Effectiveness of Short Term Cognitive Behavior Therapy in Patients with Generalized Anxiety Disorder

N.M. Bakhshani, K. Lashkaripour and S.A. Sadjadi

Recent studies have suggested that Cognitive Behavior Therapy (CBT) is an effective treatment for anxiety disorders. Yet, many questions remain regarding the overall effectiveness of CBT. This controlled clinical trial was done to evaluate the efficacy of short term CBT treatment in Iranian outpatients with GAD. The study was performed in Baharan psychiatric center of Zahedan University of medical sciences (Zahedan-Iran). Twenty-one GAD patients were included in the study. From this group, 7 patients were randomly assigned to 8 sessions of CBT, seven patients were treated with antidepressant and Benzodiazepine drugs and the other 7 participants assigned to control group (Placebo). CBT was done in accordance with a manual. All patients completed at pre and post treatment the BAI, HARS and DAS. The results showed that both short term CBT and pharmacotherapy significantly produced symptoms reduction (BAI and HARS scores) in GAD patients comparing with placebo. Significant reduction of DAS scores only was observed in CBT group. Overall, short term CBT is an effective method of treatment for Iranian outpatients with GAD. Further research in this area will need to focus on comparing CBT with other psychological treatments.

Key words: Cognitive behavior therapy, generalized anxiety disorder, efficacy

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INTRODUCTION

Generalized Anxiety Disorder (GAD) is a common and chronic disorder with low rates of remission (Keller, 2002). GAD characterized, according to DSM-IV (APA, 1994), by extensive and uncontrollable worrying and anxiety, lasting for at least 6 months. Associated symptoms include irritability, restlessness and concentration problems. Somatic symptoms of GAD include muscle tension, sweating, dry mouth, nausea and diarrhea. GAD has a high prevalence rate. Studies of the lifetime prevalence for GAD in the general population have provided estimates ranging from 1.9 to 5.4%. According to Findings of a recent National Comorbidity Survey (NCS) current and lifetime prevalence of GAD were 1.6 and 5.1%, respectively (Wittchen et al., 1994). Consistently, community surveys indicate a 2:1 female to male preponderance of GAD (Wittchen et al., 1994; Blazer et al., 1991). Findings from the NCS indicate that 82% of persons with GAD reported that their problem was associated with significant impairment, as indexed by past treatment-seeking behavior (either drugs or psychotherapy) or substantial lifestyle interference. Moreover, research has routinely shown that GAD is associated with high comorbidity rates for other psychiatric disorders. For example, the NCS estimated the current and lifetime comorbidity of GAD to be 65 and 90%, respectively (Wittchen et al., 1994). GAD has a considerable impact on quality of life and is associated with increased reliance in public assistance, impaired social life and low ratings of life satisfaction (Massion et al., 1993).

Anxiety disorders, in general, are treated with medication and psychotherapy or both (Gorman, 2002). Several pharmacotherapeutic approaches widely used to the treatment of GAD (Sadock and Sadock, 2003). A great number of patients with GAD are treated by benzodiazepines and tricyclic antidepressants. Hoehn-Saric et al. (1988) compared alprazolam and imipramine in a group of 52 GAD patients. They showed that both drugs were effective in treating GAD. However, imipramine was more effective in attenuating psychological symptoms (such as dysphoria and anticipatory negative thinking), whereas alprazolam was more effective in somatic symptoms of GAD patients. Rickels et al. (1993) in a comparative study between imipramine, trazodone, diazepam and placebo found that from week 3 through week 8, trazodone achieved similar anxiolytic efficacy to diazepam but the effect of imipramine was somewhat better. And also psychological symptoms (apprehension and worry) responded better to the antidepressants than to anxiolytics. Rocca et al. (1997) in a study on a sample of GAD patients supported that antidepressants affect predominantly psychological symptoms whereas benzodiazepine affect predominantly somatic symptoms in GAD. A comparison study between antidepressants and non benzodiazepine anxiolytics showed that venlafaxine and buspirone were superior to placebo (Davidson et al., 1999).

Cognitive and behavioral techniques have been established as psychological treatments for anxiety disorders. Although exposure methods have been accepted as effective treatments for anxiety disorders in which specific fear-provoking stimuli can be identified (such as phobia and OCD), but applicability of exposure for GAD is not clear (Borkovec and Whisman, 1996).

Several meta-analytic studies have reviewed treatment results for GAD. In a meta-analysis, Borkovec and Whisman (1996) summarized results from 11 controlled trials and found that CBT for GAD produces significant improvement which is maintained for up to one year following treatment termination. CBT has also been found to generate greater improvement than no treatment, analytic psychotherapy, pill placebo, nondirective therapy and placebo therapy. Although effect sizes varied somewhat across dependent variables, behavioral techniques (i.e., relaxation training and imagine exposure) tended to have higher effect sizes than cognitive therapy, whereas the highest effect sizes were evidenced by treatments incorporating the combination of behavioral and cognitive procedures. These findings provide support for the effectiveness of behavioral and particularly cognitive-behavioral, interventions for GAD. Also the findings of Gould et al. (1997) are consistent with those reported by Borkovec and Whisman (1996) in suggesting that combining cognitive with behavioral techniques is more effective for GAD than either behavior or cognitive therapy alone. Weston and Morrison (2001) examined five controlled trials for GAD published from 1990 to 1998. Their findings reinforced earlier meta-analytic findings on the effectiveness of cognitive-behavioral treatments for GAD. Borkovec et al. (2001) contrasted cognitive therapy, applied relaxation and self-control desensitization and CBT containing all of these elements. Considerable changes occurred for all three groups, but no significant between-group effects were observed. Linden et al. (2005) in a recently study compared the efficacy of CBT (25 session therapy) with control group and found that CBT is an effective methods in treatment of GAD. Also effectiveness of cognitive behavioral therapy for comorbid GAD and panic disorder with agoraphobia confirmed by a study by Labrecque et al. (2006).

Overall, although the published studies (e.g., Borkovec and Whisman, 1996; Stanley et al., 2003; Mohlman et al., 2003; Ladouceur et al., 2004; Haby et al., 2006; Labrecque et al., 2006) and meta-analytic literature (Weston and Morrison, 2001) supported
the effectiveness of combined cognitive-behavioral interventions for GAD in western and English speaking patients. But more evidence is, still, needed to support this conclusion. Because treatment duration and characteristics of research samples influence treatment results, as Haby et al. (2006) said, more studies are necessary to determine efficacy of CBT in countries outside of the US and UK and its usefulness for non-English-speaking patient groups. In addition, duration of treatment plans in reported studies were long. Although CBT strategies generally are brief and time limited and the average number of sessions is about 16 (http://www.nacbt.org) but for enhancing efficiency of CBT the most common approach is to abbreviate it by reducing the number of treatment sessions. Designing and applying, however, an effective short-form manual of CBT for treatment of prevalent disorders such as anxiety disorders is a necessary. The present study aimed to examine the efficacy of short term CBT in treatment of Iranian population with GAD.

MATERIALS AND METHODS

The sample was made up of twenty one patients with GAD, aged 17-40 year. All of them were recruited through the clinical psychology and psychiatric department of Baharan Psychiatric center, a university hospital in Zahedan (southeast of Iran). The patient's diagnoses were established by the consensus of two clinicians (psychiatrist and clinical psychologist). Subjects had to meet the diagnostic criteria of DSM for GAD (APA, 1987, 1994). No history of drug or alcohol abuse or dependency, no organic disorder, no personality disorder or other Axes I disorders. The participants were randomly allocated to 3 groups: (1) pharmacotherapy group (Ph-G), (2) cognitive behavioral therapy (CBT-G) and (3) placebo control group (PL-G). The Table 1 presents demographic characteristics of participants by group. The 7 patients in pharmacological group received benzodiazepines (Diazepam) and tricyclic antidepressant (Imipramin) drugs, prescribed by psychiatrist. The 7 patients of CBT group participated in 8 sessions of cognitive behavior therapy (plus 2 sessions for assessment), according a step by step manual of treatment based on methods and strategies described by Clark (1990) that provided by a clinical psychologist and other 7 patients (finally one of them was excluded from research sample because using drugs) received placebo pills. All patients completed at pre and post treatment the Beck Anxiety Inventory (BAI), Hamilton Anxiety Rating Scale (HARS) and Dysfunctional Attitude Scale (DAS).

The Beck Anxiety Inventory (BAI) consists of 21 items, each describing a common symptom of anxiety (Beck et al., 1988). The respondent is asked to rate how much he or she has been bothered by each symptom over the past week on a 4-point scale ranging from 0 to 3. The items are summed to obtain a total score that can range from 0 to 63. The Hamilton Anxiety Scale (HAS or HAMA) is a 14-item test measuring the severity of anxiety symptoms. It is also sometimes called the Hamilton Anxiety Rating Scale (HARS). The HAS was developed by Max Hamilton (Hamilton, 1955) and is used to assess the severity of anxiety symptoms present in children and adults. It is also used as an outcome measure when assessing the impact of anti-anxiety medications.

The Dysfunctional Attitudes Scale (DAS) (Weismann and Beck, 1978) consists of 40 statements (rated on a 7-point scale) that describe implicit rules and conditions for self-acceptance, including perfectionistic standards for the self and rigid expectations regarding how others should act. The DAS was scored so that higher scores would indicate more dysfunctional attitudes.

RESULTS

The results of mean comparisons of pre and post scores by using t-test show significant reduction (p<0.01) of symptoms (BAI and HARS) for treatment groups, not for placebo control group (p>0.05) Table 2. Only reduction of DAS score was significant for CBT group (p<0.05).

We used ANOVA to see that there is a significant difference between groups or not. The results of ANOVA Table 3 showed no significant difference between groups at pre treatment scores of BAI (F = 0.42, p>0.05), HARS (F = 0.11, p>0.05) and DAS (F = 0.57, p>0.05) scales. However ANOVA showed (Table 4) that there is

<p>| Table 1: Demographic characteristic of study participants by group |
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<th>Education</th>
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<td>Pharmacotherapy</td>
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<td>26.71 5.82</td>
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<tr>
<td>Cognitive</td>
<td>7 11.57 3.69</td>
<td>25 4.69</td>
<td>4</td>
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<tr>
<td>behavior therapy</td>
<td>6 11 4.46</td>
<td>28.3 8.5</td>
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<th>Table 2: Pre and post means of BAI, HARS and DAS by groups and results of t test (comparison of pre and post test means score)</th>
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<tr>
<td>Pharmacotherapy</td>
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NS = Non significant difference; *p<0.05; ** = Significant difference; ***= Significant difference; p<0.01
a significant difference between groups at post treatment scores of BAI (F = 3.74, p < 0.05), HARS (F = 4.8, p < 0.05) and DAS (F = 5.56, p < 0.05) scales. Result of turkey test confirmed that treatment groups (Ph-G and C BT-G) are significantly different from placebo control group on BAI (p < 0.05) and HARS (p < 0.05) but difference between Ph-G and CBT-G is not significant on BAI and HARS post scores (p > 0.05). According to results of turkey test CBT compare to pharmacotherapy and also compare to placebo control group has produced a significant reduction in DAS scores (p < 0.05) but there is no difference between pharmacotherapy and placebo control groups on post DAS scores (p > 0.05).

**DISCUSSION**

Data analysis suggests that both types of treatment (short-term cognitive behavior therapy and pharmacotherapy) compare to placebo had a significant effect of reducing the severity of anxiety symptoms in GAD patients. The results of this study are somewhat concordant with those of earlier trial control studies and meta-analyses regarding the effectiveness of CBT in treatment of GAD (Borkovec and Whisman, 1996; Gould et al., 1997; Otto et al., 2004; Linden and et al., 2005; Butler et al., 2006; Haby et al., 2005).

There is then, good reason to believe that the present results are consistent with other findings. Although medication and CBT both significantly reduced anxiety symptoms of GAD but dysfunctional attitudes were affected significantly by CBT not by pharmacotherapy. This finding indicates the efficacy of CBT in changing of those dysfunctional assumptions and rules that supposed responsible for negative emotions. Specifically, CBT reduced anxiety by teaching patients how to identify, evaluate, control and modify their negative thoughts and associated behaviors. Although both medication and CBT produce a significant reduction of anxiety symptoms but CBT is superior to medication in treatment of GAD, because it targets directly automatic thoughts and dysfunctional rules. Meta analyses, also, suggest the superiority of CBT to other psychological treatment for GAD (Durham and Allan, 1993; Borkovec and Ruscio, 2001).

Cognitive behavioral therapy model of Generalized Anxiety Disorder (GAD) proposed that the disorder stems from constant perceptions of the world as a dangerous place, resulting in a process of maladaptive and habitual interactions among cognitive, behavioral and physiological response systems. Maladaptive cognitive responses include biased attention to threat cues (Mathews, 1990) negatively valence images and worrisome thinking (Borkovec and Inz, 1990) and cognitive avoidance of some aspects of anxious experience (Borkovec et al., 1991). Although, GAD patients often do not show avoidance of specific external situation but their behavioral responses include subtle behavioral avoidance (Butler et al., 1991) which maintain their negative beliefs (Butler et al., 1987) and slowed decision-making (Metzger et al., 1990). The physiological responses entail excessive muscle tension and an autonomic inflexibility (Thayer et al., 1996). The interaction of these maladaptive response systems leads to a process of intensification in anxiety. CBT attempts to replace these maladaptive reactions with using multiple cognitive and behavioral techniques (Clark, 1990) that target each domain of dysfunction. These characteristics of CBT made it effective strategy for treatment of GAD and as noted by Heuzenroeder et al. (2004) the most cost-effective intervention.

In summary, although the study as a preliminary study in Iran, has several limitations: First, it involved a small number of patients. Second, CBT was provided by only one therapist. Nonetheless, the study provides new, important clinical insights regarding the treatment of GAD. The post treatment results of current research showed that the short term cognitive behavioral therapy is an effective method for Iranian population with GAD and findings can support application of CBT in different cultures.
What we conclude from this study and literature about treating of GAD is that short term cognitive behavior therapy is an effective treatment and it’s efficacy not limited to western countries or English speaking patients. As Otto et al. (2004) concluded CBT can be used as a replacement strategy for patients who wish to discontinue their medications.

REFERENCES


