Research Paper

Comparing The Effectiveness of Cognitive Behavioral Therapy Focused on Intolerance of Uncertainty and Pharmacotherapy on Worry, Intolerance of Uncertainty, and Cognitive Avoidance in Patients With Generalized Anxiety Disorder

Negar Beheshti[1] , ***Mehdi Zemestani[2,3]** , **Farzin Rezaei[3,4]**

1. MSC., Department of Psychology, Faculty of Humanities and Social Sciences, University of Kurdistan, Sanandaj, Iran.
2. PhD in Psychology, Assistant Professor, Department of Psychology, Faculty of Humanities and Social Sciences, University of Kurdistan, Sanandaj, Iran.
3. Neurosciences Research Center, Kurdistan University of Medical Sciences, Sanandaj, Iran.
4. PhD in Psychiatry, Associate Professor, Department of Psychiatry, School of Medicine, Kurdistan University of Medical Sciences, Sanandaj, Iran.

ABSTRACT

Objectives Generalized Anxiety Disorder (GAD) is a highly prevalent distressing condition for individuals in both community and healthcare staff. In this regard, lack of effective psychological and medical treatments can impose a high cost on the family and society.

Methods A total of 22 female patients with GAD after primary clinical evaluation and qualifying conditions were selected and divided into two therapeutic groups; first group CBT-IU (Cognitive-Behavioral Therapy focused on Intolerance of Uncertainty) (N=12) were selected through convenient sampling method, and second group pharmacotherapy (N=12) were selected through purposeful sampling method. The first group (CBT-IU) received 12 individual weekly treatment sessions and the second group under the supervision of a psychiatrist was treated with anti-anxiety medicines (selective serotonin reuptake inhibitors). All subjects completed the pretest and post-test questionnaires of Pennsylvania worry questionnaire, intolerance of uncertainty scale, and cognitive avoidance questionnaire. The obtained data were analyzed by repeated measures analysis of variance.

Results Results showed that cognitive-behavioral therapy focused on intolerance of uncertainty, was more effective than pharmacotherapy on worry, intolerance of uncertainty, and cognitive avoidance.

Conclusion Since CBT-IU focuses on cognitive components (worry, intolerance of ambiguity and cognitive avoidance) and selected tools also measures most of the components associated with the intervention performed for this group, the more effectiveness of this treatment on the studied variables is justified compared to pharmacotherapy. Due to the effect of CBT-IU on cognitive components of patients with GAD, these results have practical implications for clinicians involved in medical centers.

Extended Abstract

1. Introduction

Generalized Anxiety Disorder (GAD) is knows as a common anxiety disorder and follows a chronic course that has destructive effects on the patient's functional capacity [1]. Although GAD does have a high prevalence, researchers have expressed that compared with other anxiety disorders, it has been neglected by few studies that have been conducted on this disorder in previous periods [2, 3]. The relapse rate of GAD is very high, and if people with GAD do not receive appropriate treatment, in most cases, they

* Corresponding Author:
Mehdi Zemestani, PhD
Address: Department of Psychology, Faculty of Humanities and Social Sciences, University of Kurdistan, Sanandaj, Iran.
Tel: +98 (912) 4374452
E-mail: m.zemestani@uok.ac.ir

will be obliged to grapple with the problem in their own life. Therefore, the development of appropriate and effective treatments for GAD is one of the main priorities of researchers in this field [11, 12].

People with GAD can be treated using various therapeutic approaches such as psychological and pharmacological interventions [13]. Pharmacotherapy is a selective therapeutic option for those who are not willing and able to use psychological treatments. However, the study of pharmacotherapy for GAD shows that antidepressant medicines commonly used to treat GAD have flaws, including slow response to therapy, limited recovery, and risk of relapse [13].

The most common psychological treatment of GAD is Cognitive-Behavioral Therapy (CBT), which as one of fixed therapies is considered to be as a first-line treatment and has positive outcomes in therapy [10]. The findings of studies conducted on the comparison of pharmacological treatments and CBT of anxiety disorders have shown that pharmacological treatments have a rapid effect on reducing anxiety and related symptoms; on the other hand, CBT has demonstrated favorable long-term outcomes in the treatment of anxiety disorders [18, 23].

One of contemporary models of GAD emphasizing the unique contribution of the Intolerance of Uncertainty (IU) is CBT focused on Intolerance of Uncertainty (CBT-IU), which the basis of this therapy is to increase tolerance and accept uncertainty [25, 31]. Several controlled clinical trials have demonstrated the effectiveness of CBT-IU in terms of the group and individual therapies as compared with the waiting list group [32-34], applied relaxation [35], and nondirective therapy [36].

Considering the high prevalence of GAD and the numerous and significant problems caused by this disorder, there is a need to examine an effective therapeutic model for GAD. Considering the fact that there are few studies comparing the effectiveness of two different types of therapy (Pharmacotherapy and CBT-IU), thus, the present study attempts to whether the effectiveness of two

therapeutic approaches shows significant differences in the dependent variables?

2. Method

The present study was registered at the Iranian Registry of Clinical Trials (IRCT), registration number: IRCT2016020626397N1, and was approved by Ethics Committee of Kurdistan University of Medical Sciences (ethic code: MUK.REC.1394.309). According to the purpose of the study, this study was a type of applied research, and according to data collection method, it was a type of quasi-experimental research, which in the form of pretest–posttest designs is carried out on both groups. This research included two studies. The population in the first study included all female students of Kurdistan University and the population in the second study included all female patients referring to private psychiatric hospitals in Sanandaj. The pharmacological treatment was carried out by a neurologist and patients used anti-anxiety medicines under the supervision of a psychiatrist.

3. Results

A repeated-measures ANOVA was used to analyze the data. Based on the results from the Table 1, the results of a repeated measures ANOVA showed that there was statistically significant difference in the scores in the two stages of pre-test and post-test in worry ($P<0.005$, $F=12.53$), intolerance of uncertainty ($P<0.005$, $F=4.40$), and cognitive avoidance ($P<0.005$, $F=0.45$). Bonferroni post hoc test was used to compare two means, the results of which are summarized in the Table 1.

The results of Table 2 showed that at the level of 0.05, there was a significant difference between the means of the cognitive-behavioral group in two stages (pre-test and post-test), while the difference was not observed in the treatment group. The findings of the data analysis indicated that CBT-IU had greater efficacy on the components of anxiety, intolerance of uncertainty and cognitive avoidance in patients with GAD than pharmacological treatment.

Table 1. The results of repeated-measures ANOVA for comparison of pre-test and post-test scores in two treatment groups

Variables	Sum of Squares	df	F	P	Eta
Worry	1474.08	1	12.53	0.002	0.36
Intolerance of uncertainty	2380.08	1	4.40	0.048	0.17
Cognitive avoidance	1840.083	1	0.45	0.049	0.02

Beheshti N, et al. CBT and Intolerance of Uncertainty and Pharmacotherapy in Worry, Intolerance of Uncertainty, and Cognitive Avoidance. IJPCP. 2018; 24(3):240-255.

Table 2. Results of Bonferroni post hoc test to compare two mean scores of subjects in the CBT-IU and Pharmacotherapy groups

Variables	Groups	Source of Changes	Difference of Means (i-j)	Standard Error	P
Worry	CBT-IU	Pre-test (i)	23.41	2.36	0.000
		Post-test (j)			
	Pharmacotherapy	Pre-test (i)	7.58	3.78	0.07
		Post-test (j)			
Intolerance of uncertainty	CBT-IU	Pre-test (i)	41.91	1.64	0.000
		Post-test (j)			
	Pharmacotherapy	Pre-test (i)	7.91	4.94	0.14
		Post-test (j)			
Cognitive avoidance	CBT-IU	Pre-test (i)	29.41	4.66	0.000
		Post-test (j)			
	Pharmacotherapy	Pre-test (i)	5.08	6.95	0.48
		Post-test (j)			

Iranian Journal of
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4. Discussion

The results of this study showed that there was a significant difference between the two therapeutic approaches in terms of affecting the anxiety level, as CBT-IU had greater efficacy on the anxiety level of patients with GAD than pharmacological treatment. Another component that was addressed in this study was cognitive avoidance. The results of this study showed that there was a significant difference between the two therapeutic approaches in terms of affecting the level of cognitive avoidance, as CBT-IU had greater effect on cognitive avoidance in patients with GAD than pharmacological treatment.

In general explanation of the results of this study, regarding the effectiveness of CBT-IU versus pharmacological treatment could be stated that given that the therapeutic intervention of the cognitive-behavioral group focuses specifically on cognitive components (anxiety, intolerance of uncertainty ,and cognitive avoidance), and the chosen tools also often measure the components associated with the intervention performed for this group, therefore, the more effectiveness of CBT-IU on the study variables compared to pharmacological treatment would be justifiable.

Ethical Considerations

Compliance with ethical guidelines

All the participants completed the informed consent form. The study was registered in Iranian Registry of Clinical Trials (IRCT) having code IRCT2016020626397N1 and also was registered in Kurdistan University of Medical Sciences ethical committee with code MUK.REC.1394.309. This research meets the guidelines for ethical conduct and report of research.

Conflict of interest

The authors declare no conflict of interest.

Beheshti N, et al. CBT and Intolerance of Uncertainty and Pharmacotherapy in Worry, Intolerance of Uncertainty, and Cognitive Avoidance. IJPCP. 2018; 24(3):240-255.

242

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