

Use of ACT on patients with Obsessive Compulsive Disorder

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Abstract-

Aim: Obsessive Compulsive Disorder (OCD) is known to be basically characterised by presence of obsessions and compulsions. With life time prevalence rate of around 2-3%, OCD possess quite a challenge in its management. Existing literature sufficiently advocates use of cognitive and behavioural strategies in management of OCD. With the propagation of newer techniques like Acceptance and Commitment Therapy (ACT), it is interesting to see their effectiveness in treating patients with OCD. Present study attempts to use ACT in managing obsessive compulsive symptoms in OCD patients.

Method: Pre and post intervention with a control group design was made to conduct this study involving 20 patients having a primary diagnosis of OCD. All patients were divided in to two equal groups were one group was given intervention with ACT. Pre and post intervention assessment was done using YBOCS, BDI and HARS.

Result: Obtained data indicates that there is noticeable decrease in post intervention scores on YBOCS, BDI and HARS in the group which has been given intervention with ACT as compared to the other group.

Conclusion: Findings of the study reveals that ACT is helpful in decreasing the symptoms severity in patients with OCD.

Key words: Obsessive Compulsive Disorder, Acceptance and Commitment Therapy, YBOCS

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I. Introduction

Obsessive-compulsive disorder (OCD) is believed to affects between 2% and 3% of the adult population during their life time (Ruscio, Stein, Chiu, & Kessler, 2010). OCD basically characterised by presence of recurrent intrusive thoughts, ideas, and images (i.e. obsessions) that provoke distress in the form of anxiety and overt and covert acts or rituals (i.e. compulsions) necessitating an avoidance behavior that the patient indulges in to manage obsessional distress (Clark, 2003). Although existing literature suggests that cognitive and behavioural approaches for OCD management are effective however treatment response varies (Loerinc et al., 2015). Moreover, behavioural intervention such as Exposure Response Prevention (ERP) results in the deliberate provocation of anxiety without performing anxiety-reduction behaviors, which may contribute to the fact that between 25% and 30% of otherwise appropriate patients drop out prematurely from ERP (Ong, Clyde, Bluett, Levin, & Twohig, 2016), or subsequently do not adhere to the treatment instructions (Foa et al., 2005)

With the advent of third wave of psychotherapeutic strategies like Acceptance and Commitment Therapy (ACT) which aimed to encourages people to embrace their thoughts and feelings rather than fighting or feeling guilty for them (Hayes, 1999), it is all the more interesting to see its use on varied clinical populations. Previous use of ACT emphasize willingness to experience anxiety, valued living, and cognitive diffusion on the part of the patients (Twohig, 2009; Twohig et al., 2015), suggesting that ACT alone holds potential as an effective and tolerable treatment for OCD.(Twohig et al., 2010). ACT, with its six core process like acceptance, cognitive diffusion, being present, self as context, values and committed action, is understood as a problem-focused, behaviorally based intervention that encourage interaction and engagement with feared stimuli while also discouraging anxiety-reduction strategies. ACT techniques have been shown to increase adherence to difficult activities (Masedo& Rosa Esteve, 2007; Páez-Blarrina et al., 2008) and willingness to experience unwanted obsessive thoughts (Marcks& Woods, 2005, 2007). In the light of above discussion, ACT has been used as a treatment technique to see its impact in managing core obsessive and compulsive symptoms severity in patients with OCD in the present study.

II. Method

Aim

This study has been undertaken with the aim of examining the role of ACT on symptom severity in patients with OCD

Study design

It was a pre and post intervention study with control group design, which was conducted at Out Patient Department, Govt. Mental Hospital, Gwalior, M.P. India.

Sample-

A total of twenty patients diagnosed with OCD as per ICD-10-DCR (WHO, 1992) criteria were enrolled for this study using purposive sampling. Patients were equally placed into two sub groups, experimental and control, having ten OCD patients each, using draw of lots method.

Inclusion Criteria for Both Groups

1. Patients diagnosed with Obsessive Compulsive Disorder as per ICD-10 DCR criteria.
2. Age ranges between 25 to 40 years.
3. Duration of illness between 2 to 5 years.
4. Patients who have attained education of at least primary level.
5. Patients who are able to understand Hindi.

Exclusion Criteria for Both Groups

1. Patients having any neurological disorder, brain damage, mental retardation or co- morbid psychiatric conditions except mild depression.
2. Patients having any chronic medical disorder.
3. Patients with any substance or drug dependence except nicotine dependence.

Instruments-

1 Socio-demographic and Clinical data sheet- A socio-demographic and clinical data sheet has been prepared and was used to collect information regarding various socio-demographic variables like age, domicile, socio-economic status, religion, education, marital status, family type and clinical variables like onset of illness, duration of illness, presence of precipitating factor and treatment undertaken.

2 Yale-Brown Obsessive Compulsive Scale (Y-BOCS) - This rating scale was originally developed by Goodman et al (1989). It is a widely used instrument to rate the severity of obsessive and compulsive symptoms in patients having OCD and to monitor the improvement in OCD patients. This scale measures obsessions and compulsions separately. It is a clinician rated 10 items scale. Each item is rated from 0 (no symptoms) to 40 (severe symptoms). The scale includes item about the amount of time the patient spends on obsessions, how much impairment or distress they experience and how much resistance and control they have over these thoughts. The cut off point for presence of obsession and compulsions is 7, that is a score of 7 or less indicates no obsessions and/or compulsion. A score of 8-15 indicates mild, 16-23 indicates moderate, a score of 24-31 indicates severe and a score of 32-40 indicates extreme obsessions and /or compulsion. The internal consistency of YBOCS was found to be of acceptable level and the inter-rater reliability has been found to be excellent that is, correlation coefficients is $r = 0.85$ for the total YBOCS score.

Hamilton Anxiety Rating Scale (HARS)

This scale was developed by Hamilton in 1959. It is commonly used to assess the global anxiety symptoms in clinical as well as normal populations. It is a fifteen (15) item rating scale. Each item is rated on a five point rating scale, scored from 0 (not present), 1 (doubtful), 2 (moderately present), 3 (markedly present) and 4 (severely present). Common symptoms includes anxious mood, fears, tension, insomnia, somatic -muscularly, somatic -sensory, cardio-vascular symptoms, respiratory symptoms, gastrointestinal symptoms, intellectual symptoms, depressed mood, genitourinary symptoms and autonomic symptoms. The last item that is behavior at interview is not included in for final scoring purpose. The total score ranges from 0-56 and the cut-off point is 17. A score of 18-24 indicates mild to moderate anxiety and a score of 25-30 indicates moderate to severe anxiety and a score above 30 indicates severe level of anxiety. Sensitivity of this scale is high and inter-rater and test retest reliability of this scale is 0.42.

4 Beck Depression Inventory (BDI)- This inventory is originally developed by Beck (1961). It is one of the most popular research tools to measure the severity of depressive features in the patients. It is basically a self-administered rating scale. It consists of few categories where each category describes a specific behavioural manifestation of depression and consists of a graded series of four to five self-evaluative statements. The statements are ranked to reflect the range of severity of the symptoms from neutral to maximum severity.

Scoring is done by assigning the numerical values form 0-3. A total of 21 symptoms categories are included in the inventory. A score of 0-16 indicates low level of depression, 16-32(mild level), 32-48 (moderate level) and a score of 48-64 indicates severe level of depression. This scale will be used in this study to assess the presence of depressive features in the subjects. The internal consistency of BDI was satisfactorily high ($\alpha > \text{or} = 0.84$) and retest reliability exceeded $\alpha > \text{or} = 0.75$.

5- **Intervention tool:** Techniques of ACT (Hayes, 2002) has been used as a means of intervention in this study.

Procedure-

The present study has been carried out in three steps-

Step I- This step involved enrolment and baseline assessment of patients. Initially, based on inclusion criteria 20 patients were selected who gave their written consent for participation and divided equally in to two groups, experimental and control, using draw of lots method. The baseline assessment was started with an informal discussion to make the patients comfortable. After this a clinical interview was conducted to list and rate severity of their current obsessive compulsive and depressive symptoms, using YBOCS, HARS and BDI respectively.

Step II- In this step OCD patients in the experimental group were given 15 sessions of ACT based intervention featuring six core process of acceptance, cognitive diffusion, being present, self as context, values and committed action aiming to inculcate psychological flexibility with a frequency of two sessions per week and session duration of around 45 minutes. Along with the ACT based intervention, all patients in experimental group were allowed to continue with their medications as usual, on ethical grounds. No session of ACT based intervention has been given to control group, but they were allowed to continue with their respective medications as well.

Step III- This is the final step of data collection. It involves post intervention assessment. Experimental group of OCD patients were again assessed after administration of 15 sessions of ACT based intervention and OCD patients of control group were assessed after 8 weeks of their baseline assessment. During this step, severity of obsessive compulsive, anxiety and depressive symptoms was assessed on YBOCS, HARS and BDI.

Statistical Analysis -

The obtained data has been analysed using Statistical Package for Social Sciences (SPSS) version 16.0 of windows. As the study sample was small, non-parametric test measures were used for data analysis. Chi square and Mann Whitney U test has been used to see the difference between both groups for categorical and continuous variables respectively, where-as comparison of pre and post intervention scores in case of experimental group subjects has been done using Wilcoxon Sign Rank test.

III. Results:

Table-1: Shows Comparison between Experimental Group and Control Group of OCD Patients on Socio-Demographic Variables.

Subjects		Experimental Group of OCD Patients (N=10) (n = %)	Control Group of OCD Patients (N=10) (n= %)	Fisher Test Value
Sex	Male	6(60)	7(70)	1.71 NS
	Female	4 (40)	3 (30)	
Type of Family	Joint	2(20)	3(30)	0.00 NS
	Nuclear	8 (80)	7(70)	
Marital Status	Married	5(50)	4(40)	0.19 NS
	Unmarried	5(50)	6(60)	
Education	Graduate	7 (70)	8(80)	1.12 NS
	Matriculate	2 (20)	2(20)	
	Primary	1 (10)	0(0)	
Occupation	Employed	4(40)	2 (20)	0.90 NS
	Unemployed	6 (60)	8 (80)	

NS = P value not significant.

Table - 1 shows comparison between both groups on various socio-demographic variables. Results indicate that both compared groups did not differ significantly in terms of socio-demographic variables such as sex, type of family, marital status, education and occupation.

Table-2: Shows Comparison of age and Clinical Variables between Experimental Group and Control Group of OCD Patients.

Variable	Experimental Group of OCD Patients (N=10)		Control Group of OCD Patients (N=10)		Mann Whitney U Test			
	M	SD	M	SD	Mean Rank		U	Z
					Exp. Group	Control Group		
Age (Years)	28.80	3.34	26.80	1.62	12.12	8.91	33.00	1.22 NS
Age of Onset of illness	25.70	3.51	23.20	1.74	11.49	9.51	41.00	0.77 NS
Duration of Illness	3.11	0.54	2.71	0.81	12.11	8.90	33.00	1.32 NS

NS = P value not significant.

Table - 2. Results indicate that there is no significant difference between patients of both groups in terms of chronological age, age of onset of and duration of illness.

Table-3: Shows baseline assessment of OCD patients of experimental group and control on YBOCS, HARS and BDI.

Variable	Experimental Group of OCD Patients (N=10)		Control Group of OCD Patients (N=10)		Mann Whitney U Test			
	M	SD	M	SD	Mean Rank		U	Z
					Exp. Group	Control Group		
Obsession Domain Score	15.20	1.54	15.40	2.59	10.05	10.95	45.50	0.34 NS
Compulsion Domain Score	13.70	1.33	14.10	2.02	9.80	11.20	43.00	0.54 NS
YBOCS: Composite Score	28.90	1.28	29.50	1.43	9.30	11.70	38.00	0.99 NS
BDI Score	19.90	4.14	21.90	4.14	10.05	10.95	45.50	0.34 NS
HARS Score	29.30	4.94	29.00	1.24	11.20	9.80	43.00	0.53 NS

NS = P value not significant

Table - 3 suggests that both groups were alike at baseline with regard to their performance on YBOCS, HARS and BDI, meaning that OCD patients of both groups exhibit impairment in OC features, anxiety and depression at baseline.

Table-4: Shows Baseline Assessment of Severity Level of Experimental Group and Control Group of OCD Patients on YBOCS, HARS and BDI.

Subjects		Experimental Group of OCD Patients N=10 (n = %)	Control Group of OCD Patients N=10 (n = %)	Fisher value
Obsession Domain Score	Moderate	6(60)	5 (50)	0.19 NS
	Severe	4 (40)	5 (50)	
Compulsion Domain Score	Moderate	10 (100)	7 (70)	3.35 NS
	Severe	0 (0)	3 (30)	
YBOCS: Composite Score	Moderate	1(10)	0(0)	1.00 NS
	Severe	9 (90)	10 (100)	
BDI	Mild	3 (30)	4(40)	1.72 NS
	Moderate	7(70)	6(60)	
HARS	Mild	1(10)	0 (0)	3.41 NS
	Moderate	4(40)	8(80)	
	severe	5(50)	2(20)	

NS = P value not significant.

Table - 4 shows that there is no significant difference between both compared groups with respect to severity of anxiety and depressive symptoms on HARS and BDI and in overall impairment of their composite as well as obsession and compulsion domain score on YBOCS at baseline stage.

Table-5: Shows Post Intervention Assessment of Experimental Group and Control Group of OCD Patients on YBOCS, HARS and BDI.

Variable	Subjects								Mann Whitney U Test			
	Experimental Group of OCD Patients (N=10)				Control Group of OCD Patients (N=10)				Mean Rank		U	Z
	Pre		Post		Pre		Post		Exp Group	Con Group		
	M	SD	M	SD	M	SD	M	SD				
Obsession Domain Score	15.20	1.54	7.60	1.17	15.40	2.59	13.70	1.63	5.50	15.50	0.00	3.84**
Compulsion Domain Score	13.70	1.33	6.80	1.55	14.10	2.02	12.90	1.91	5.50	15.50	0.00	3.82**
YBOCS: Composite Score	28.90	1.28	14.40	2.11	29.50	1.43	26.60	2.17	5.50	15.50	0.00	3.80**
BDI Score	19.90	4.14	8.90	3.44	21.90	4.14	20.30	4.39	5.50	15.50	0.00	3.79**
HARS	29.30	4.94	18.60	1.77	29.00	1.24	26.70	1.41	5.50	15.50	0.00	3.82**

** P value is significant at 0.01 level.

Table 5 It is evident from the table that experimental group improved significantly as compared to control group in terms of obsessive compulsive, anxiety and depressive symptoms.

Table-6: Shows Post Intervention Assessment of Severity Level of Patients of Experimental Group and Control Group on YBOCS, HARS and BDI.

Variables	Subjects	Experimental Group of OCD Patients N=10 (n=%)	Control Group of OCD Patients N=10 (n=%)	Fisher Value
Obsession Domain Score	Mild	10(100)	0(0)	19.00**
	Moderate	0(0)	10 (100)	
Compulsion Domain Score	Mild	10 (100)	0 (0)	16.54**
	Moderate	0(0)	9(90)	
	Severe	0 (0)	1 (10)	
YBOCS: Composite Score	Mild	7(70)	0(0)	20.65**
	Moderate	3(30)	0(0)	
	Severe	0(0)	9(90)	
	Extreme	0 (0)	1 (10)	
BDI Score	Minimal Depression	10(100)	0(0)	20.86**
	Mild Depression	0(0)	4 (40)	
	Moderate Depression	0(0)	6(60)	
HARS score	No Anxiety	1(10)	0 (0)	21.84**
	Mild Anxiety	9(90)	0(0)	
	Moderate Anxiety	0(0)	10(0)	

** P value is significant at 0.01 level

Table - 6 reflects that experimental group has shown improvement with regard to impairment severity in obsession and compulsions, anxiety and depressive symptoms.

Table-7: Shows Pre and Post Intervention Analysis of Experimental Group of OCD Patients on YBOCS, HARS and BDI.

Variables	Wilcoxon Sign Rank Test		
	Mean Rank	Sum of Rank	Z value
Obsession Domain Score Post Intervention – Obsession Domain Score Pre Intervention	5.50	55.50	2.82**
Compulsion Domain Score Post Intervention – Compulsion Domain Score pre Intervention	5.50	55.50	2.81**
YBOCS Composite Score Post Intervention – YBOCS Composite Score Pre Intervention	5.50	55.00	2.81**

BDI Score Post Intervention - BDI Score Pre Intervention	9.54	124.00	2.90**
HARS Score Post Intervention - HARS Score Pre Intervention	10.00	190.00	3.83**

**P value is significant at 0.01 level.

Table – 7- It is evident from the table that there is significant difference between obtained scores at pre and post intervention levels which is suggestive of decrease in severity of obsessive and compulsive, anxiety and depressive symptoms after the intervention in experimental group of OCD patients.

IV. Discussion:

Over the years, although behavioural and cognitive strategies were proven to be an effective treatment modalities for patients with OCD, however based on the pitfalls related with the implementation and use of such techniques, it seems important to identify methods to improve patient adherence, completion, and outcome. Thus use of ACT may provide a promising avenue for addressing the pitfalls of already established techniques. Accordingly the present study aimed to see the use of ACT in decreasing symptoms severity in patients with OCD. Findings of the study indicates (Table1&2) that both compared groups were having similar sample characteristics in terms of various socio-demographic and clinical variables like sex, education, marital status, chronological age, onset and duration of illness. Variables like age of onset and duration of OCD have been known to influence treatment outcome (Clark, 2007), thus, similarity between groups on such variables was significant.

Baseline stage findings (Table 3) indicate presence of significant impairment in patients of both groups. YBOCS, HARS and BDI scores suggest presence of obsessive compulsive and depressive features in all patients at baseline. Findings further reveals (Table 4) that both groups were comparable in terms of presence of illness symptoms, as majority of patients in both groups were having severe level of OC symptoms along with moderate level of co-morbid depressive symptoms. After 8 weeks of intervention, which comprises of 15 sessions of ACT based intervention, it has been observed that experimental group of OCD patient’s exhibit improvement in symptom severity as compared to control group. It has been witnessed that after intervention majority of the patients in experimental group were having mild level of OC symptoms and minimal depressive features. As compared to this, majority of patients in control group (which has not been provided intervention sessions) continue to exhibit severe and moderate level of OC and depressive symptoms respectively, which is similar to their pre-intervention stage assessment. Our study findings were supported by (Abramowitz & Jacoby, 2015). They have also reported decrease in symptoms severity as measured on YBOCS after using ACT based therapeutic intervention. Question may arise how this change has been brought up. Literature argues that as opposed to the traditional approach, the ACT framework uses various metaphors and experiential exercises to convey its rationale (Twohig et al., 2015) and there by aimed to create psychological flexibility in the minds of the patients with regard to their obsessive thoughts. However few previous studies like of (Manos et al., 2010). Also points out that it is indeed difficult to imagine someone increasing their willingness to experience an obsessional thought without also eventually changing their beliefs about the need to control such a thought. It can be argued that the ACT framework bears resemblance to approaches that optimize inhibitory learning during exposure that is not rely on the habituation of anxiety as indicators of learning (Craske et al., 2008; Jacoby & Abramowitz, 2016). Thus, whereas the ACT framework may be helpful in decreasing symptoms severity in OCD patients in the present study but this study does not suggest that this approach is neither a replacement for existing cognitive strategies which mainly focuses on misinterpretations or belief change and nor a alternative for behavioural frameworks aiming at negative reinforcement/habituation/extinction with regard to obsessive compulsive behaviour of the patients with OCD. Additionally present findings also found significant decrease in HARS and BDI scores after intervention involving ACT techniques. As highlighted by Roberts et al (2003), in present study also, during intervention, only the primary obsessive thoughts were targeted in terms of acceptance of primary obsessive thoughts, focused on learning flexible responding in presence of obsessions, anxiety, urges to ritualize. Broadly speaking acceptance of obsessions and anxiety as and when they occur was the main focussed in ACT intervention which could be the reason behind decrease in secondary anxiety and depressive features a reflected in HARS and BDI scores at post intervention in the present study

V. Conclusion:

The study concludes that use of ACT based intervention is helpful in decreasing the severity of OC, anxiety and depressive symptoms in patients with OCD. Thus the present study implies that different techniques of ACT should be a part of treatment in patients with OCD. However, in the present study only the cross sectional (immediate) effect of ACT intervention has been seen and effect of medications was not excluded. Thus in future research protocols, follow up effect may be examined and patients could be controlled on medications to rule out its effect in outcome.

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Conflict of Interest-

Nil.

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