysfunctional, 21-40 seriously dysfunctional, 41-60 dysfunctionality predominate, 61-80 somewhat dysfunctional, 81-100 fully satisfactorily functional.

GARF scale is interviewer rated and already previously validated. The scale has high specificity and reliability.

Statistical analysis:

The data was tabulated in Microsoft Excel and Statistical package for Social Sciences 15 (SPSS 15) was used for further analysis. Analysis was done by chi square test, 2- tailed Pearson Correlation and student's t-test appropriately. P-value less than 0.05 were interpreted as indicating statistically significant difference.

RESULTS

Socio-Demographic Characteristics (TABLE 1):

Total of hundred patients coming for 1st time to psychiatric OPD in our setting seeking treatment were recruited.

56 patients were from lower socio economical class according to Kuppuswami scale, 43 patients were from middle and only 3 patients were from upper class. Majority (81) patients were from urban background and 19 patients were from rural background.

57 patients belong to nuclear family and 43 patients were from joint family.

The association between severity of depression among rural and urban background of patients is not statistically significant on chi square test (p>0.05). (Table A)

The association between severity of depression among patients from nuclear and joint family is not statistically significant on chi square test (p>0.05). (Table B)

Table B: Association between Severity of Depression among Patients from Nuclear and Joint Family

Family	Mild + Moderate Depression	Severe + Very severe Depression	Total
Nuclear	22	35	57
Extended/joint	15	28	43

Table A: Association between Severity of Depression among Rural and Urban Background of Patients

Locality	Mild + Moderate Depression	Severe + Very severe Depression	Total
Urban	30	51	81
Rural	7	12	19

Table 1: Socio-Demographic Characteristics

Age	Range	19-70	
	Mean (SD)	42.85 (12.86)	
Sex	Male	57	
	Female	43	
Marital status	Single	14	
	Married	70	
	Remarried	10	
	Widowed Separated Others	6	
Occupation		Head of family	Patient
	Professional	2	2
	Semi-professional	2	3
	Clerical/shop owner/farmer	5	4
	Skilled worker	29	24
	Semi skilled/unskilled worker	34	17
	Unskilled worker	21	20
	Unemployed	7	30
Education		Head of family	Patient
	Professional or honor	2	2
	Graduate or post graduate	18	21
	Immediate or post high school Diploma	17	15
	High school certificate	21	21
	Middle school certificate	14	12
	Primary school certificate	19	18
	Illiterate	9	11
Income in rupees		Head of family	patient
	>19575	15	12
	9798-19574	11	4
	7323-9797	11	4
	4891-7322	23	22
	2936-4893	18	13
	980-2935	16	12
	Up to 979	6	33
Religion	Hindu	82	
	Islam	12	
	Sikhism Christian Buddhism Jainism Others	6	
Locality	Urban	81	
	Rural	19	
Family type	Nuclear	57	
	Extended/ Joint	43	

Severity of depression – HDRS (TABLE 2)

If we look at the baseline severity than 37 patients fell to mild to moderate, 19 to severe and 44 patients having very severe depression. All the patients reported depressed mood ranging from sadness to extreme symptoms. Only 8 patients denied for any suicidal thought and 25 patients had active suicidal ideas. Around 90 patients had insomnia mainly in initial phase of sleep.

83 and 69 patients had psychomotor retardation or agitation respectively. 88 patients had psychic and somatic anxiety. 97 patients had mild to severe GI somatic complaints like loss of appetite, heavy feeling in abdomen, constipation. 92 patients had general somatic complaints like heaviness in limbs, back or head, diffuse backache, loss of energy and fatigability.

TABLE 2: Hamilton Depression Rating Scale

Question	Range	Mean (SD)	No. of patients	Patient's answer
1. Depressed Mood	1-4	2.56 (0.85)	42	Frequent weeping
2. Feelings of Guilt	0-3	0.66 (0.95)	62	Absence of guilt
3. Suicide	0-4	1.95 (0.95)	48	Wishes he/she were dead
4. Insomnia, Early	0-2	1.88 (0.38)	90	Frequent
5. Insomnia, Middle	0-2	1.17 (0.62)	59	Occasional
6. Insomnia, Late	0-2	0.64 (0.79)	24	Occasional
7. Work and Activities	1-4	2.51 (0.79)	37	Productivity decreased
8. Retardation	0-3	1.52 (0.75)	41	Obvious retardation during interview
9. Agitation	0-2	0.78 (0.59)	60	Occasional agitation
10. Anxiety Psychic	0-4	1.65 (0.95)	12	Absence of psychic anxiety
11. Anxiety Somatic	0-3	1.46 (0.82)	13	Absence of somatic anxiety
12. Somatic Symptoms, Gastrointestinal	0-2	1.3 (0.52)	97	Mild to severe Somatic GI Symptoms
13. Somatic Symptoms, General	0-2	1.29 (0.6)	92	Mild to severe Somatic general Symptoms
14. Genital Symptoms	0-2	0.86 (0.8)	60	Mild to severe genital dysfunction
15. Hypochondriasis	0-2	0.34 (0.62)	74	Absence of hypochondriasis
16. Loss of Weight	0-2	1.42 (0.62)	93	Slight to obvious weight loss
17. Insight	0-1	0.05 (0.21)	95	Insight present

Relational Functional Unit (TABLE 3):
GARF SCALE

TABLE 3

	Patient		Relative	
	Functional	Non functional	Functional	Non functional
Agreed on patterns or routines	65	35	62	38
Help meet the usual needs of each family/couple member	41	59	38	62
Flexibility for change in response to unusual demands or events	43	57	42	58
Conflicts and stressful transitions are resolved through problem-solving	11	89	25	75
Communication and negotiation	40	60	42	58
Shared undertaking and agreement about roles and appropriate tasks	61	39	52	48
Decision making is established for each functional area and subsystem (e.g. parents-spouses, siblings and individuals).	29	71	36	64
Situationally appropriate, optimistic atmosphere in the family	77	23	80	20
A wide range of feelings is freely expressed and managed within the family; and there is a general atmosphere of warmth, caring and sharing of values among all family members	67	33	75	25
Sexual relations of adult members are satisfactory	45	55	46	54

Overall dysfunctionality of relational unit as per GARF Scale

1 = **1-20 Overall:** Relational unit has become too dysfunctional to retain continuity of contact and attachment	16
2 = **21-40 Overall:** Relational unit is obviously and seriously dysfunctional; forms and time periods of satisfactory relating are rare	29
3 = **41-60 Overall:** Relational unit has occasional times of satisfying and competent functioning together, but clearly dysfunctional, unsatisfying relationships tend to predominate	31
4 = **61-80 Overall:** Functioning of relational unit is somewhat unsatisfactory. Over a period of time, many but not all difficulties are resolved without complaints	20
5 = **81-100 Overall:** Relational unit is functioning satisfactorily from self-report of participants and from perspectives of observers	4

HDRS severity And GARF (TABLE 4, 5 & 6):

37 patients had mild to moderate depression and GARF score ranging from severely dysfunctional unit to fully functional unit from both patient and relatives' prospective. 19 patients had severe MDD and GARF ranging from totally dysfunctional unit to somewhat unsatisfactorily functioning unit.

44 patients had very severe MDD as per HDRS severity and significant functional impairment in this group.

There was no any statistically significant difference found in the functional impairment of relational unit as per severity of depression between patients and their relatives (p>0.05).

There was statistically very significant relation found between the severity of depression and relational functioning of the unit as per both the patient and relative's point of view by using 2-tailed Pearson correlation coefficient (p<0.0001). It was on linear relation i.e. when severity increases, functionality decreases from both patient and relatives' prospective.

There was no any statistically significant difference found in functional impairment between male and female group (p>0.05) as per severity subsets.

Table 4: HDRS Severity And GARF From Patient And Relative's View:

HAM-D severity	GARF patient		GARF relative	
Mild + Moderate (n=37)	Range	2-5	Range	2-5
	Mean (SD)	3.67(0.75)	Mean (SD)	3.78 (0.75)
Severe (n=19)	Range	2-3	Range	1-5
	Mean (SD)	2.68 (0.48)	Mean (SD)	2.78 (0.85)
Very Severe (n=44)	Range	1-4	Range	1-4
	Mean (SD)1.81(0.75)		Mean (SD)1.93 (0.76)	

Table 5: Correlations Of Severity Of Depression And Social Dysfunction

		Relational functioning as per patient	Relational functioning as per relative	Severity of depression
Relational functioning as per patient	Pearson Correlation	1	.823(**)	.888(**)
	Sig. (2-tailed)	--	.000	.000
	N	100	100	100
Relational functioning as per relative	Pearson Correlation	.823(**)	1	.816(**)
	Sig. (2-tailed)	.000	--	.000
	N	100	100	100
Severity of depression	Pearson Correlation	.888(**)	.816(**)	1
	Sig. (2-tailed)	.000	.000	--
	N	100	100	100

** Correlation is significant at the 0.01 level (2-tailed).

Table 6: Severity Of Depression And Comparison Of Relational Functioning Between Male And Female

			GARF Score - Patient		GARF Score - Relative	
Men	Mild	n=20	Range	2-5	Range	2-5
	Moderate		Mean (SD)	3.70 (0.92)	Mean (SD)	3.70 (0.73)
	Severe	n=37	Range	1-4	Range	1-5
	Very severe		Mean (SD)	2.13 (0.79)	Mean (SD)	2.35 (0.89)
	N=57		Range	1-5	Range	1-5
			Mean (SD)	2.68 (1.12)	Mean (SD)	2.82 (1.05)
Women	Mild	n=17	Range	3-4	Range	2-5
	Moderate		Mean (SD)	3.65 (0.49)	Mean (SD)	3.88 (0.78)
	Severe	n=26	Range	1-3	Range	1-3
	Very severe		Mean (SD)	2 (0.80)	Mean (SD)	1.96 (0.82)
	N = 43		Range	1-4	Range	1-5
			Mean (SD)	2.65 (1.07)	Mean (SD)	2.72 (1.24)

DISCUSSION

Prevalence rates of depression have consistently been found to be between 1.5 and 2.5 times higher in women than men and have also been fairly stable in the age range of 18 to 64 years (Waraich et al., 2004). [14] In our results the mean age of patients is 43 years. Though women suffer more from depression, there is general belief that males try to hide their illness and function with more efficiently than the females even in severe cases. But as per our study, results suggest that there was no any statistically significant difference (p>0.05) found in functional impairment between male and female in context to depressional severity from both the patient and relative's view. This counteracts the hypothetical general belief that males, even during severe depression, try to run relational unit perfectly.

Another feature in our study regarding to sociodemographic characteristic is that majority (56) of the patients coming from lower socio-economical class. Only 3 patients were from upper class. This is the usual distribution of the clientele visiting our general hospital. This could be attributed to the long waiting period in our set up and upper class people might be reluctant to spend long time in queue. This variation may also be associated with stigma and higher class people want to hide the mental illness and may prefer private psychiatry service. Severity of depression has no any statistically significant correlation among group of rural and urban background of patients (p>0.05). There was no any correlation found with family type (nuclear or extended/joint) of patient and severity of depression as well (p>0.05).These findings were in line with the study done by Lorant et al, 2003. [15]

As stated previously, as per our knowledge this is the first study in India which correlates the association between depressional severities and how much it impacts not only the patient but overall on relational unit's functioning. As per our observation, as severity of depression increases, the quality of relational functioning as a unit decreases greatly. As GARF score decreases, as stated below, relational unit's functions hamper more severely.

Mild and moderate depression patients (37) having mean GARF score 61 to 80.

Severe depression patients (19) having mean GARF score 41 to 60.

Very severe depression patients (44) having mean GARF score 21 to 40.

Compared to patients with moderate depression, those with severe and very severe depression had significantly higher scores on Global Assessment of Relational Functioning Scale from both patient as well as family member's interviews. When correlation of severity of depression and social dysfunction was done, the difference was statistically highly significant on Pearson correlation coefficient (p<0.0001, 2-tailed) from both the patient's and relative's view. On analysis of result, we found that when there is correlation made between severity of depression, relational functional impairment of patient and relational functional impairment of patient, from relative's point of view, there is linear relationship found between depressional severity and impairment of relational unit's functioning.

Similar findings were found in the study conducted by Judd et al, San Diego, California [16] who used six points psychiatric status rating scale (PSR-MDD) for depressional severity and longitudinal interval follow up evaluation (LIFE) for functional impairment. They also found the correlation between the severity of depression and relational functioning at p<0.001 level.

Suicide accounts for nearly 1% of all deaths and nearly two-thirds of this figure occur in people with depression (Sartorius, 2001, Denmark). [17] In our study we also found that half of the patient's wishes they would be dead and 25 patients had active suicidal ideas, among them 5 patients had suicidal attempt as well. As depressional severity increased, severity of suicidal ideas and even suicidal attempt increased.

97 patients had mild to severe somatic complaints. During interview also we found that it was one of the presenting complaints especially by the patients having mild to moderate depression and they were not willing to accept that they are having depression. This finding is in accordance with similar finding in Indian depressed patients reported previously by Weiss et al (1995). [18] It has been said that people from traditional cultures may not distinguish between emotions of anxiety, irritability and depression because they tend to express distress in somatic terms (Leff J P, 1977). [19]

People with depression can find it difficult to engage in social activities, including family life and work. Depressed mood, lack of interest, agitation, insomnia all affects greatly in interpersonal relationship which can be evaluated by patient's occupational impairment. This makes the patient a burden over the family. As depression is chronic disabling condition, long-term regular follow up required for the patient to remain free from disease and for stable relationship. The impact of depression on work has been measured in terms of absence from work and lost productivity. Research in the mid-1990s which examined the impact of illness in the workplace found that the average number of days of work lost per year was greater with depression than with chronic illnesses (Conti D, Burton W., 1994). [20] Some aspects of depression can be considered to be intangible and are difficult to measure. These include pain, suffering and stress on family, friends, caregivers and other relationships, which may manifest themselves as disruptions in daily activities, family or marital breakdown, and even homelessness. Because these intangible burdens are complex and notoriously difficult to measure.

Researchers have shown that family function is effective on improving quality of life and increasing individual health level in community. It also is effective on decreasing

family problems, increasing life satisfaction, creating hope, and improving life skills. By improving family function one can increase general health of patient and prevent him from mental and physical disorders. Disorder in family function make members confused, worry and relational problems and treat member health. In fact, what happened in family and the way of it functions is key on flexibility and adoption with difficult conditions and situations. In families with good function, problem solving occurred appropriate; roles and responsibilities are clear and flexible; communications are direct and verbal communication is consistent with the symptoms of the face and body language; emotional accompanied and appropriate supervision is exist; and conflicts posed and resolves. All of these dimensions and characteristics educable and with training them can enhance family function and decrease psychological problems. As depression can arise from any aspect of biological, psychological or social reason, functioning of whole relational unit is very important aspect for both the preventive and as well as treatment aspect of the patient.

Limitation

Majority of the patients belonged to lower socioeconomic strata and hence findings cannot be generalized unless similar studies are carried out involving patients from all socio-cultural background.

CONCLUSION

This study finds and strengthens the earlier findings that depression affects relational unit globally rather than impacting patient himself or any particular area of functioning. This helps the clinicians to keep in mind that not only the patient's but also relative's counselling and education plays vital role in treatment adherence and overall prognosis of depressive outcome. This is particularly relevant in Indian context as even today relatives are the major caretakers in our society.

To the best of our knowledge, this is the first study in India, which correlates the association between severity of depression and relational functioning. It would be interesting to study the inter-episodic improvement in depression and how far this improves the functioning of patient individually and that of the relational unit. It would be interesting research for future studies to see the impact of subsequent depressive episodes on relational functioning.

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How to cite this article: Suthar J, Solanki C, Parikh M et. al. Severity of depression and relational functioning. Int J Health Sci Res. 2015; 5(3):101-109.

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