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Comparing the effectiveness of acceptance-based behavior therapy to applied relaxation on worry and generalized anxiety disorder symptoms

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Abstract

Introduction: Generalized anxiety disorder (GAD) is associated with a diminished quality of life and co morbidity with other anxiety and mood disorders. Acceptance-based behavior therapy (ABBT) is a new treatment that introduced for treatment of GAD. The current study compared ABBT to Applied Relaxation (AR) -the most utilized psychological therapy for GAD.

Materials and Methods: Thirty two women with GAD who were referred from psychiatrics offices in Isfahan city were recruited to participate in the study. They were then administered the SCID/CV. Twenty four subjects who met the criteria for GAD were assigned to two groups (ABBT and AR) randomly. The groups received similar medication. The ABBT and AR participated in 12 weekly therapy sessions. The instruments used in the study at pre and post test included the Generalized Anxiety Disorder-7 item scale (GAD-7) and Penn State Worry Questionnaire (PSWQ). The data were analyzed using the multivariate analysis of covariance (MANCOVA).

Results: No significant differences were found between ABBT and AR groups in anxiety symptoms and worry (P>0.05).

Conclusion: Overall, based on the findings of this study, one can conclude that the acceptance-based behavior therapy does not seem to be different from the applied relaxation therapy for treatment of generalized anxiety disorder.

Keywords: Acceptance, Behavior therapy, Generalized anxiety disorder, Relaxation, Worry

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Introduction

Generalized Anxiety Disorder (GAD) is a common disorder with an incidence of 3% in 12 months (1). This disorder has features, such as anxiety, tension and resistant worry. It is accompanied by a significant dysfunction and psychosocial distress (2). Generalized anxiety disorder does not usually improve without treatment due to its chronic nature. Of all the strategies to reduce anxiety, Applied Relaxation (AR has gained the most practical support) in the treatment of GAD (3). The underlying rational for muscle relaxation is reduction and control of physiological and psychological symptoms of GAD. Of all the physical properties of GAD, muscle tension has the strongest association with worry, which is a significant cognitive symptom of GAD (4). Studies clearly show that the application of relaxation is effective in reducing the severity of GAD, worry, anxiety, depression and the general psycho-pathology associated with GAD (3). While there are a variety of cognitive and behavioral therapies for the treatment of GAD, only about half of these therapies reinstate patients to complete function. This condition puts GAD among anxiety disorders that with the least successful therapy outcomes (5). Among the known treatments for this disorder, there are classical cognitive-behavioral therapy, treatment based on Avoidance Model of Worry (AMW), treatment based on Intolerance of Uncertainty Model (IUM), treatment based on Emotion Dysregulation Model (EDM) and Meta-Cognitive Model (MCM) (6). The main elements of AMW model include: cognitive avoidance, positive beliefs about worry, problem solving and emotional processing inefficient. In IUM model have been

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the problem of intolerance of uncertainty, cognitive avoidance, ideas and concerns related to negative orientation towards problems in patients with GAD. Emotional hyperarousal, poor understanding of emotions, negative cognitive reactions to emotions, management and non-adaptive emotion regulation are key elements in EDM model. Meta-cognitive Model suggests that patients with GAD have positive and negative beliefs about worry and tolerance ineffective strategies for taking your concerns (6). In order to improve the efficacy of GAD treatment is introduced a new treatment. This treatment has been showed GAD continues due to negative reaction to internal experience, avoidance of emotional experiences and behavioral constraints. So the treatment that targets those components could be effective. In particular, treatment should modulate relationship of a person with inner experiences; reduce the avoidance, increase flexibility and behavior in areas that have great importance for the patient (7). In response to this need, Romer and Orsillo developed Acceptance-Based Behavioral Therapy (ABBT) for GAD. In the treatment, acceptance and mindfulness strategies combined with traditional therapeutic methods (7). This study aimed to evaluate the effectiveness of Acceptance-Based Behavioral Therapy compared to Applied Relaxation (AR) on severity symptoms and worry in generalized anxiety disorder.

Materials and Method

The clinical trial population consisted of all patients with generalized anxiety disorder had been referred to psychiatric offices of Isfahan city during October to January 2011. Selection of patients was done via convenience sampling. Patients were administered the Structured Clinical Interview for Mental Disorders (SCID-I) after diagnosis by a psychiatrist to apply a more reliable diagnosis of generalized anxiety disorder. Then they signed the informed consent form and entered the study. Based on inclusion and exclusion criteria, 24 patients with GAD were selected and assigned randomly into two groups of Applied Relaxation (AR) and Acceptance Based Commitment Therapy (ABBT). Inclusion criteria were: (1) Primary diagnosis of GAD according psychiatric diagnosis and SCID-I; (2) no psychotherapy received for their GAD during last 6 months; (3) age between 18 years and 60 years; educational level higher than 3rd in junior school; (4). Exclusion criteria were: (1) Having mental retardation, psychotic disorders, alcohol or drug dependence, severe depressive disorders, bipolar mood disorder, and personality disorders (cluster A and B) according SCID-II (2) having suicidal thoughts and drugs abuse.

Measure instruments

*a) Structured Clinical Interview for DSM-IV Axis I disorders (SCID-I):*This is a comprehensive and standardized instrument for assessing major mental disorders in clinical and research atmosphere. SCID-I is administrated in a single session and takes about 45 to 90 minutes to be completed (8). The validity and reliability of this instrument have been confirmed previously (9). Persian version of this questionnaire has been provided and its validity was suitable (10, 11).

b)Structured Clinical Interview for DSM-IV Axis II disorders SCID-II: SCID-II like SCID-I is a structured diagnostic interview for personality disorder to assess ten personality disorders at the DSMIV Axis II as well as NOS (not otherwise specified) depressive and aggressive disorders (12). This questionnaire has 119 questions and its completion takes less than 20 minutes and the responder needs certificate of at least eight grades of school. Test reliability in non-Iranian and Iranian populations has been reported as high (13,14).

c)GAD-7: This scale is a 7-item questionnaire that measures the severity of GAD according to DSM-IV-TR over the past two weeks. The scores of GAD-7 are calculated by assigning scores 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. Total score for GAD-7 ranges from 0 to 21. Scores represent mild anxiety (0-5), moderate anxiety (6-10), moderately severe anxiety (11-15), and severe anxiety (15-21). The questionnaire can screen the patients with GAD (15,16). Significant correlation has been reported between GAD-7 questionnaire and Hamilton Anxiety Scale (HAM-A) (r=0.85) and 12 items version of the World Health Organization Disability Scale (WHO-DAS-II) (r=0.70) (15). In this sample, the GAD-7, administered for 30 cases, demonstrated adequate internal consistency (α= .87).

d)Penn State Worry Questionnaire (PSWQ): The PSWQ is a 16-item tool that was developed at Pennsylvania State University (16). This tool measures trait anxiety before and after the therapy. Test reliability and test-retest reliability was also high (alpha = 0.86 to 0.93). This questionnaire is able to distinguish between GAD and other anxiety disorders. Hays, Roemer and

Orsillo reported internal consistency before treatment (α= 0.77) and after treatment (α= 0.92) (7). PSWQ was administered on 250 undergraduate and graduate students of Shiraz University and reliability and validity of the questionnaire was calculated. Also factor analysis of the items was obtained. Internal consistency coefficient for the total scale was 0.86 (17).

In the present study, 32 subjects with a diagnosis of generalized anxiety disorder were referred to psychiatric offices of Isfahan city. Three patients were excluded because of having a disorder in Axis II or similar disorders in Axis I (such as adjustment disorder with anxiety). Five people did not participate because of problems such as distance, inappropriate timing sessions with their free time and having young children. 12 patients were assigned in each group (Applied Relaxation and Acceptance- Based Behavior Therapy). Final data analysis was performed with 9 subjects in each group. The ABBT was performed according on Roemer and Orsillo protocol during 12 sessions of group therapy. Sessions were held once a week for 3 months. Each Sessions was last 90 minutes. General content of ABBT Sessions include increasing awareness of the patterns of response to anxiety, emotional performance, dysfunctional role of avoidance on internal experiences, experimental determination and monitoring between the treatment sessions, teaching various practices of mindfulness and transferring mindfulness to valued actions in everyday life (18). The applied relaxation was performed using Ost protocol in 12 weekly sessions. In general, a summary of the relaxation Sessions was to present the rational of muscle relaxation, training of anxiety monitoring, detect early signs of anxiety, identify groups of muscles, training abdominal breathing, progressive muscle relaxation training in 12, 8, and 4 muscles groups respectively, training relaxation without tension, cue- controlled relaxation and accelerate the relaxation (including differential relaxation, rapid relaxation, specific use of relaxation) (19).

At the end of the thirteenth session (12 treatment sessions and an evaluation session), participants of both ABBT and AR filled out GAD-7 and Penn State Inventories as post-test. Data were analyzed using multivariate analysis of variance by controlling interfering variables.

Results

A total of 24 patients with generalized anxiety disorder (GAD) were selected and randomly assigned to two groups (Applied Relaxation and Acceptance- Based Behavior Therapy). Subscale scores in patients with GAD symptoms are shown in Table 1.

Table 1: Mean and standard deviation of GAD symptom severity and worry in ABBT and AR groups

variables	Pre-test	Post-test	Recovery percent
Severity of GAD symptoms			
AR	12.44 (5.87)	7.11 (5.15)	43
ABBT	54.22 (8.09)	48.51 (10.90)	10
Severity of worry			
AR	11.22 (3.92)	4.66 (2.73)	57
ABBT	57.66 (8.88)	45.22 (10.75)	21

Table 1 show that severity symptoms of GAD and worry scores has been decreased in ABBT and AR groups in post-test phase compared to pre- test. Recovery percent of severity symptoms of GAD and worry in ABBT are more than those variables in AR group.

To determine significant differences between the mean scores of GAD and worry in two groups were used Multivariate Analysis of Covariance (MONCOVA). There was no correlation between the pre-test scores of the scales and none of the assessed demographic variables. So just entering pre-test scores as control variables in the MONCOVA was necessary. Box's Test of Equality of Covariance Matrices showed that the observed covariance matrices of the dependent variables are equal across groups. Levine test confirmed assuming equality of error variances of the scales in ABBT and AR groups. Table 2 shows that there is no significant difference between the two groups in severity of GAD symptoms and worry.

Table 2: Pairwise Comparison of groups in symptoms of Severity symptoms of GAD and worry in post-test

Dependent variable	group	Estimated marginal mean	group	Estimated marginal mean	Mean Difference	Standard deviation of mean	*P*
Severity of GAD symptoms	AR	6.100	ABBT	4.32	1.77	2.28	0.44
Severity of worry	AR	45.83	ABBT	44.79	1.04	5.15	0.84

Discussion

Based on the theory that the GAD develops through reactive relationships with internal experiences, experiential avoidance and behavioral restriction, Roemer and Orsillo designed Acceptance-Based Behavior Therapy (ABBT) for GAD targets those components (20). However, ABBT have had suitable treatment outcomes for patients with GAD, but these results have been evaluated in two studies (21,22). The two studies have shown ABBT had considerable improvement in worry, anxiety and depression in clients with GAD and more outcomes were continued until 3 months. However to date, has not been done the research that compared ABBT with other psychological treatment. In present study has been investigated the effect of Acceptance- Based Behavior Therapy compared to traditional treatment for this disorder (Applied Relaxation). The present study showed that the mean scores of the two groups in severity of GAD symptoms and worry is reduced in the posttest stage. But the difference between the two treatment groups was not significant. It appears applied relaxation and ABBT have similar effects on the severity of GAD symptoms and worry. ABBT leads to a reduction in GAD symptoms by two main mechanisms of the therapeutic model: acceptance of internal experiences and engagement in valued action. Major part of ABBT techniques are mindfulness techniques. Since the relaxation is functionally similar to mindfulness, many of the strategies used in AR may be develop mindfulness and decentering (23). For example, self-monitoring of early indicators of anxiety likely changes an individual's relationship with anxiety. Self- monitoring needs a different kind of awareness, one that is characterized by a more objective and curious stance towards anxious responses. Furthermore, the acts of recording early cues on a monitoring sheet and observing and reporting on responses during an imaginal exercise both require the client to decenter and more objectively consider her or his responses.

PMR may also cultivate present-moment awareness as clients who may typically seek to avoid or ignore anxiety related symptoms are encouraged to focus on the sensations of tension and relaxation in the body.

On the other hand, AR may target acceptance in a number of ways. Most notably, the in-session imaginal exercises require the client to vividly recall anxiety-provoking situations. Similar to techniques used in other forms of behavior therapy, this re-experiencing exercise may serve the function of having clients notice their anxious responses. The therapist helps them to stay with the experience, encouraging clients to approach, rather than avoid. Likewise, rather than automatically responding to signs of anxiety, self-monitoring of cues also requires clients to approach the cues. Also With continued the progressive muscle relaxation training, acceptance is increased (25).

The limitation of the study was that participants of treatment groups were from female with GAD and should be cautious in generalizing the results to male population. Other limitation of this study was lack of follow-up outcome.

Conclusion

According to this study, Acceptance-Based Behavior Therapy and Applied Relaxation have similar effects on symptom severity and worry in generalized anxiety disorder. These effects seem to be common in techniques based on mindfulness and acceptance of unpleasant internal experiences such as anxiety. The present study showed that Acceptance-Based Behavior Therapy is at least as effective as Applied Relaxation in reducing the symptoms of generalized anxiety disorder and worry.

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