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Comparing the Effectiveness of Cognitive Behavioral Therapy with Acceptance and Commitment Therapy on Reduction of Social Anxiety Disorder Symptoms in University Students

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Abstract

Background: Social anxiety disorder is one of the most common chronic anxiety disorders with a significant fear or anxiety that leads to a long period of disability and the sufferer suffers a lot of problems in terms of personal, occupational and social performance

Objectives: The purpose of present study was to compare the effectiveness of cognitive behavioral group therapy and acceptance and commitment group therapy on reducing of social anxiety symptoms in university students with social anxiety disorder.

Methods: In this research, a semi-experimental interventional method was used using two groups of experimental and one control group. A sample of 45 students with social anxiety disorder was selected by convenience sampling method and then randomly assigned to two experimental and one control groups. The Social Phobia Inventory (SPIN) was used for data collection in order to assess the amount of social anxiety. The pre-test and post-test scores were analyzed using covariance test.

Results: The results showed that, both treatment groups outperformed control group, with no differences observed between CBT group and ACT group. Although ACT group slightly outperformed CBT group but the difference was not statistically significance.

Conclusion: Findings shows that the two therapeutic approaches are equally effective in reducing the symptoms of social anxiety, and ACT can be a good alternative CBT in the treatment of social anxiety disorder.

Keywords: Acceptance and commitment therapy; Cognitive-behavioral therapy; Social anxiety

Introduction

Social anxiety disorder is one of the most common chronic anxiety disorders, with a prevalence of 13% [1]. It's the second most commonly diagnosed anxiety disorder, and one of the three common psychiatric disorders in the United States [2,3]. The main feature of this disorder is a significant fear or anxiety, which is tolerated or avoided by great difficulty, about one or more social situations in which it is possible for the patient being judged, negatively evaluated, or rejected [4]. This chronic disorder has a gradual and early onset in adolescence [5] and significantly impairs family social performance and personal economic performance [6]. Only a small fraction of the affected ones gets significant treatment (National Collaborating Centre for Mental Health) [7]. Some affected people may not go out of their home for weeks or lose their many social, occupational and educational opportunities, although these avoidance behaviors temporarily reduce anxiety but do not eliminate the disorder [8]. In the absence of therapeutic interventions, the disorder will lead to a long period of disability and the sufferer suffers a lot of problems in terms of personal, occupational and social performance [9]. There is high comorbidity of this disorder with other anxiety disorders, depression and alcohol dependence, and a range of personality disorders, especially the avoidance personality disorder [10].

Considering the high prevalence and early onset of this disorder, as well as its effect on the social and occupational functioning of the individual and its low spontaneous improvement or remission, it is very evident that a timely diagnosis and effective treatment is of necessity. On the other hand, its high comorbidity with other disorders, precedence over other disorders, and the high cost it imposes on health services, highlights the importance of finding a more effective treating approach.

In addition to drug therapy, many psychological treatments have been identified as effective for social anxiety disorder, including cognitive-behavioral therapy [11], interpersonal therapy [12], exposure therapy [13] Social skills training, and cognitive-behavioral therapy [14].

Cognitive-behavioral therapy (CBT), is well established as an effective treatment for anxiety disorders [15,16]. CBT model of treatment for social anxiety disorder has been widely studied and its effect on social anxiety disorder has been reported moderate in the recent meta-analysis [16]. Blanco et al. [17] reported a lower response rate of CBT to social anxiety disorder compared to drug therapy and both treatments together. More over despite experiencing considerable Success [18] in a recent research [3], it has been reported that CBT had important shortcomings, such as not all individuals responded to this treatment, the long-term treatment outcomes were not stable, and,

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trying to control thoughts that accompany the unpleasant excitement, often increases them. Barlow et al. [19] also reported that many recipients of CBT abandoned the treatment before it ends, and relapse following successful treatment, seeking additional treatment usually happened. Crask et al. [3] acknowledged that despite the successful treatment of people with anxiety disorders, they remain vulnerable to developing anxiety and mood disorders across the lifespan. Furthermore, there is growing interest in behavioral approaches that do not rely on cognitive restructuring, which is a substantial component of CBT, such as behavioral activation treatment for depression [20]. Therefore, 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. Earlier researchers turned to treatments that are based on awareness and acceptance [21]. Among these treatments, Acceptance and Commitment Therapy (ACT) has been reported to be efficacious treatment for many different disorders, including: Social Anxiety Disorder [22] Panic Disorder [23] Anxiety disorders [24], eating disorders [25], obsessive-compulsive disorder, skin disorder [26], and depression [27].

ACT is a third wave therapy and is grounded in a philosophy of science known as functional contextualism, based on behavioral theory and research including relational frame theory, with this larger line of work often called contextual behavioral science [28]. ACT initially developed as a transdiagnostic and process-focused treatment [21]. In this treatment, it is assumed that human being considers many feelings, emotions, thoughts and inner events as unpleasant and intolerable and tries to change, control or eliminate these internal experiences [29]. But this attempt to control internal events is inefficient and exacerbate them [28]. Although this approach recognizes the role of cognition in creating unpleasant emotions, but rather than focusing on cognitive restructuring as in CBT, ACT focuses on acceptance and tendency to experience internal events and on interactions based on values in life, and recognizes thoughts, only as an integral part of normal human experiences and, one of several possible contextual factors that can lead to negative emotions [30,31]. ACT aims to eliminate experiential avoidance and increase psychological flexibility through contact with the present moment, commitment act and values-based living [32].

Whereas several large randomized controlled trials have examined treatment differences of ACT and CBT in psychological factors, these studies have not focused on a social anxiety population and have largely ignored performance outcomes for this group [33]. As far as the researcher has searched, few studies have been widely conducted in this regard, Arch et al. [34], which compared the effectiveness of ACT with CBT on an anxiety disorder, And Craske et al. [3], in which examination of the efficacy of ACT relative to CBT for social anxiety was studied and their second goal was to evaluate moderators of each treatment approach. Therefore, in the same direction and in order to improve, expand the conclusions about the effectiveness of each of these therapeutic approaches, to evaluate the claims of each of these two therapeutic approaches, namely, cognitive reconstruction and change in the content of thoughts, and ultimately controlling thoughts to reduce anxiety versus acceptance and openness to anxiety provoking tasks with the purpose of living on the basis of one's own values, warrants the investigation.

Clearly, since entering the university is a critical period in the life of a person and it is often accompanied by a lot of changes in social relationships [35], it is importance of find a way to improve the social and academic performance of this social group.

Materials and Methods

This research is quasi-experimental in which the pretest-posttest control group design was used. Independent variable in this study was treatment (acceptance and commitment therapy and cognitive behavioral therapy) and dependent variable was, changes in social phobia inventory (SPIN) scores as a result of the application of two different treatment methods.

The statistical population consisted of all undergraduate students of Islamic Azad University of Marvdasht and Shiraz, in 2016.

The sampling was done in two stages: in the first stage, 470 students were selected by convenience method. Students who got high scores in SPIN (35-40 or higher) were identified and were clinically interviewed (according to the criteria of the Diagnostic Statistical Manual, Fifth Edition). The criteria for entry to the experimental group were: studying in university, not taking psychiatric drugs, not having other psychological and personality disorder, not participating simultaneously in other therapy programs and not receiving individual or personal counseling. Exclusion criteria were active suicidal ideation, severe depression, history of bipolar disorder or psychosis, substance abuse or dependence within the last 6 months. Upon identifying students with social anxiety disorder and receiving the final consent of the individuals to participate in the research, in the second stage of sampling, 45 students with social anxiety disorder were randomly assigned to three groups as follows: 15 in the experimental group ACT and 15 in the experimental group CBT and 15 were assigned into control group.

All three groups were assessed prior to treatment (Pre), by social anxiety inventory (SPIN) [36]. Then one of the experimental groups received CBT based on Hoffman & Otto's practitioner's Guide [5], and the second experimental group received ACT based on the Eifert and Forsyth practitioner's Guide [23]. For twelve weekly, 2-hour, group therapy sessions[1] but the control group did not receive any intervention. At the end of treatment, the subjects in all groups completed the social anxiety inventory (SPIN) again in the post-test stage and finally the obtained data was analyzed by covariance analysis method (Table 1).

It should be mentioned that the control group had already been informed about the necessity of receiving treatment, after post assessment, they were offered treatment free of charge, and were able to choose either CBT or ACT at the end of the research project.

Instruments

The amount of social anxiety was measured by social anxiety inventory (SPIN), which is a self-assessment scale of 17 items and total scores can range from 0 to 68. SPIN was designed by Canner et al. in 2000 to assess social anxiety and it's very sensitive to reduction of the symptoms of social anxiety over time. One of its uses is to test the response to treatment in social anxiety disorder. It is a useful screening tool for distinguishing between people with and without social anxiety, scores above 51 are considered very severe social anxiety and scores between 41 to 50 moderate, 21 to 30 low and less than 20 normal, the cut point 40 with an accuracy of 80% can distinguish people with or without Social phobia [36]. Results from the original validation study suggest that the SPIN possesses strong internal consistency, test–retest reliability, convergent validity, discriminative validity, construct validity, and sensitivity for measuring change following pharmacological treatment [37].

[1]Treatment sessions are briefly summarized in Table 1.

Cognitive Behavioral Therapy for Social Anxiety Disorders Based on Hoffman and Otto Guidelines (2008)
Session 1: Establishing relationship and introducing a therapeutic model with special emphasis on exposure Session 2: Reviewing the homework of the previous session and the therapeutic model, practicing exposure in the session by asking the members to explain the therapeutic model and its logic, and at the end of the session assigning homework Session 3-6: Creating enough anxiety for each exposure exercise and at the end of the session assigning homework Session 7-11: Introducing exposures based on the fear hierarchy and asking each patient to anticipate the following: 1. Average and Maximum Anxiety During Exposure? 2. Consequence of the situation? 3. How long will these consequences take? And finally assigning homework Session 12: Summarize the progress of each group member with regard to the independent practice and the positive skills that each member has learned and discuss what parts and kinds of anxiety has been overcome and what remains.
Acceptance and commitment therapy for anxiety disorders: a manual by Eifert and Forsyth (2005)
Session 1: focused on psychoeducation, experiential exercises, and discussion of acceptance and valued action. Sessions 2–3: explored creative hopelessness, or whether previous efforts to control anxiety had “worked” and how such efforts had led to the reduction of valued life activities and encouraged acceptance. Sessions 4 and 5: emphasized mindfulness, acceptance, and cognitive defusion, or the process of experiencing anxiety-related language [e.g., thoughts, self-talk, and so forth] as part of the broader, ongoing stream of present experience rather than getting stuck in responding to its literal meaning. Sessions 6–11: continued to hone acceptance, mindfulness, and defusion, and added values exploration and clarification with the goal of increasing willingness to pursue valued life activities. Behavioral exposures, including interoceptive, invivo, and imaginal, were used to practice making room for, mindfully observing, and accepting anxiety and to practice engaging in valued activities while experiencing anxiety. Session 12: reviewed what worked and how to continue moving forward.

Table 1: Summary of treatment sessions.

Tests of Between-Subjects Effects						
Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**	**Eta Squared**
Group	64.657	2	32.329	9.169	0.001	0.372
SPIN_Pre	338.976	1	338.976	96.138	0.000	0.756
Group * SPIN_Pre	10.707	2	5.352	1.523	0.235	0.089

Table 2: Covariance analysis.

Groups		**Mean (differences)**	**Sig.**	**95% confidence interval for the difference between the two groups**	
				Lower limit	**Upper limit**
CONTROL	CBT	*3.98	0.0001	2.44	5.51
	ACT	*4.68	0.001	3.06	6.19
CBT	CONTROL	*3.98	0.0001	-5.51	-2.44
	ACT	0.65	0.395	-0.89	2.18
ACT	COTROL	*-4.63	0.001	-6.19	-3.06
	CBT	-0.65	0.395	-2.18	0.89
*The difference is significant at the 5% error rate					

Table 3: Post-test results.

Results

The assumptions of covariance analysis, the final analysis results are Covariance analysis was used to analyze the data and compare the experimental and control groups. By confirming presented in Table 2.

As shown in Table 2, the value of F for the difference between the groups (control and experiment) is significant at the significance level of ≤ 0.001. This means that there is a significant difference (with pre-test factor control) between the social anxiety scores of the experimental and control group. Therefore, it is confirmed that therapy sessions have been effective. Another indicator to be considered is the effect size, which is indicated in the table as “ETA”. The value of ETA squared is 0.372, which in percentage will be 37%, meaning that 37% of the changes in social anxiety scores are due to the implementation of the treatment.

Subsequently, the difference between pairs of groups was investigated using post hoc test. The results of the follow-up test are presented in Table 3.

The results of the post hoc test in Table 3 show that there is a significant difference between the control group and the CBT group, as well as between the control group and the ACT group at a meaningful level of ≤0.001, and both therapeutic methods have been effective. Although the effect ACT was slightly higher than CBT, but the difference between the two treatment groups was not significant.

Discussion

The aim of this study was to compare the effectiveness of cognitive behavioral group therapy and Acceptance and commitment group therapy in reducing the social anxiety symptoms in students with social anxiety disorder. The results showed that both approaches reduced the social anxiety symptoms compared to control group. Initially, in order to determine the effectiveness of each approach separately, it can be said, based on literature, that the results obtained using ACT approach [38,39] were consistent with the results obtained using CBT approach [16,40,41].

The findings of the present study were consistent with the findings of study carried out by Forman, Herbert, Moitra, Yeomans, and Geller [33] which compared the effects of ACT and CBT approaches in outpatients with moderate to high levels of depression and anxiety without being diagnosed with depression and anxiety; while they were inconsistent with the study carried out by Lappalainen et al. [42] which studied only 28 patients with different disorders individually treated by different therapists and indicated that the symptoms reduced more significantly in patients treated with ACT than in patients treated with CBT. Although, in the present study, the symptoms of social anxiety reduced more significantly in ACT group than in CBT, but the difference was insignificant. These are consistent with the findings of following studies: Arch et al. [34] compared the effectiveness of ACT

with CBT on a sample population of individuals with anxiety disorders; Craske et al. [3] investigated the interventions and consequences of cognitive behavioral therapy and Acceptance and commitment therapy in treatment of social anxiety disorder; Kocovski, Fleming, Hawley, Huta and Antony [43] compared acceptance and commitment group therapy with cognitive behavioral group therapy on social anxiety. In order to further clarify the findings, we can mention the similarities between the two approaches and common processes and methods in these two approaches including that both approaches provide a context which identify the cognition as the product of a system rather the expression of internal truth; both approaches believe in inefficiency of automatic, inflexible responses to experience which enforces the problems [31]. The other common feature in these approaches is exposure to stressful thoughts rather controlling or suppressing them, which is considered to be the main treatment factor in the model Hofmann and Otto model [37] used in this research, though with a different logic and different methodology; in CBT, exposure takes place with the aim of reducing anxiety and gaining control over fear, anxiety, evaluating the individuals' catastrophic predictions [44] and avoiding social situations is considered to maintain anxiety [37]; but in ACT, the aim of exposure to or experiential acceptance which is studied as a change mechanism [32] is to increase the individuals' interest in experiencing internal incidents as they are accomplishing what is of value to them in life and what is consistent with their life values [43]. In the present study, one important intervention in therapy sessions for both experimental groups were exposure. Given the potential of exposure in treating the anxiety disorders (For example, Norton, Price, [45], it is possible that this shared treatment component counterbalances the differences in two approaches and leads to equal effectiveness in both therapies. Furthermore, in a study carried out by Burton, Schmertz, Price, Masuda, and Anderson [46] on the relationship between mindfulness and fear of negative evaluation in CBT therapy on social anxiety disorder, it was shown that although the mindfulness is associated with the fear of negative evaluation as a main factor of social anxiety disorder, better mindfulness did not moderate treatment outcome. The findings confirmed the aforesaid results given that mindfulness is an important factor in ACT therapy [47].

Moreover, several authors have suggested that exposure and cognitive restructuring are difficult to differentiate both conceptually and practically, since both specifically aim to provide new learning experiences that contradict patients' beliefs about the likelihood and cost of negative social outcomes [37,48]. Exposure has been shown to lead to cognitive change [49], and cognitive techniques, especially behavioral experiments, often involve exposure-like experiences. In addition, ACT emphasizes eliminating tendencies to avoid or escape from unpleasant emotions and an emphasis on tolerating unpleasant feelings which is so similar to what exposure asserts. Based on this once more we can conclude that a similarity of these two approaches can lead to similar results.

However, the findings in literature are inconsistent. For example, Kocovski, Fleming, Hawley, RingoHo, Antony [43] questioned whether, in social anxiety disorder, cognitive reappraisal is considered to be the unique mechanism of change in Cognitive Behavioral Group Therapy and mindfulness and acceptance in Mindfulness and Acceptance-based Group Therapy? Cognitive reappraisal was reported to be effective only in cognitive behavioral group therapy while mindfulness and acceptance were an effective mechanism in both therapies.

Limitation

While there have been many studies on the effectiveness of each approach on various disorders individually, for example, Bluett, Homan, Morrison, Levin, and Twohig, [50] reported that ACT as the effective therapy on anxiety disorders, but lack of studies comparing the effectiveness of these two approaches on a specific disorder is considered to be the limitation of the present study. Also, the sample population entirely consisted of university students which are considered to be a specific population which in turn limits the potential of generalizing the results to other populations; accordingly, it is suggested that other populations also be used in future studies. Lack of facilities for at least 3-month follow-up is also another limitation of the study and hence it cannot be determined whether these two approaches are equally effective in reducing the symptoms of social anxiety disorder and the results obtained will remain stable. It is possible to obtain different results by extensive research and follow-up as Arch et al. [34] indicated after a 12-month follow-up that the symptoms of social anxiety are reduced more significantly in ACT group compared to CBT group.

Conclusion, Future Directions and Recommendations

The aim of present study was to compare the effectiveness of cognitive behavioral group therapy and acceptance and commitment group therapy on reducing of social anxiety symptoms in university students with social anxiety disorder. The findings showed that the two therapeutic approaches were equally effective in reducing the symptoms of social anxiety in university students. While acceptance and commitment group therapy, slightly outperformed the cognitive behavioral group therapy in the treatment of social anxiety disorder in university students, still further studies in this area is needed to come up with more clear result.

We, the authors recommend that the same study replicated with different population in order to find out whether the result obtained will be of any dereference.

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