



The Impact of Parent Child Interaction Therapy on Temper Tantrums in Pre-school

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Abstract

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BACKGROUND: Temper tantrum behavior is a child's emotional behavior which is shown by explosive anger and some parents consider this behavior to be bad behavior. Temper tantrums can occur in children aged 3–6 years or more.

AIM: This literature review aims to determine the impact of parent child interaction therapy (PCIT) on temper tantrums in preschool.

METHODS: In finding this literature review used four databases (ProQuest, Scopus, PubMed, and Saints Direct for the design of the study used cross-sectional, true experimental, observational, and systematic reviews published in the past 5 years. The protocol and evaluation of the literature review used the preferred reporting items for systematic reviews and meta-analyses checklist to determine the selection of studies that were found and adapted to the objectives of the literature review.

RESULTS: The results of literature review analysis of several parents in group and individual PCIT reported that the application of parent-child-based interventions was proven to be effective and has the potential to bring significant and lasting changes in increasing positive behavior in children with external behavior problems. The frequency of problematic child relationship behavior significantly decreased with increasing age of the child.

CONCLUSION: In addition, assessing both positive and negative child relationship behavior could assist parents in understanding the relevance of different aspects for the development of parent-child relationships.

Introduction

Temper tantrums are problematic behaviors in children that need proper attention and treatment by parents. If this temper tantrum behavior is left alone without being handled wisely, this temper tantrum behavior can become a deviant behavior, which can have a bad impact on the child's life in the future. Problematic behavior in children is one of the issues in society that needs attention and treatment by parents during the development and growth of children. In each process of growth and development, children have differences and characteristics of each that are different from one another, one of the differences is in terms of behavior. Parents must be ready and know how to deal with these behavioral differences, both expected behavior and unexpected or deviant behavior, especially in dealing with children who are experiencing temper tantrum behavior. According to (Amin, 2017), temper tantrum behavior is an excessive reaction from a child when his wishes are not in accordance with feelings or expectations. This temper tantrum behavior usually appears when a child who has a temper tantrum faces a situation or obstacle that is not in accordance with his wishes.

According to data from the Central Statistics Agency in 2016 (Alini and Jannah, 2019) in Indonesia, the number of preschool children with an age range of 2–7 years is 30.26 million. Meanwhile, according to Psychologyzone 2012 in (Ramadia, 2018) states that in Indonesia toddlers who experience temper tantrums occur at the age of 2–4 years as much as 23–83% and this temper tantrum lasts for 1 year. Based on the results of Esti's 2015 research in (Hanura, 2017) conducted in Jember City, it was started that many as 17 children (73.9%) were at risk of experiencing temper tantrums because mothers left their children or worked and as many as six children (26.1%) were not at risk. experiencing a temper tantrum.

Temper tantrum behavior that often appears in preschool-aged children usually starts from the interaction between parents and children who are not good, so usually this temper tantrum behavior arises from situations in the house or ineffective behavior from parents. Parents have a great influence on the process of child growth and development, both in the process of physical, mental, social, emotional, and spiritual formation. In fact, it is not uncommon for improper parenting to be the cause of problems in children. When children are faced with coercion from parents,

such as criticism, repeated orders, and repeated physical prompts, it will usually result in rejection from the child that manifests in the form of temper tantrums, vocal rejection, or actions aimed at seeking attention (acting out). For example, when child starts screaming, crying, or throwing himself on the floor, parents are likely to change their decision more quickly and be reluctant to follow-up on disciplinary action (Paramita *et al.* 2019) [1]. According to Kirana, 2013 in research (Supriyanti *et al.*, 2018), the factors that can cause temper tantrums in children include physiological factors (such as children feeling hungry, tired, or sick), psychological factors (when children experience failure and other parents are too demanding that the child is in accordance with their expectations of parents), parental factors (parental care and communication between parents and children), and environmental factors (both the environment in the family and the environment outside the home).

Table 1: Inclusion and exclusion criteria

| Criteria | Inclusion | Exclusion |
|-----------------------------------|--|--|
| Population | The study consisted of a community of preschoolers who experienced temper tantrums or other external behaviors. | Communities other than preschool children with an age range above 10 years |
| Intervention | PCIT Intervention | |
| Comparison | Other treatments, for example, parenting therapy for children, parenting therapy for children, parenting communication therapy for children. | In addition to parenting therapy management for children, parenting therapy for children, parent-child communication therapy |
| Outcome | The impact of PCIT on temper tantrums in preschool. | No exceptions |
| Study design and publication type | Studies using cross sectional, True Experimental, Observational and Systematic Review. | No exceptions |
| Publication years | 2015–2021 years | year<2015 |
| Language | English and Indonesian | Languages other than English and Indonesian |

PCIT: Parent child interaction therapy.

Preschool age children usually start to have the desire to do various things, such learning to understand and adapt related to the behavior that is expected and not expected by the surrounding environment, and indirectly children also begin to learn which behavior are right and wrong. The role of parents in this case is needed to help children understand the norms and values that apply in their environment. Children need to be given the freedom to do things or activities they want while still providing boundaries in accordance with the norms and values that apply in their environment, so that children understand that there are limits and signs that should not be violated. Thus, it is hoped that through parent child interaction therapy (PCIT) therapy, parents are able to overcome the problem of temper tantrum behavior that occurs in preschool-aged children by combining play and interaction therapy, so that it is hoped that children can grow and develop well and have a good spirit independent and responsible.

Methods

The protocol and evaluation of the literature review will use the PRISMA (preferred reporting items for systematic reviews and meta-analyses) checklist to determine the selection of studies that have been found and adapted to the objectives of the literature review (Table 1 and Figure 1).

The literature search in this literature review uses four databases, namely, ProQuest, Scopus, and PubMed, and Saints Direct.

Table 2: Study search results based on research database

| Source language | Year | Database | N | Types of article research studies | | |
|-----------------|-----------|--------------|-----|-----------------------------------|-------------------|-------------------|
| | | | | Cross-sectional | Systematic review | True experimental |
| English | 2015–2021 | ProQuest | 173 | 1 | 2 | 1 |
| | | Scopus | 0 | 0 | 0 | |
| | | PubMed | 227 | 0 | 1 | 1 |
| | | Sains Direct | 1 | 0 | 0 | 0 |
| Results | | | 6 | 1 | 3 | 2 |

Study search and selection results

Quality rating

Analysis to assess the methodological quality in each study using the JBI Critical Appraisal Checklist was obtained in each study ($n = 6$) with an assessment checklist with several questions to assess the quality of the study (Table 2). We excluded studies of low quality to avoid bias in the validity of the results and review recommendations. In the last screening, thirty studies achieved a score of 50% and were ready to synthesize

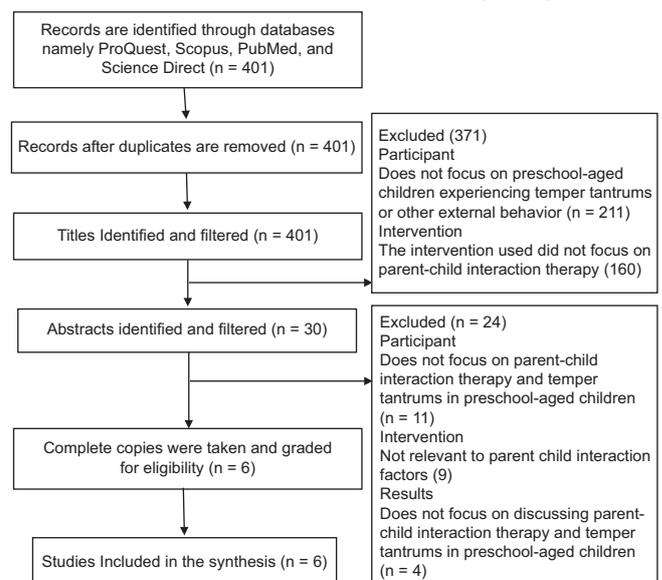


Figure 1: Study search and selection results

data, however due to biased assessment of therapy and articles used in the literature review there were 6 pieces.

Table 3: Literature search results

| S. No. | Author and year | Title | Study design, sample | Variable | Instrument | Result of factor analysis | Result summary |
|--------|--|--|---|--|--|--|--|
| 1. | Briegel <i>et al.</i> 2019 [8] | Parents' perception of their 2–10-year-old children's contribution to the dyadic parent-child relationship in terms of positive and negative behavior | Design : cross sectional Sample : 173 children aged 2–10 years | Parents' perception, positive and negative behavior | Pre-trial questionnaire, observation, scale and checklist | Emotional, physical and intellectual | Statistical results show that the child's relationship behavior is a reliable and valid measure. In their parents' perception, girls show more positive relationship behavior and are less problematic than boys. The frequency of problematic child relationship behavior significantly decreased with increasing age of the child, while positive relationship behavior did not show any correlation with the child's age. |
| 2. | (Mingebach <i>et al.</i> , 2018) [3] | Meta-meta-analysis on the effectiveness of parent-based interventions for the treatment of child externalizing behavior problems | Design : Systematic Literature Review Sample: children under 13 years old | intervention, Child externalizing behavior problems | 1. Overall child behavior using instruments: child behavior checklist, Dyadic parent-child interaction coding system, teacher assessment of social behavior and other side specific measures such as child depression interaction, social behavior questionnaire 2. Children's behavior violates using the instrument: Externalization checklist, strengths and difficulties of the questionnaire behavior scale 3. PRISMA | Factors that led to children being referred to treatment were behavioral problems e.g., oppositional symptom disorder (ODD), conduct disorder (CD), ADHD, and children described as having externalizing problems. | Parent-based interventions have been shown to be effective in improving behavior in children with external behavior problems, as assessed using parental reports and observational measures. Further analysis focusing on the child's externalizing behavior yielded a significant and moderate effect (SMD=0.45). |
| 3. | Ogundele, 2018 [4] | Behavioral and emotional disorders in childhood: A brief overview for pediatricians | Design : Systematic literature Review Sample: 3042 children with an average age of 4–7 years | Care, Behavior in children | PRISMA | Disorders, depression, anxiety, post-traumatic stress in childhood and pervasive developmental disorder (autism), characterized by internalizing and externalizing | There is evidence-based improvement for some psychosocial interventions but less leverage for pharmacological treatment other than the use of stimulants for ADHD behavioral problems. |
| 4. | Lieneman <i>et al.</i> , 2017 [6], [9] | Parent – Child Interaction Therapy : current perspectives | Design : Systematic literature review Sample : Children 2–7-years-old | PCIT, perspective | PRISMA | Treatment effectiveness, treatment components, adaptation for different populations (age groups, cultural groups, military families, individuals diagnosed with certain disorders, trauma victims, and hearing loss), changes in format (group and home-based), intensive PCIT teacher-child interaction training, preventive medicine (for problems of externalization, child abuse, and developmental delays), and implementation. | The results of the analysis of various studies indicate that there are several shortcomings of PCIT therapy in contemporary studies related to behavioral health. Many studies conducted on small samples, particularly in the mothers involved, have little demographic diversity and few have long-term follow-up. |
| 5. | Kohlhoff <i>et al.</i> , 2020 [5] | A randomized controlled trial comparing parent child interaction therapy - toddler, circle of security–parenting™ and waitlist controls in the treatment of disruptive behaviors for children aged 14–24months: study protocol | Design: Randomized Controlled design Sample: 90 Toddlers aged 12–24 months | Treatment, Parent Child Interaction Therapy, | interviews, observations, report questionnaires, | parenting capacity, parenting sensitivity, sense of competence of parents in managing negative emotions of toddlers, sense of powerlessness of parenting, parental mentalization of children, regulation of parental emotions, potential for child abuse and parental stress. For children, it will cover children's socio-emotional functions (initiative, relationship functions, self-regulation), child emotional regulation, child attachment security, and child behavior. | Based on the results of the study, it was shown that PCIT therapy in toddlers has the potential to bring significant and lasting changes to children who experience early behavior problems. |
| 6. | Niec <i>et al.</i> [10] | Group parent-child interaction therapy: a randomized control trial for the treatment of conduct problems in young children | Design : Randomized Controlled group pre-test post-test design Sample: 81 families with children aged 3–6 years as many as 42 children | Interventions, treatment of children's externalizing behavior problems | Child behavior checklist, dyadic parent-child interaction coding system, teacher assessment of social behavior and on the other hand special measures like for example child depression inventory, social behavior questionnaire | Parenting stress, and social support on admission | Based on the results of the study, parents in both group and individual PCIT reported significant improvements from care to post-treatment and follow-up in their children's behavioral problems and adaptive functioning, as well as significant reductions in parenting stress. Parents in both treatment conditions also showed significant improvement in parenting skills. |

PCIT: Parent-child interaction therapy, PRISMA: Preferred reporting items for systematic reviews and meta-analyses, ADHD: Attention deficit hyperactivity, ODD: Oppositional disorder.

Results and Analysis

The contributing factors in the study of PCIT and problem behavior in children are mostly true experimental and systematic literature reviews. The average number of participants is more than 50 individuals. Overall, each study examines the impact of applying PCIT related to behavioral problems in preschoolers. Studies corresponding to this systematic review were carried out on average in Germany with two studies ((Briegel and

Table 4: Demographic characteristics of the research sample in Journal 1

| Author | Data | N | Percent | |
|----------------------------|------------------------|---------------------|---------|-------|
| (Briegel et al., 2019) [8] | Children's samples | 1712 | 100.0 | |
| | Sex | Woman | 843 | 49.2 |
| | | Man | 869 | 50.8 |
| | Children live together | Both parents | 1412 | 82.6 |
| | | Widow | 171 | 10.0 |
| | | Mom and new partner | 89 | 5.2 |
| | | single father | 11 | 0.6 |
| | | Foster parents | 17 | 1.0 |
| | | New dad and partner | 7 | 0.4 |
| | | Adoptive parents | 2 | 0.1 |
| | Is lost | | 3 | - |
| | | | 223 | 13.0 |
| | Migration background | Yes | 1489 | 87.0 |
| | | No. | 2710 | 100.0 |
| | Master sample | | 1642 | 60.1 |
| | | | 1068 | 39.9 |
| Sex | Woman | 292 | 19.4 | |
| | Man | 787 | 52.4 | |
| | Low | 424 | 28.2 | |
| | Medium | 209 | - | |
| | Is lost | | | |

Hoyer, 2020) [2]; (Mingebach et al. 2018) [3], one study in the UK (Ogundele, 2018) [4], one study in Australia (Kohlhoff et al., 2020) [5], and the other two studies were in the USA (Lieneman et al. 2017b) [6] (Barnett et al., 2019) (Table 3) [7].

Characteristics of study respondents

Respondents in this study were all preschool age children who experienced behavioral problems. In this study, factors related to the impact of the application of PCIT on temper tantrums in preschoolers have been mentioned, with the majority of respondents amounting to more than 50 individuals. Respondents in this study were 2–10-years-old on average from various countries. The gender characteristics of the respondents are almost the same between men and women. The overall respondents are Asian people

and indigenous people from the research location (Tables 4-9).

Discussion

This study proves and answers the researcher's question, namely, how is the impact of PCIT on the temper tantrums of preschoolers. Study characteristics of all included meta-analyses are illustrated in Tables 4-9. On average, individual meta-analyses were included in the primary study. While 2 meta-analyses included exclusively controlled trials, the other 4 meta-analyses included uncontrolled trials. Therefore, the resulting effect is estimated, on the one hand, as a comparison between the experimental and control groups, while, on the other hand, the pre-to-post or follow-up measures.

Table 6: Description of study characteristics in Journal 3

| Author | Children's behavioral and emotional disorders | Age and gender | |
|----------------------|---|--|-------------------------|
| (Ogundele, 2018) [4] | Challenging Behavior | Learning Disabilities Impaired social and communication skills Autism Neurobehavioral disorders | Varies around the world |
| | | | |
| | Emotional Problems | Panic disorder GAD Anxiety leaving Social phobia Specific phobia OCD Depression | |
| | | | |
| | Social communication disorder | ADHD Sindrom william Behavioral disorders Closed head injury Spina bifida | |
| | | | |

CDD: Childhood disintegrative disorder, GAD: Generalized anxiety disorder, ADHD: Attention deficit hyperactivity, ODD: Oppositional disorder.

The study averages related to parental behavioral interventions, which are characterized by teaching effective parenting behavioral strategies and skills to manage children's behavior. Some studies use non-behavioral interventions. These interventions focus, for example, on parent-child communication or problem-solving strategies. Furthermore, several meta-analyses have focused on specific parent-based interventions (eg PCIT etc.).

Table 5: Description of study characteristics in Journal 2

| Author | Inclusion Criteria | Child Age | Meta-Analysis Search Results (N) | |
|------------------------------|--------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| (Mingebach et al., 2018) [3] | Positive behavior | Preschool age children and school | Controlled trial | Controlled and uncontrolled trials |
| | External behavior problems | | 20 | 8 |
| | Symptoms of internalization | | | |
| | Children with mental disorders | | | |
| | | | | |

ADHD: Attention deficit hyperactivity, ODD: Oppositional disorder.

Table 7: Description of study characteristics in Journal 4

| Author | Inclusion Criteria | Child Age | Main Outcomes Parenting Capacity |
|------------------------------|---|-----------|---|
| (Lieneman et al., 2017a) [9] | Treatment effectiveness Treatment components Adaptation to specific populations (age groups, cultural groups, military families, individuals diagnosed with certain disorders, victims of trauma and hearing loss) Format-based adaptation | 2–7 years | Based on the results of PCIT research over the past decade focused on examining and enhancing the effectiveness of PCIT in community settings and targeting more families facing complex personal and contextual challenges |

PCIT: Parent-child interaction therapy.

Table 8: Description of study characteristics in Journal 5

| Author | Inclusion Criteria | Child Age | Main Outcomes Parenting Capacity |
|-----------------------------|--|--------------|---|
| (Kohlhoff et al., 2020) [5] | Disruptive behavior (e.g., tantrums, aggression, irritability) | 14–24 months | 1. Positive and negative parenting 2. Parenting sensitivity 3. Parental competence in negative emotions of toddlers 4. Parental helplessness 5. Mentalization of parents about children 6. Parental emotion regulation 7. Potential for child abuse and parental stress |

The overall behavior of children, both external and internal, was assessed using instruments in each study (e.g., child behavior lists) and using direct observation or through direct reports from parents, teachers, and the surrounding environment.

Table 9: Description of study characteristics in Journal 6

| Author | Inclusion Criteria | Child Age | Main Outcomes Parenting Capacity |
|----------------------------|---|-----------|--|
| (Barnett et al., 2019) [7] | Children's defiance or conduct disorder Parenting stress Social support Post-therapy care and follow-up 6 months | 3–6 years | Parents in both group and individual PCIT reported significant improvements from intake to post-treatment and follow-up in their children's behavioral problems and adaptive functioning, as well as significant reductions in parenting stress. |

PCIT: Parent-child interaction therapy.

Symptoms of externalizing behavior in preschool children are the main targets in the application of this parent-based intervention, a greater impact of this intervention can be expected compared to the outcome category of interventions for more distant children such as internalizing symptoms or proportional behavior. The impact of parent-based interventions on internalizing symptoms needs to be critically evaluated, because these interventions often accompany externalizing disorders in childhood. In addition, research on parent-based interventions for the treatment of children with internalizing disorders is still very scarce. Although several meta-analyses have presented results on the effects of parent-based interventions on children's proportionate behavior and reported small effects, further research is needed.

Literature limitations

At the beginning of looking for journal articles in several databases of international journal articles, there were no journal articles that specifically talked about PCIT therapy and how it could help preschoolers who had temper tantrums.

Conclusion

Parent-child interventions were found to be effective in dealing with children's externalizing behavior problems. This intervention is done by reducing problematic behavior in children as a whole. In addition, this intervention is more effective because it can minimize costs and has a positive effect in the long term. Based on the results obtained, this meta-analysis supports parent-based interventions as evidence-based interventions for the treatment of external behavioral problems in children. In addition, this meta-analysis also supports certain interventions that are based on a broad empirical database (e.g., PCIT). Based on the results of a strong database analysis showing the effectiveness of parent-based interventions there must be a shift toward broader interventions. The role of parents is very important in the development process of their children and is an influential factor in the origin of externalizing disorders. Therefore, the role of parents or caregivers in the treatment of child behavioral disorders is very important. Because, the long-term consequences of externalization problems and disorders that occur in children can be detrimental to children, their families and the surrounding environment.

For this reason, it is very important to improve mental healthcare for children who have problems and disorders outside of their bodies.

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