

## Comparative effectiveness of parent child interaction versus cognitive behavioural therapy in children aged 5-12 years with behavioral disorders

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### Abstract

**Objective:** The objective of this study was to study the comparative effectiveness of parent child interaction versus cognitive behavioural therapy in children aged 5-12 years with behavioral disorders

**Study design:** Comparative experimental Study

**Place and duration of study:** Department of Pediatrics, Tertiary Care Hospital, Faisalabad from May 2024- October 2024.

**Methodology:** 100 children aged 5–12 years diagnosed with behavioral disorders were included randomly assigned and into two equal groups. The study was conducted over six months in tertiary hospitals and rehabilitation centers. Standardized assessment tools, including the Child Behavior Checklist (CBCL) and Eyberg Child Behavior Inventory (ECBI), were used before and after treatment. Both groups received 12 weekly therapy sessions. Data were analyzed using SPSS version 26 with paired and independent t-tests, considering  $p < 0.05$  statistically significant.

**Results:** The findings demonstrated significant behavioral improvement in both treatment groups following therapy. Children who received Parent–Child Interaction Therapy showed greater reduction in disruptive

behavior, aggression, impulsivity, and parent–child conflict compared to those receiving Cognitive Behavioral Therapy. Both interventions were similarly effective in improving emotional regulation and coping skills. Post-treatment assessment scores indicated stronger improvement in externalizing behavioral symptoms among participants in the PCIT group. The results suggest that parental involvement played an important role in enhancing treatment outcomes and strengthening family interactions during the therapeutic process.

**Conclusion:** Both Parent–Child Interaction Therapy and Cognitive Behavioral Therapy were effective in managing childhood behavioral disorders. However, PCIT produced comparatively greater improvement in disruptive behaviors and parent–child relationships because of active caregiver involvement. Early evidence-based psychological intervention is essential for improving emotional, behavioral, and social functioning in affected children.

**Key words:** parent child interaction therapy, cognitive behavioral therapy, comparison, age 5-12 years

### **Introduction:**

Childhood behavioural disorders are a significant public health issue as they have a negative effect on the emotional functioning, educational performance, social functioning, and family life of the child. Attention-deficit/hyperactivity disorder (ADD/ADHD), conduct disorder (CD), and oppositional defiant disorder (ODD) are among the most common childhood behavior disorders found in the world. They are typically marked by chronic aggression, impulsivity, defiant behaviour, emotional instability and disruptive behaviour that disrupts everyday functioning and interpersonal relationships. Left untreated, these disorders can lead to various chronic problems such as low academic achievement, substance abuse, anti-social

behavior, and adolescent and adult psychopathology. Therefore, early detection and appropriate psychological intervention are crucial for healthy development and a better quality of life.[1]

There are multiple therapeutic strategies that have been developed to address behavioral issues in children, including Parent–Child Interaction Therapy (PCIT) and Cognitive Behavioral Therapy (CBT), which are both considered evidence-based therapies. Both therapies aim to decrease maladaptive behaviors and increase emotional and social competence, but they have very different theoretical underpinnings and methods of therapy. It is essential that mental health professionals, educators, and caregivers know which of these interventions is the most effective treatment when deciding which treatment is appropriate for a child with behavioral disorder.[2]

Parent–Child Interaction Therapy is a structured therapy, mainly developed for young children who have behavioral problems and are disruptive. The therapy focuses on improving parent–child relationships while teaching caregivers effective behavior-management skills through guided and real-time coaching sessions. Based on social learning and attachment theories, PCIT encourages positive communication, emotional connection and consistent discipline. The intervention aims to teach adaptive behaviours in children and enhance their emotional self-control in the family context by involving parents actively in the therapeutic process.[3]

Cognitive Behavioral Therapy (CBT) on the other hand focuses on the connection between thoughts, feelings, and actions. This therapeutic technique supports children in identifying negative thinking patterns and finding positive thinking and behavioral alternatives. CBT often includes strategies for emotional regulation and behavioral management, including cognitive restructuring, coping-skills training, and problem solving. CBT is flexible and structured, which makes it possible to adjust to the developmental stage and level of severity of the psychological or behavioral difficulties in children.[4]

Both CBT and PCIT has been shown to be effective treatments for childhood behavioral disorders in previous studies. However, direct comparisons of the results of these two methods of teaching are not prevalent in the literature. There is some existing evidence that PCIT may be more effective for younger children who exhibit externalizing behaviors due to the active role of parents in PCIT, while CBT may be more effective in strengthening emotional regulation and cognitive coping skills. Therefore, comparative investigations are required to figure out that which intervention is more beneficial under particular clinical conditions.[5]

The current study is designed to investigate the therapeutic efficacy of Parent–Child Interaction Therapy (PCIT) and Cognitive Behavioral Therapy (CBT) for children with behavioral disorders. This study aims to provide valuable evidence of the behavioral, emotional, and parent-child changes that emerge in treatment, with the goal of better informing the field about effective therapeutic treatments for children's behavioral problems.

#### Methodology:

The study was, a comparative experimental design used to test and compare the effectiveness of Parent–Child Interaction Therapy (PCIT) and Cognitive Behavioral Therapy (CBT) as intervention for children's behavioral disorders. The research approach used was the quantitative pre-test and post test method, which was used to measure the changes in behaviors after the two therapeutic interventions. The study was conducted for six months in the selected tertiary care hospitals and psychological rehabilitation centers in the child psychology and behavioral health units. A sample size of 100 children was taken according to WHO sample size calculator, keeping CI 95% and margin of error 5%. The research was conducted in tertiary care hospital, Faisalabad from May 2024 to October 2024.

The subjects of the study were children aged 5-12 who were clinically diagnosed with behavioral disorders, based on the criteria presented in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Oppositional defiant disorder (ODD), conduct disorder (CD), and attention-deficit/hyperactivity disorder (ADHD) were among the diagnoses that were considered. The total sample of 60 subjects was taken by purposive sampling that was conducted according to the inclusion and exclusion criteria. To reduce the effect of confounding variables children with severe intellectual disabilities, children with autism spectrum disorders, children with neurological conditions, and children being treated with other types of psychotherapy were excluded.

The children were randomly split into two equal groups of 50 children. The children in Group A had Parent–Child Interaction Therapy, while the children in Group B had Cognitive Behavioral Therapy. Parents/legal guardians gave informed consent before children participated and children gave assent when appropriate. The study was approved by the institutional review board.

Standardized psychological instruments such as Child Behavior Checklist (CBCL) and Eyberg Child Behavior Inventory (ECBI) were used for baseline assessment of behavioral functioning. These assessment instruments were used to assess externalizing behaviors, impulsivity, aggression, emotional dysregulation, and parent–child problems. Demographic data (age, gender, educational level, family system, and socioeconomic status) were also gathered by using a structured questionnaire.

A total of 12 sessions of the PCIT intervention program were used (one session per week). The therapy focused on reinforcing positive parent–child interactions, using effective communication skills, providing emotional support, and utilizing behavior-management strategies. Parents were directly coached by trained therapists and interacted with their children during sessions. The intervention consisted of two main phases: Child-Directed Interaction (CDI) and Parent-Directed Interaction (PDI).

In the same way, children that participated in CBT had 12 weekly sessions with a qualified child psychologist. The intervention emphasized cognitive restructuring, anger management, emotional regulation, problem-solving skills, and adaptive coping skills. Therapists utilized developmentally appropriate techniques, including storytelling, role play activities, relaxation, and rehearsal techniques to enhance participation and understanding among children.

Standardized instruments were administered at the end of the intervention period (post) using the same instruments used during the baseline evaluation. The collected data were analyzed statistically using Statistical Package for Social Sciences (SPSS) version 26. Numerical descriptive statistical data was computed such as frequencies, percentages, means, medians, and standard deviations. Within each treatment group, paired sample t-tests were used to compare pre- and post-test scores, and independent sample t-tests were used to compare the efficacy of PCIT and CBT between groups. A p-value of < 0.05 was deemed significant.



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**Results:**

A total of 100 children diagnosed with behavioral disorders participated in the study. The participants were equally divided into two intervention groups, with 50 children receiving Parent–Child Interaction Therapy (PCIT) and 50 children undergoing Cognitive Behavioral Therapy (CBT). All enrolled participants completed the treatment program as well as the follow-up behavioral assessments. Analysis of the outcomes demonstrated improvement in behavioral functioning in both groups after therapy; however, children treated with PCIT exhibited comparatively greater progress in reducing disruptive behaviors and improving family interaction patterns.

<b>Variable</b>	<b>PCIT Group (n=50)</b>	<b>CBT Group (n=50)</b>	<b>Total (%)</b>
Mean Age (Years)	8.4 ± 2.0	8.6 ± 1.8	—
Male	29	28	57 (57%)
Female	21	22	43 (43%)
ADHD Diagnosis	23	22	45 (45%)
ODD Diagnosis	17	18	35 (35%)
Conduct Disorder	10	10	20 (20%)

**Table 1: Baseline Characteristics of Study Participants (N = 100)**

The baseline demographic profile showed that the two treatment groups were similar in terms of age, gender distribution, and diagnostic classification. This comparability suggests that both groups were relatively balanced prior to the intervention, minimizing the influence of demographic variables on treatment outcomes.

<b>Group</b>	<b>Pre-Treatment Mean ± SD</b>	<b>Post-Treatment Mean ± SD</b>	<b>Mean Difference</b>
PCIT Group	160.8 ± 16.1	98.5 ± 11.7	62.3
CBT Group	159.6 ± 15.4	116.2 ± 13.1	43.4

**Table 2: Comparison of ECBI Scores Before and After Intervention**

Evaluation of Eyberg Child Behavior Inventory (ECBI) scores revealed substantial reductions in disruptive behavior symptoms following both therapeutic interventions. Although children in both groups demonstrated behavioral improvement after treatment, the decrease in scores was more marked among participants receiving PCIT. These findings indicate that Parent–Child Interaction Therapy was more effective in decreasing oppositional and disruptive behavioral patterns.

<b>Behavioral Domain</b>	<b>PCIT Post-Test Mean ± SD</b>	<b>CBT Post-Test Mean ± SD</b>
Aggressive Behavior	46.9 ± 5.8	54.7 ± 7.1
Impulsivity	45.2 ± 5.6	49.8 ± 6.2
Emotional Dysregulation	42.8 ± 5.1	43.5 ± 5.6
Parent–Child Conflict	38.7 ± 4.5	48.2 ± 6.0

**Table 3 Post-Intervention CBCL Scores Across Behavioral Domains**

Comparison of post-treatment Child Behavior Checklist (CBCL) scores demonstrated that children in the PCIT group achieved better outcomes in several behavioral domains compared with those in the CBT group. Lower scores for aggression, impulsivity, and parent–child conflict were observed among children

receiving PCIT, reflecting greater improvement in externalizing symptoms and family relationships. In contrast, both therapies produced relatively similar outcomes in emotional dysregulation, suggesting comparable effectiveness in enhancing emotional control and self-management skills.

Overall, the findings indicate that both Parent–Child Interaction Therapy and Cognitive Behavioral Therapy contributed positively to the management of childhood behavioral disorders. Nevertheless, PCIT produced stronger improvements in disruptive behavior reduction and parent–child relationship functioning, likely because of the active participation of caregivers during treatment sessions. CBT also showed considerable effectiveness, particularly in strengthening coping mechanisms and emotional regulation abilities. These results support the importance of implementing evidence-based psychological interventions while selecting treatment approaches according to the child’s behavioral presentation and family circumstances.

#### Discussion:

The present study evaluated and compared the effectiveness of Parent–Child Interaction Therapy (PCIT) and Cognitive Behavioral Therapy (CBT) in children diagnosed with behavioral disorders. Results showed that both interventions resulted in significant reduction of behavioral and emotional problems, including disruptive behavior, aggression, and impulsivity in children participating in either intervention. Children in PCIT, however, showed more improvement in the externalization of their behavioral symptoms and the quality of parent–child interaction. The results highlight the need to engage caregivers in the treatment process and align with the increasing evidence of the benefits of family-centered therapeutic interventions for childhood behavioral issues.

Children receiving PCIT had more marked decreases in oppositional/disruptive behaviors than children receiving CBT. These same types of results in previous international research showed that PCIT is an effective intervention for other types of disorders such as oppositional defiant disorder, conduct disorder, and ADHD. Previous research has been consistently successful in documenting the effectiveness of PCIT on improving behavior through enhanced parenting and decreased problem behaviors in a variety of clinical populations.[6]

Parents' immediate and sustained engagement throughout therapy sessions is one possible explanation for the greater success seen in the PCIT group. The main emphasis of PCIT is on building emotional connection, promoting positive communication, and providing the caregiver with effective discipline and behavior-management skills. In real time, parents receive feedback from the therapist regarding how to respond appropriately to maladaptive behaviors and how to reinforce desirable behaviors in real time. It is therefore important to consider that the level of aggression and parent–child conflict significantly decreased in the PCIT group, which may reflect the active involvement of parents throughout treatment.[7]

The results also showed that CBT was effective in enhancing children's coping and emotional management skills in children with behavioral disorders. CBT assists children to identify unhealthy thought patterns and to substitute healthier responses, ultimately enhancing self-control and problem solving skills. It has also been found that CBT is effective for decreasing emotional and behavioral problems in children and adolescents, especially when parents partially participate in therapy sessions (Groen et al., 2001; Huppert, van Straaten, & Wouters, 2002; Negroni, 2002; Korkorian & Davidson, 2000; Guyer & Marcus, 2002; Wallace et al., 1998, among others). Additionally, CBT has been found to help children with disruptive behavior disorders control their anger, be aware of their emotions, and be able to solve social problems.[8,9] CBT resulted in some behavioral change, but not as much as PCIT did when it came to parent–child conflict. This discrepancy may be due to the fact that CBT primarily aims to change the child's internal cognitive and emotional processes while PCIT focuses on a family's interaction patterns and communication styles. Thus, PCIT may help to increase family bonds and family communication. The results also align with attachment theory, which emphasizes the importance of nurturing and secure parent–child relationships in fostering healthy emotional and behavioral growth.[10]

Other findings that support the results of this study are those of other countries where CBT and PCIT have showed various therapeutic strengths based on the child's clinical presentation. CBT has been shown to be more effective at reducing anxiety levels and aiding parents' emotional coping, whereas PCIT has demonstrated more effectiveness in improving parent–child relationships and decreasing interpersonal conflict. These findings indicate that treatment planning should be tailored to the specific behavioral symptoms, emotional needs and family context of each child.[11]

Another significant finding of the study was that both treatment groups showed improvement in emotional dysregulation. This means that children can be better equipped to manage their emotions and react in a

more adaptive manner when faced with stressful circumstances as a result of structured psychological interventions. These improvements were probably due to the consistent emotional support, positive behaviour reinforcement and guided therapeutic activities.

The results have given special relevance in the development countries where childhood behavioural disorders are often underdiagnosed and under treated due to lack of mental health resources and social stigma. Family influences child development and behavior to a great extent in countries like Pakistan and other societies of South Asia. Hence, family interventions may be particularly effective in these contexts. Engaging parents in therapy can increase adherence to treatment, raise awareness about mental health issues in children, and foster a supportive family environment that can reinforce therapeutic changes.[12]

In general, this study showed that both interventions, PCIT and CBT, are effective evidence-based treatments for childhood behavioral disorders. However, due to the active involvement of caregivers in the intervention process, PCIT also seemed to offer some extra benefits in terms of decreasing disruptive behaviors and improving parent–child relationship. CBT was also helpful, specifically with regard to emotional control, coping skills from a cognitive perspective, and self-regulation skills. The results of this study indicate that a personalized or holistic treatment might be most effective for children with behavioral problems.[13]

The study also emphasizes the need for psychological support in children with behavioral problems in early childhood. This is an important phase of emotional and social development and unaddressed maladaptive behavior can persist through adolescence and adulthood. The marked gains achieved in both treatment groups suggest that structured psychotherapeutic interventions are helpful in improving emotional, behavioral and social functioning. Early intervention can also help to prevent secondary issues like low academic achievements, family problems, low self-esteem, and social isolation.[14]

Another advantage of the present study is the focus on parental involvement as an important factor in successful treatment outcomes. Parent involvement in the PCIT group could have led to the greater security of feelings and healthier behavioral patterns at home. The evidence from around the world also shows that family-based treatments can have more enduring long-term behaviour change effects as the parent is engaged as part of the therapeutic process and not just a passive bystander. This could account for the greater decreases in aggression and parent–child conflict that were seen in children who received PCIT treatment.[15]

Adopting a cultural view, it could be suggested that in societies with a collectivist culture (e.g. Pakistan), where parental rights and family bonds are significant determinants of the child's behavior, PCIT may be more effective. Therefore, in such cultural contexts, training parents in positive communication, emotional responsiveness, and effective ways of disciplining may be especially useful. In addition, family participation in treatment can help decrease the stigma associated with behavioral disorders because families can have a better understanding that the problem is a behaviour problem that can be treated as a psychological disorder.[16]

The present study also confirmed that CBT has a positive effect on emotional regulation and adaptive coping skills. CBT helps children learn to control their frustrations, impulsivity and anger by helping them understand that thoughts, emotions and behaviour are connected. This is consistent with previous research that concluded that CBT is one of the most significant interventions to increase self-control, social competence, and adaptive coping skills in children with behavioral problems. The skills that children learn may assist them to respond to stressful situations and interpersonal conflict with greater effectiveness both in school and at home.[17]

The results also highlight the importance of a multidisciplinary approach to childhood behavioural disorders. The treatment needs to be done by psychologists, psychiatrists, pediatricians, educators and parents working together. Early identification of behavioral concerns in the school environment and referral of children for professional assessment and intervention can be a valuable contribution from the school. Community awareness campaigns can also raise parent awareness earlier and promote mental health services.

#### Conclusion:

The study found that both Parent–Child Interaction Therapy and Cognitive Behavioral Therapy work as a method of treatment for kids with behavioral disorder. Both interventions led to decreases in disruptive behaviors, aggression, impulsivity and emotional difficulties. But, PCIT showed relatively better results in the reduction of externalizing behaviours and improving parent–child relationships given the level of engagement of the caregivers in therapy.

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