

## Extended Abstract

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## Research paper

### **The Effectiveness of Dialectical Behavior Therapy on Depression and Anxiety among Mothers of Children with Cerebral Palsy**

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## Introduction

Cerebral palsy (CP) is one of the most common causes of motor disability in children and is characterized by permanent disorders of movement and posture resulting from non-progressive disturbances in the developing brain (Sadowska et al., 2020). The diagnosis of CP often imposes substantial emotional and psychological challenges on parents, particularly mothers, who typically assume the primary caregiving role. These challenges frequently manifest as elevated levels of depression and anxiety due to the chronic nature of the condition and the lifelong caregiving demands it entails (Fernández-Alcántara et al., 2015).

Depression is commonly associated with persistent sadness, loss of interest, social withdrawal, disturbances in sleep and appetite, and impaired daily functioning. Anxiety, in contrast, is characterized by excessive worry, heightened physiological arousal, and maladaptive coping behaviors (Sadock & Sadock, 2022). Psychological interventions play a crucial role in alleviating these symptoms, and dialectical behavior therapy (DBT) has emerged as an effective and evidence-based approach. DBT emphasizes the development of skills in mindfulness, emotion regulation, distress tolerance, and interpersonal effectiveness and has demonstrated efficacy in reducing symptoms of depression and anxiety across diverse clinical populations (Gilbert et al., 2023).

Despite growing evidence supporting the effectiveness of DBT, limited research has specifically examined its impact on mothers of children with CP. Addressing this gap is essential, given the heightened vulnerability of this population to psychological distress. Therefore, the present study aimed to evaluate the effectiveness of a DBT-based skills training program in reducing depression and anxiety among mothers of children with CP.

## **Method**

This study employed a quasi-experimental pre-test–post-test design with a control group. The statistical population consisted of all mothers of children with CP residing in Tehran during the year 1401 (2022–2023). Using convenience sampling and based on predefined inclusion criteria, 20 mothers registered at the Hayat Arghwani Supportive Charity Organization were selected and randomly assigned to either the experimental group ( $n = 10$ ) or the control group ( $n = 10$ ). Inclusion criteria were: (a) being the mother of a child diagnosed with CP, (b) age between 25 and 40 years, and (c) a minimum educational level of high school diploma. Exclusion criteria included withdrawal from the study, absence from more than two intervention sessions, and failure to complete the assigned homework tasks.

Depression and anxiety were assessed using the Beck Depression Inventory (BDI; Beck et al., 1967) and the Beck Anxiety Inventory (BAI; Beck et al., 1970), respectively. Both instruments are widely used and have demonstrated satisfactory reliability and validity in clinical and non-clinical populations. Both groups completed the pre-test assessments prior to the intervention. The experimental group then participated in 12 DBT-based group therapy sessions, each lasting 90 minutes, conducted over a four-week period. The control group received no psychological intervention during this time. Following completion of the intervention, both groups completed the post-test assessments. Data were analyzed using multivariate analysis of covariance (MANCOVA) in SPSS version 26, with pre-test scores entered as covariates.

## **Results**

Descriptive analyses indicated a reduction in mean depression and anxiety scores in the experimental group at post-test compared to the control group. The results of the MANCOVA revealed statistically significant differences between the experimental and control groups after controlling for pre-test scores, both for depression ( $F(1, 16) = 7.79, p = .013, \eta^2 = .33$ ) and anxiety ( $F(1, 16) = 9.07, p = .008, \eta^2 = .36$ ). Adjusted post-test means showed that mothers in the DBT intervention group reported significantly lower levels of depression ( $M = 22.17, SE = 0.58$ ) and anxiety ( $M = 26.27, SE = 1.28$ ) compared to those in the control group (depression:  $M = 24.55, SE = 0.58$ ; anxiety:  $M = 31.77, SE = 1.28$ ). These findings indicate that DBT was effective in reducing psychological distress among mothers of children with CP.

## **Discussion and Conclusion**

The findings of the present study indicate that DBT is an effective intervention for reducing symptoms of depression and anxiety among mothers of children with CP. The observed reduction in depressive symptoms may be attributed to DBT's emphasis on mindfulness, emotion regulation, and behavioral activation, which enable individuals to observe and manage negative emotional experiences without excessive judgment or avoidance.

Similarly, the reduction in anxiety symptoms can be explained by DBT's focus on distress tolerance and interpersonal effectiveness skills, which enhance coping capacity and promote adaptive responses to caregiving-related stressors. These findings support the integration of DBT-based interventions into supportive and rehabilitative services for families of children with CP to improve maternal mental health and overall family functioning. Despite its contributions, this study has several limitations, including the small sample size and the use of convenience sampling, which may limit the generalizability of the findings. Future research should employ larger, randomized samples and longitudinal designs to further examine the long-term effectiveness of DBT in this population.

## **Ethical Considerations**

### **Ethical Code**

All participants were fully informed about the purpose and procedures of the study and provided informed consent prior to participation. Confidentiality of participant information was strictly maintained. No financial incentives were offered.

### **Financial Support**

This study received no financial support.

### **Authors' Contributions**

The first author was responsible for conceptualizing the study and drafting the manuscript. The second, third, and fourth authors contributed to data collection, implementation of the intervention, manuscript revision, and submission. All authors approved the final version of the manuscript

### **Conflicts of Interest**

The authors declare no conflicts of interest.

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