Journal of Depression and Anxiety
ISSN: 2167-1044
OPEN ACCESS Freely available online
Research Article

Obsessive-Compulsive Symptoms during Depressive Episode in Non-OCD Patients: A Prospective Observational Follow-Up Study

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ABSTRACT

Background: Obsessive-Compulsive-Disorder (OCD) and depression are well-known co-morbidities. But Obsessive-Compulsive-Symptoms (OCS) also occurs in non-OCD patients during depression as associated-symptoms, which has neither been adequately researched nor reflected in the nosology. This study systematically tried to look into the OCS during depressive episode in non-OCD patients.

Methods: This was an observational follow-up study done at Central- Institute-of-Psychiatry, India. Male and female patients aged 18-55 years diagnosed by ICD10 as depressive episode single, recurrent or bipolar having no history of OCD treated as both in and out-patient were included in the study spanning over a period of six months. All the patients were screened with Yale-Brown- Obsessive-Compulsive-Symptoms-(YBOCS)-checklist. Patients having OCS were further rated with YBOCS-rating-scale and Hamilton-Depression-Rating-Scale (HDRS)-21-points at first contact and after six-to-eight weeks of treatment.

Results: OCS was found in nearly one-third of non-OCD depressive-patients (45-male and 34-female) in this study of which 50% had premorbid-anankastic-traits. Contamination-washing-symptoms were commonest in females while obsessions of aggression and symmetry in males. There was significant correlation of OCS with low-mood, psychic-anxiety and weight-loss. Mean HDRS-total-score correlated significantly with YBOCS-obsession-score but not YBOCS-compulsion-score. Irrespective of choice-of-treatment, improvement in depression and OCS corroborated with each-other and patients showing inadequate improvement had multiple-OCS at baseline.

Conclusion: OCS is found in nearly one-third of non-OCD depression with corroboration of severity and treatment response, thus may be considered as a specifier for depression in future.

Key Words: Obsessive-compulsive-symptoms; Depression; Phenomenology; Correlation; Outcome

INTRODUCTION

Background

Obsessions and depression are two closely associated terms in psychiatry. In the 19th century the term obsession first came into discussion in psychiatry with the works of Prichard and Esquirol. At that time obsession was thought to be part of melancholia. Gradually in the 20th century with the works of Freud and Janet, psychiatry started to recognise obsession phenomenologically as a unique entity independent of emotional state [1]. Subsequently numbers of studies were done to unravel the complex relationship of obsessions and depression [2-10]. From those studies it was clear that apart from co-morbid OCD and Depression, OCS may also appear during depressive episode and remain limited to it. This was recognised in Hamilton-Depression-Rating-Scale (HDRS-21) way back in 1967 [11] where OC symptoms were included as associated symptoms of Depression. This concept has not got adequate weightage in the nosological system of ICD or DSM - so that we do not find any OCS specifier in their latest version of DSM5 or ICD11, while anxiety and panic have found their mention. But Sir David Goldberg (board member of working committee for mood disorders in DSM5) in his article 'The heterogeneity in major depression', 2011 [12] described a form of depression where obsessional behaviours present as an epiphenomenon similar to that of panic attacks.

In a recent study from STAR*D (Sequenced Treatment Alternative

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Received: September 04, 2021, **Accepted:** September 20, 2021, **Published:** September 27, 2021

Citation: Ray AK (2021) Obsessive-Compulsive Symptoms during Depressive Episode in Non-OCD Patients: A Prospective Observational Follow-Up Study. J Depress Anxiety 10:425.

to Relieve Depression) trial database in 2015 by Lee B, et al. [13] it was highlighted that OCS are common in depressed outpatients and are often not recognized. OCS impact clinical recovery from depression and should be screened since sufferers are often reluctant to disclose these symptoms. In previous studies, the co-existence of OCS and depression was around 30% with no gender difference in terms of extent. However, in most of those studies the sample population was a mixture of both OCD and depression not equally matched with gender. Among the studies on primary depressive disorder patients, Gittleson NL [1] published a number of papers on phenomenology, effect and fate of OCS in depressive psychosis patients but his data was a retrospective chart review rather than primary assessment of patients. The study on OCS by Kendell RE, et al. [6] was restricted to only severe admitted depressive patients of limited sample size. The study population of Lee B, et al. [13] was a large number of 3984 non-OCD depressive patients from STAR*D trial base, but they were only outpatients and the OCS were assessed only by their frequency as obtained from OCD-subscale of Psychiatric Diagnostic Screening Questionnaire of DSM-IV not their severity rated by any standardised tools like YBOCS. From none of these studies we come across any phenomenological comparison of OCS between male and females or any correlation of severity and outcome of OCS and depression.

Objective

In this background, current study would try to find out the extent of OCS in equally matched male and female patients diagnosed as depressive episode – either single and recurrent or bipolar depression being treated in both in and out-patient department and who have never been diagnosed or treated as OCD in their lifetime. A detailed phenomenological-content analysis and severity of the OC and depressive-symptoms would be done with appropriate tools. Gender difference would be assessed in all the above parameters. A correlation would be done between OC and depressive symptoms in individual content and overall severity. The study would also look into the fate of these OC and depressive-symptoms after 6-to-8 weeks of treatment as-per naturalistic choice of the respective treating doctors.

MATERIALS AND METHODS

This study was an observational study done at Central Institute of Psychiatry (CIP), Ranchi, India as a part of the Diploma in Psychological Medicine dissertation of the author. The Institute was the first mental health service cum teaching and training institute of the Asia established by British Government in 1918 in colonial era with an asylum structure. The institute maintained its glorious position even after independence catering to a large number of serious mental disorder patients coming from large part of North India. During the study, patients diagnosed by ICD10 as depressive episode of single or recurrent depression as-well-as bipolar disorder of age group 18-55 years treated both in-patient and Out-Patient-Department (OPD) were included in the study after taking informed consent.

Any history of prior diagnosis or treatments of OCD were excluded from the study. Apart from OCD, history of personality disorders, schizophrenia and other related psychotic disorders, substance abuse, dementia, epilepsy, movement disorders and other organicity were also excluded as OCS can also occur in these conditions. Cases were selected over six months on twice-a-week scheduled OPD-duty of the author and from admitted patients during that period. Diagnosis and treatment of the patients were done by expert psychiatrists of the institute and the researcher acted only as an observer. All the patients included in the study were screened with YBOCS-symptoms-checklist and patients found to be having OCS were further applied with YBOCS-rating scale and HDRS-21 [14] at baseline and after six-to-eight weeks of treatment for depression. Information regarding socio-demographic data and premorbid personality were collected from the work-up files of the patients. Statistical analysis was done with SPSS-10. Apart from descriptive analysis, comparative study between two gender groups was done with chi-square (χ^2) and t-test and correlation of OC and depressive-symptoms with Pearson-correlation-coefficient (r).

RESULTS

During the 6 months of the stipulated study period, 34 female and 45 male depressive patients could be enrolled following inclusion and exclusion criteria after taking proper informed consent. Out of the total 79 patients, 10 were of bipolar-depression, rest was unipolar depression – 30 were of first episode and 39 recurrent depressive disorder. Out of 79, 41 patients were seen as in-patient while rest as out-patient.

Among 79 patients of depression, OCS were found in 26 (32.91%) patients, of them 23 (33.33% - 23 among 69) in unipolar and 3 (30% - 3 out-of 10) in bipolar-depression group. Among unipolar depressive patients having OCS, 10 were of single episode and 13 of recurrent depression, thus extent of OCS being 33.33% in both the groups. In male *vs.* female depressive patients, extent of OCS was 33.33% (15 out-of 45) and 32.35% (11 out-of 34) respectively. Among depressed patients OCS were found in 34.15% (14 out-of 41) in-patients and 31.58% (12 out-of 38) out-patients.

Mean age of this group of depressive patients with OCS was 31.36 ± 5.25 years, mean duration of depressive illness was 10.98 ± 8.4 months and mean score of HDRS was 22.01 ± 3.70.

Regarding Premorbid Personality (PMP) no assessment was done by the researcher. Information was gathered from the work up file where impression of the specialist psychiatrist used to be mentioned along with the diagnosis based on clinical interview of the patients and their family members. Work up files used to carry impression on PMP on the basis of clinical guidelines of ICD10. Anankastic trait was found in 50% of depressive patients with OCS, 46.67% (7 out-of 15) male and 54.54% (6 out-of 11) female.

Family history of diagnosed OCD was found in found in only 1 patient (3.85%), while 12 (46.15%) patients had family history of affective disorders including bipolar in 2 (7.70%).

Regarding treatment history, 13 out-of 26 (50%) patients were already on treatment prior to first assessment, with three on Selective Serotonin Re-uptake Inhibitor (SSRI), rest on others like Tricyclic Antidepressants (TCA) or Lithium and antipsychotic combination (Table 1).

Among obsessive contents contamination was the commonest (53.8%), followed by miscellaneous (34.6%) and aggressive (26.9%) obsessions. Among compulsions washing was the commonest (50%), followed by checking (34.6%) and counting (26.9%) (Table 2).

Gender difference among content of OCS as assessed by chi-square (χ^2) test from the data obtained by YBOCS checklist showed, statistically significant gender difference in case of contamination obsession (p=0.001) and cleaning-washing compulsion (p=0.047) both being commoner in females. Among males, aggressive obsession (p=0.079) and obsession of symmetry (p=0.063) were much commoner than females but failed to reach statistical significance (Table 3).

There was no significant gender difference in scores of obsession, compulsion or total YBOCS score. The mean total YBOCS scores of was 17.06 ± 7.36 in males and 18.00 ± 8.01 in females which came in the range of moderately severe OCS (score of 14-25) as per Storch EA, et al. [15] (Table 4).

Correlation of individual items of HDRS and Y-BOCS rating scale as shown in Table 4 revealed, statistically significant correlation of

Table 1: Phenomenology of OCS among patients of depression.

Frequency Distribution Of Content Of OCS Among Patients Of Depression		
	Individual Content	**Number (% within group)**
Obsessions	Aggressive obsessions	7 (26.9%)
	Contamination obsessions	14 (53.8%)
	Sexual obsessions	5 (19.2%)
	Hoarding obsessions	0
	Religious obsessions	2 (7.7%)
	Symmetry obsessions	4 (15.4%)
	Miscellaneous obsessions	9 (34.6%)
Compulsions	Washing compulsions	13(50%)
	Checking compulsions	9 (34.6%)
	Repeating compulsions	0
	Ordering compulsions	3 (11.5%)
	Hoarding compulsions	0
	Counting compulsions	7 (26.9%)
	Miscellaneous compulsions	0

Table 2: Gender difference in phenomenology of OCS among patients of depression.

Gender Difference Among YBOCS Symptoms Checklist					
Y-BOCS Symptoms Checklist	**Male – Number (% within group)**	**Female – Number (% within group)**	χ^2	**df**	P
Aggressive Obsession	*6(40%)*	*1(9.1%)*	*3.082*	*1*	.079
Contamination Obsession	4(26.7%)	10(90.9%)	10.539	1	.001**
Sexual Obsession	3(20%)	2(18.2%)	.014	1	.807
Religious Obsession	1(6.7%)	1(9.1%)	.053	1	.819
Symmetry Obsession	*4(26.7%)*	0	*3.467*	*1*	.063
Miscellaneous Obsession	6(40%)	3(27.3%)	.454	1	.500
Somatic Obsession	2(13.3%)	2(18.2%)	.115	1	.735
Cleaning and Washing Compulsion	5(33.3%)	8(72.7%)	3.939	1	047*
Checking Compulsion	6(40%)	3(27.3%)	.454	1	.500
Repeating Compulsion	2(13.3%)	1(9.1%)	.112	1	.738
Ordering Compulsion	3(20%)	0	2.487	1	.116
Miscellaneous Compulsion	5(33.3%)	2(18.2%)	.740	1	.390

χ^2= chi square df= degrees of freedom
p=level of significance * Significant at p <0.05 ** Highly significant at p <0.01

Table 3: Gender difference in severity of OCS among depressive patients.

Scales	Sex	Mean score	SD	t	Df	P
YBOCS obsession	Males	10.20	4.29	.322	24	.750
	Females	9.63	4.56			
YBOCS compulsion	Males	6.86	4.40	.852	24	.403
	Females	8.36	4.45			
Y-BOCS total	Males	17.06	7.36	.308	24	.761
	Females	18.00	8.01			

SD= Standard Deviation; t= independent 't' test; df= degrees of freedom; p=level of significance

psychic anxiety and weight loss with both obsession and compulsion as well as total YBOCS score. The score of depression as an item in HDRS showed highly significant correlation with obsession and total YBOCS scores, but failed to reach statistical significance with the score of compulsion (p=0.060). Among rest of the items of HDRS, correlation with YBOCS was far from significance except somatic anxiety with obsession (0.07). There was an interesting finding of negative correlation (though far from significance) of suicidality in HDRS with YBOCS compulsion and total score.

Mean total HDRS score of 22.01 ± 3.70 showed highly significant correlation with mean YBOCS-obsession score of 9.95 ± 4.42 (p=0.001**) and significant correlation with mean total YBOCS score of 17.46 ± 7.68 (p=0.035*), but the correlation was far from significance with mean YBOCS-compulsion score of 7.85 ± 4.41 (p=0.209) (Table 5).

After assessment at first contact, 26 depressive patients with OCS were re-evaluated with HDRS-21 and YBOCS rating scales after six-to-eight weeks of first assessment. Out of these 26 patients, 15 were admitted patients with 10 of them having psychotic symptoms and five with severe suicidality; and 11 patients were treated at OPD. Choice of treatment was variable between both the groups, while admitted patients were predominantly treated with Electroconvulsive Therapy (ECT) and combination of TCA and low dose antipsychotics; for OPD patients SSRI was the principal choice either alone or in combination with low dose antipsychotics, Lithium. Imipramine 150-225 mg and Fluoxetine 20-40 mg were the most common TCA and SSRI respectively. Among antipsychotics, haloperidol 2.5-7.5 mg and risperidone 2-3 mg were the most common choice among admitted patients; olanzapine 5-7.5 mg was the principal choice among OPD patients. Tapering dose of benzodiazepines and propranolol were used in both the groups for symptomatic management of anxiety and restlessness.

Because of absence of any uniform mode of treatment, no comparison (paired t-test) was done between pre and post treatment mean scores of HDRS and YBOCS. But in both the group's pre and post treatment mean scores of HDRS and YBOCS showed significant correlation (Pearson correlation with p <0.05) between each other. Despite variable choice of treatment, severity of both depression and OCS improved hand-in-hand from severe depression with moderate level of OCS to mildly symptomatic level in both the domain as per mean score of HDRS and YBOCS after 6-to-8 weeks of treatment in both the inpatient and outpatient groups. Three out of 26 (11.54%) patients (1 admitted and 2 outpatient)

Table 4: Correlation of individual item score in HDRS with scores of Y-BOCS rating scale.

Individual HDRS Items		Y-BOCS (O)	Y-BOCS (C)	Y-BOCS (T)
Depression	R	0.339**	0.212	0.293**
	P	0.002**	0.06	0.009**
Psychic Anxiety	R	0.309**	0.247*	0.292**
	P	0.006**	0.028*	0.009**
Weight Loss	R	0.273*	0.357**	0.323**
	P	0.015*	0.001**	0.004**
Somatic Anxiety	R	0.201	0.057	0.142
	P	0.075	0.619	0.238
Suicidality	R	0.039	-0.043	-0.023
	P	0.733	0.397	0.841
Mean Total HDRS Score	R	0.600**	0.152	0.230*
	P	0.001**	0.209	0.035*

r= Pearson correlation coefficient p= Level of Significance
* Significant at p <0.05 ** Highly significant at p <0.01

Table 5: HDRS and YBOCS scores before and after treatment for 6-8 weeks.

Locus of Treatment	Pre-Treatment Status			Treatment Offered		Post Treatment Status		
	HDRS	Y-BOCS	Correlation	Modality	Number	HDRS	Y-BOCS	Correlation
In-Patient Number: 15	24.30 ± 3.12	19.01 ± 7.03	r * 0.243	ECT	10	12.13 ± 6.12	9.02 ± 7.07	R * 0.235
				TCA	12			
				SSRI	5			
			p * 0.030	Antipsychotic	14			P * 0.045
				Lithium	8			
Out-Patient Number: 11	20.81 ± 4.48	17.70 ± 7.92	r * 0.255	ECT	0	11.08 ± 6.21	8.78 ± 6.82	R * 0.228
				TCA	3			
				SSRI	8			
			p * 0.022	Antipsychotic	4			P * 0.048
				Lithium	4			

r = Pearson Correlation Coefficient p= Level of significance * Significant at p <0.05

failed to achieve 25% improvement in both HDRS and Y-BOCS baseline score and the phenomenological commonality between them was multiple (3-4) OC symptoms on Y-BOCS checklist.

DISCUSSION

Over six months of study period 79 patients of depression without history of OCD could be included as sample following inclusion and exclusion criteria. The sample size appears to be limited due to relatively less footfall of minor mental health patients in CIP at that time.

The extent OCS among these depressed patients ranged from 30-to-34.15% across all the groups, which corroborated with the previous studies except the one by Lee B, et al. [13] who found 53% patients of depression without OCD at the entry of the study had at-least 1 OCS and 14% >4 OCS.

In this group of depressive patients with OCS, mean duration of depressive illness was 10.98 ± 8.4 months and mean score of HDRS was 22.01 ± 3.70 which was suggestive of severe depression with prolonged duration of complaints in this group. Further inference could not be drawn as no comparison was done between depressive patients with or without OCS.

Regarding premorbid anankastic trait, among the previous researchers, Gittleson NL [1] found presence of premorbid obsessional traits in 69.4% of depressive patients with OCS compared to 29.3% in depression without OCS and considered the OCS in depression as an activation of the premorbid trait. But according to Kendell RE, et al. [6] the relationship was not that straight forward, where greater premorbid obsessional traits was found among neurotic (reactive) depression compared to psychotic depression but the latter used to have more OCS during the depressive state. In our study, 50% patients had premorbid anankastic trait with little (non-significant) preponderance towards females.

Regarding family history of mental illness in these patients of depression with OCS, a highly skewed presence of affective disorders (46.15%) *vs.* OCD (3.85%) probably gives a hint that these patients are genetically closer to affective disorders than OCD.

Regarding phenomenology of OCS during depression, all the previous studies [3,6,13] found obsessions of causing harm or aggressive obsessions to be commonest, while in this study aggressive obsessions (26.9%) were the third commonest variety preceded by contamination (53.8%) and miscellaneous obsessions (34.6%).

Unlike the previous studies which did not look for any gender difference among phenology of OCS, this study found significant gender difference in contamination obsession (p=0.001) and cleaning-washing compulsion (p=0.047) both being commoner in females; and aggressive obsession (p=0.079), obsession of symmetry (p=0.063) commoner among males.

In the previous studies only the content of OCS and their impact on depression were studied but their severity was not measured with any tool and there was no correlation of OCS and depression in terms of individual content and overall severity. In this study, severity of OCS in terms of total YBOCS score was in the range of moderate severity (score of 14-25 as per Storch EA, et al. [15]) with no difference between males (17.06 ± 7.36) and females (18.00 ± 8.01).

There was highly significant correlation of mean total HDRS score with mean YBOCS-obsession score and significant correlation with mean total YBOCS score, but far from significant correlation with mean Y-BOCS-compulsion score, which may be suggestive of the fact that obsessive symptoms are phenomenologically closer to depression than the compulsion. This finding was similar to that of Ricciardi J, et al. [8], but his study sample was that of OCD than primary depression.

Among individual items of HDRS, significant correlation of psychic anxiety and depression with YBOCS scores probably suggest their phenomenological similarity, while significant correlation of weight loss with YBOCS probably indicative of the severity of the depression in these patients. The interesting finding of negative correlation (though far from significance) of suicidality with YBOCS compulsion and total score, was also replicated in the previous study of Gittleson NL, et al. [1-5] who hypothesized a protective role of OCS against suicidality in depression.

Regarding treatment outcome of OCS after six-to-eight weeks of treatment for depressive disorder, noticeable improvement in both HDRS and Y-BOCS mean score was noted in both in-patient and out-patient groups. Similar to pre-treatment positive significant correlation between HDRS and YBOCS mean scores, significant correlation was also found between them after the treatment despite variable choice of treatment for depression. This may suggest that the course and outcome of OCS probably go hand-in-hand with the course of depressive episode. Finding of multiple OCS (3-4 in YBOCS checklist) in patients showing inadequate (<25%) response in both HDRS and YBOCS rating scale was similar to the findings of the study by Lee B, et al. [13] where after 12-week trial of citalopram 20-60 mg, patients having four or more OCS showed inadequate improvement in depression.

Limitation

Though this study has extensively explored the intricate relationship of OCS in non-OCD depression patients with a sound methodology, the significance of its findings would have much strengthened if a larger sample size could have been included. There is another limitation regarding absence of information on presence of OCS in previous affective episodes. The study would have been much enriched if a comparison could have been done between patients of depression-with-OCS (n=26) and with-out-OCS (n=53) by statistically selecting a cluster from the latter group by number-age-sex matching with the former group and assessed by same tools and parameters.

CONCLUSIONS

Nearly one third of non-OCD-depression patients exhibit OCS during the depressive episode with severity of OCS coming in the moderate range as per YBOCS rating scale. Family history of these patients are skewed towards affective disorder than OCD. Half of these patients had premorbid anankastic traits. There was no gender difference in extent and severity of OCS among these patients, but phenomenologically contamination-washing symptoms were commonest in females, while aggressive and symmetry in males. Severity of depression showed significant correlation with obsession but not with compulsion. Regarding individual symptoms of depression, low mood, psychic anxiety and weight-loss had significant correlation with OCS. After six-to-eight

weeks of treatment, there was satisfactory improvement in both depression and OC symptoms which correlated with each other irrespective of choice of antidepressants in most of the patients. Around 10% patients showing poor response to treatment had multiple OC-symptoms at baseline.

Thus, these OCS can be considered as associated symptoms of depression in nearly one-third depressive patients where severity and outcome of both depression and obsession go hand in hand. This can be recognized by nosology in future classification, where OCS would be considered as a specifier of depression.

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