



## COMPARING CBT AND PHARMACOTHERAPY IN BIPOLAR DISORDER

*Qayimjonov Oyatullo Zoxidjon o'g'li*

*Assistant, Department of Fundamentals of Preventive Medicine*

*Andijan State Medical Institute, Andijan, Uzbekistan*

*ORCID: 0009-0000-9159-2766*

*Tel: +998 99 327 67 61*

### **Abstract**

**Background:** Bipolar disorder is a chronic psychiatric condition characterized by recurrent episodes of mania, hypomania, and depression, resulting in significant psychosocial impairment and reduced quality of life. Although pharmacotherapy remains the cornerstone of treatment, relapse rates remain high despite adequate medication adherence. Cognitive Behavioral Therapy (CBT) has emerged as an evidence-based psychotherapeutic intervention aimed at improving symptom management and reducing recurrence.

**Objective:** To compare the effectiveness of Cognitive Behavioral Therapy and standard pharmacotherapy in patients with bipolar disorder.

**Methods:** A comparative study was conducted involving patients diagnosed with bipolar disorder. Participants were allocated to either a CBT intervention group or a standard pharmacotherapy group. Clinical outcomes, symptom severity, relapse frequency, treatment adherence, and psychosocial functioning were assessed using standardized psychiatric rating scales.

**Results:** Patients receiving CBT demonstrated significant improvements in mood regulation, relapse prevention, treatment adherence, and psychosocial functioning compared with those receiving pharmacotherapy alone. CBT was particularly effective in reducing depressive symptoms and enhancing coping strategies.



**Conclusion:** Cognitive Behavioral Therapy may provide substantial benefits in the management of bipolar disorder and can serve as an effective therapeutic approach either alone in selected cases or as an adjunct to pharmacotherapy. Further large-scale randomized controlled trials are required to establish optimal treatment protocols.

**Keywords:** Bipolar disorder, Cognitive Behavioral Therapy, CBT, pharmacotherapy, mood disorders, relapse prevention, psychosocial functioning, psychotherapy, mania, depression.

## INTRODUCTION

Bipolar disorder (BD) is a severe and chronic psychiatric illness characterized by recurrent episodes of mania, hypomania, and depression, interspersed with periods of euthymia. It is among the leading causes of disability worldwide and significantly affects occupational functioning, interpersonal relationships, and overall quality of life [1]. The lifetime prevalence of bipolar spectrum disorders is estimated to range from 1% to 4% of the global population, with substantial variations depending on diagnostic criteria and study methodology [2].

The etiology of bipolar disorder is multifactorial, involving complex interactions between genetic susceptibility, neurobiological abnormalities, environmental stressors, and psychosocial factors [3]. Neuroimaging studies have demonstrated structural and functional alterations in brain regions responsible for emotional regulation, including the prefrontal cortex, amygdala, hippocampus, and anterior cingulate cortex [4]. Dysregulation of neurotransmitter systems, particularly dopamine, serotonin, glutamate, and gamma-aminobutyric acid (GABA), has also been implicated in the pathophysiology of bipolar disorder [5].

Pharmacotherapy remains the primary treatment modality for bipolar disorder. Mood stabilizers such as lithium, valproate, and lamotrigine, as well as atypical antipsychotics, are widely used to manage acute episodes and prevent relapse [6].



Numerous studies have demonstrated the efficacy of pharmacological interventions in reducing manic symptoms and maintaining mood stability [7]. However, long-term outcomes remain suboptimal, as many patients continue to experience recurrent episodes, residual symptoms, medication non-adherence, and functional impairment despite receiving appropriate pharmacological treatment [8].

In recent decades, increasing attention has been directed toward psychotherapeutic interventions as complementary or alternative treatment approaches for bipolar disorder [9]. Among these interventions, Cognitive Behavioral Therapy (CBT) has gained considerable empirical support. CBT is based on the premise that maladaptive cognitive patterns and dysfunctional behavioral responses contribute to emotional distress and symptom exacerbation. Through cognitive restructuring, behavioral activation, problem-solving techniques, and relapse prevention strategies, CBT aims to improve emotional regulation and enhance adaptive coping mechanisms [10].

Several clinical trials have reported that CBT may reduce depressive symptoms, improve medication adherence, increase illness insight, and decrease relapse rates among individuals with bipolar disorder [11,12]. Furthermore, CBT has been associated with improved psychosocial functioning, better stress management, and enhanced quality of life [13]. Psychoeducation and self-monitoring techniques incorporated within CBT may help patients recognize early warning signs of mood episodes and seek timely intervention [14].

Despite the established efficacy of pharmacotherapy and the growing evidence supporting CBT, controversy remains regarding their relative effectiveness in clinical practice [15]. While pharmacotherapy directly targets neurobiological mechanisms underlying mood instability, CBT primarily addresses cognitive and behavioral factors that influence symptom persistence and recurrence [16]. Consequently, determining the comparative effectiveness of these treatment modalities remains an important area of psychiatric research [17].



Understanding the relative strengths and limitations of pharmacotherapy and CBT may contribute to the development of more individualized treatment strategies for patients with bipolar disorder [18]. Such knowledge is particularly relevant in resource-limited settings where access to specialized psychiatric services may be restricted [19,20].

Therefore, the present study aimed to compare the effectiveness of Cognitive Behavioral Therapy and standard pharmacotherapy in patients with bipolar disorder, focusing on symptom severity, relapse frequency, treatment adherence, and psychosocial functioning.

## **MATERIALS AND METHODS**

### **Study Design and Participants**

A comparative prospective study was conducted among patients diagnosed with bipolar disorder according to established diagnostic criteria. A total of 60 patients aged between 18 and 60 years were enrolled and divided into two equal groups.

The pharmacotherapy group (n = 30) received standard pharmacological treatment, including mood stabilizers and atypical antipsychotic medications according to current clinical guidelines. The Cognitive Behavioral Therapy (CBT) group (n = 30) participated in a structured CBT program delivered by trained mental health professionals.

### **Inclusion Criteria**

- Diagnosis of bipolar disorder type I or type II.
- Age between 18 and 60 years.
- Clinically stable condition at the time of enrollment.
- Ability to participate in psychotherapy sessions.
- Provision of informed consent.

### **Exclusion Criteria**

- Severe cognitive impairment.



- Active substance use disorder.
- Severe neurological illness.
- Acute psychotic symptoms requiring hospitalization.
- Participation in another clinical study.

### **Intervention**

Patients in the CBT group attended one 60-minute session per week for 24 weeks. The therapeutic program included:

- Psychoeducation regarding bipolar disorder.
- Cognitive restructuring.
- Identification of dysfunctional beliefs.
- Stress management techniques.
- Behavioral activation.
- Relapse prevention strategies.
- Development of coping skills.

The pharmacotherapy group received routine psychiatric care and medication management throughout the study period.

### **Outcome Measures**

Clinical assessments were performed at baseline and after 24 weeks using the following instruments:

- Young Mania Rating Scale (YMRS)
- Hamilton Depression Rating Scale (HDRS)
- Clinical Global Impression Scale (CGI)
- Global Assessment of Functioning Scale (GAF)

Treatment adherence and relapse frequency were also recorded during follow-up.

### **Statistical Analysis**

Data were analyzed using IBM SPSS Statistics Version 26.0. Continuous variables were expressed as mean  $\pm$  standard deviation. Group differences were



assessed using independent sample t-tests, while within-group comparisons were analyzed using paired t-tests. Statistical significance was defined as  $p < 0.05$ .

### **Ethical Considerations**

The study was conducted in accordance with the principles of the Declaration of Helsinki. Ethical approval was obtained from the institutional ethics committee, and informed consent was obtained from all participants before inclusion in the study.

### **RESULTS**

A total of 60 patients completed the study. No significant differences were observed between the groups regarding age, gender distribution, duration of illness, or baseline clinical severity ( $p > 0.05$ ).

After 24 weeks, both groups demonstrated clinical improvement; however, patients receiving Cognitive Behavioral Therapy showed significantly greater reductions in depressive symptoms and relapse frequency.

The mean HDRS score decreased from  $22.3 \pm 3.4$  to  $10.5 \pm 2.8$  in the CBT group, compared with a reduction from  $21.9 \pm 3.1$  to  $15.2 \pm 3.0$  in the pharmacotherapy group ( $p < 0.05$ ).

YMRS scores improved in both groups, with no statistically significant difference in manic symptom reduction. Nevertheless, the CBT group demonstrated superior emotional regulation and greater awareness of early warning signs of mood episodes.

Relapse occurred in 4 patients (13.3%) in the CBT group compared with 10 patients (33.3%) in the pharmacotherapy group during the study period.

Functional outcomes also improved substantially. The mean GAF score increased from  $54.8 \pm 7.2$  to  $76.4 \pm 6.5$  in the CBT group, whereas the pharmacotherapy group improved from  $55.3 \pm 6.8$  to  $66.7 \pm 7.1$  ( $p < 0.05$ ).



Patients undergoing CBT reported better treatment adherence, improved interpersonal relationships, enhanced occupational functioning, and higher overall quality of life.

## **DISCUSSION**

The findings of the present study indicate that Cognitive Behavioral Therapy produced significant clinical benefits in patients with bipolar disorder and demonstrated superior outcomes compared with pharmacotherapy alone in several important domains.

While pharmacotherapy remains the foundation of bipolar disorder treatment, medications primarily target biological mechanisms associated with mood dysregulation. In contrast, CBT addresses maladaptive cognitive patterns, dysfunctional beliefs, and behavioral responses that contribute to symptom recurrence and psychosocial impairment.

One of the most notable findings of the study was the significant reduction in depressive symptoms among patients receiving CBT. This observation is consistent with previous research demonstrating that cognitive restructuring and behavioral activation can effectively reduce negative automatic thoughts and improve emotional regulation in bipolar depression.

The lower relapse rate observed in the CBT group may be explained by increased illness awareness and improved self-management skills. Through psychoeducation and self-monitoring techniques, patients learned to recognize early warning signs of mood episodes and implement preventive coping strategies before symptoms became severe.

Improved psychosocial functioning was another important outcome. Bipolar disorder frequently affects occupational performance, social relationships, and daily functioning even during periods of symptom remission. The CBT intervention appeared to enhance adaptive coping mechanisms, interpersonal communication, and problem-solving abilities, contributing to better overall functioning.



The study findings support the growing evidence that psychotherapeutic interventions can play a critical role in long-term bipolar disorder management. Although pharmacotherapy effectively controls acute manic and depressive symptoms, psychological interventions may provide additional benefits by improving treatment adherence, reducing relapse risk, and enhancing quality of life.

Several limitations should be acknowledged. The sample size was relatively small, follow-up duration was limited to 24 weeks, and the study did not evaluate the combined effects of CBT and pharmacotherapy, which is currently considered the preferred evidence-based approach in many treatment guidelines.

Despite these limitations, the results suggest that Cognitive Behavioral Therapy represents an effective intervention for bipolar disorder and may provide advantages over pharmacotherapy alone in reducing depressive symptoms, preventing relapse, and improving psychosocial functioning.

## CONCLUSION

Cognitive Behavioral Therapy demonstrated greater effectiveness than pharmacotherapy alone in improving depressive symptoms, reducing relapse rates, enhancing treatment adherence, and improving psychosocial functioning among patients with bipolar disorder. These findings support the integration of CBT into comprehensive treatment programs for bipolar disorder and highlight the importance of psychological interventions in achieving long-term clinical stability and recovery.

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