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Research Paper

Comparative Efficacy of Cognitive Behaviour Therapy and Acceptance & Commitment Therapy in Generalized Anxiety Disorder

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ABSTRACT

Background: Acceptance & Commitment Therapy (ACT) and Cognitive Behaviour therapy (CBT) researchers carry assumptions about the characteristics of these therapies, and the extent to which they differ from one another. This article examines proposed differences between ACT and CBT for Generalised anxiety disorder, including aspects of treatment components, processes, and outcomes. Cognitive Behaviour therapy (CBT) is an empirically supported treatment for anxiety disorders. However, not all individuals respond to treatment and many who show improvement do not maintain their gains over the long-term. Thus, alternative treatments are explored. ***Methods:*** The current study (N=30) was a three group design, comparing Cognitive Behaviour Therapy (CBT), Acceptance & Commitment Therapy (ACT), and Control group of participants with ICD 10 diagnosis of Generalised Anxiety Disorder has been taken. Participants completed 12 sessions of CBT or ACT or a 12-week waiting period. Baseline assessment done with all the participants and post-treatment assessment was done after completion of the therapy sessions. Assessments consisted of clinician ratings measures. As it is a three group design so Kruskal-Wallis H test has been used for the analysis of data to examine between-group differences on outcomes measures. ***Result:*** Both treatment groups control group, with no significant differences observed between CBT and ACT on post assessment. ***Conclusion:*** Overall improvement was similar between ACT and CBT, indicating that ACT is a highly viable treatment for anxiety disorders as CBT.

Keywords: *Cognitive Behaviour therapy, Acceptance & Commitment Therapy, Generalised anxiety disorder.*

Generalized anxiety disorder (GAD) is the most common type of anxiety disorder. The key features of Generalized anxiety disorder (GAD) is excessive and uncontrollable worry about

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a number of activities/events of life and features of negative emotions and tension. The affected person finds the worries difficult to control, and this can result in decreased occupational and social functioning (Bitran, Barlow and Spiegel, 2009). People with GAD experience other psychological and somatic symptoms of anxiety like excessive worry which is generalized and difficult to control. Psychological symptoms include irritability, poor concentration, increased sensitivity to noise and sleep disturbance, typically difficulty falling asleep. Somatic symptoms of GAD can manifest in many different ways. So, the associated sign and symptoms accounted by the persons with GAD at the highest frequency are restlessness, irritability, muscular tension, easy fatigability, difficulty in sleep, and difficulties in concentration (Marten et al., 1993). The prevalence rate of Generalized anxiety disorder is increasing day by day, the twelve month prevalence rate of GAD is 0.6% (NMHS, 2016). A Twelve-month prevalence rate in 2017 has been found to be 1-1.7% (Sagar et al., 2017) Now a days the focus of researches is on the assessment to find out the effectiveness of psychological interventions in the specific disorder and the positive outcomes has been found from the researches done since last few years it is found that psychological illnesses can be treated successfully. In view of this it was found that there are numbers of studies have been done to see the effect of cognitive behaviour therapy on generalized anxiety disorder and it is well known that Cognitive behavioural therapy (CBT) is broadly considered as the approach to psychotherapy with more empirical support (Butler, Chapman, Forman, & Beck 2006). Koohbanan and Mobaraki (2014), assess the efficacy cognitive therapy in reducing generalized anxiety disorder in female high school students and the observed that the anxiety was significantly decreased through training in children with generalized anxiety disorder. Through the obtained results is it clear that the effectiveness of cognitive therapy on generalized anxiety disorder in female students is very high. Efficacy of CBT in patients with generalized anxiety disorder and the Quality of life (QOL) of the patients with GAD has been assessed and obtained that apart from decreasing the symptoms of GAD cognitive behaviour therapy also improved the level of Quality of life in the patents (Jablameli, Doost, Kajbaf & Molavi. 2015).

However, like many writers have already noted, it is not an easy task to define CBT because diverse theories, principles, models, and techniques can be categorized with this label (e.g., Craske, 2010; Hayes, 2008; Herbert & Forman, 2011; Levin & Hayes, 2011), but Cognitive behavioural therapy can be better seen as a scientific approach for psychopathology. Apart from cognitive behaviour therapy, the third generation of CBT has also been proposed almost one decade ago represented by therapies that have been developed during the last twenty years and that emphasize the role of acceptance and mindfulness to produce second-order changes instead of changes in cognitive content. One of such therapies, and probably the most representative one, is Acceptance & Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999, 2012;Wilson & Luciano, 2002).

In the psychological intervention psychotherapists used the approach of Cognitive behavioural therapy for anxiety disorders to help clients to reduce their distress by changing

their cognitive and behavioural responses to anxiety (Craske, 1999; Craske & Barlow, 1993). From the perspective of learning theory (Foa & Kozak, 1986), Cognitive behavioural therapy enables clients to develop a new associative network of adaptive thoughts and Behaviours that compete with or modify maladaptive behavior, fear-based networks and memories. Toward that aim, Cognitive behavioural therapy for anxiety disorders may include the following components: (a) Psychoeducation on the nature of fear/anxiety; (b) self-monitoring of symptoms; (c) relaxation/breathing retraining; (d) cognitive restructuring (logical empiricism and disconfirmation); (e) behavioural experiments; (f) response and relapse prevention. In cognitive restructuring, clients learn to challenge the absolute truth of anxious thoughts by noting evidence for and against the thought, identifying cognitive errors the thought reflects, and/or developing alternative thoughts that better reflect the full range of their experience.

Acceptance & Commitment Therapy is a behavioural therapy that uses mindfulness, acceptance, and cognitive diffusion skills to increase psychological flexibility and promote behavioural change in the area of chosen values. In ACT, psychological flexibility is defined as enhancing the capacity of clients to make contact with their experience in the present moment, and based on what is possible for them in that moment; choose to act in ways that are consistent with their chosen values (Hayes et al., 1999). The approach that blends mindfulness-related processes and direct Behaviour change methods is ACT (Mc-Cracken, 2013). For behavioural problems, ACT helps clients alter the context of symbolic activity, or the functional significance of action limiting language. Therefore, a central ACT component is teaching cognitive diffusion skills, which involve distancing oneself from the literal meaning and content of language. Clients are encouraged to use these skills, which are taught via experiential exercises.

Cognitive behavioural therapy (CBT) is very well established as an effective treatment for anxiety disorders. There are number of supportive evidences has been found which are proven the effectiveness of cognitive behavioural therapy for disorders of Anxiety. (Butler, Chapman, Forman, and Beck, 2006; Hofmann and Smits, 2008; Norton and Price, 2007; Tolin, 2010), the positive outcome has also be seen specifically in Generalized Anxiety disorder, obsessive-compulsive disorder, panic disorder, social anxiety disorder, specific phobia, and posttraumatic stress disorder, relative to psychological control conditions. So it can say that cognitive behaviour therapy (CBT) has strong empirical validation in the treatment of anxiety disorders.

In spite of all above mentioned evidences of effectiveness of cognitive behaviour therapy (CBT) on different types of anxiety disorders, there are some substantial percentage of cases with the diagnosis of anxiety disorders who don’t get benefits from cognitive behaviour therapy (Barlow, Gorman, Shear, and Woods, 2000), patients don’t get long term improvement, (Brown and Barlow, 1995), felt the need to take other treatments (Brown and Barlow, 1995). Studies also reported that some patients who were seeking cognitive

behaviour therapy as a psychological intervention were remain vulnerable to explicating features of anxiety and mood disorders throughout the long time (Wetherell, Gatz, and Craske, 2003). In terms of effectiveness, a meta-analysis found individual CBT to be effective in treating social anxiety compared with a waitlist control. However, a substantial number of patients remain symptomatic and response rates were low in long term follow up (Mayo-Wilson, Dias, Mavranezouli 2014). Researchers have advocated better matching of treatments to individuals as one approach towards improving therapy outcomes, which in turn has motivated the search for alternative treatment approaches. Acceptance & Commitment Therapy (ACT), which emphasizes personal values and cognitive flexibility, offers one such alternative.

The growing interest in behavioural approaches that do not rely on cognitive restructuring, such as behavioural activation treatment for depression (Dimidjian, Hollon, Dobson, Schmaling, Kohlenberg, Addis, Gallop, McGlinchey, Markley, Gollan & Jacobson, 2009) with ACT (Hayes, Strosahl & Wilson, 1999). Thus, ACT does not aim to correct cognitive errors or physiological deregulation, but rather uses an acceptance-based approach to manage internal experiences. Experimental data support the value of this approach. Instructions for emotional acceptance have been shown to lower distress and increase tolerance for experimentally-induced symptoms of anxiety (Campbel, Brown, & Hofmann, 2006). There are now at least six randomized controlled trials providing support for the use of ACT for chronic Pain also (Buhrman, Skoglund, Hussell, Bergstron, Gordh, Hursti & Andersson, 2013). In an open trial, patients with panic disorder trained to observe and accept rather than control their anxiety during exposures showed decreases in panic symptom severity, on par with what is typically seen in CBT (Meuret, Twohig, Rosenfield, Hayes & Craske 2012).

In the first randomized controlled trial comparing ACT to CBT in patients diagnosed with anxiety disorders (Arch et al., 2012), comparable outcomes were found between CBT and ACT. However, the sample was comprised of mixed anxiety disorders and was too small to evaluate the relative effects of CBT and ACT for specific anxiety disorders. ACT was also shown to be effective for social phobia in a single case design study (Dalrymple & Herbert, 2007). Apart from that ACT has been used widely in different areas in which along with anxiety and depression, persistent pain, discomfort, or distress is also included. Some researches done by Pielech, Vowles and Wicksell (2017) and they also found that ACT is very effective in chronic pain as well.

MATERIAL AND METHODS

Objective

To explore the efficacy of Cognitive Behaviour Therapy and Acceptance & Commitment Therapy in the patients with Generalized Anxiety Disorder and comparison between two treatment modalities.

Sample

The sample for the study consisted of 30 persons diagnosed with Generalized Anxiety Disorder that were taken from the psychiatric setup. The age range of the participants varies from 20 to 50 years. Both male and female participants were taken in the sample. The sample was randomly assigned to three group CBT, ACT and Control.

Design

In the present study, to achieve the desired objectives, three group design is used to study the effect of Cognitive behaviour therapy and Acceptance & Commitment Therapy in Generalized anxiety disorder.

CBT	ACT	CONTROL
N=10	N=10	N=10

Tools

GAD 7 (Spitzer and Williams, 2006) **–**

Description: **Spitzer and Williams made the scale** GAD-7, which is a valid and efficient tool for screening for Generalized Anxiety Disorder and assessing its severity in clinical practice and research, and it is widely used in researches.

Scoring: The scores are assigned of 0, 1, 2, and 3, to the response categories of “not at all,” “several days,” “more than half the days,” and “nearly every day,” respectively. GAD-7 total score for the seven items ranges from 0 to 21. The cut-off of 5, 10 and 15 represents the level of severity.

Reliability and validity: A 7 Items anxiety scale (GAD-7) is having good reliability (.92), as well as criterion, construct, factorial, and procedural validity (alpha 0.89) was used. Increasing scores on the scale were strongly associated with multiple domains of functional impairment.

***Consent form*:-** In view of the ethical and legal issues the informed consent has been filled and signed by all the participants. By obtaining informed consent in *writing,* the clinician possesses even clearer proof of the consent. Unless a client can provide proof that s/he was misinformed or was not competent to provide consent, the signed document can minimize risk for the clinician. Consent is most often used prior to beginning of psychotherapy, or psychological assessment. It is also used to authorize psychotherapists to release or reveal confidential information about the patients whom they are treating or have treated.

Procedure

Thirty participants who met ICD 10 criteria for Generalized Anxiety Disorder were randomized to ACT (n=10), CBT (n=10) and Control Group (n=10). All participants who began the treatment have motivation for the intervention that was determined through the interview. Before intervention consent of the patient for therapy and assessment has been

taken individually through informed consent form. The severity of illness was measured by Severity Measure for Generalized Anxiety Disorder—Adult for the baseline assessment and then they were taken for the therapy. The tool administrator and the therapist was the same person who is a trained clinical psychologist and certified as a Health Services Provider. After that Acceptance & Commitment Therapy has been applied on 10 GAD patients. On another 10 patients, CBT were applied and no psychotherapeutic intervention was given to the remaining 10 patients. The pattern of psychotherapeutic intervention was scheduled as one session in a week, the duration of the sessions were between 45 minutes to 1 hour. 10 – 12 sessions has been given for each patient for both the groups (ACT & CBT). The Severity measure GAD 7 test was administered again to assess the severity of illness, to know the outcome effect of both the psychotherapeutic intervention approach.

Statistical analysis: In order to achieve the objective of the study, difference test and Kruskal Wallis H test has been used. The Kruskal-Wallis H test is a rank-based nonparametric test(which is also called the "one-way ANOVA on ranks sometimes") that was used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. It is considered as a nonparametric test alternative to the one-way ANOVA, and an extension of the Mann-Whitney U test to significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. It is considered the nonparametric alternative to the one-way ANOVA and an extension of the Mann-Whitney U test to allow the comparison of more than two independent groups, non-parametric test was used because groups sample size was less than 30 which is basic assumptions to use parametric (ANOVA) test.

RESULT

The aim of the study is to assess the comparative efficacy of Cognitive Behaviour Therapy and Acceptance & Commitment Therapy in the persons with Generalized Anxiety Disorder and independently the effect of Cognitive Behaviour Therapy and Acceptance & Commitment Therapy on Generalized Anxiety Disorder. In view of that to achieve the objectives of the study Kruskal-Wallis H test has been used for the analysis of data, which is a rank-based nonparametric test that is used to determine that if there are some statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. It is considered the nonparametric alternative to the one-way ANOVA and an extension of the Mann-Whitney U test to allow the comparison of more than two independent groups, non-parametric test was used because groups sample size was less than 30 which is basic assumptions to use parametric (ANOVA) test.

Table 1 shows that there is no significant differences emerged between ACT, CBT and control group on measures at Pre-treatment. ACT group, CBT group and control group did not differ on socio-demographic or clinical characteristics at Pre treatment test.

Group		GadPre	GadPost
CBT	Mean	23.2000	8.6000
	Std. Deviation	1.47573	2.06559
ACT	Mean	22.5000	8.4000
	Std. Deviation	2.17307	2.87518
Control	Mean Std. Deviation	22.8000 1.98886	18.5000 2.91548
Chi –Squar		.584	19.481**

Table 2 Comparison between three groups

	Test Statistic	Standard Eror	Std. Test statistic	Sig.
ACT- Control	-14.95	3.924	-3.82	.00*
CBT- Control	-15.05	3.924	-3.84	.00*
CBT-ACT	-.100	3.924	-.025	.98

The significance level is .05 P<.05

In Table 2 the outcome from the analysis of Kruskal wallis H test is shown and through which it is very clear that the difference between ACT group and control group is significant on .01 level. As well as ACT group CBT group is also significantly different from control group but there is no significant difference is seen between ACT group and CBT group.

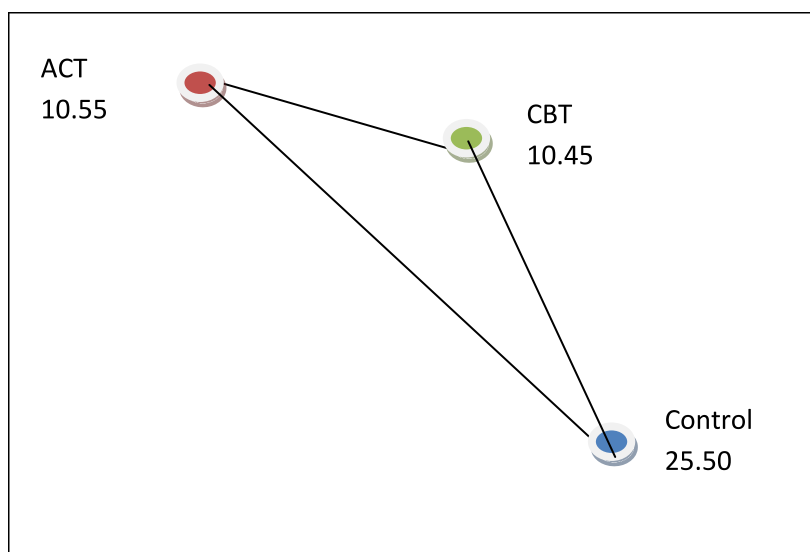

Figure 1: Representation of difference between three groups

DISCUSSION

As the aim of the study is to assess the comparative efficacy of Cognitive Behaviour Therapy and Acceptance & Commitment Therapy in the persons with Generalized Anxiety Disorder and independently the effect of Cognitive Behaviour Therapy and Acceptance & Commitment Therapy on Generalized Anxiety Disorder. To meet the desired aim of the

study, objectives made to assess and Compare the efficacy of Cognitive behaviour therapy and Acceptance & Commitment Therapy in the improvement of Generalized anxiety disorder. In view of this it is found in the results that there is a significant reduction in severity of Generalized Anxiety Disorder through the treatment process with Cognitive Behaviour Therapy (14.98) that is significant on .01 level. Previous studies have been corroborated with these results of the present study. Kishita and Laidlaw (2017) studied the effectiveness of Cognitive Behaviour Therapy for Generalized anxiety disorder between adults of working age and older persons. In results they have obtained statistically significant differences in outcome i.e. the difference between pre and post finding there was significant difference. As well as Cognitive Behaviour Therapy, the effect of Acceptance & Commitment Therapy in the improvement in the pathology have also been seen significantly in post GAD group in comparison to pre GAD group (13.57) that is significant on .01 level which indicate that Acceptance and Commitment Therapy is effective on the symptoms of Generalized anxiety disorder. The results are corroborated with the previous studies in which Hasheminasab, Babapour, Mahmood & Fakhari, (2015) studied the effect of Acceptance and Commitment Therapy on persons with Generalized anxiety disorder, they ascertained positive result in the outcome post treatment. So, it can be said that CBT and ACT is highly efficacious treatment for Generalized anxiety disorder. Although there are few other studies are also supporting the result that ACT is as effective as CBT in other anxiety disorders also, like evidences shows that individuals with social phobia will, on average, respond as well to ACT as they do to CBT (Clarks et al 2015). Cognitive therapy has been shown to be effective in the treatment of GAD patients. The results of a Meta analysis suggested that cognitive behavioural therapy showed better long-term outcomes than applied relaxation in GAD patients. (Cuijpers, Sijbrandij, Koole, Huibers, Berking & Andersson, 2014).

The results of present study are also corroborated with the previous study done on comparison of ACT and CBT for a mixed anxiety sample (Arch et al., 2012), the two treatments in the study were structured to be equated on the amount of exposure to feared situations, although, presented with different rationales (i.e., to gain control over fear responding in CBT and to achieve actions consistent with life values in ACT). Given the potency of exposure for anxiety disorders (Norton & Price, 2007), it is conceivable that the shared component of exposure overruled other differences between the two treatments, and thereby equated their effects. Overall, the current findings add to the growing body of literature supporting the efficacy of acceptance-based approaches as a workable alternative to cognitive behavioural therapies that aim to regulate internal (somatic and cognitive) state, at least given equivalent amounts of exposure to feared situations (Antonia, Kaczkurkin, Edna & Foa, 2015). The rationale of the result table 2 could be the procedures and processes that are shared in common between both the approaches of psychotherapy. Similarities between ACT and CBT are discussed elsewhere (Arch & craske, 2008). These include exposure to, rather than suppression of, anxious thoughts; active effort to deal with anxious thoughts; and acquisition of strategic control over emotions even though via different paths. GAD treatment also involves a significant cognitive aspect such as using cognitive skills to reduce excessive

anxiety and worries. For example, Craske and Barlow's (2014) GAD treatment manual teaches patients to learn to change patterns of thinking that lead to anxiety, challenge thoughts that overestimate risk, and identify and change catastrophic thinking.

The outcome of the study has also been supported by other studies that has been done on other than psychiatric disorder as a study done with the aim to compare weight loss and indicator of psychological functioning in a population of obese subjects belonging to three different diagnostic categories: without Eating Disorder, with Eating Disorder. Participants were exposed respectively to a CBT or an ACT treatment and were assessed three times: pre intervention, post intervention and follow-up. The investigators hypothesize that CBT and ACT are both effective in the post-intervention. ACT intervention should be more effective in the follow-up both for weight and psychological functioning, due to its focus on the flexible managing of the global context instead of the focus on the pathology itself, more typical in standard CBT treatment. Andrea et al, (2017).

CONCLUSION

In sum, this study adds to the small but growing body of evidence indicating that CBT and ACT perform equally well for the treatment of Generalized Anxiety Disorder. As it is clear that ACT is a viable alternative to CBT. Hopefully the present discussion encourages researchers to think creatively in conceptualizing therapeutic elements of CBT and ACT. This study also replicated that the purpose of behaviourally based treatment initiate to identify the maximally efficient and effective elements of long-lasting behaviour changes to help the person to maximize happiness and life fulfilment.

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Conflict of Interest

The authors colorfully declare this paper to bear not conflict of interests

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