

# Comparing the Effectiveness of Cognitive Behavioral Play Therapy and Gestalt Play Therapy on Vandalistic Behaviors, Impulsivity, and Cognitive Flexibility in Aggressive Male Elementary Students

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## ABSTRACT

**Objective:** Aggression in the early years of life leads to the emergence of individual problems such as a poor self-concept and poor academic performance, as well as interpersonal issues such as rejection by peers in a child's life. The purpose of this study was to compare the effectiveness of cognitive behavioral play therapy and Gestalt play therapy on vandalistic behaviors, impulsivity, and cognitive flexibility in aggressive male elementary students.

**Methods and Materials:** This quasi-experimental research was conducted with a pre-test, post-test design with a control group and a follow-up period. The research population consisted of aggressive elementary students from District 6 of Tehran, 45 of whom were selected through purposive non-random sampling and randomly assigned to two experimental groups (cognitive behavioral play therapy and Gestalt play therapy) and one control group. The Madrigal Vandalistic Behaviors Questionnaire (2006), Barratt Impulsiveness Scale (1993), and Denz and Vandewall Cognitive Flexibility Questionnaire (1977) were used. The first experimental group underwent 8 sessions of 60-minute cognitive behavioral play therapy, and the second experimental group underwent 10 sessions of 60-minute Gestalt play therapy. Data were analyzed using repeated measures ANOVA and SPSS software version 22.

**Findings:** The results showed that both cognitive behavioral play therapy and Gestalt play therapy were effective in reducing vandalistic behaviors, impulsivity, and in enhancing cognitive flexibility ( $P < 0.05$ ). Furthermore, the findings indicated that Gestalt play therapy was more effective than cognitive behavioral play therapy ( $P < 0.05$ ).

**Conclusion:** Cognitive behavioral play therapy and Gestalt play therapy were effective in improving aggression and Gestalt play therapy was more effective than cognitive behavioral play therapy. Therefore, these approaches can be utilized alongside medical treatments and care in therapeutic centers.

**Keywords:** Cognitive Flexibility, Impulsivity, Vandalistic Behaviors

## 1. Introduction

Aggressive behavior can be observed in some students during elementary and school years. Aggression is an intentional and annoying behavior for the individual that can occur directly or indirectly (relationally) (Bierman et al., 2023). Aggressive behaviors are costly and harmful for both the individual and society. Most researchers have examined various forms of aggression and define it as behavior aimed at harming others. The high prevalence of aggressive behaviors, especially relational aggression among elementary students, leads to some of them being excluded from peer groups or forcing others to sever relationships with them (Osiesi et al., 2023). The presence of aggression in childhood and adolescence is an important issue because early life experiences lay the foundation for individuals' mental health or pathology in adulthood, leading to social conflicts, dissatisfaction, unhappiness, and failure in education (Sklirou & Papakonstantinou, 2022). Aggression in the early years of life leads to individual problems such as a poor self-concept and poor academic performance, as well as interpersonal problems like rejection by peers in a child's life (Iswinarti & Hidayah, 2020; Mukul & Ajita, 2021).

Behavioral issues in aggressive students include vandalistic (destructive) behaviors. Destructive behaviors are actions intentionally aimed at damaging property, objects, and public belongings, as well as destroying works of art and hostility towards science, industry, and the achievements of civilization (Iswinarti & Hidayah, 2020). Madrigal (2006) believes that the nature of the family environment, including parental relationships with each other and with children, can play a facilitating or inhibitory role in the development of destructive behaviors. Impulsivity is among the factors that can affect the academic progress of aggressive students (Madrigal, 2006). Impulsive behaviors, sometimes referred to as risky behaviors, encompass a wide range of actions that are carried out with little thought, immaturity with instant occurrence, without the ability to focus on a specific task, and in the absence of proper planning, and are characterized by high risk and danger (Hammerslag et al., 2019).

One of the variables that can affect the likelihood of aggressive behavior is cognitive flexibility. This construct allows an individual to accept multiple ideas and flexibly change their cognition, rather than responding typically to environmental changes. Cognitive flexibility refers to the ability to connect with the moments of life and to change or stabilize behavior based on the situation, in alignment with

personal values (Portoghese et al., 2020). Cognitive flexibility can adapt an individual's thought and behavior in response to changes in environmental conditions. The processes for achieving cognitive flexibility are supported by six principles to help individuals achieve cognitive flexibility: cognitive defusion, acceptance, contact with the present moment, self as context, values, and committed action (Navarro et al., 2022).

Among the different therapeutic methods proposed for improving aggression is play therapy. Play is the natural world of the child, allowing the student to use their creativity while developing their imagination, skills, agility, and emotional, physical, and cognitive strength. Studies (Azizah & Ariani, 2020; Chao-Fernández et al., 2020; Hejrani-Diarjan et al., 2020; Soltani & Farhadi, 2021) have shown that play therapy is effective in reducing aggression. Cognitive-behavioral play therapy includes interventions based on cognitive-behavioral approach within the context of play therapy. This theory is based on the developmental trajectory of sensory experiences. Accordingly, play is used as a verbal and non-verbal method for problem-solving. This approach differs from indirect play therapies, such as relational therapies that avoid any direct discussion. Cognitive-behavioral play therapy facilitates the development of adaptive thoughts and behaviors. Cognitive-behavioral therapy through play therapy aims to identify maladaptive thoughts, understand cognitive assumptions, and learn to correct irrational beliefs. Furthermore, play therapy based on the Gestalt approach is a humanistic approach, grounded in the belief that people are born with the resources and strength to make contact with others and create a satisfying and creative life. However, most face issues during childhood or even later, becoming trapped in their patterns and beliefs, thinking they are on the right path. The Gestalt approach attempts to identify and explore the causes of these patterns' activity and their effects on human life. Therapists in this approach believe that all individuals have the potential to resolve their issues and naturally have the strength to deal with problems, but sometimes get stuck and need others' help, making the Gestalt approach a useful method (Raffagnino, 2019). Therefore, given the importance of improving aggression, the present research aimed to compare the effectiveness of cognitive-behavioral play therapy and Gestalt play therapy on vandalistic behaviors, impulsivity, and cognitive flexibility in aggressive male elementary students.

## 2. Methods and Materials

## 2.1. Study Design and Participants

The design of the current research was quasi-experimental, employing a pre-test, post-test with a control group and a follow-up period. The research population consisted of aggressive elementary students from District 6 of Tehran, reported to number 250. To calculate the sample size for this study, GPower software version 3.1 was used, resulting in a required sample size of 45. These were selected through purposive non-random sampling and randomly assigned into three groups (each group consisting of 15 individuals) across two experimental groups (cognitive-behavioral play therapy and Gestalt play therapy) and one control group. Entry criteria were an age range of 7 to 12 years and normal intelligence. Exclusion criteria from the research included absence from more than two sessions and the presence of physical problems. In addition to informed consent and confidentiality of participants' information, another ethical consideration was the opportunity for the control group to receive the intervention for free after the study.

Ethical considerations in this research included voluntary participation. Before starting the project, participants were acquainted with the details and regulations of the plan. The views and beliefs of individuals were respected. Members of both the experimental and control groups were allowed to withdraw from the research at any stage. Furthermore, members of the control group could receive the intervention conducted for the experimental group in similar therapeutic sessions after the project's conclusion. All documents, questionnaires, and confidential records were solely accessible to the investigators. Written informed consent was obtained from all volunteers.

## 2.2. Measures

### 2.2.1. Vandalistic Behaviors

This questionnaire was developed by Nik Akhtar to assess the commission of vandalistic behaviors. It includes 30 items and sub-scales for the commission of vandalistic behaviors, attitudes towards vandalistic behaviors, and projection of vandalistic behaviors, rated on a 5-point Likert scale. In this research, only the sub-scale for the commission of vandalistic behaviors, which includes 10 items, was used. The reliability of this questionnaire in Nick Akhtar's research was reported as 0.74. In the latest administration of this test on third-year high school students, the overall alpha coefficient of the questionnaire was 0.87 (Kruzhkova et al.,

2018). In the current research, an internal consistency coefficient of 0.83 was obtained.

### 2.2.2. Impulsiveness

Created by Barratt (1993), this scale consists of 30 items, and respondents answer these items on a four-point scale (rarely to always). It measures three components: non-planning impulsiveness, motor impulsiveness, and cognitive impulsiveness. In a preliminary study by Patton, Stanford, and Barratt (1995), Cronbach's alpha reliability coefficient and a one-month test-retest reliability of this scale were reported as 0.87 and 0.79, respectively (Viyani et al., 2022). In the present study, Cronbach's alpha coefficient for this scale was 0.80.

### 2.2.3. Cognitive Flexibility

Developed by Dennis and Vandewall in 2010, this self-report tool is a brief questionnaire consisting of 20 questions used to assess a type of cognitive flexibility crucial for an individual's success in challenging and replacing inefficient thoughts with more efficient ones. Scoring is based on a 7-point Likert scale from 1 to 7, measuring three aspects of cognitive flexibility: (a) willingness to perceive challenging situations as controllable (perception of controllability), (b) ability to understand multiple alternative explanations for life events and human behaviors (perception of behavior explanation), and (c) ability to generate multiple alternative solutions for challenging situations (perception of different options). The score range for this questionnaire is between 20 to 140, with higher scores indicating greater flexibility. The researchers reported a total Cronbach's alpha coefficient for the scale as 0.90 and for the sub-scales as 0.87, 0.89, and 0.55, respectively. The findings of Shareh et al. (2014) indicate satisfactory convergent and concurrent factorial validity for the Persian version of this scale (Shareh et al., 2014). In the current study, the Cronbach's alpha coefficient for the Cognitive Flexibility Questionnaire was 0.79.

## 2.3. Interventions

### 2.3.1. Cognitive-Behavioral Play Therapy

The intervention program used in this study was developed by Hansen, Mislser, and Owens (2006). This treatment consisted of 8 sessions of 60 minutes each, conducted weekly (Alsem et al., 2023; Hejrani-Diarjan et al., 2020).

Session 1: Introduction and Rapport Building

The initial session focuses on establishing a trusting and safe relationship between the therapist and the child. The therapist introduces the play therapy room and explains the purpose and rules of the sessions in child-friendly language. This session allows the child to explore the therapy environment freely, choosing activities or toys that interest them, while the therapist observes and participates as appropriate to begin understanding the child's issues and preferred modes of expression.

#### Session 2: Identifying Emotions

The second session aims to help the child identify and express their emotions using various play therapy techniques, such as drawing, storytelling, and role-playing with puppets or figures. The therapist encourages the child to describe the emotions of the characters in their play, linking them to real-life situations when possible, to increase the child's awareness of their own feelings.

#### Session 3: Developing Coping Strategies

In this session, the focus is on teaching the child coping strategies to deal with difficult emotions and situations. Through structured play activities, the therapist introduces problem-solving skills and alternative ways to express feelings, such as using words instead of actions. The child is encouraged to practice these new skills within the play and discuss how they might be used in their daily life.

#### Session 4: Enhancing Self-Esteem

This session concentrates on activities that promote self-esteem and positive self-concept. The therapist uses games and activities that the child can succeed in, praising their efforts and achievements. The child is also encouraged to create a "strengths shield" or a similar project that highlights their strengths, interests, and achievements.

#### Session 5: Social Skills Training

The therapist introduces games and activities that require taking turns, sharing, and cooperating with the therapist or imaginary peers, aiming to improve the child's social skills. The session includes role-playing scenarios that the child might encounter in their daily interactions, with a focus on practicing positive interaction skills.

#### Session 6: Addressing Specific Behaviors

Focusing on the child's specific behaviors identified as problematic, this session uses role-play and storytelling to explore these behaviors' consequences. The child and therapist work together to understand the triggers of these behaviors and develop healthier alternatives.

#### Session 7: Reinforcement of Learned Skills

This session reviews and reinforces the skills and strategies learned in previous sessions. The child is

encouraged to discuss how they have applied what they have learned outside of therapy and any difficulties they have encountered. The therapist and child revisit key concepts through their favorite activities from past sessions.

#### Session 8: Closure and Future Planning

The final session provides an opportunity for closure. The therapist and child review the progress made and celebrate the child's achievements. They discuss how the child can continue to use the skills they have learned in the future. A story or activity that symbolizes the end of therapy and the beginning of the child's journey to continue applying their new skills independently may be included.

### 2.3.2. Gestalt Play Therapy

Gestalt play therapy, initially used by Violet Oaklander (1977) for treating children's issues and disorders, was delivered to the experimental group in 10 sessions of 45 minutes each, twice a week (Pahlavi & Ashori, 2021; Raffagnino, 2019).

#### Session 1: Introduction to Gestalt Play Therapy

The initial session focuses on creating a comfortable and safe space for the child to express themselves freely. The therapist introduces the principles of Gestalt play therapy, emphasizing the importance of living in the present moment and awareness of one's feelings and actions. The child is allowed to explore the therapy room and choose activities that resonate with them, facilitating a non-judgmental space for expression.

#### Session 2: Awareness of Self

This session is dedicated to enhancing the child's awareness of their own thoughts, feelings, and bodily sensations. Activities may include mindfulness exercises, body mapping, or expressive arts, encouraging the child to notice and describe their experiences without judgment. This helps in fostering a deeper connection with their inner self.

#### Session 3: Expressing Emotions

The therapist employs creative and expressive play activities to encourage the child to express their emotions openly. Techniques such as painting, clay work, or sandplay allow the child to project their feelings onto external objects, making it easier to talk about them. The therapist facilitates this process by reflecting on the emotions expressed and exploring their origins.

#### Session 4: Exploring Relationships

Through the use of role-play, puppetry, or storytelling, this session explores the child's relationships with family, peers, and others. The focus is on understanding the

dynamics of these relationships and the child’s role within them. The therapist helps the child to express unresolved feelings and thoughts about these relationships.

**Session 5: Enhancing Communication**

The session aims to improve the child's communication skills. Through interactive play and dialogues, the child is encouraged to articulate their needs, desires, and boundaries clearly and assertively. This includes practicing how to express disagreement or consent in a respectful manner.

**Session 6: Working Through Conflicts**

Conflict resolution is the focus of this session. The child engages in problem-solving activities, learning to identify conflict sources and explore various solutions. The therapist guides the child through the process of considering multiple perspectives and finding compromise or reconciliation.

**Session 7: Self-Regulation Techniques**

This session introduces the child to techniques for self-regulation and managing impulses. Through breath work, relaxation exercises, and sensory play, the child learns to calm themselves and control their reactions to emotions and external stimuli.

**Session 8: Integration and Closure**

The final session aims to integrate the experiences and learnings from therapy into the child’s everyday life. The

therapist and child review their journey together, discussing how the child can apply the insights and skills gained in therapy to future challenges. A meaningful activity, such as creating a memory box or a goodbye letter, may be used to mark the end of therapy and celebrate the child’s growth.

**2.4. Data analysis**

Descriptive data analysis involved calculating statistical indicators for each research variable. In the inferential statistics section, repeated measures ANOVA and SPSS software version 22 were used.

**3. Findings and Results**

The cognitive-behavioral play therapy group had an average age of 7.6 with a standard deviation of 1.54, the Gestalt play therapy group had an average age of 6.5 with a standard deviation of 1.20, and the control group had an average age of 5.5 with a standard deviation of 1.30. The minimum age of participants in this research was 5 and the maximum was 7. Additionally, with a significance level greater than 0.05, there was no significant difference between the three groups, indicating that the groups were homogeneous in terms of age.

**Table 1**

*Descriptive Statistics for Research Variables by Test Type and Groups*

Variable	Phase	Experimental Group		Control Group	
		Mean	SD	Mean	SD
Vandalistic Behaviors	Pre-test	69.20	24.36	65.93	25.02
	Post-test	60.81	23.48	64.22	23.42
	Follow-up	59.93	22.49	64.33	23.19
Impulsivity	Pre-test	40.26	13.01	41.66	14.41
	Post-test	32.46	11.20	40.46	13.24
	Follow-up	33.46	10.41	39.33	12.84
Cognitive Flexibility	Pre-test	39.53	12.22	37.86	13.87
	Post-test	55.60	16.54	36.80	12.05
	Follow-up	57.40	17.61	36.60	12.01

The Shapiro-Wilk test results were not significant, indicating that the distribution of scores for the dependent variables is normal. In the Levene's test results, the F-value for none of the dependent variables was significant, indicating the assumption of homogeneity of variances between groups is met. The sphericity assumption was not met for any of the data. Therefore, Greenhouse-Geisser corrected values will be used for the degrees of freedom in the analysis of variance. All tests for Pillai's trace, Wilks' lambda, Hotelling's trace, and the largest root were

significant, indicating significant differences in vandalistic behaviors, impulsivity, cognitive flexibility, and overall compliance based on group, assessment time, and the interaction between group and assessment time, concluding that there is a significant difference in the effectiveness of cognitive-behavioral play therapy and Gestalt play therapy on vandalistic behaviors, impulsivity, and cognitive flexibility in aggressive elementary students. To investigate the source of differences and test the subsidiary hypotheses,

univariate analyses were also conducted, the results of which are shown in Table 2.

**Table 2**

*Mixed ANOVA Results for Examining the Effect of Group and Evaluation Time on Dependent Variables*

Source	Dependent Variable	Sum of Squares	Df	Mean Squares	F	Sig.	Effect Size
Within-Subjects	Time						
	Vandalistic Behaviors	3466.4	1.03	3348.1	160.5	0.001	0.741
	Impulsivity	1718.2	1.03	1664.2	209.5	0.001	0.789
Time * Group	Cognitive Flexibility	1602.3	1.03	1587.2	200	0.001	0.699
	Vandalistic Behaviors	1317.8	3.09	160	21.3	0.001	0.530
	Impulsivity	557.1	3.09	179.8	22.6	0.001	0.548
Error	Cognitive Flexibility	558.2	3.10	424.2	20.3	0.522	
	Vandalistic Behaviors	1208.9	57	20.8			
	Impulsivity	459.2	57	7.94			
Between-Subjects	Group						
	Vandalistic Behaviors	2181.5	3	727.1	6.33	0.001	0.253
	Impulsivity	981.6	3	327.2	4.39	0.001	0.191
Error	Cognitive Flexibility	580.9	3	256.1	6.36	0.001	0.181
	Vandalistic Behaviors	6426.08	56	114.7			
	Impulsivity	4166.6	56	74.4			
	Cognitive Flexibility	4567.3	56	81.6			

According to the results reported in Table 2, the main effect of assessment time on all three dependent variables is significant. This means that the scores for vandalistic behaviors, impulsivity, and cognitive flexibility of all

subjects, regardless of their group, are significantly different in pre-test, post-test, and follow-up. The Bonferroni post-hoc test was used to investigate the source of differences, with results presented in Table 3.

**Table 3**

*Pairwise Comparison of Mean Differences Between Cognitive-Behavioral Play Therapy and Gestalt Play Therapy Groups Across Three Stages of the Study*

Variable	Phase	Mean Difference	Standard Error	Significance Level
Vandalistic Behaviors	Pre-test	-1.13	2.70	0.99
	Post-test	-13.33	2.36	0.001
	Follow-up	-12.95	2.70	0.001
Impulsivity	Pre-test	1.12	2.31	0.99
	Post-test	20.04	2.19	0.001
	Follow-up	19.56	2.49	0.001
Cognitive Flexibility	Pre-test	1.25	2.30	0.001
	Post-test	20.2	2.36	0.001
	Follow-up	19.6	2.66	0.001

Results in Table 3 indicate that the difference between the post-test and follow-up stages in both the cognitive-behavioral play therapy and Gestalt play therapy groups was significant ( $p < 0.05$ ), but at the pre-test stage, there was no significant difference between the cognitive-behavioral play therapy and Gestalt play therapy groups ( $p > 0.05$ ).

The present research aimed to compare the effectiveness of cognitive-behavioral play therapy and Gestalt play therapy on vandalistic behaviors, impulsivity, and cognitive flexibility in aggressive elementary students. The results showed there is a significant difference in the effectiveness of cognitive-behavioral play therapy and Gestalt play therapy on vandalistic behaviors, impulsivity, and cognitive flexibility in aggressive elementary students, with Gestalt play therapy being more effective than cognitive-behavioral

**4. Discussion and Conclusion**

play therapy in improving vandalistic behaviors, impulsivity, and cognitive flexibility. These findings are in line with prior research (Alsem et al., 2023; Pahlavi & Ashori, 2021; Tahan & Huertas-Abril, 2021; Vacher et al., 2022; Vyas et al., 2021).

In explaining the effectiveness of cognitive-behavioral play therapy on reducing vandalistic and impulsive behaviors, and increasing cognitive flexibility, it can be said that children learn in play therapy that their behavior is a choice and thereby also choose the consequences of their behavior, enhancing self-regulatory behavior awareness. Play is a natural and enjoyable activity essential for the cognitive, emotional, social, and psychomotor development of children. During play, various abilities such as agility, attention, and understanding develop, shaping and changing children's personalities significantly. Play increases curiosity and innovation and allows children to feel a genuine sense of self and experience reality. It provides children with an opportunity to present an image of their inner world and facilitates the expression of emotions. The primary function of play therapy is to resolve any conflict in the child that interferes with their effective functioning in their environment (Alsem et al., 2023). Play therapy provides a safe environment for children to gradually express their emotions, tensions, insecurities, aggression, and suppressed fears. In other words, through expressing emotions or aggressive behaviors in the playroom and also with the presence of empathy and understanding from the therapist, which is more important than the occurrence of aggressive behavior alone, children learn to deal with their needs in a socially appropriate manner (Vacher et al., 2022). Additionally, children's communication skills develop during play, and in such a framework, they can repeatedly recreate important themes and events, externalize their feelings and emotions, gain new insights, and choose more adapted problem-solving methods (Vyas et al., 2021).

In explaining the effectiveness of Gestalt play therapy on reducing vandalistic and impulsive behaviors, and increasing cognitive flexibility, it can be said that this method is effective in improving aggression because play provides an opportunity for learners to freely express their feelings, compensate for their issues in reality using symbols, and discharge their negative emotions. Aggression is a reaction that a person has to bitter and unpleasant events and sometimes exhibits towards others. Students suffering from aggression cannot fulfill their needs and requests, resulting in the suppression of their desires and growing frustration. They cannot adapt themselves to external

conditions, customs, values, and external commands, and thus express their protest through external actions like aggression (Azizah & Ariani, 2020). Expressing emotions and violent behaviors in play therapy increases empathy and understanding from the therapist, and children learn to deal with their requests in a socially appropriate way. Furthermore, during Gestalt play therapy sessions, children become more aware of their emotions and feelings by practicing role-playing techniques, emotional card games, emotional dice games, and the empty chair technique, which can help reduce their aggression. As a result, comparing the two therapeutic methods showed that Gestalt play therapy was more effective in increasing cognitive flexibility in the post-test phase than cognitive-behavioral play therapy. Therefore, it can be concluded that Gestalt play therapy helps students remove all barriers to awareness, and with increased personal awareness and insight, they can reduce all negative and destructive thoughts and behaviors, such as exam anxiety and aggression. This method includes a set of techniques that can increase responsibility and reduce aggression and exam anxiety in students as a group. These techniques help the learner pay more attention to the present moment and gain a greater understanding of all their senses, feelings, and beliefs. Consequently, the goal of Gestalt play therapy is to enhance the individual's ability and power to adapt themselves to the current conditions and regain their power of choice and selection (Pahlavi & Ashori, 2021).

## 5. Limitations & Suggestions

Limitations of the current research include the use of purposive sampling, which complicates the generalizability of the results. It is suggested that future research use different sampling methods so that the sample can better represent the research population and the results have greater generalizability. Furthermore, the intervention was only performed on aggressive male students, so it is not generalizable to female groups. Future research is recommended to be conducted on both normal male and female students of different age groups and educational levels to facilitate comparison of results and to allow the findings to be generalized with higher reliability and both internal and external validity.

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## Declaration of Interest

The authors of this article declared no conflict of interest.

## Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

## Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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## Authors' Contributions

All authors equally contributed in this article.

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