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Comparing the Effectiveness of Child-Centered Play Therapy and Story Therapy on Social Skills and Shyness in Preschool Children with Attention Deficit Hyperactivity Disorder in Tehran

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ABSTRACT

Objective: The aim of this study was to compare the effectiveness of child-centered play therapy and story therapy on social skills and shyness in preschool children with attention deficit hyperactivity disorder in Tehran.

Methods: The research method was a semi-experimental pre-test-post-test design with experimental and control groups. The statistical population of this research included all preschool children in 22 districts of Tehran, who were selected from three districts 1, 3, and 6 using purposive sampling, and 5 preschool centers were selected from these three districts. The selection of the research sample was done in two stages. In the first stage, 80 children were examined with a research checklist, and in the second stage, 45 children with a primary diagnosis of attention-deficit-hyperactivity disorder were selected, who were normal in terms of motor function and free of other psychological disorders, and to differentiate normal children and children with Attention-deficit-hyperactivity disorder, they were evaluated with behavioral inventory and clinical interview for more certainty. Then these people were compared in terms of age, gender, IQ and socio-economic status. To collect research data, social skills questionnaire - parent form (Gresham et al., 2011) and shyness test (Cheek and Briggs, 1990) were used. Therapeutic interventions were also implemented with the protocols of story therapy (Sabri and Vakili, 2013) and child-centered play therapy (Qureishi, 2015).

Results: The results showed that in terms of social skills, the therapeutic approach of story therapy has obtained better results, whereas, play therapy has more significant effects on shyness.

Conclusions: The findings of the research can be a practical guide for therapists and psychologists in the field of children psychology.

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Introduction

Children diagnosed with attention deficit hyperactivity disorder (ADHD) also manifest various comorbid conditions such as depression, behavioral issues, mood disturbances, and anxiety. Furthermore, the untreated hyperactivity in affected individuals entails significant social ramifications, encompassing hampered academic and professional advancement, engagement in delinquent conduct, as well as interpersonal and familial relationship difficulties (Siegel et al., 2020). Challenges in social aptitude represent another prominent issue among children grappling with ADHD, leading to peer rejection. This rejection is often attributed to children's inclination towards social interactions from an early developmental stage, thereby seeking social acknowledgment (Mikami et al., 2019). Recent research in the realm of deficits and social setbacks faced by children with ADHD shed light on their struggles with interpersonal connections and social competencies. Studies indicate discernible differences in brain structures implicated in social cognition between individuals with ADHD and neurotypical counterparts (Şahin et al., 2021).

Baribeau et al. (2019) have also shown that there is a relationship between cortical thickness and brain volume with social skills in children with attention deficit-hyperactivity disorder between the ages of 6 and 18 years and these children have many defects in emotional and social ability. In this regard, hypocrisy as an emotional state expresses a situation in which a child experiences a negative reaction to some special, original, temporary and threatening social conditions in the presence of others (London & Landes, 2021). Shyness can be a source of unpleasant feelings or discomfort in a child, such as frequent embarrassment or fear. Rydel et al. (2009) asked parents and preschool teachers to evaluate the constructs of hyperactivity and shyness in children aged 5 to 6 years on 151 children. Then, at age 9, they obtained teacher ratings of hyperactivity, internalizing and externalizing problems, self-ratings of trait anxiety, and peer ratings of shyness, social preference, and aggression from the same children. According to their findings, shyness has a protective effect on hyperactive boys' aggression, and high shyness is associated with low social preferences. Sette et al. (2022) have also shown that shyness has a significant positive relationship with peer withdrawal and rejection, and emotion recognition significantly moderates the relationship between shyness and social-emotional performance in preschool children, and it seems in terms of problems related to emotion recognition, shyness is related to withdrawal and

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rejection by peers in hyperactivity. However, due to the high prevalence of this disorder in children, the issue of using modern psychotherapy methods is very important considering the side effects of drug therapy (Tang, 2021).

In this regard, play therapy is a structured and theory-based approach for children (Byrd et al., 2020; Landreth, 2012). Through play, therapists help children acquire more adaptive behaviors and the corrective emotional experience necessary for recovery. Also, playing increases social skills, emotional capacities and flexibility, creativity and problem-solving skills in children. The child-centered game also helps the person to improve the social skills that people use in their interpersonal relationships and interactions, and also helps the person to communicate with others in a way that he can defend his rights. to perform his duties in an appropriate and logical way, not to have conflicts and conflicts with others, not to be philanthropic or anti-people, but to have friendly, free and sincere relations with people (Yosefishahir et al., 2021).

The use of story therapy is also rooted in the thoughts of psychoanalysis (Carlson, 2021), in therapy sessions, Erikson used to tell stories that fit the client's psychological situation and believed that by retelling the stories, constructive and positive forces will unconsciously bring the clients to him. Bettelhim and Gardner also used stories as a therapeutic tool. Stories give the child the opportunity to identify with characters, externalize conflicts and vent emotions, and gain insight. In examining the effect of stories on anxiety and attention, storytelling strengthens the art of listening, children become eager to learn the keys that unlock and give meaning to symbols for them. Child-centered play therapy is founded upon Rogers' (1961) theoretical framework, perceiving child behaviors as reflections of unconscious expression. This therapeutic approach regards the individual as a "core," aiming to unveil the layers of defenses erected by children, thus revealing their authentic "true self" (Rogers, 1961). Encouraging children to convey their world, thoughts, emotions, and significance, child-centered play therapy prompts them to draw upon their encounters (Cochran et al., 2010). Conversely, story therapy posits that a child's notions, difficulties, attributes, and conditions are all shaped by culture and history, asserting that identity formation occurs in relation to others, rather than emanating from an internal "core" (Simeone-Russell, 2011). Given that hyperactivity in children impacts diverse educational, communicative, and emotional facets, both child-centered play therapy and story therapy approaches appear appealing, enriching, and

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congruent with children's developmental requirements within social environments, such as parent-child dynamics, social competencies, empathy, and emotional traits (e.g., impulsiveness, anxiety, shyness). As social skills and emotional responses significantly influence these children's adaptation, and considering the seemingly conflicting theoretical and philosophical underpinnings of these two methods, they possess converging attributes for addressing the social and emotional challenges faced by children (Casta, 2020). Hence, owing to the limited research comparing the efficacy of child-centered play therapy protocols and story therapy in enhancing the social and emotional functioning of preschool children with hyperactivity disorder, the primary query of this study is to explore whether there exists a distinction in the effectiveness of child-centered play therapy compared to story therapy concerning social skills and hypoactivity in this particular population.

Materials and Methods

The present study employed a semi-experimental methodology with a pre-test-post-test design and a control group to collect quantitative data for practical purposes. The statistical population consisted of preschool children, with 15 children allocated to each experimental group using random sampling from psychological service centers. The study proceeded in two stages, initially selecting 15 typical students and 45 students diagnosed with attention deficit hyperactivity disorder (ADHD) who displayed normal motor performance and no other associated issues. Achenbach Child Behavior Checklist was utilized to assess these students, followed by a clinical interview to distinguish between individuals with ADHD and those without. Matching was done based on age, gender, IQ (assessed using the Wechsler 4 IQ test), and socio-economic status. The data analysis was conducted using the "analysis of covariance" test in SPSS, controlling for pre-test effects and calculating the eta square. Parents of the participating students provided informed consent for the study.

Instruments

Social Skills Rating System (SSRS)- parent form (Gresham et al., 2011): The magnitude of the assessment system for social skills is grounded on the belief that behavioral challenges impede the advancement of social skills (Gresham et al., 2011). This belief holds significance in comprehending deficiencies in social skills. The manifestation of behavioral issues may obstruct

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the progression or impede the enhancement of social skills. The inventory comprises three variants tailored for parents, teachers, and students respectively, designed for the distinct educational stages encompassing preschool, elementary, middle, and high school. This metric gauge the frequency of conduct influencing the student's maturation, social competence, and adjustment within domestic and academic environments, enabling grading, categorization, and formulation of social skills enhancement programs (Gresham et al., 2011). The parental form encompasses two overarching dimensions of social skills and behavioral obstacles. Within the social skills survey, parents are prompted to evaluate their child's social adeptness by scrutinizing each query and selecting the appropriate response from the options 'never,' 'sometimes,' or 'often,' denoting the selection with a mark in the designated space. The questionnaire comprises 52 items distributed across two segments: social skills (40 items, questions 1 to 40) and behavioral impediments (12 items, questions 41 to 52). Responses to the questionnaire items are evaluated using a three-tier Likert scale, representing 'never' (score of zero), 'sometimes' (score of 1), and 'most of the time' (score of 2). Conversely, the scoring of the 12 items in the behavioral challenges section is reversed. This assessment tool has been applied in various international studies. In a study conducted in Iran, Shahim (1999) assessed 304 children aged between 6 to 12 in Shiraz. The questionnaire's reliability, determined through Cronbach's alpha method, was established at 0.94 (Shahim, 1999). Furthermore, the questionnaire's validity in the Iranian context was corroborated by Khanzadeh (2004) utilizing factor analysis. The overall reliability of this questionnaire in the mentioned study, as assessed by Cronbach's alpha, was 0.92.

Shyness Test: The 14-item test scale utilized by Cheek and Briggs (1990) is a notable instrument in the field. Each item is rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scoring range spans from 14 to 70, with higher scores indicating elevated levels of modesty and shyness in the subject. Notably, items 6, 9, and 12 are inversely scored within this scale. The assessment of preschool children using this scale entails the interviewer evaluating the child's responses to the questionnaire. A study conducted in Iran by Rajabi (2012) unveiled a three-factor structure for this scale, yielding a commendable total Cronbach's alpha coefficient of 0.84. The correlation coefficients between each item and the total score ranged from 0.50 to 0.60, with all items (excluding item 12) showing significance at the $p<0.0001$ level. Moreover, the

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differential validity coefficient between this scale and Rosenberg's self-esteem scale stood at 0.23 within the entire sample, proving statistically significant at the $p < 0.002$ level. The overall reliability of this questionnaire in the present study, as assessed by Cronbach's alpha, was determined to be 0.85.

Results

First hypothesis: The effectiveness of child-centered play therapy and story therapy on the social skills of preschool children with hyperactivity disorder is different. To test this hypothesis, univariate analysis of covariance (ANCOVA) was used, the results of which are shown in Tables 1 and 2.

Table 1. The results of univariate covariance test on social skills post-test with pre-test control

Variable	Effect	SS	DF	MS	F	P	Eta Square	Power
Social skills	Pretest	13493.37	1	13493.37	289.34	0.001	0.87	1
	Group	7348.95	2	3674.47	78.79	0.001	0.79	1
	Error	1958.66	42	46.63				

According to the equality of the variance-covariance matrix and compliance with the sphericity test, as shown in Table 1, there is a significant difference between the three groups in the social skills' variable post-test. Since the F test only shows the overall significance, to check the significance between the three groups in the post-test stage, Sidak multiple comparisons test was used, which is reported in Table 2.

Table 2. Sidak multiple comparisons test on the average scores of the social skills post-test stage

Variable	Group		Mean difference	Std. error
Social skills		1	2	3
	1-control	-	18.20 (2.44)	47.60 (2.44)
	2- play therapy	-	-	29.40 (2.44)
	3- story therapy	-	-	-

As Table 2 shows, there is a significant difference between the experimental groups in the post-test stage of social skills. Also, both experimental groups are significantly different from the control group. Although both experimental groups have significantly led to an increase in social skills in the post-test phase, they have a significant difference in terms of effectiveness on

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improving social skills. As Table 2 shows, story therapy compared to play therapy significantly increases social skills in preschool children with hyperactivity disorder.

Second hypothesis: The effectiveness of child-centered play therapy and story therapy on shyness of preschool children with hyperactivity disorder is different. To test this hypothesis, univariate analysis of covariance (ANCOVA) was used, the results of which are shown in Tables 3 and 4.

Table 3. Results of univariate covariance test on shyness post-test with pre-test control

Variable	Effect	SS	DF	MS	F	P	Eta Square	Power
Shyness	Pretest	6333.61	1	6333.61	382.12	0.001	0.90	1
	Group	3450.75	2	1725.37	104.98	0.001	0.83	1
	Error	696.13	42	16.75				

According to the equality of the variance-covariance matrix and compliance with the sphericity test, as shown in Table 3, there is a significant difference between the three groups in the shyness variable post-test. Since the F test only shows overall significance, Sidak multiple comparisons test was used to check the significance between the three groups in the post-test stage, which is reported in Table 4.

Table 4. Sidak multiple comparisons test on the mean scores of the shyness post-test stage

Variable	Group		Mean difference	Std. error
Shyness		1	2	3
	1-control	-	12.26 (0.95)	13.46 (0.95)
	2- play therapy	-	-	1.20 (0.95)
	3- story therapy	-	-	-

As Table 4 shows, there is no significant difference between the experimental groups in the shyness post-test stage. But both experimental groups have significant differences with the control group. It can also be said that both experimental groups have significantly reduced shyness in the post-test phase, but there is no significant difference in terms of effectiveness on improving shyness.

Discussion

The outcomes of this research demonstrate that based on the equality of the variance-covariance matrix and adherence to the sphericity test, a notable distinction existed among the three groups concerning the social skills variable post-assessment. Furthermore, a significant differentiation

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was evident among the experimental groups during the post-assessment phase pertaining to social skills. Despite both experimental groups manifesting a considerable decrease in emotional and behavioral disorders post-assessment, they exhibited a substantial contrast in terms of efficacy in enhancing social skills. Specifically, story therapy, in comparison to play therapy, notably decreased emotional-behavioral disorders or enhanced social skills among preschool children diagnosed with hyperactivity disorder.

Moreover, the findings of this study indicate that not only do both child-centered play therapy and story therapy effectively enhance the social skills (reduction of psychopathology) of children with hyperactivity disorder post-assessment compared to pre-assessment, but also, in contrast to child-centered play therapy, the story therapy approach significantly boosts social skills (reduction of psychopathology) in these children. These results are consistent with previous research studies (Casta, 2020; Onuorah, 2020).

In a broader context, accentuating the narrative elements in psychotherapy suggests that story therapy represents a distinctive form of dialogue that elicits the child's abilities, competencies, and resolutions, thereby unveiling the child's potential and fostering resilience and motivation for change. Within story therapy, the therapist and the child jointly uncover and decipher intricate issues during problem-solving sessions, enabling children to effectively navigate their social challenges. Story therapy is adaptable across various stages of therapy, as storytelling serves as a unifying factor across diverse theoretical frameworks and psychoanalytic approaches. Compared to child-centered play therapy, story therapy perhaps places greater emphasis on the child's self-selected domains for self-discovery and identification within the realms of unconscious human experiences. Therefore, story therapy serves as a means to delve into the child's psychological world residing in the unconscious, while play therapy offers a platform for continual emotional expression, with story therapy being a more potent medium for enhancing social skills through fostering creativity.

The outcomes of this investigation indicate a notable distinction among the three groups regarding the shyness variable in the post-test phase. Nevertheless, no significant variance was observed between the experimental groups in terms of shyness during the post-test phase. Despite both experimental groups displaying a significant reduction in shyness post-test, there was no

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substantial variance in terms of efficacy for enhancing shyness. The findings of the present study align with prior research studies (Mohammadpanah Ardakan et al., 2022; Moghtader et al., 2022). Thus, child-centered play therapy and story therapy approaches ultimately foster positive social interaction and self-expression, consequently alleviating shyness in children diagnosed with hyperactivity disorder. Essentially, hyperactive behaviors often serve as a deliberate or subconscious mechanism to mask a child's inner vulnerabilities, stemming from a lack of courage or awareness in effectively expressing themselves. Both child-centered play therapy and story therapy contribute to emotional refinement or discharge.

One of the constraints of this study pertains to its focus solely on examining the impact of education on preschoolers diagnosed with attention deficit disorder. Therefore, caution must be exercised when extrapolating the findings to other age brackets and utilizing appropriate sampling methods to ensure prudent generalization. Future research endeavors should explore the influence of illustrated story therapy on various other variables like self-assurance, anxiety levels, peer relationships, etc. Subsequent studies should also incorporate longer intervals between assessments to evaluate the durability of the training sessions' effects. Additionally, investigating alternative educational games aimed at enhancing attention among hyperactive/attention deficit children within classroom settings is recommended for future investigations.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Islamic Azad University.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. The author contributed to the article and approved the submitted version.

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Conflict of interest

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The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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