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The Effect of Cognitive- Behavioral Play Therapy on Social Skills and Aggression in Pre-School Children

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Abstract

Background: The development of positive social skills is a critical component of child well-being during the preschool years. Cognitive Behavioral Play Therapy (CBPT) techniques are utilized to nurture social skills in young school-aged children. CBPT has the potential to be beneficial in refining social skills and addressing behavioral issues, including aggression, which can subsequently have a positive impact on their academic and emotional functioning.

Method: Employing a quasi-experimental design with pretest-posttest and control groups, 30 preschool children in district 2, with lower questionnaire scores, were randomly assigned to experimental or control groups (n=15/group). The experimental group underwent a 10-session CBPT program, while the control group continued with their regular activities. Posttests employing the Aggression Scale for Preschoolers and the Social Skills Rating System were conducted, and data were analyzed using ANCOVA in SPSS ($p < 0.001$).

Results: Findings indicate significant improvements in social skills ($p < 0.05$; $F 6.434$) and reduced aggression ($p < 0.05$; $F 30.642$) within the experimental group compared to the control group.

Conclusion: CBPT effectively enhances social skills and mitigates aggressive behaviors in preschoolers. Healthcare providers serving this age group are encouraged to incorporate CBPT into their intervention strategies, addressing behavioral and emotional challenges and bolstering the overall well-being of preschool-aged children.

Keywords: cognitive-behavioral play therapy; social skills; aggression; preschool children

Introduction

The study of preschool children's development and how to support it has been ongoing for decades. Social skills are increasingly recognized as crucial for success in both school and later life in various social contexts. These skills encompass a range of competencies in individuals (Hu, Li, Wang, Wu, & Vitiello, 2021). Social skills, as defined by Chester, Richdale, & McGillivray (2019), are specific verbal and non-verbal

behaviors, such as eye contact, sharing, and smiling, used to initiate and maintain social interactions. Research has shown that children begin to develop these skills as early as their second year of life (Jeon, M. McCartney, Richard, Johnson, & Kwon, 2021). Interestingly, many educators of preschoolers consider social skills more important than academic abilities (Berhenke, Miller, Brown, Seifer, & Dickstein, 2011). A growing body of research has also explored the link between early social skill

development in children and their future socioemotional well-being, psychological health, and academic achievements (Berhenke et al., 2011; Housman, 2017; Lang, Jeon, Schoppe-Sullivan, & Wells, 2020; Loinaz, 2018).

Research findings indicate that a lack of social skills in children can lead to numerous problems, including difficulties in interpersonal relationships and behavioral disorders. It may also have adverse effects on the development of children's personalities and their ability to adapt to their environment, potentially predisposing them to psychological disorders (Liu, Liu, Yan, Lee, & Mayes, 2016). Aggression and violence experienced by children and adolescents are significant global public health issues. Aggression is a common reason for referrals to mental healthcare services, and it has been recommended that a greater focus be placed on children at higher risk of aggression compared to the general population (Mitrofan, Paul, Weich, & Spencer, 2014). Early childhood aggression is often seen as a growing pattern that receives insufficient attention (Reebye, 2005). Research has highlighted the prevalence of aggressive behaviors in young children and emphasized the importance of preventive and screening measures, especially in preschool children (Ersan, 2020). Early childhood aggression has been linked to negative outcomes such as increased internalizing issues and poor peer interactions (Barnes, Howell, Thurston, & Cohen, 2017). The emergence of childhood aggression has also been associated with the development of aggressive behaviors in the future and into adulthood (Barnes et al., 2017). Previous research has identified preschool as a period with a high frequency of physical aggression among children (Alink et al., 2006). Cognitive Behavioral Play Therapy (CBPT) is derived from cognitive behavioral therapy and has been adapted for preschoolers and early school-age children (typically aged 3 to 8) to engage them in treatment (Knell, 1999). CBPT involves several stages, including orientation, assessment, middle phase, and termination. Sessions can be structured or unstructured, with a focus on helping children apply adaptive behaviors to various situations (Knell, 1999). CBPT has shown promise in helping children improve their social skills, which in turn can enhance their academic and emotional functioning (Fazio-Griffith & Ballard, 2014). Extensive literature supports the use of CBPT for school-aged children (Beesley, 2004; Newsome & Gladding, 2003; D. C.

Ray, Blanco, Sullivan, & Holliman, 2009; Schmidt, 2003; White & Flynt, 1999). Previous research has also indicated the positive impact of play therapy on elementary school students with aggressive behavior (D. C. Ray et al., 2009). A study on children with aggressive behaviors found that CBPT was effective in reducing cognitive inflexibility, a primary cognitive flexibility index measured in the Wisconsin test. Additionally, CBPT encouraged children to evaluate their aggressive behaviors in interactive and communicative situations under the guidance of a play therapist. This process helped them recognize the consequences of their behaviors on their peer relationships and gradually replace aggression with socially acceptable behaviors, ultimately improving their flexibility (Badamian & Ebrahimi Moghaddam, 2017). Considering these factors, this study aimed to investigate the impact of CBPT on the social skills and aggressive behaviors of preschool children.

Participants and Methods

This study adopted an applied quasi-experimental design with a pretest-posttest and a control group structure. The research population consisted of preschool children selected through a convenience sampling approach. To establish the study sample, 30 children who scored lower on the distributed questionnaires were chosen and randomly divided into two groups, each containing 15 participants. In Tehran's District 2, there are 13 preschools, comprising 6 boys' preschools and 7 girls' preschools, with an average total of 1126 children. The selection process began by choosing one preschool, "Sarai Mahalleh Parvaz," from the 13 options using an availability-based method. Subsequently, 30 children who exhibited high levels of aggression and low social skills, as determined by the assessments, were selected. The program took place in a play therapy room at the Flight Neighborhood Hall and was administered by counseling specialists trained in cognitive-behavioral play therapy. The experimental group underwent a 10-session CBPT program, each lasting one hour, while the control group continued with their regular activities. After completing the research program, both groups underwent a posttest. Prior to their participation, all study subjects were fully informed about the study's procedure and objectives, and they provided informed consent. The control group members were assured of receiving the same intervention after the research period. Additionally,

both groups were informed about the confidentiality of their data and the anonymity of their completed questionnaires. To collect the necessary data, the following instruments were employed:

The Aggression Scale for Preschoolers (ASP): This scale was utilized to assess aggression in the selected participants. It encompasses various aspects of aggression in preschool children, including verbal-aggressive aggression, physical-aggressive aggression, and impulsive anger. The ASP consists of 43 items, rated on a five-point Likert-type scale ranging from zero (never) to 4 (most days). Vahedi et al. (2008) examined the psychometric properties of this questionnaire, employing factor analysis to evaluate its construct validity and Cronbach's alpha coefficient

to assess reliability, which yielded a desirable value of 0.98 for the entire questionnaire. The Social Skills Rating System (SSRS; Gresham & Elliott, 1990): The SSRS, designed and validated by Gresham and Elliott, consists of 48 items rated on a five-point Likert-type scale. It is specific to three educational levels: preschool, primary school, and high school, and covers social skills and behavioral problems. This questionnaire has been validated for use in the Iranian population. The CBPT used in this study was designed based on CBT principles and followed Riviere's (2006) proposed treatment plan (Kaduson & Schaefer, 2006). For detailed information on the intervention's content, refer to Table 1.

Table 1: The content of the presented CBPT sessions

Session	Content	Assignment
One	One Briefing and Group members' introduction	Each group member to draw a memorable drawing for the next session
Two	Drawing activities and recognizing emotions	Each group member to write down their self-talks
Three	Magic bag and its cards	Each group member to write down hopeful or hurtful words others tell them
Four	Thought, feeling, behavior	Each group member to generate a chart and, according to different events, mention the positive thoughts that lead to positive feelings and behaviors as well as the negative thoughts that lead to negative emotions and behaviors in him
Five	Enjoyable experiences and creative shaping	Each group member to generate a two-column chart; the first column is titled: "he/she says," which must address others' disturbing words about them; the second column is titled: "I say," which must include the potential answers to others' problematic words about them
Six	Some say...what?	-
Seven	Some individuals love me	Each group member to draw a picture of a season in which they have pleasant memories of the life events
Eight	The chapters of my life	Each group member to bring group photos they have with their friends and peers
Nine	Friendship exhibition	Each group member to write down their wishes
Ten	On the dream rug (future goals)	-

The collected data underwent a comprehensive analysis, including both descriptive statistics such as mean and standard deviation, and inferential statistics, notably Analysis of Covariance (ANCOVA). These analyses were conducted to evaluate the normal distribution of the data and investigate the research hypotheses. All data analyses were carried out using the statistical software SPSS. Ethical Considerations: This study strictly adhered to ethical standards and guidelines. All procedures involving human participants were conducted in accordance with the ethical principles outlined in the 1964 Helsinki Declaration and its subsequent amendments or equivalent ethical standards. The necessary ethical

approval for the research project was obtained from the Ethics Committee of the University before the study commenced. Furthermore, participation in the study was entirely voluntary, and the study's findings are available to the participants upon request.

Informed Consent: Informed consent was obtained from all study participants, ensuring that they were fully aware of the study's procedures and objectives before their involvement.

Results

The findings of the current study indicated that among the fathers of the children surveyed, 40% were engaged in freelancing, while 60% were employed.

Additionally, regarding the mothers of the participants, it was observed that 63.03% were homemakers, and 36.67% were employed (Table 2).

Moreover, the study revealed that 53.33% of the participants were the first child in their families, 33.33% were the second child, and 13.3% were the third child (Table 2).

Table 2: descriptive characteristics of the study subject

Characteristic	Category	No.	%
Father's employment status	Freelance-based job	12	40
	Employed	18	60
Mother's employment status	Total	30	100
	Home keeper	19	63.33
	Employed	11	36.67
	Total	30	100
Birth order	First	16	53.33
	Second	10	33.33
	Third	4	13.34
	Total	30	100

The obtained results also provided insight into the mean±SD scores of social skills and aggression among the study participants. Specifically, the descriptive

statistics for the pretest and posttest mean±SD values of social skills and aggression can be found in Table 3.

Table 3: The mean±SD scores of social skills and aggression in the study participants at pretest and posttest stages

Characteristic	Group	Pretest (Mean+SD)	Posttest (Mean+SD)
Social skills	Experimental	37.23_+10.69	45.15_+7.57
	Control	38.13_+13.28	38.22_+13.70
Aggression	Experimental	108.87_+11.66	98.37_+13.99
	Control	108.53_+14.55	107.87_+14.00

Prior to conducting the ANCOVA, an assessment of the normal distribution of the collected data was performed using the Kolmogorov-Smirnov (K-S) test. The results of this assessment indicated that the data for both social skills and aggression variables exhibited a generally normal distribution (K-S: 0.659, $p=0.78$ & K-S: 0.705, $p=0.69$, respectively). Additionally, another prerequisite for ANCOVA is the homogeneity of variances. To meet this requirement, Levene's test was employed to assess the equality of variances between the control and experimental groups for both social skills and aggression. The results of Levene's test demonstrated that the significance level for the test of variance homogeneity in each study variable was greater than the predetermined significance level (0.05). Consequently, it was established that the variances of the control and experimental groups were

homogeneous in terms of social skills and aggression ($F=2.774$, $p=0.11$ & $F=2.950$, $p=0.09$, respectively).

Subsequent to the ANCOVA analysis, the data revealed a statistically significant difference between the experimental and control groups concerning social skills ($p<0.05$; $F=6.434$). This implies that the presented CBPT effectively improved the social skills of the preschool children under study. Furthermore, the ANCOVA results indicated a statistically significant difference between the experimental and control groups in relation to aggression ($p<0.05$; $F=30.642$). Therefore, the provided CBPT was effective in reducing aggression among the study participants. Table 4 presents the ANCOVA results concerning the posttest scores of social skills and aggression in the experimental and control groups, with pretest values taken into account.

Table 4: ANCOVA data on the posttest scores of social skills and aggression in the explored experimental and control groups

Characteristic	Source	Sum of squares	Df	Mean of squares	F	P	Test Power
	Pretest	1659.02	1	1659.02	25.275	0.00	0.99
Social skills	Group effect	422.358	1	422.358	6.434	0.02	0.69
	Error	1772.174	27	65.640			
	Pretest	4850.153	1	4850.15	20.996	0.00	1.00
Aggression	Group effect	724.987	1	724.987	30.642	0.00	1.00
	Error	638.814	27	23.660			

Discussion

This study delved into the effects of Cognitive Behavioral Play Therapy (CBPT) on the social skills and aggression of preschoolers. The importance of developing positive social skills during the preschool years cannot be overstated, as these skills play a critical role in a child's overall well-being (Fazio-Griffith & Ballard, 2014). The findings of this research suggested that CBPT was effective in enhancing the social skills of the studied preschoolers, aligning with previous studies (Roberts et al., 2018; Herdman, 2020; Nerurkar & Singh, 2016). CBPT techniques were applied to foster social skills in young school-aged children (Fazio-Griffith & Ballard, 2014). Fazio-Griffith and Ballard (2014) pointed out that a substantial number of primary school children struggle with maladaptive social skills, including difficulties in forming friendships, regulating emotions, and interacting with peers and teachers. Such deficiencies can negatively impact a child's school performance and interactions in various settings (Fazio-Griffith & Ballard, 2014). They also emphasized the positive impact of CBPT in improving social skills and its beneficial outcomes in different contexts for children, recommending its utilization by school educators and counselors (Fazio-Griffith & Ballard, 2014).

The study also revealed a reduction in posttest scores for aggression in the experimental group compared to pretest values, indicating that CBPT effectively reduced aggression in the studied preschoolers. This aligns with previous research, such as a meta-analysis that found skills training and multimodal interventions to be effective in reducing aggression and enhancing social skills in children (Sukhodolsky,

Kassinove, & Gorman, 2004). Additionally, Garza (2013) documented the positive effects of play therapy in reducing aggression and other behavioral problems in Hispanic children, emphasizing the importance of early intervention for aggressive behaviors in children (Ferguson, Garza, Jerabeck, Ramos, & Galindo, 2013). These findings underscore the potential of play therapy, specifically CBPT, in addressing aggressive behaviors in children. The effectiveness of CBPT in reducing aggression may be attributed to children's realization during play therapy that their behavior is a choice, and they can control the outcomes of their actions. This awareness can help strengthen their self-control abilities. Play, being a natural and enjoyable activity, contributes to the cognitive, emotional, social, and psychological development of children. It enhances characteristics such as agility, attention, and perception while shaping their personalities and modifying their traits. Consequently, school counselors could teach play therapy skills to children, particularly CBPT, and integrate them into existing school guidance programs (Fazio-Griffith & Ballard, 2014).

However, this study has its limitations. It focused exclusively on preschool children in district 2 of Tehran, Iran, which limits the generalizability of the findings to other populations. Additionally, difficulties in obtaining cooperation from some preschool center administrators and parental consent posed challenges to the research. Future research could expand the scope to include preschool children from different regions and incorporate qualitative individual questionnaires and clinical interviews to enhance the validity of the findings. The results support the effectiveness of CBPT in enhancing social

skills and reducing aggression in preschool children, suggesting that educational department counseling clinics consider equipping themselves with CBPT rooms to address the psychological and behavioral issues of children.

Conclusion

The study's results indicate that CBPT effectively improved social skills and reduced aggressive behaviors in preschoolers. Therefore, healthcare service providers working with this age group are encouraged to incorporate CBPT into their intervention plans to address behavioral and emotional problems, ultimately promoting the overall well-being of preschool-aged children.

Declarations

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Conflicts of Interest

The authors have no conflicts of interest to declare.

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