“We are what we think. All that we are arises with our thoughts. With our thoughts, we make the world.”
- Buddha
DISCUSSION

The present investigation was undertaken to examine the effects of Acceptance and Commitment Therapy on psychological flexibility, thought suppression, mindfulness skills, and symptom severity in patients diagnosed with Obsessive-Compulsive Disorder. For the purpose of this study, a sample of 30 patients diagnosed by experienced psychiatrists, with Obsessive-Compulsive Disorder was taken. The final sample that consented for the study was selected on the basis of the inclusion and exclusion criteria and included 6 females and 24 males, whose age ranged between 18 to 55 years.

To begin with, the patients’ socio-demographic details, clinical history and behaviour analysis were completed. This was followed by the pre-intervention assessment, where in the patients were administered the tools which measured their degree of psychological flexibility, thought suppression, mindfulness skills and severity of symptoms. Subsequent to the administration and recording of the baseline assessment, these patients were taken up one by one for the therapeutic procedure. After completion of the eight sessions of Acceptance and Commitment Therapy, the patients were re-administered all the above mentioned tools to obtain scores and record the post-intervention assessment. One month subsequent to this, the same patients were followed up and they were administered the above mentioned tools once again, to obtain scores and document the follow-up assessment. The obtained data was analyzed using SPSS, to examine if there were any significant differences in the scores before (pre/baseline) and after (post) intervention therapy, as well as one month post the termination the therapy (follow-up). Results
indicated that there was an increase in psychological flexibility and mindfulness skills of ‘acceptance without judgment’ and ‘acting with awareness’, and a decrease in thought suppression and symptom severity of OCD in the patients having undergone intervention of ACT. The results obtained will be discussed below, in the light of the hypothesis that were formulated and other studies that have been reported by researchers investigating Acceptance and Commitment Therapy.

The first hypothesis, as given in the methodology, stated that there will be a significant increase in the psychological flexibility of patients diagnosed with OCD, subsequent to undergoing treatment of Acceptance and Commitment Therapy. As mentioned elsewhere, Psychological flexibility is the ability to fully contact the present moment and the thoughts and feelings it contains without needless defense, and, depending upon what the situation affords, persisting or changing in behavior in the pursuit of goals and values (Hayes et al., 1999). It was found from the results (Table. 3) that there was a significant treatment effect (F= 40.99, p< 0.001) on psychological flexibility as measured by AAQ-II, from baseline to post- and 1-month follow-up. Psychological flexibility increased from ‘Low’ at pre-, to ‘High’ at post- and follow-up assessment (Table. 4) indicating that there was a significant increase in psychological flexibility subsequent to ACT. These findings are graphically represented below (Figure 3).
Figure 3. Graphical Representation of comparison of Mean Scores between pre-intervention, post-intervention and follow-up on the Acceptance and Action Questionnaire II (AAQ-II).

Pairwise comparison of means (Table 5) revealed a significant increase of 34.04 from pre- to post- and of 40 from pre- to follow-up. The effect size of change was found to be large at post- (d= 2.57) and follow-up (d= 3.02) indicating a strong effect of the intervention, i.e., Acceptance and Commitment Therapy (ACT) on psychological flexibility or acceptance in patients diagnosed with OCD.

The findings of the current study clearly showed that there was a significant increase in the psychological flexibility subsequent to ACT as compared to the level of psychological flexibility the patients showed before commencing the therapy. These findings support some of the previous findings where ACT interventions have been shown to significantly increase willingness to engage in difficult activities while experiencing
difficult emotions (Eifert & Heffner, 2003; Levitt, Brown, Orsillo, & Barlow, 2004; Bricker et al., 2013; Morris, Garety and Peters, 2014). Findings of this study also corroborate other studies that examined psychological flexibility or acceptance as a mediating factor in the efficacy of ACT. For e.g., Bond and Bunce (2000) found in a study that changes in outcome variables in the ACT condition were mediated by the acceptance of undesirable thoughts and feelings; Gifford et al. (2004) demonstrated that ACT worked through acceptance and response flexibility. According to Fledderus et al. (2010), enhancement of psychological flexibility during the intervention mediated the effects on positive mental health and concluded that ACT is an intervention that stimulates skills of acceptance and value-based action. Bohlmieijera et al. (2011) found that the improvement of acceptance during the ACT intervention mediated the effects of the intervention on depressive symptomatology at follow-up. However, contradicting results were reported by Bilich-Erich (2009) who investigated an acceptance-based approach called MBEIT (Mindfulness-based emotional intelligence training) on a sample of police officers and found no evidence of psychological flexibility as a mediating factor in improving general mental health. Such results may be attributed to the personality factors and training of the sample investigated, i.e., police officers, who are trained to resist influence and change, and the cognitive, social, and inflexible styles associated with the police role.

According to Hayes et al. (1999), one of the main goals of ACT is to increase psychological flexibility. The aim is to enable the clients to shift the focus away from experiential control and towards valued activity and to choose to act effectively, even in the presence of difficult private events (Hayes et al., 1999). According to Eifert and others (2009), this less avoidant and more flexible way of responding to anxiety and other
forms of emotional discomfort creates a space for individuals to act in ways that move them in the direction of chosen life goals even when unpleasant thoughts, feelings, and bodily sensations are present. By doing so, the individual’s effective repertoire is broadened in the presence of stimuli where psychological rigidity is present (Wilson and Murrell, 2004).

There are six key processes utilized by ACT that form the core of developing psychological flexibility (Hayes et al., 1999). These are: (i) acceptance (willingness to contact inner experiences e.g., allowing thoughts to come and go without struggling with them), (ii) defusion (learning methods to reduce the tendency to reify thoughts, images, emotions, and memories, and experiencing cognition as an ongoing process rather than allowing cognition to overly regulate behavior), (iii) self as context (experiencing oneself as the context in which inner experiences occur, rather than being defined by the content of experiences), (iv) being present (being able to flexibly attend to inner and outer events as they occur, non-judgmentally), (v) values (discovering what is most important to one's true self and choosing desired consequences of on-going patterns of behavior so as to establish reinforcers in the present), and (vi) committed action (setting goals according to values and carrying them out responsibly).

Cognitive defusion involves arranging verbal contexts so as to decrease the believability of one’s thoughts and reducing the tendency to respond in the presence of them (Twohig et al., 2006). Cognitive fusion refers to the tendency of human beings to get caught up in the content of what they are thinking, and fusing with or attaching to the literal
content of the private experience. These entanglements of the belief in thought, judgments, evaluations and negative self-evaluations become the core reason for avoidance of experience. Thus, learning the skills of cognitive defusion is central to ACT, whereby individuals learn to observe thought as ‘just thoughts or mental events’, not as facts (Eifert and others, 2009). Cognitive defusion has been found to mediate the effect of treatment condition in studies using ACT (for e.g., Gaudiano & Herbert, 2006) and these techniques have been found to reduce both discomfort and believability of thoughts (Masuda and others, 2004). ACT seeks to promote extinction of the anxiety response, but unlike the principle of respondent conditioning used in exposure techniques, with ACT, this principle is conceptualized as a willing (i.e. accepting) experiencing of aversive emotions in a relatively defused state, from a self-as-context perspective (Flaxman, Blackledge and Bond, 2011). ACT helps the individual get in contact with a transcendent sense of self known as "self-as-context"—the ‘you’ that is always there observing and experiencing and yet distinct from one's thoughts, feelings, sensations, and memories. ACT as a therapy is aimed at letting oneself ‘experience the experience’, without needless defense, thereby, promoting psychological flexibility. In the current study, psychological flexibility was found to significantly increase subsequent to ACT and was further improved at follow-up, thus, validating the first hypothesis.

The second hypothesis stated that there will be a significant decrease in the thought suppression of patients diagnosed with OCD, subsequent to undergoing treatment of Acceptance and Commitment Therapy. It was found from the results (Table. 3) that there was a significant treatment effect (F= 40.64, p< 0.001) on thought suppression as measured
by WBSI, from baseline to post- and 1-month follow-up. Graphical representation given below depicts these findings (Figure 4).

![Graph showing decrease in WBSI scores](image)

**Figure 4.** Graphical Representation of comparison of Mean Scores between pre-intervention, post-intervention and follow-up on the White Bear Suppression Inventory (WBSI).

It can be seen from the graph given above that Thought Suppression decreased from ‘High’ at pre-, to ‘Low’ at post- and follow-up assessment indicating that there was a significant decrease in thought suppression subsequent to ACT. Pairwise comparison of means revealed a significant decrease of 53.02 from pre- to post- and of 54.04 from pre- to follow-up, with a large effect size at post- (d= 2.30) and follow-up (d= 2.34) indicating a strong effect of the intervention on thought suppression in patients diagnosed with OCD (Table 5).
Thought Suppression is defined as the act of attempting to ignore or control one’s thoughts that are found to be threatening or distressing. It is the act of experientially avoiding one’s distressing thoughts. The findings of this study corroborate some previous findings, supporting the impact of ACT on reducing experiential avoidance of thoughts, for e.g., Dalrymple and Herbert (2007) demonstrated the mediational role of experiential avoidance in the efficacy of acceptance and commitment therapy (ACT) for social anxiety disorder (SAD); Ruiz (2010) in a meta-analysis found that ACT was a efficacious treatment working on experiential avoidance to treat various forms of psychopathology; Burrows (2011) found that internal control strategies, particularly rumination and thought suppression were the most common manifestations of experiential avoidance, and concluded that ACT reduced experiential avoidance by offering willingness as an alternative to avoidance and control, grounding the participants in the present moment, reducing their fear of trauma symptoms, restoring their personal values and engaging them in values-guided action.

The function of thought suppression or experiential avoidance is to control or minimize the impact of aversive internal experiences. Experiential avoidance of thoughts and other unwanted private events (e.g., emotions, memories, etc) provides immediate but short-term relief from anxiety created by the aversive experience, which negatively reinforces such behaviour and strengthens the anxiety response (Eifert et al., 2009). There is sufficient empirical evidence that has demonstrated the inefficacy of attempts to control or suppress thoughts and that such suppression results in a paradoxical increase and restrict life functionality (e.g., Abramowitz et al., 2001; Purdon, 1999; Dahl, Wilson and Nilsson, 2004; Hayes et al., 2006).
According to Hayes (2004), unpleasant and unwanted ‘private experiences’ (thoughts, images, feelings, sensations, urges, and memories) act as barriers. The attempt to control private experiences can lead to a paradoxical increase in the intensity and frequency of those experiences, and may even result in psychopathology. Cognitive fusion, which supports experiential avoidance, occurs when an individual’s verbal processes (i.e., thoughts) markedly regulate overt behaviour in ineffective ways due to the inability or failure to notice the process of thinking (context) over the products of thinking (content) (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). Acceptance and Commitment Therapy (ACT) is conceived as the treatment of ‘Experiential Avoidance Disorder’, by inculcating skills of being present, acceptance and defusion of thoughts. Cognitive defusion involves disengagement from verbal entanglements of judgments and evaluations, thereby, decreasing the believability of thoughts and allowing the individual to experience events without acting on the basis solely of their derived verbal functions (for e.g., Luciano, Rodrí-guez Valverde and Gutiérrez Martí–nez, 2004). Thus, ACT as a therapy is conceived to reduce thought suppression, a form of experiential avoidance, by preventing cognitive fusion and increasing willingness to experience even distressful thoughts. Hence, the second hypothesis stands validated.

The third hypothesis stated that there will be a significant increase in the mindfulness skills (observing, describing, acting with awareness and acceptance without judgment) of patients diagnosed with OCD, subsequent to undergoing treatment of Acceptance and Commitment Therapy. It was found from the results (Table. 3) that there was a significant treatment effect (F = 27.45, p < 0.001) on mindfulness skills as measured
by KIMS, from baseline to post- and 1-month follow-up. Below is the graphical representation of the findings (Figure 5).

![Graphical representation of findings](image)

**Figure 5.** Graphical Representation of comparison of Mean Scores between pre-intervention, post-intervention and follow-up on the Kentucky Inventory of Mindfulness Skills (KIMS).

The graph (Figure 5) depicts that there was a significant increase in mindfulness skills subsequent to ACT at the post-intervention phase, followed by a decrease at the follow-up phase. Mindfulness skills increased from ‘Low’ at pre-, to ‘High’ at post-, but decreased to ‘Moderate’ at follow-up assessment (Table. 4). Pairwise comparison of means (Table 5) revealed a significant increase of 83.85 from pre- to post- and of 66.13 from pre- to follow-up with a large effect size at post- (d= 2.59) and at follow-up (d= 2.04). Treatment effect (Table. 3) was found to be significant for the subscales of ‘Acting with Awareness’ (F= 13.28, p< 0.001) and ‘Acceptance without Judgment’ (F= 18.32, p< 0.001); however, on the subscales of ‘Observing’ (F= 3.09, p> 0.05) and ‘Describing’ (F= 2.89, p>
0.05) the effect was not found significant. Pairwise comparison of difference between means and their effect size on the subscales revealed a significant increase of 26.84 on ‘Acting with Awareness’ from pre- to post- with a large effect size of d=2.76 at post, and a significant increase of 23.99 from pre- to follow-up with a large effect size of d= 2.47 at follow-up. A significant increase of 27.07 from pre- to post- with a large effect size of 2.65 at post, and a significant increase of 28.97 from pre- to follow-up with a large effect size of d=2.83 at follow-up was observed on the subscale of ‘Acceptance without Judgment’. The large effect size revealed in the pairwise comparison on KIMS and its subscales indicate a strong effect of the intervention on mindfulness skills in patients diagnosed with OCD. The graphical representation of the results obtained on the subscales of KIMS is given below (Figure. 6).

![Graphical Representation of comparison of Mean Scores between pre-intervention, post-intervention and follow-up on the sub-scales of Kentucky Inventory of Mindfulness Skills](image-url)

**Figure 6.** Graphical Representation of comparison of Mean Scores between pre-intervention, post-intervention and follow-up on the sub-scales of Kentucky Inventory of
Mindfulness Skills (KIMS) – Observing (Obs), Describing (Des), Acting with Awareness (AwA) and Acceptance without Judgment (AwJ).

Kabat-Zinn (2005) defined Mindfulness as, “moment-to-moment, non-judgmental awareness, cultivated by paying attention in a specific way, that is, in the present moment, and as non-reactively, as non-judgmentally, and open-heartedly as possible. A core characteristic of mindfulness has been described as open or receptive awareness and attention (Deikman, 1982; Martin, 1997). Mindfulness is not a concept but a skill that involves cultivation of a kind of non-elaborative, non-judgmental, present-centered awareness in which each thought, feeling, or sensation that arises in the attentional field is acknowledged and accepted as it is (Kabat-Zinn, 1990; Segal, Williams, & Teasdale, 2002). According to Fletcher and Hayes (2005), mindfulness can be understood as a collection of related processes or skills that function to undermine the dominance of verbal networks, especially involving temporal and evaluative relations. The concept of mindfulness encompasses cultivating skills such as ‘observing’, ‘describing’, ‘acting with awareness’ and ‘acceptance without judgment’. In the current study, ACT was found to improve two skills, i.e., ‘acting with awareness’ and ‘acceptance without judgment’, however, treatment effect was not found significant for ‘observing’ and ‘describing’ skills. This indicates that subsequent to ACT, participants were found to have an increased ‘awareness’, i.e., being attentive and engaging fully in one’s current activity is, and an increase in the attitude of being non-judgmental, i.e., to allow reality or what is there, to be as it is without judging or avoiding.
The findings of this study corroborate the findings of some other researches; for
e.g., Bowen and colleagues (2007) reported a significant decrease in thought suppression in
participants of mindfulness meditation, indicating that mindfulness exercises reduce
experiential avoidance, and hence, improve awareness and acceptance of thoughts. In
another study, it was found that ‘observing’ and ‘describing’ one’s experiences appeared to
mediate outcomes for the Cognitive Therapy group relative to the ACT group, whereas
‘experiential avoidance’, ‘acting with awareness’, and ‘acceptance’ mediated outcomes for
the ACT group (Forman et al., 2007).

Mindfulness skills that are targeted for cultivation as key processes involved in
developing psychological flexibility in Acceptance and Commitment Therapy (ACT)
include ‘being present’, ‘non-judgmental acceptance’, and ‘defusion’ from verbal
entanglements thereby observing experience ‘just as it is’. The skills of observing (noticing
or attending to various stimuli including internal phenomena such as cognitions, bodily
sensations, and external phenomena such as, sounds, smells) and describing (describing,
labeling, or noting of observed phenomena by applying words in a nonjudgmental way)
were not found to improve, probably because these skills are not directly targeted by ACT.
In ACT, less focus is placed on deliberate observation and noticing of internal and external
events and describing them verbally in a non-judgmental manner. Instead, the mindfulness
exercises focus on cognitive defusion that enables individuals to create a ‘distance’ from
thoughts and notice the process of thinking, and on acceptance that teaches individuals how
to let go of their control struggle and experience events ‘just as it is’. In addition, the
enhancement of mindfulness skill of ‘acceptance without judgment’ was found to be
maintained at follow-up, unlike ‘acting with awareness’ that was found to decline at follow-up. It was also found that the overall scores on mindfulness skills were found to decline at follow-up as compared to post-assessment. These results may be justified as ‘mindfulness’ is a skill, especially the skill of ‘being present and aware’, that is cultivated and maintained through regular practice of mindfulness exercises which was not continued by participants post the completion of therapy. Unlike awareness, the skill of ‘acceptance without judgment’ is a developed by way of changing one’s belief system about evaluations, and remained more stable and ingrained in the individuals mindset. Thus, maintaining the results at follow-up assessment.

Mindfulness exercises used in ACT target awareness, acceptance and cognitive defusion, thus, enabling individuals make contact with experience as it is, without evaluations, including verbal rules and reasons, and without judgments. ‘Acting with awareness’ and ‘acceptance without judgment’ skills of mindfulness are related to these targets of ACT, which were found to improve subsequent to therapy. Thus, mindfulness skills in the framework of ACT focus on changing one’s awareness of and one’s relationship to one’s thoughts and feelings (private events) (Segal, Teasdale & Williams, 2004), encouraging the viewing of thoughts as ‘thoughts’ or mental events rather than as reality (Teasdale et al., 2002; Segal et al., 2002). Thus, though skills of ‘observing’ and ‘describing’ were not found to significantly increase, there was a significant increase in mindfulness skills of ‘acting with awareness’ and ‘acceptance without judgment’ and an overall increase in mindfulness skills, thereby, partially validating the third hypothesis.
The fourth hypothesis stated that there will be a significant reduction in the severity of symptoms of patients diagnosed with OCD, subsequent to undergoing treatment of Acceptance and Commitment Therapy. It was found from the results (Table. 3) that there was a significant treatment effect (F= 22.14, p< 0.001) on symptoms of OCD as measured by OCI-R, from baseline to post- and 1-month follow-up. Symptom severity of OCD (as measured by OCI-R) decreased from ‘High’ at pre-, to ‘Moderate’ at post- and follow-up assessment (Table. 4) indicating that there was a significant reduction in the symptoms of OCD subsequent to ACT. These findings are graphically presented below (Figure. 7).

![Graphical Representation of comparison of Mean Scores between pre-intervention, post-intervention and follow-up on Obsessive-Compulsive Inventory – Revised (OCI-R).](image)

*Figure 7.* Graphical Representation of comparison of Mean Scores between pre-intervention, post-intervention and follow-up on Obsessive-Compulsive Inventory – Revised (OCI-R).

As depicted by the graph, a significant improvement in the symptoms of OCD was noted subsequent to ACT. This improvement was also evident in the comparison of means (Table. 4) of symptoms of OCD from pre- to post-, however, these results did not maintain
at follow-up and increase of symptoms was observed from post- to follow-up. Pairwise comparison of means (Table 5) revealed a significant decrease from pre- to post- with a large effect size at post- (27.54, d=1.56) and a significant decrease from pre- to follow up with a large effect size at follow-up (33.34, d=1.89) indicating a strong effect of the intervention on symptoms in patients diagnosed with OCD.

Furthermore, on analyzing the subscales of OCI-R, treatment effect was found to be significant for the subscales of ‘Hoarding’ (F= 15.75, p< 0.001), ‘Checking’ (F= 17.09, p< 0.001), ‘Neutralizing’ (F= 13.86, p< 0.001) and ‘Washing’ (F= 31.84, p< 0.001); however, on the subscales of ‘Ordering’(F= 2.08, p> 0.05) and ‘Obsessing’ (F= 2.59, p> 0.05) the effect was not found significant. Strong effect of the intervention was found at post- and follow-up on the subscales of ‘Hording’ (d= 1.64 and d= 1.68, respectively), ‘Checking’ (d= 1.54 and d= 1.68, respectively), ‘Neutralizing’ (d= 1.26 and d= 1.17, respectively), and ‘Washing’ (d= 1.39 and d= 1.35, respectively). Graphical representation of the results obtained on the subscales of OCI-R is given below (Figure 8).
Figure 8. Graphical Representation of comparison of Mean Scores between pre-intervention, post-intervention and follow-up on the sub-scales of Obsessive-Compulsive Inventory – Revised (OCI-R) – Hording (H), Checking (Ch), Ordering (Or), Neutralizing (N), Washing (W), and Obsessing (Ob).

Findings of the current study corroborate the results reported by a research conducted by Twohig and colleagues (2010) that compared the effectiveness of 8 sessions of acceptance and commitment therapy (ACT) with progressive relaxation training (PRT) in adults with OCD and found a clinically significant change in OCD severity especially in the ACT group. Also, it was noted that such improvement in the reduction of OCD severity, contributed in a great extent, to an improved quality of life. In line with the findings of the current study, Armstrong, Morrison and Twohig (2013) investigated efficacy of ACT in youth with OCD, and reported a significant mean reduction in compulsions and severity of
compulsions from pre-treatment to post-treatment, with results maintaining at 3-month follow-up. Twohig, Hayes and Masuda (2006) evaluated the effectiveness of an 8-session Acceptance and Commitment Therapy for OCD intervention and found clinically significant reductions in compulsions by the end of treatment for all participants, with results maintaining at 3-month follow-up. Process changes were found in the form of decreased experiential avoidance, believability of obsessions, and need to respond to obsessions.

Investigations have found corroborating evidence while examining the mediating variables involved in the efficacy of ACT on OCD, such as, experiential acceptance or a willingness to experience obsessions, preventing experiential avoidance or thought suppression, cognitive defusion and mindfulness (for e.g., Twohig and Crosby, 2010; Carrascoso López & Valdivia-Salas, 2009; Hayes and Pankey, 2002; Eifert et al., 2009; Orayfig, 2010; Masuda and Tully, 2012; Biglan and others, 2013). Together these variables contribute to enhancing psychological flexibility of patients diagnosed with OCD, lack of which has been associated with OCD symptom levels in adults and children (Abramowitz, Lackey, & Wheaton, 2009; Briggs & Price, 2009). Increasing psychological flexibility involves helping clients to disentangle themselves from the cycle of experiential avoidance and cognitive fusion, not by challenging or changing their thoughts and emotions for example, but by learning to react more mindfully to such experiences, so that they no longer seem to be barriers (Ciarrochi & Blackledge, 2006). In a study on OC spectrum disorder, Wendell (2011) reported that psychological flexibility mediated the relation between acceptance and dysfunctional cognitions related with the disorder, and the symptoms, implying that ACT may be beneficial in treating these problems. Woods, Wetterneck and
Flessner (2006) reported that Acceptance and Commitment Therapy (ACT) decreased experiential avoidance and increased treatment compliance in treatment of OC spectrum disorder. According to Heffner and others (2002) ACT techniques are found efficacious in the treatment of OC spectrum conditions to target ineffective control strategies and experiential avoidance—the unwillingness to accept negative thoughts, feelings, and emotions.

According to Twohig (2008), OCD can be conceptualized as a disorder of misplaced rules regarding dangerous inner experiences that should be controlled. Rassin and colleagues (2000) found that thought-action fusion (TAF) triggers thought suppression, while thought suppression, in turn, promotes obsessive-compulsive symptoms. It was further reported that psychotherapy can bring significant changes in TAF and thought suppression, and thus, in symptoms of OCD (Rassin and others, 2001). Attempting to control or regulate obsessions (and associated anxiety or fear) is largely what makes OCD a disorder (Twohig, 2008). Research has found that attempts to suppress obsessions are generally not effective (Purdon & Clark, 2001), and a key component of effective treatments for OCD involves exposure and reduction of neutralizing responses (Abramowitz, 1996). Furthermore, attempts at regulating these inner experiences (e.g., compulsions) counteract and result in reduced rather than increased quality of life (e.g., Koran, Theinemann, & Davenport, 1996). Another factor that may be linked to the reduction in symptoms of OCD is rumination. Rumination in the context of OCD is characterized by a train of prolonged thinking about a question or theme that is undirected and unproductive. According to Davis and Nolen-Hoeksema (2000), an inverse relationship exists between rumination and cognitive inflexibility, suggesting the significance of
enhancing flexibility as a treatment of rumination, and thus, OCD. The findings of the current study support the findings of these researches, as the reduction in the severity of symptoms of OCD subsequent to ACT, was accompanied by a significant increase in acceptance or psychological flexibility and a significant decrease in thought suppression or experiential avoidance. Also, an increased psychological flexibility subsequent to ACT maybe contributing to a reduction in rumination, thereby, reducing the severity of OCD.

Another key principle of ACT holds extreme significance in treatment of OCD, i.e., mindfulness. Hanstede, Gidron and Nyklíček (2008) applied a mindfulness intervention on obsessive compulsive disorder (OCD) and found that the intervention had a significant and large effect on mindfulness skills, OCD symptoms, ‘letting go’, and thought-action fusion. ‘Letting go’ aspect was found integral to treatment of OCD. Fairfax (2008) found that mindfulness when applied with increased its efficacy and perhaps prevented relapse, by working on the TAF that maintains the disorder. Wilkinson-Tough and others (2010) also found corroborating evidence that Mindfulness-Based Therapy benefitted those experiencing obsessive-intrusive thoughts by targeting thought-action fusion and thought suppression. They also found that acceptance was useful in managing thought-action fusion and suppression of unwanted thoughts. Thus, changes in the above mentioned variables may suggest the mediatory role of these processes in the efficacy ACT for OCD.

Thus, in the context of Obsessive Compulsive Disorder (OCD), acceptance of distressing emotions and thoughts is integral in treatment of OCD. Psychological inflexibility, experiential avoidance of such thoughts and emotions, rumination, and meta-cognitive beliefs (in terms of thought-action fusion) contribute significantly to maintenance
of the disorder. ACT seeks to help the client create a new relationship with obsessive thoughts and anxious feelings, of acceptance, of experiencing them mindfully ‘just as they are’. This less avoidant and more flexible way of responding to anxiety and other forms of emotional discomfort creates a space for individuals to act in ways that move them in the direction of chosen life goals even when unpleasant thoughts, feelings, and bodily sensations are present (Eifert and Forsyth, 2009).

Furthermore, the Reliability Change Index (RCI) (Jacobson and Truax, 1991) that was used to analyze the degree of change from pre- to post-/follow-up intervention on the Obsessive-Compulsive Inventory-Revised (OCI-R) in terms of statistical reliability (Table 6) revealed a statistically significant degree of clinical change from pre- to post- (for 40% patients i.e., 12 out of 30) and from pre- to follow-up (for 30% patients i.e., 9 out of 30). This indicated that the intervention (Acceptance and Commitment Therapy) had a clinically significant effect on reducing the symptoms of Obsessive-Compulsive Disorder (OCD), thus, validating the fourth hypothesis of the study.

The current study also attempted to draw an understanding of the effect of certain socio-demographic and clinical variables (Table 7) on the efficacy of Acceptance and Commitment Therapy. The two-tailed t-test for difference between two independent means (Table 8) was done to test the effect of age, sex, education, duration of illness and age of onset on the outcome of the treatment. Each variable was categorized under 2 levels which were tested for significant difference on OCI-R scores post the intervention of ACT. The variable of age was categorized under two levels of 18-25 and 26-35. t-test for independent means revealed a significant difference between the means (t = -3.81, p < 0.01) classifying
the category of 26-35 years as responding better to the intervention of ACT than the category of 18-25 years of age. t-test for independent means revealed no significant difference between means of males and females (t = +1.92, p > 0.05), indicating that ACT was not found to be more efficacious for either females or males. In terms of education, ACT was found to be more efficacious (t = -2.58, p < 0.05) with the college educated group (education of 13 years or more) than with the school educated group (education up to 12 years). For duration of illness, two levels were tested, 1-3 years and 3-8 years of illness. t-test for independent means revealed that ACT was found to be more efficacious with duration of illness being 1-3 years (t = +4.17, p < 0.01). Age of onset was categorized under the levels of 16-19 years and 20-31 years (range being 16-31 years). It was found on the t-test that ACT was more efficacious with those having a later age of onset i.e., 20-31 years than 16-19 years (t = -5.24, p < 0.01). The levels of the variables were decided upon and based on the research literature on OCD e.g., Kessler and others (2005), Kanno et al., (1988), Ackerman and others (1994). According to Ackerman and others (1994), a young age of onset, longer illness duration, and presence of compulsions have also been identified as poor predictors of response to treatment in patients with OCD. It was clinically observed that patients from a higher age range and substantial duration of illness were considerably more receptive and convinced about the therapy procedure, having tried and failed at their attempts to suppress and neutralize the obsessions for years. The other factors that were clinically observed to impact the efficacy of treatment were the emotional maturity and psychological mindedness of the patients, which are overall general predictors of therapy outcome (Conte and others, 1990).
ACT differs from the traditional CBT-interventions in the philosophy, basic science, applied theory, targeted processes of change, and many of the techniques of change. Lappalainen and colleagues (2007) compared the impact of individualized treatment provided by trainee therapists based on a traditional cognitive behavior therapy (CBT) and acceptance and commitment therapy (ACT) model. Clients treated within an ACT model showed better symptom improvement than the CBT clients, CBT improved client self-confidence more rapidly than ACT, and ACT improved acceptance more than CBT. Foreman and others (2007) compared ACT with CBT using a group of participants reporting moderate to severe levels of anxiety or depression. They reported that “observing” and “describing” one’s experiences mediated outcomes for those in the CT group relative to those in the ACT group, whereas “experiential avoidance,” “acting with awareness” and “acceptance” mediated outcomes for those in the ACT group. In another research, Forman and others (2007) compared ACT to a traditional CBT program for participants who were impacted at different levels by food. Those participants that were highly impacted by food related cues ate less and had fewer cravings in the ACT condition, whereas, those who were not impacted by food did worse in the ACT condition than in the CBT condition. This indicates that both ACT and CBT have different mechanisms and process variables underlying their efficacy, and need to be compared as treatment approaches for specific conditions. It seems possible based on this line of reasoning that CBT might actually work better than ACT in more confined and minor areas, whereas, ACT might work a bit better in more severe or chronic areas where avoidance and inflexibility is more dominant (Hayes, n.d., ACBS).
To conclude, subsequent to the eight sessions of Acceptance and Commitment Therapy (ACT), patients diagnosed with Obsessive-Compulsive Disorder (OCD) were found to have improvement in Psychological Flexibility, decrement in Thought Suppression, enhancement of Mindfulness Skills of ‘Acting with Awareness’ and ‘Acceptance without Judgment’, and clinically significant reduction in symptoms of OCD.

The current study has significant clinical implications. The present investigation is one of the initial attempts made in India to study the efficacy of Acceptance and Commitment Therapy (ACT) and to examine the effects of this therapy on factors that may mediating the improvement in the obsessive-compulsive disorder (OCD). The findings of this study imply the role of ACT and its effect on psychological flexibility, experiential avoidance or thought suppression, and mindfulness skills, in the treatment of obsessive-compulsive disorder (OCD). The results imply the role of ACT in developing higher levels of psychological flexibility or acceptance, mindfulness skills and preventing thought suppression or experiential avoidance in patients diagnosed with OCD. The progress made by patients was followed-up after a period of one month post the completion of therapy to assess the maintenance of treatment gains, thereby, ensuring the efficacy of therapy beyond the therapeutic contact with the therapist. It was found that ACT was an effective intervention that enabled most patients in the sample to maintain the improvement they had made. The present study may be a small, but significant contribution towards developing cost-effective interventions for OCD in the Indian setting.

However, there are certain limitations of this study. The study did not examine the effect of ACT on thought-action fusion, which may be a mediator of change in the
treatment of OCD. The study may have a limited generalizability of results owing to a small sample size. A single group open label design and lack of a control group limit the degree to which significant improvement can be attributed to direct effect of the therapeutic program rather than non-specific effect of treatment.

The results of the present study are encouraging and suggest the need for future research on ACT in India. Larger scale randomized controlled trials examining the effects of ACT and also examining the correlation between mediating variables in therapy may be warranted. Conducting randomized controlled trials comparing ACT with traditional CBT in specific conditions and disorders will help in highlighting the role of specific factors involved in therapy. Substantiating quantitative results with qualitative data, such as the use of semi-structured interviews, may enrich the findings by providing deeper insights into the therapy process and outcome. OCD is a complex disorder with various manifestations and thus, investigating the effect of therapy on specific manifestations with their underlying mediational variables may be viable to build efficacious intervention programs. The effectiveness and applicability of Acceptance and Commitment Therapy (ACT) on other anxiety disorders such as Panic Disorder, and other related disorders, can be investigated. Lastly, Acceptance and Commitment Therapy (ACT) is a unique and creative intervention that makes use of techniques like metaphors, paradoxes and experiential exercises. As the results of the present research have demonstrated its efficacy, it can be replicated, and if viable, suitable modifications may be introduced in these techniques depending on the cultural milieu. A stronger research base for ACT can help practitioners create a more efficacious adaptation for the Indian setting.
The study which was set out to examine the effects of Acceptance and Commitment Therapy (ACT) on Psychological Flexibility, Thought Suppression, Mindfulness Skills, and Symptom Severity in patients diagnosed with Obsessive-Compulsive Disorder (OCD), was able to achieve its aim and objectives and was also able to clearly demonstrate the efficacy of this therapy on OCD. Even though the sample taken was rather small, the methodology used in this study can be replicated, not only for OCD but for other anxiety disorders and related conditions as well.