

## **The impact of parent child interaction therapy vs cognitive behavioral therapy in children with behavioral disorders: A comparative study**

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### **Abstract**

**Objective:** The objective of this study was to study the impact and to compare parent child interaction therapy vs cognitive behavioral therapy in children with behavioral disorders

**Study design:** Comparative experimental Study

**Place and duration of study:** Department of Pediatrics, Tertiary Care Hospital, Lahore from September 2024- February 2025.

**Methodology:** 60 children aged 5–12 years diagnosed with behavioral disorders, including ADHD, oppositional defiant disorder, and conduct disorder were included in this study. Participants were randomly assigned into two groups receiving either PCIT or CBT for 12 weeks. Behavioral outcomes were assessed before and after intervention using standardized tools including the Child Behavior Checklist (CBCL) and Eyberg Child Behavior Inventory (ECBI). Statistical analysis was performed using SPSS version 26, with significance set at  $p < 0.05$ .

**Results:** The findings showed that both PCIT and CBT significantly improved behavioral symptoms among children with behavioral disorders. However, the PCIT group demonstrated greater reductions in aggression, impulsivity, disruptive behaviors, and parent–child conflict compared to the CBT group. CBT was also effective in improving emotional regulation and coping skills. Statistical analysis revealed

significant differences between pre- and post-treatment scores in both groups, with PCIT showing comparatively superior outcomes in managing externalizing behavioral problems and strengthening parent–child relationships through active parental involvement.

**Conclusion:** Both Parent–Child Interaction Therapy and Cognitive Behavioral Therapy are effective treatments for childhood behavioral disorders. However, PCIT demonstrated greater effectiveness in reducing disruptive behaviors and improving parent–child relationships.

**Key words:**parent child interaction therapy, cognitive behavioral therapy, comparison

**Introduction:**

Childhood behavioral disorders are a serious public health problem because they are associated with distress in emotional, social, academic, and family functioning. Childhood behavioural disorders are among the most common ones globally, including attention-deficit/hyperactivity disorder (ADHD), conduct disorder (CD) and oppositional defiant disorder (ODD). These disorders involve sustained patterns of aggression, defiance, impulsivity, emotional out-of-controlness, and disruptive behavior that disrupt a child's functioning and relationships. Leaving behavioral disorders untreated can have lasting consequences such as academic difficulties, substance abuse, delinquency, and mental health issues in adolescence and adulthood. Thus, early detection and appropriate intervention in the child's psychology is crucial to ensure developmental outcomes and quality of life.<sup>1</sup>

Parent–Child Interaction Therapy (PCIT) and Cognitive Behavioral Therapy (CBT) are two evidence-based therapeutic approaches that are well known and commonly used with children with behavioral disorders. Although both interventions share the common goals of decreasing maladaptive behaviors and improving emotional and social functioning, they have very different theoretical underpinnings, methods and techniques for implementation. It is important to know the relative effectiveness of these treatments so that clinicians, educators and parents can choose the best treatment for the affected children.<sup>2</sup>

Parent–Child Interaction Therapy is a structured, evidence-based program that is primarily implemented with young children who have disruptive behavior issues. It emphasizes improving the quality of the parent–child relationship and enhancing positive parenting skills through live coaching sessions. Based on theories of social learning and attachment, PCIT emphasizes reinforcement of communication, emotional bonding, and regular discipline routines. PCIT actively engages parents in the therapeutic process, and aims to change children's behavior in the family and to foster self-regulation of behavior.<sup>3</sup>

CBT, on the other hand, is likely to involve identifying unhelpful thinking, feeling, and behaviour patterns and changing them, using cognitive restructuring, problem-solving and coping strategies. CBT assists children to understand the connection between thoughts, emotions and behaviors, while providing them with skills to control and regulate their emotions. It is well used for a wide variety of childhood psychological and behavioral issues and can be tailored to the developmental level and severity of the symptoms of a child.<sup>4</sup>

Although significant research has demonstrated the efficacy of both PCIT and CBT, there has been very little comparative research to examine the relative effects of the two interventions on children's behavior outcomes. Some studies indicate that PCIT may be more effective with younger children who have more externalizing behaviours, in that parents are directly involved, but CBT may be more effective in enhancing cognitive and emotional self-regulation. Therefore, comparative studies are needed to identify which intervention provides better results in certain clinical circumstances.<sup>5</sup>

The current research is to compare the therapeutic effectiveness of Parent–Child Interaction Therapy and Cognitive Behavioral Therapy with children suffering from behavioral disorders. This research aims to provide insightful information on evidence-based therapeutic approaches for children's behavioral problems by analyzing the changes in behavior, regulation of emotions, and parent–child relationships.

### **Methodology:**

The purpose of this comparative experimental study was to compare the efficacy of Parent–Child Interaction Therapy (PCIT) with Cognitive Behavioral Therapy (CBT) for children with a diagnosis of behavioral disorders. This study used a quantitative research design, pre-test and post-test, to compare the behavioral outcomes of the two therapeutic interventions. This study was conducted for six months in the child psychology and behavioural health departments of some tertiary hospitals and psychological rehabilitation centers. The study was conducted in Tertiary Care Setup Lahore, Department of Pediatrics, from September 2024- February 2025.

Diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) was used for the target population that included children aged 5–12 years diagnosed with behavioral disorders which included oppositional defiant disorder (ODD), conduct disorder (CD), and attention-deficit/hyperactivity disorder (ADHD). The total number of children (N=60) was purposefully sampled using inclusion and exclusion criteria. To limit the confounding factors, children with severe intellectual disabilities, autism spectrum disorders, neurological disorders, and those receiving other types of psychotherapy were not included in the study.

The children were randomly allocated to two sets of 30 children. Parent–Child Interaction Therapy (PCIT) was provided in Group A and Cognitive Behavioral Therapy (CBT) was provided in Group B. Informed consent was obtained from parents/legal guardians and assent from children as appropriate prior to the start of treatment. The institutional ethical review committee approved the study.

Standardized psychological assessment tools used for baseline behavioral assessment were the Child Behavior Checklist (CBCL) and the Eyberg Child Behavior Inventory (ECBI). The instruments used to assess the externalization of behaviors, emotional regulation, aggression, impulsivity and parent–child relationship problems. A structured questionnaire was also used to obtain demographic data such as age, gender, education level, family structure and socioeconomic status.

The PCIT intervention lasted for 12 weeks, and was delivered weekly. Sessions involved enhancing parent–child interaction through positive reinforcement, effective communication, emotional responsiveness, and strategies for behavior management. Coaching was provided in real time to parents

by trained therapists, who interacted with their children. The therapy consisted of two phases: Child-Directed Interaction (CDI) and Parent-Directed Interaction (PDI).

In addition, 12 sessions of CBT were administered by certified child psychologists to the CBT group weekly. Cognitive restructuring, anger management, emotional regulation, problem-solving skills, and adaptive coping strategies were the key areas of CBT. To ensure children understand and can be involved, age-appropriate techniques were used, including role-play, story-telling, relaxation techniques and behavioural rehearsal.

Post treatment was evaluated at the end of the intervention period using identical standardized instruments, as were pre treatment. The data was analyzed with the aid of the Statistical Package for Social Sciences (SPSS) version 26. Descriptive statistics including mean, median, standard deviations, frequencies and percentages were computed. Paired t-tests were used for comparison between pre and post scores within group, and independent t-tests for comparison between groups for effectiveness of PCIT and CBT. Statistically significant p value was set at  $< 0.05$ .

**Results:**

A total of 60 children participated in the study, with 30 children assigned to the Parent–Child Interaction Therapy (PCIT) group and 30 children assigned to the Cognitive Behavioral Therapy (CBT) group. All participants completed the intervention and post-treatment assessment. The results demonstrated significant improvement in behavioral symptoms in both groups; however, the PCIT group showed comparatively greater improvement in externalizing behaviors and parent–child relationship outcomes.

| Variable         | PCIT Group (n=30) | CBT Group (n=30) | Total (%)  |
|------------------|-------------------|------------------|------------|
| Mean Age (Years) | 8.2 ± 2.1         | 8.5 ± 1.9        | —          |
| Male             | 18                | 17               | 35 (58.3%) |
| Female           | 12                | 13               | 25 (41.7%) |
| ADHD Diagnosis   | 14                | 13               | 27 (45%)   |
| ODD Diagnosis    | 10                | 11               | 21 (35%)   |
| Conduct Disorder | 6                 | 6                | 12 (20%)   |

**Table 1: Demographic Characteristics of Participants (N = 60)**

The demographic data indicated that both groups were comparable regarding age, gender distribution, and diagnostic categories, minimizing the possibility of baseline differences affecting treatment outcomes.

| Group      | Pre-Treatment Mean ± SD | Post-Treatment Mean ± SD | Mean Difference |
|------------|-------------------------|--------------------------|-----------------|
| PCIT Group | 158.4 ± 15.2            | 102.6 ± 12.4             | 55.8            |
| CBT Group  | 156.9 ± 14.8            | 118.7 ± 13.9             | 38.2            |

**Table 2: Comparison of Pre- and Post-Treatment ECBI Scores within Groups**

Both interventions resulted in statistically significant reductions in disruptive behavior scores measured through the Eyberg Child Behavior Inventory (ECBI). However, the reduction was greater in the PCIT group compared to the CBT group, indicating superior improvement in disruptive and oppositional behaviors.

| Behavioral Domain | PCIT Post-Test Mean ± SD | CBT Post-Test Mean ± SD |
|-------------------|--------------------------|-------------------------|
|-------------------|--------------------------|-------------------------|

|                         |            |            |
|-------------------------|------------|------------|
| Aggression              | 48.3 ± 6.1 | 55.9 ± 7.4 |
| Impulsivity             | 46.8 ± 5.9 | 50.6 ± 6.7 |
| Emotional Dysregulation | 44.7 ± 5.4 | 43.1 ± 5.8 |
| Parent–Child Conflict   | 40.2 ± 4.8 | 49.5 ± 6.3 |

**Table 3: Comparison of Child Behavior Checklist (CBCL) Scores Between Groups**

The findings revealed that children receiving PCIT demonstrated significantly lower aggression, impulsivity, and parent–child conflict scores compared to those receiving CBT. However, no statistically significant difference was observed between groups regarding emotional dysregulation, suggesting that both therapies were similarly effective in improving emotional control.

Overall, the study findings indicate that both PCIT and CBT are effective interventions for managing childhood behavioral disorders. Nevertheless, PCIT demonstrated greater effectiveness in reducing disruptive behaviors and improving family interaction patterns due to active parental involvement throughout the therapeutic process. CBT also produced meaningful behavioral improvements, particularly in enhancing coping skills and emotional regulation. These findings support the use of evidence-based psychological interventions for children with behavioral disorders and highlight the importance of tailoring treatment approaches according to the child’s clinical presentation and family environment.

**Discussion:**

The current study compared the efficacy of Parent–Child Interaction Therapy (PCIT) to Cognitive Behavioral Therapy (CBT) with children who have behavioral disorders. The results showed that both interventions were effective, with both groups seeing a decrease in disruptive behavior, aggression, impulsivity, and emotional regulation in the children that participated in both intervention groups. The PCIT group demonstrated a greater improvement in externalizing behavior and parent–child relationship functioning compared to the CBT group, however. The results of this study confirm the need for parents to be involved in the treatment of childhood behavioral disorders and mirror the increasing literature on family-oriented approaches to treatment.

The current study revealed that this was the case; children receiving PCIT showed a larger decrease in disruptive and oppositional behavior than children receiving CBT. This finding is in line with previous international research demonstrating the strong efficacy of PCIT for the reduction of oppositional defiant disorder, conduct disorder and ADHD behaviors in children. A study by Bjørseth and Wichstrøm showed that children treated with PCIT improved significantly in behaviors compared to the treatment-as-usual methods. Likewise, Calderone and colleagues emphasized that PCIT also is effective in reducing disruptive behavior problems and enhancing parenting across various clinical populations.<sup>6</sup>

A potential reason for the effectiveness of PCIT in the current study is that parents are directly engaged in the entire therapeutic process. The primary goal of PCIT is to increase positive parent–child interactions, foster emotional bonding, and to provide the parent with consistent discipline skills. Coaching with parents in real time interaction with kids allows therapists to address maladaptive communication patterns and reinforce positive behaviors in real time. The increase in the reduction of aggression and parent–child conflict in the group that participated in PCIT might have been due to the active parental involvement.<sup>7</sup>

CBT was also found to be effective in enhancing emotional regulation and coping skills in children with behavioural disorders. These findings are consistent with previous research showing that CBT can benefit children in changing their negative thought patterns, enhancing self-control, and fostering adaptive problem-solving skills. Oud et al. found that CBT is also a highly effective intervention in the reduction of emotional and behavioral symptoms in children and adolescents, especially when caregivers are included in the therapy sessions. Matthys and colleagues also concluded that CBT is a therapy that can

help children with disruptive behavioral conditions to regulate their anger, recognize their emotions, and solve social problems.<sup>8</sup>

While the current study revealed that CBT did not have as marked of an effect on parent–child conflict as PCIT did, significant behavioral improvement was still achieved. This could be because CBT is more focused on cognitive and emotional changes in the child, rather than directly on family interaction patterns. On the other hand, PCIT is more specific with the parent-child relationship issues, resulting in greater enhancements of family communication and the quality of the relationship. This finding supports attachment theory, which suggests that secure and supportive parent–child relationships are fundamental to healthy emotional and behavioral development.<sup>9</sup>

The findings of the present study also confirm to comparative studies carried out in Iran that aimed to compare CBT and PCIT in children with separation anxiety disorder. The study found significant differences between the two therapies, and found that CBT was more effective at reducing anxiety; PCIT was more effective at improving parent–child interactions and reducing loneliness. These results indicate different types of strengths for each therapy in the clinical presentation of the child. Thus, treatment decisions must be made on a case-by-case basis, depending on the child's symptoms of behavior, emotional problems, and family context.<sup>10</sup>

Overall, emotional dysregulation improved for children in both treatment groups, another important finding of the present study. This suggests a potential for developing children's emotion regulation and adaptive responses to stress activation through both PCIT and CBT. Emotional regulation has been found to benefit from a consistent pattern of behavioural reinforcement, emotional support and structured therapeutic guidance in previous literature.<sup>11</sup>

The findings are especially significant nationally for countries in which childhood behavioral disorders may be undiagnosed and untreated, as there are few resources for mental health care and social stigma in such countries. Family-oriented therapeutic methods might be particularly effective in Pakistan and other South Asian nations owing to the impact of family dynamics on child behavior. Parents may benefit from being involved in therapy to enhance treatment adherence, raise awareness, and foster a supportive home environment that supports therapeutic progress.<sup>12</sup>

In the present study, both PCIT and CBT are shown to be effective interventions for childhood behavioral disorders. In an effort to reinforce positive behaviors and involve parents, PCIT seems to offer

more benefits in reducing disruptive behaviors and enhancing parent–child relationship. CBT is an effective treatment for improving emotional regulation and cognitive coping skills. The results highlight the significance of evidence-based psychological interventions and indicate that combined/unified or individualized interventions might be most effective in children with behavioral disorders.<sup>13</sup>

The results of the present study reinforce the need to implement psychological interventions in children affected by behavioral problem in early stages of the disorder. The years of childhood are crucial for development, and if maladaptive behaviors are not properly addressed, they can last into adolescence and adulthood. The marked improvement seen in both treatment groups suggest that organized psychotherapeutic treatments have beneficial effects on the behavioral, emotional and social functioning of affected children. Early intervention can help limit the intensity of symptoms, as well as contribute to the avoidance of secondary issues like academic failure, social isolation, family stress, and low self-esteem.<sup>14</sup>

One of the salient points of this study is the importance of the parent's role in outcome of treatment. Positive consistent parental participation for children in PCIT may have increased the emotional security and positive behavioral patterns at home. Family-based interventions have been shown to bring about lasting behavioural changes in the literature internationally, as parents are not just a bystander, but an active participant in the process. Thomas & Zimmer-Gembeck found that if parents were actively involved in therapy, children had more stable, long-term behaviors and more positive emotional attachment to their parents, than children who were receiving child-focused therapy. This could be one of the reasons why the PCIT group in the present study showed more decrease in aggression and parent–child conflict.<sup>15</sup>

In addition, cultural factors might play a role in the effectiveness of PCIT in collectivist societies like Pakistan, where the family relationship and parental authority have significant impact on the development of children. Parents in many families in South Asia have an impact on the emotional and behavioral development of their children. Thus, parent education on positive communication, emotional responsiveness and behavior management skills may be especially helpful in these contexts. Parent involvement in treatment can also help to decrease stigma surrounding childhood behavioral disorders by promoting the idea that these disorders are treatable psychological problems, and not disciplinary failures.<sup>16,17</sup>

The current study also found that CBT was effective in enhancing the emotional regulation and coping skills of children. CBT teaches children the connection between thoughts, feelings, and behaviors, which helps them to control their frustrations, impulsivity, and anger more effectively. The results are consistent with earlier international research that found CBT an effective intervention to teach self-control and social skills, as well as adaptive coping. Children who learn these skills will have a greater ability to handle stressful situations and interpersonal conflicts in a school and home setting.<sup>18</sup>

One of the other significant implications of this study is the importance of treating childhood behavioral disorders in a multidisciplinary manner. Cooperation between psychologists, psychiatrists, pediatricians, teachers and parents is needed for the effective treatment. Schools can support by recognizing early behavioural issues and referring children for assessment and intervention by a professional. Community awareness programs can also enable parents to identify behavioral symptoms early and obtain prompt treatment.

**Conclusion:**

The study showed that Parent–Child Interaction Therapy (PCIT) and Cognitive Behavioral Therapy (CBT) are effective treatments for children who have behavioral disorders. Both treatments were effective in decreasing disruptive behaviors, aggression, impulsivity and emotional dys- regulation among children who participated. With parents actively engaged in the therapeutic process, PCIT was, however, more effective in enhancing parent–child relationship and minimizing externalizing behavioral problems. CBT was also reported to be very effective, especially in improving emotional control, coping and cognitive control in children. It also highlights the importance of raising awareness, early diagnosis and accessibility of child mental health care, especially in developing countries.

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