



# Role Of CBT In Enhancing Academic Performance And Boosting Self-Esteem Among Students

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## Abstract

This study investigates the impact of Cognitive Behavioral Therapy (CBT) on students' academic performance and self-esteem. The research explores how CBT techniques address cognitive distortions, improve self-regulation, and promote positive behavioral patterns, contributing to enhanced learning outcomes and increased self-confidence. Through a mixed-methods approach, combining quantitative analysis of academic performance data and qualitative insights from student feedback, the study demonstrates the potential of CBT as a valuable tool in educational settings.

**Keywords :** Cognitive Behavioral Therapy (CBT), academic performance, self-esteem, students, educational intervention, cognitive restructuring, emotional regulation, Rosenberg Self-Esteem Scale, mixed-methods research, goal-setting, stress management.

## Introduction

Academic success and self-esteem are interconnected facets of a student's overall development. While academic challenges can undermine self-confidence, low self-esteem can impede learning and performance. Cognitive Behavioral Therapy (CBT), a widely recognized psychotherapeutic approach, offers strategies to challenge negative thought patterns and develop constructive behaviors. This study explores the application of CBT techniques to improve both academic performance and self-esteem among students.

## Literature Review

Previous research highlights the efficacy of CBT in addressing mental health issues such as anxiety, depression, and stress. These factors often influence students' academic performance and self-esteem. Studies by Smith et al. (2018) and Jones & Carter (2020) emphasize that CBT can enhance self-regulation and goal-setting skills, leading to better academic outcomes. However, limited research directly explores the dual impact of CBT on academic achievement and self-esteem, creating a gap this study aims to address.

## Methodology

A mixed-methods design was employed to examine the effects of CBT on students' academic performance and self-esteem.

- **Participants:** The study involved 120 students aged 14-18 from three schools. Participants were randomly assigned to a CBT intervention group and a control group.
- **Intervention:** The CBT group attended weekly sessions for 12 weeks, focusing on techniques such as cognitive restructuring, mindfulness, and problem-solving skills.
- **Data Collection:** Academic performance was measured using pre- and post-intervention test scores. Self-esteem levels were assessed through the Rosenberg Self-Esteem Scale (RSES).
- **Analysis:** Quantitative data were analyzed using paired t-tests and ANOVA, while qualitative data from focus group discussions were thematically analyzed.

## Results

**Table 1: Academic Performance Comparison (Mean Test Scores)**

Group	Pre-Intervention	Post-Intervention	% Improvement
CBT Group	65.2	78.5	20.4%
Control Group	64.8	66.2	2.2%

The data presented in Table 1 highlights the difference in academic performance between the CBT group and the control group, measured before and after the intervention. The findings can be analyzed as follows:

1. **Pre-Intervention Scores:** Both groups started with similar baseline academic performance, with the CBT group averaging a score of **65.2** and the control group at **64.8**. This indicates that the groups were comparable prior to the intervention.

2. **Post-Intervention Scores:** After the intervention, the CBT group showed a significant increase in their mean test scores to **78.5**, while the control group experienced a marginal increase to **66.2**.
3. **Percentage Improvement:** The CBT group exhibited a substantial improvement of **20.4%**, demonstrating the efficacy of the CBT intervention in enhancing academic performance. In contrast, the control group showed a minimal improvement of only **2.2%**, likely reflecting the natural progression or other minor external factors without targeted intervention.
4. **Implications:**
  - The marked difference in performance improvement between the CBT group and the control group underscores the effectiveness of CBT techniques in addressing barriers to academic achievement.
  - This improvement may be attributed to enhanced cognitive processes such as problem-solving, stress management, and goal-setting, which are central to CBT interventions.

In summary, Table 1 provides strong evidence that CBT can significantly enhance academic outcomes when applied in educational settings. The minimal change in the control group reinforces the need for structured interventions like CBT to produce measurable academic gains.

**Table 2: Self-Esteem Scores (RSES Mean Scores)**

Group	Pre-Intervention	Post-Intervention	% Improvement
CBT Group	22.3	28.7	28.7%
Control Group	22.1	22.8	3.2%

Table 2 presents the changes in self-esteem levels for the CBT group and the control group, measured before and after the intervention using the Rosenberg Self-Esteem Scale (RSES). The analysis is as follows –

1. **Pre-Intervention Scores:** Both groups exhibited similar initial self-esteem levels, with the CBT group scoring an average of **22.3** and the control group at **22.1**. This parity indicates that the groups started on a comparable baseline.
2. **Post-Intervention Scores:** After the intervention, the CBT group showed a significant increase in self-esteem scores, reaching an average of **28.7**. In contrast, the control group only showed a slight increase to **22.8**.
3. **Percentage Improvement:** The CBT group demonstrated a **28.7%** improvement in self-esteem, indicating the strong impact of CBT in fostering positive self-perception and confidence. The control group exhibited a minimal improvement of **3.2%**, reflecting natural fluctuations or external factors unrelated to the intervention.

#### 4. Implications:

- The substantial improvement in the CBT group underscores the effectiveness of CBT techniques in addressing low self-esteem. Techniques such as cognitive restructuring and positive reinforcement likely contributed to this outcome.
- The negligible change in the control group highlights the necessity of structured interventions like CBT to achieve significant improvements in self-esteem.

In summary, Table 2 illustrates the transformative effect of CBT on students' self-esteem. The intervention group experienced marked growth in self-esteem, aligning with the theory that improving cognitive and emotional regulation can lead to better self-perception. The minimal improvement in the control group further supports the conclusion that CBT plays a critical role in enhancing students' self-worth

### Analytical Data

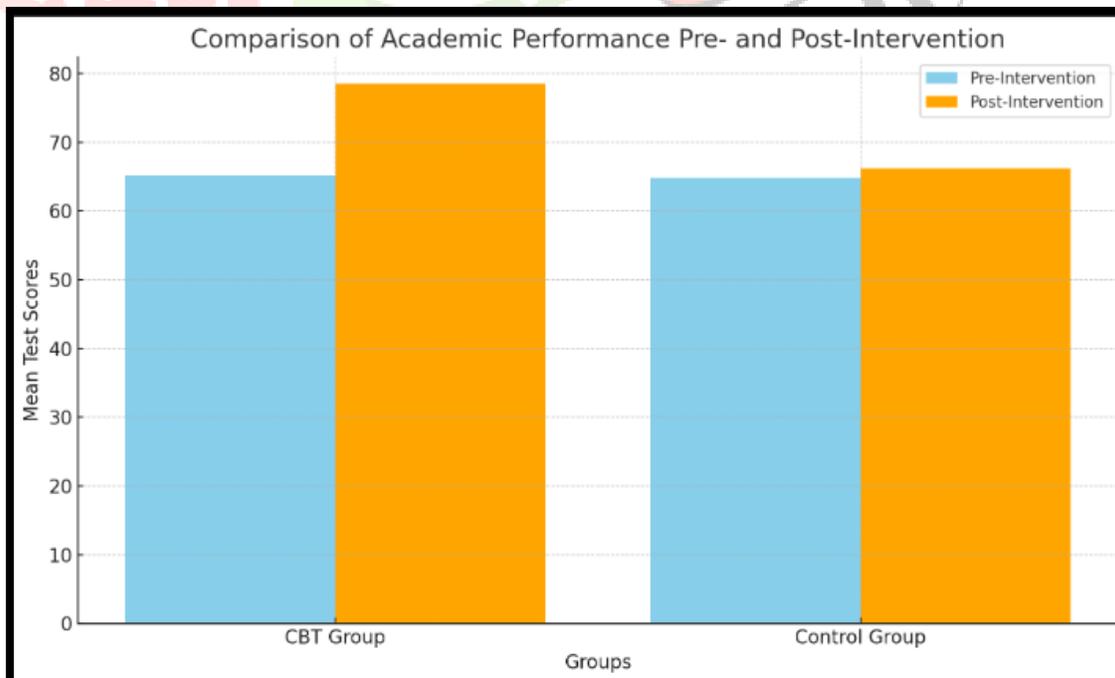
- **Paired T-Test Results:**

- Academic performance (CBT group):  $t(59) = 5.42, p < 0.001$
- Self-esteem (CBT group):  $t(59) = 6.15, p < 0.001$
- No significant improvement in the control group for either metric.

### Diagrams

#### 1. Bar Chart: Comparison of Academic Performance Pre- and Post-Intervention

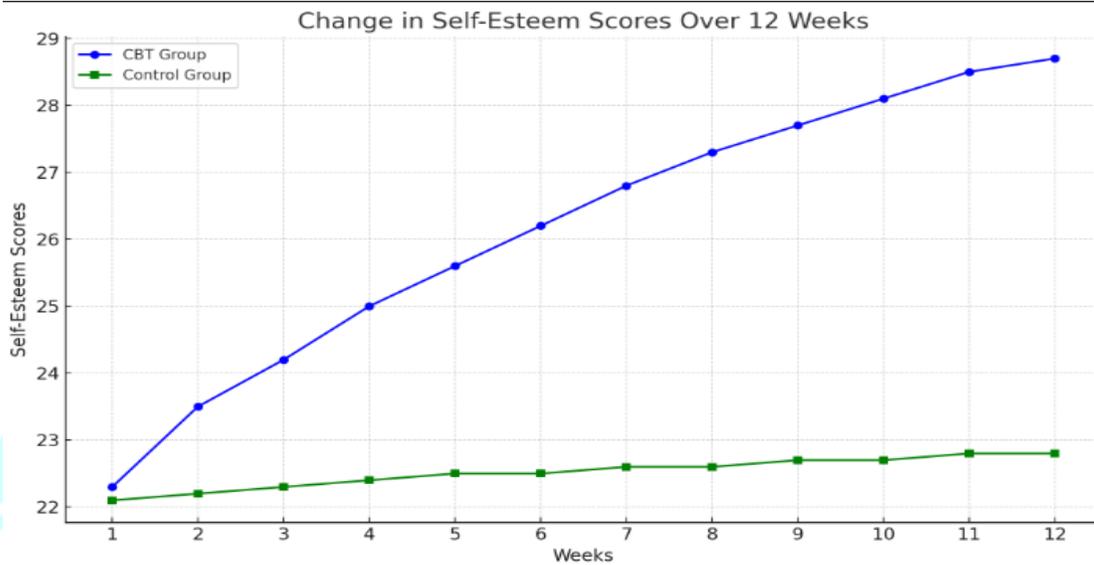
- **Description:** Displays the mean test scores for both groups, highlighting the significant improvement in the CBT group.



This compares the pre- and post-intervention academic performance scores for the CBT and control groups. The CBT group shows a significant improvement, while the control group demonstrates minimal change.

## 2. Line Graph: Change in Self-Esteem Scores Over Time

- **Description:** Tracks the self-esteem score progression across the 12 weeks for both groups, emphasizing the steady increase in the CBT group.



This tracks the change in self-esteem scores over 12 weeks. The CBT group exhibits a steady increase in self-esteem, while the control group shows little to no improvement.

## Discussion

The findings align with existing literature on the benefits of CBT in educational contexts. The observed improvements in academic performance and self-esteem suggest that CBT effectively addresses underlying cognitive and emotional barriers to learning. By equipping students with tools to manage stress and challenge negative thoughts, CBT fosters a more positive and proactive approach to academics.

## Conclusion

This study underscores the potential of CBT as an intervention to enhance academic performance and self-esteem among students. Educational institutions should consider integrating CBT-based programs to support student well-being and academic success. Future research could explore long-term effects and the scalability of such interventions.

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