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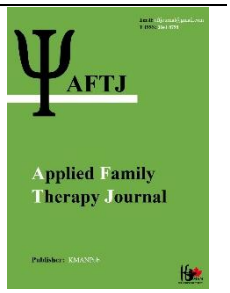

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Comparison of the Effectiveness of Parent-Child Relationship-Based Play Therapy and Attachment-Based Play Therapy on Internalizing and Externalizing Behavioral Disorders in Children with Learning Disabilities

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A B S T R A C T

Objective: The study aimed to compare the effectiveness of attachment-based play therapy and parent-child relationship-based play therapy on internalizing and externalizing behavioral disorders in children with learning disabilities.

Methods: This quasi-experimental study employed a pre-test, post-test, and follow-up design with a control group. A total of 45 children with learning disabilities were selected through purposive sampling and randomly assigned to three groups: attachment-based play therapy, parent-child relationship-based play therapy, and a control group. The study used the Achenbach and Rescorla (2001) Behavioral Disorders Questionnaire to measure internalizing and externalizing behaviors at each stage. Both experimental groups received nine 60-minute therapy sessions. Data were analyzed using repeated measures ANOVA and ANCOVA to compare the effectiveness of the interventions.

Findings: The findings indicated that both attachment-based play therapy and parent-child relationship-based play therapy significantly reduced internalizing and externalizing behavioral disorders in children with learning disabilities, with large effect sizes ($\eta^2 = 0.864$ and $\eta^2 = 0.773$, respectively). Repeated measures ANOVA and ANCOVA confirmed the interventions' effectiveness ($p < 0.001$), and Bonferroni post-hoc tests revealed significant differences between the experimental groups and the control group, but no significant differences between the two experimental groups. The positive effects were sustained over time, demonstrating the long-term efficacy of both therapeutic approaches.

Conclusion: Both attachment-based play therapy and parent-child relationship-based play therapy effectively reduce internalizing and externalizing disorders in children with learning disabilities, with lasting effects over time.

Keywords: *Attachment-based play therapy, Parent-child relationship-based play therapy, Internalizing disorders, Externalizing disorders, Learning disabilities, Behavioral disorders.*

1. Introduction

Learning disabilities are one of the most important topics in school psychology and are among the most common developmental disorders diagnosed during childhood. Epidemiological studies report comparable prevalence rates of 4-9% for reading deficits and 3-7% for math deficits (İzoğlu-Tok & Doğan, 2024; Malekzadeh et al., 2024). Academic skills such as reading, writing, and mathematics, which were previously classified as separate problems in earlier versions of the DSM, are now referred to as specific learning disorders in the DSM-5 (Bulut et al., 2024; Luna, 2024). Specific learning disorders, such as dyslexia and dyscalculia, are studied by researchers to inform diagnosis and intervention strategies. Furthermore, students with specific learning disorders are examined to enhance our understanding of the mechanisms underlying learning in the affected areas. Reading and math are core subjects in formal education and predictors of academic achievement (Massoodi, 2024; Tiengsomboon & Luvira, 2024).

One of the dominant frameworks used in developmental research to understand the underlying mechanisms in the development of such neuro-cognitive abilities is the study of children with specific learning disorders. The logic behind studying selected groups of children facing specific deficits is that understanding the causal and related factors of their deficits can provide broader insights into the neuro-cognitive mechanisms underlying the development of impaired competencies (Luna, 2024). Recently, studies have begun exploring the relationship between deficits in various learning domains (i.e., dyslexia and mathematical learning problems) to better understand their overlap instead of focusing on a single deficit. Findings suggest that children with a deficit in one learning domain often have deficits in other learning domains as well (Dirks et al., 2008). One of the problems these children face is behavioral disorders (internalizing and externalizing) (Dekker et al., 2002). Disorders categorized as internalizing manifest in issues such as aggression and attention-deficit/hyperactivity disorder (ADHD), while externalizing disorders manifest in problems like anxiety, depression, fear, social withdrawal, and somatic complaints (Lansford et al., 2014). Previous studies indicate that students with learning disabilities experience more behavioral disorders compared to other healthy children (Hamidi et al., 2014).

In terms of internalizing disorders in children with learning disabilities, these children exhibit more problems related to ADHD compared to healthy children, showing greater inattention and lack of focus in the classroom (Zablotsky & Alford, 2020). Furthermore, these students display more externalizing behaviors, such as aggression, compared to healthy students (Sofologi et al., 2022). On the other hand, learning problems such as dyslexia, difficulty in math, and writing disorders can adversely affect various aspects of the lives of children with learning disabilities (Fish & Morgan, 2021). They may experience greater social exclusion and loneliness, and their ability to reason and solve problems diminishes, affecting their quality of life (Ginieri-Coccossis et al., 2013; Massoodi, 2024; Matteucci et al., 2019).

Parent-child relationship-based play therapy is a therapeutic intervention for children, grounded in child development and behavior theories (Kianoosh, 2023; Klein et al., 2022; Warren et al., 2022), including attachment theory (Bowlby, 1982), Baumrind's parenting styles (1966), and social learning theory (Bandura & Hall, 2018). Parent-child relationship-based play therapy assumes that the parent-child relationship is shaped by interactions that influence parents' and children's thoughts, emotions, and behaviors (Batzer et al., 2018). This therapy involves a dual intervention with two therapeutic stages. The first stage, child-directed interaction, aims to strengthen secure parent-child relationships and improve problematic child behaviors through positive behavior support strategies. These strategies include differential attention, praise for positive behaviors, and skill-building (e.g., enhancing speech and language skills, modeling social interactions) (Eyberg & Funderburk, 2011). The second stage, parent-directed interaction, focuses on discipline, teaching parents how to give effective commands and enforce consequences (Eyberg & Funderburk, 2011). Parent-child relationship-based play therapy was originally developed to treat externalizing and disruptive behavioral disorders in young children, and it has a substantial evidence base supporting its use for these issues (Thomas & Zimmer-Gembeck, 2007; Ward et al., 2016). Additionally, this therapy has evolved for use in treating various other conditions, such as autism spectrum disorder (Scudder et al., 2019), anxiety (Phillips & Mychailyszyn, 2021), and selective mutism (Catchpole et al., 2019). Based on previous research, children undergoing attachment-based play therapy experience a reduction in behavioral disorders (Van Zeijl et al., 2006) and improvements in parent-child attachment quality.

It is clear that both parent-child relationship-based play therapy and attachment-based play therapy are effective in

reducing children's problems. However, what is important is to examine the effectiveness of these play therapy interventions on children with learning disabilities and compare the effectiveness of these two types of play therapy to identify a more effective therapeutic intervention for children with learning disabilities. Therefore, the research question is whether there is a difference in the effectiveness of parent-child relationship-based play therapy versus attachment-based play therapy on internalizing and externalizing behavioral disorders in children with learning disabilities.

2. Methods

2.1. Study Design and Participants

The research method, based on its goal, is applied, and in terms of data collection, it is quantitative and quasi-experimental with a pre-test, post-test design and a control group. The statistical population consisted of all elementary school children with learning disabilities in Birjand City during the 2022-2023 academic year, totaling 125 students. One school was selected from the available schools, and 45 eligible children were selected through purposive sampling and randomly assigned to three groups of 15. It is worth noting that Cohen's table was used to determine the sample size. At a 95% confidence level, with an effect size of 0.70 and a statistical power of 0.91, the required sample size for each group was 12. However, to account for potential attrition and increase the generalizability of the results, the sample size was increased to 15 per group. Inclusion criteria included informed consent to participate in the study, a score of 60 or higher on the Colorado Learning Disabilities Questionnaire, an age range of 7 to 12 years, enrollment in elementary school, and not receiving concurrent training. Exclusion criteria included incomplete responses on the post-test and follow-up questionnaires, and missing more than two play therapy sessions.

After coordinating with officials from the special education schools in Birjand, a call for interested participants to join the research project was issued. Since the research design was quasi-experimental, 45 children who scored above 60 on the Colorado Learning Difficulties Questionnaire were randomly assigned to three groups (15 in the parent-child relationship-based play therapy group, 15 in the attachment-based play therapy group, and 15 in the control group) using simple random sampling. Pre-tests measuring internalizing and externalizing disorders were administered to all three groups under the same conditions. The first experimental group received ethical approval before undergoing the therapeutic interventions, while the control group did not receive any play therapy interventions and continued their regular daily activities, remaining on a waitlist. After the therapy sessions, post-tests were administered to all three groups under similar conditions.

2.2. Measures

2.2.1. Learning Disabilities

This questionnaire contains 20 questions scored on a 5-point Likert scale, where 1 = never, 2 = sometimes, 3 = I don't know, 4 = often, and 5 = always. The questionnaire developers assessed convergent validity by correlating it with academic achievement, reporting significant correlation coefficients ranging from 0.30 to 0.64 at the 0.01 level (Koriakin et al., 2019). In Iran, the questionnaire was translated and standardized by Hajloo and Rezaei Sharif (2013), with Cronbach's alpha coefficients ranging from 0.71 to 0.88 for different components and 0.90 for all items, indicating good internal consistency. Factorial validity was also evaluated, showing adequate model fit indices, confirming the questionnaire's construct validity. In other studies, Cronbach's alpha was reported as 0.83, 0.86, and in one study, Cronbach's alpha was 0.90 with a test-retest reliability of 0.94 (Hamidi et al., 2014).

2.2.2. Behavioral Problems

The Child and Adolescent Behavioral Disorders Self-Report Form is designed for ages 4 to 18 and takes approximately 15 minutes to complete. It includes 112 items that assess three general categories: internalizing disorders (depression/anxiety with items 14, 29, 30, 31, 32, 33, 35, 45, 50, 52, 71, 91, 112; withdrawal with items 5, 42, 65, 69, 75, 102, 103, 111; somatic complaints with items 47, 51, 54, 56), externalizing disorders (delinquent behavior with items 2, 26, 28, 39, 43, 63, 67, 72, 81, 82, 90, 96, 99, 101, 105; aggressive behavior with items 3, 6, 19, 20, 21, 22, 23, 37, 57, 68, 86, 87, 89, 94, 95, 97, 104), and total problems (social problems with items 11, 12, 25, 27, 34, 36, 38, 48, 62, 64, 79; thought problems with items 9, 18, 40, 46, 58, 66, 70, 76, 83, 84, 85, 100; attention problems with items 1, 4, 8, 10, 13, 17, 41, 61, 78). Other behavioral issues are assessed with items 7, 24, 44, 53, 55, 74, 77, 93, 110. Certain items, such as 15, 16, 49, 59, 60, 73, 80, 88, 92, 98, 106, 107, 108, and 109, were removed from the questionnaire due to factor loadings below 0.30 (Hamidi et al., 2014). The questionnaire

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is scored on a 3-point Likert scale, where 0 = not true, 1 = somewhat or sometimes true, and 2 = very true or often true. In one study, test-retest reliability coefficients ranged from 0.67 to 0.90. In international studies, Cronbach's alpha was reported as 0.90, indicating high reliability. Another study reported a Cronbach's alpha of 0.76 (Hamidi et al., 2014).

2.3. Interventions

2.3.1. Parent-Child Relationship-Based Play Therapy

This study used the parent-child relationship-based play therapy model developed by Adili et al. (2020), which was approved by the research supervisor and conducted in nine 60-minute sessions (Kianoosh, 2023).

Session 1: The first session introduces the parent and child to the therapy process, setting the foundation for a trusting relationship. Goals and therapeutic principles are discussed, including the importance of empathy, parent sensitivity to the child's needs, and positive reinforcement. Parents are introduced to the significance of play and the structure of future sessions, including setting consistent time and space for parent-child play.

Session 2: This session focuses on recognizing and empathizing with the child's emotions, particularly joy, sadness, anger, and fear. Parents learn how to identify these emotions and respond empathetically. They are also introduced to core principles of play therapy, such as letting the child lead during play, and practice these skills through role-play exercises.

Session 3: Parents are taught four key principles of play therapy: allowing the child to direct the play, attending to the child's emotional expressions, reflecting the child's emotions back to them, and setting clear, firm limits when necessary. The session also discusses the selection of appropriate toys for emotional expression and creativity.

Session 4: The focus is on the dos and don'ts of play sessions, emphasizing the importance of structure, consistency, and avoiding criticism or guided questions. Parents learn how to describe the child's play verbally, enforce limits assertively, and allow the child to assume responsibility within the play space.

Session 5: Parents are trained in the three-step process for setting limits on inappropriate behaviors, starting with empathetic reflection of the child's feelings, then stating the limit clearly and concisely, and finally providing an acceptable alternative. Timing of limit-setting is also discussed.

Session 6: The session revisits the importance of understanding the child's emotions. Parents review essential play therapy skills, including maintaining structure, following the child's lead, and avoiding directives or questions. The focus is on engaging in play, using imaginative roles, and aligning verbal and non-verbal communication with the child's emotional state.

Session 7: Parents learn how to offer the child choices in a way that empowers them. Strategies for choice-giving are discussed, including using choices as positive consequences and reinforcing household rules. The session also reinforces core play therapy skills for the parents.

Session 8: This session reviews all previously covered topics, emphasizing the application of play therapy skills at home. Parents are encouraged to continue using choice-giving, limit-setting, and positive reinforcement. The session aims to consolidate the therapeutic techniques learned throughout the intervention.

Session 9: The final session focuses on advanced limit-setting, including explaining the consequences of actions. Parents learn how to generalize these techniques outside of the play sessions, applying them in daily life. A post-assessment is conducted to evaluate the child's progress and the overall effectiveness of the intervention.

2.3.2. Attachment-Based Play Therapy

The attachment-based play therapy model was also used, approved by the research supervisor, and conducted in nine 60-minute sessions (Adili et al., 2024; Zloghadrnia et al., 2021).

Session 1: The session begins with introductions and an explanation of attachment theory, helping parents understand its relevance to their relationship with their child. Parents are encouraged to observe and reflect on their child's attachment behaviors, while initial rapport-building play activities are introduced to strengthen the parent-child bond.

Session 2: This session focuses on engaging the parent and child in preliminary play activities, guiding the mother to recognize and respond to the child's attachment cues. The emphasis is on creating a secure emotional connection through sensitive interactions.

Session 3: The first structured play interventions are introduced, allowing the child to express their emotions while the mother verbalizes and reflects on the child's behaviors. The focus is on observing and modifying negative parental representations in the mother-child relationship.

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Session 4: The session continues with structured play, where the mother actively engages in reflective listening and verbalization of the child's behaviors. Feedback is provided to the mother to help shift negative perceptions and strengthen the positive aspects of the relationship.

Session 5: Parents are encouraged to practice play skills at home, focusing on increasing their insight into their child's behaviors. Empathy-building exercises help parents understand the child's anxiety and behavioral challenges, with an emphasis on reducing negative parental responses.

Session 6: The session reviews the parent's experiences with play at home. Feedback is provided, and role-modeling exercises help parents reinforce positive exploratory behaviors in their child while reducing anxiety-related responses. The session focuses on deepening parental sensitivity.

Session 7: The session continues to emphasize play between the mother and child, while addressing barriers to sensitive maternal behavior. The parent is guided in reshaping their mental representations of the mother-child relationship and understanding the child's attachment needs.

Session 8: The focus is on increasing maternal responsiveness through reflection and observation of the child's cues during play. Techniques are practiced to help the mother respond more sensitively, thereby reducing behavioral issues.

Session 9: The final session provides feedback on the overall progress of the mother-child relationship. The therapist reviews attachment behaviors, helps the parent consolidate new skills, and conducts a post-assessment to evaluate changes in the child's internalizing and externalizing behaviors.

2.4. Data Analysis

Data from the pre-test and post-test were analyzed using appropriate statistical tests. Descriptive statistics, including means and standard deviations, were calculated, and inferential statistics, including mixed-design ANOVA, were used. The comparison between parent-child relationship-based play therapy and attachment-based play therapy and the comparison of pre-test and post-test stages were analyzed using SPSS version 24.

3. Findings and Results

The demographic results indicated that 62.5% of the target population were between 9 and 10 years old, while 37.5% were aged between 11 and 12 years. Descriptive statistics for the behavioral disorder variable, including the mean and standard deviation for the three study groups at pre-test, post-test, and follow-up stages, are presented in Table 1.

Table 1

Descriptive Statistics for the Behavioral Disorder Variable

Variable	Stage	Pre-test Mean	Pre-test SD	Post-test Mean	Post-test SD	Follow-up Mean	Follow-up SD
Internalizing	Parent-Child Relationship-Based Play Therapy	42.26	1.4	19.6	0.82	19.5	0.83
	Attachment-Based Play Therapy	41.73	1.19	20.6	0.81	20	0.76
	Control	42.8	1.06	38.4	1.15	37.5	1.3
Externalizing	Parent-Child Relationship-Based Play Therapy	45.3	1.8	25.4	0.86	23.8	0.82
	Attachment-Based Play Therapy	46.7	2.03	25	0.97	26.06	0.97
	Control	44.06	2.28	41.4	1.6	40.93	0.9
Overall Disorder	Parent-Child Relationship-Based Play Therapy	108.9	3.47	73.3	2.2	75.8	1.54
	Attachment-Based Play Therapy	109.9	3.2	71.13	2.03	73.5	1.9
	Control	109.7	2.7	101.07	3.6	101.6	3.4

To ensure the normal distribution of the data indicated that the significance level for both groups was greater than 0.05, supporting the null hypothesis that the data for the behavioral disorder variable in the experimental and control groups were normally distributed at all three stages. Additionally, other assumptions necessary for multivariate covariance analysis were examined. Levene's test for equality of variances showed significance levels of 0.13, 0.8, and 0.33 for internalizing, externalizing, and overall disorders, respectively, all above 0.05, confirming the homogeneity of error variances. To test the homogeneity of regression slopes, the F-interaction between the pre-test and group was calculated. Since the significance level for the interaction effects was greater than 0.05 for all three

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components (0.364, 0.339, and 0.2, respectively), the assumption of homogeneity of regression slopes was accepted.

Table 2

ANCOVA Results and Linearity of Group Effects

Effect	Variable	Sum of Squares	df	Mean Square	F	Significance	Eta Squared
Adjusted Model	Internalizing	3400.842	5	680.168	51.214	0.000	0.868
	Externalizing	2789.450	5	557.890	28.281	0.000	0.784
	Overall Disorder	8529.652	5	1705.93	14.943	0.000	0.657
Fixed Effect	Internalizing	248.449	1	248.449	18.707	0.000	0.324
	Externalizing	64.4	1	64.4	3.265	0.079	0.077
	Overall Disorder	2103.719	1	2103.719	18.428	0.000	0.321
Group	Internalizing	3288.272	2	1644.136	123.796	0.000	0.864
	Externalizing	2627.092	2	1313.546	66.586	0.000	0.773
	Overall Disorder	8248.967	2	4214.484	36.917	0.000	0.654
Error	Internalizing	517.958	39	13.281			
	Externalizing	769.35	39	19.727			
	Overall Disorder	4452.259	39	114.160			

The ANCOVA results in Table 2 showed that both parent-child relationship-based play therapy and attachment-based play therapy significantly reduced behavioral disorders in children with learning disabilities. Additionally, the effect size for the group variable was reported as 0.864, 0.773, and 0.654 for internalizing, externalizing, and overall disorders, respectively, indicating that these two interventions explained 86.4%, 77.3%, and 65.4% of the variance in internalizing, externalizing, and overall behavioral disorders in children with learning disabilities.

Table 3

Bonferroni Test Results for Behavioral Disorder Variables

Variable	Stage	Group (I)	Group (J)	Standard Error	Significance
Internalizing	Post-test	Parent-Child Relationship Play Therapy	Attachment-Based Play Therapy	1.33	1
		Parent-Child Relationship Play Therapy	Control	1.33	0.000
		Attachment-Based Play Therapy	Parent-Child Relationship Play Therapy	1.33	1
		Attachment-Based Play Therapy	Control	1.33	0.000
Externalizing	Post-test	Parent-Child Relationship Play Therapy	Attachment-Based Play Therapy	3.83	1
		Parent-Child Relationship Play Therapy	Control	3.83	0.000
		Attachment-Based Play Therapy	Parent-Child Relationship Play Therapy	3.83	1
Overall Disorder	Post-test	Parent-Child Relationship Play Therapy	Attachment-Based Play Therapy	1.27	1
		Parent-Child Relationship Play Therapy	Control	1.27	0.000
		Attachment-Based Play Therapy	Parent-Child Relationship Play Therapy	1.27	1

The Bonferroni test results for mean comparisons, as shown in the table above, indicate that the mean scores for internalizing, externalizing, and overall disorders in both the parent-child relationship-based play therapy and attachment-based play therapy groups were significantly lower compared to the control group. However, no significant difference was found between the two experimental groups in terms of mean scores for internalizing, externalizing, or overall disorders. This suggests that both parent-child relationship-based play therapy and attachment-based play therapy effectively reduced internalizing, externalizing, and overall disorders, but no significant difference was observed between the two in terms of effectiveness.

4. Discussion and Conclusion

The results indicated that attachment-based play therapy and parent-child relationship-based play therapy have a significant impact on internalizing and externalizing disorders in children with learning difficulties, and the effects of the intervention were maintained at the follow-up stage. In terms of comparing the effectiveness of the two therapeutic approaches, parent-child relationship-based play

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therapy and attachment-based play therapy, no research has been conducted on the improvement of internalizing and externalizing disorders in children with learning difficulties. However, regarding the effectiveness of these two approaches separately on the mentioned variables, the present study aligns with the prior studies (Adili et al., 2024; Batzer et al., 2018; Eyberg & Funderburk, 2011; Kianoosh, 2023; Klein et al., 2022; Phillips & Mychailyszyn, 2021; Scudder et al., 2019; Thomas & Zimmer-Gembeck, 2007; Ward et al., 2016; Warren et al., 2022; Zloghadrnia et al., 2021).

To explain these results, it can be stated that the elements of play therapy strengthen the attachment between mother and child, leading to increased trust, security, and psychological well-being in children. The proximity between mother and child increases, and the parent-child relationship, when repaired, reduces conflicts, tension, and dependency. Play elements also contribute to reducing parental stress, concerns, and a deeper understanding of the child, which in turn reduces the child's psychological disorders (Batzer et al., 2018). Attachment-based play therapy training helps mothers of children with learning difficulties see their child as a separate individual. By adding attachment elements to play therapy, the child learns to develop a relationship with the mother. The understanding of the child as a separate person from others begins in the second session, and the quality of the mother-child relationship is emphasized in the sessions. Increased maternal sensitivity and improved mother-child relational patterns, along with the reduction of negative representations in the child, reduce behavioral disorders in children. This intervention also leads to a reduction in anxiety, externalizing problems, and behavioral issues in children. The use of play therapy based on attachment theory components can help develop a secure base in children (Adili et al., 2024; Kianoosh, 2023).

In this intervention, the active caregiver participates in play with the child alongside the therapist. Through caregiving, cooperative play, and physical activities, the child can see, understand, and control the world they live in. By modeling and training mothers to communicate appropriately and challenging internal working models and mental representations between mother and child, along with increasing maternal attachment, the child's learning disorder can be alleviated. With this intervention, the child's disorders are reduced, and the mother-child relationship is strengthened, improving both internalizing and externalizing disorders and facilitating the child's adaptation (Van Zeijl et al., 2006; Zloghadrnia et al., 2021).

Additionally, it can be stated that a child with a learning disability has high behavioral disorders and difficulty connecting with others, often due to the unavailable mother pattern, which leads to a fear of being alone. In attachment-based play therapy, increasing maternal sensitivity and understanding the child's attachment behaviors facilitates the mother-child relationship, and by verbalizing the child's behaviors, the mother can observe both internalizing and externalizing disorders and positive and negative characteristics. A crucial aspect of the training is providing a safe and supportive environment for the child to reduce learning difficulties. As a result, the training reduces both internalizing and externalizing disorders.

Moreover, the results from repeated measures analysis of variance showed that parent-child relationship-based play therapy has a significant impact on internalizing and externalizing disorders in children with learning difficulties, and the effect of the intervention was sustained over time.

To explain these results, it can be said that in this therapeutic approach, the relationship between the parent and child is used as a source of change in the child's perception and ultimately their behavior. The goal is to weaken inefficient parent-child interaction patterns and enhance parents' ability to understand their child. Indeed, how a mother communicates with her child is of particular importance. It could be said that one of the best ways to enter the child's world is through play (Adili et al., 2024). Children have a smaller vocabulary compared to adults, so play can not only affect the child's body and mind but can also influence how the mother communicates with the child, improving behavioral disorders in children. Additionally, play is one of the most natural activities for engaging and involving children (Hamidi et al., 2014; Kianoosh, 2023). The focus of parent-child relationship-based play therapy is on improving the parent-child relationship, the child's internal self, and their potential capabilities. The main goals for parents include understanding and accepting the child's emotional world, increasing parental insight and awareness regarding themselves in relation to the child, changing the perception of the child's behavior, learning child-centered play therapy skills, and creating a non-judgmental, accepting atmosphere with mutual understanding for the child, and ultimately helping parents enjoy their parenting role. Parent-child relationship-based play therapy can be considered an appropriate method for communicating with children due to its focus on the child (Hamidi et al., 2014). Additionally, a

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characteristic that makes this approach effective is its emphasis on teaching self-regulation skills, reducing internalizing and externalizing disorders, and providing the necessary skills to improve the performance of both parents and children. More importantly, the active participation of both parents and children in discovering their emotions and beliefs is one of the keys to treatment and helps create appropriate interaction conditions.

5. Suggestions and Limitations

This study was conducted with children with learning difficulties in the city of Birjand, and the generalization of its results to other populations should be done with caution. Other limitations of the study include the small sample size and the use of self-report questionnaires to measure research variables, which may have led to response bias. Some respondents, due to impatience, fatigue, or lack of attention caused by their own disruptive disorders, may not have provided appropriate answers to the questions, which could have affected the validity of the results of this study.

It is suggested that attachment-based play therapy programs and parent-child relationship-based play therapy be used in psychological centers and schools to help parents become familiar with proper behavioral principles and better manage their children. It is also recommended that the results of the research be summarized in brochures and distributed to educational planners, administrators, counselors, and therapists so that necessary decisions can be made for teachers and counselors at different educational levels to master these behavioral principles and play therapies. This would enable them to use these therapeutic methods in the educational, developmental, and therapeutic processes for children with learning difficulties. It is suggested that specialized psychologists familiar with attachment-based play therapy and parent-child relationship-based play therapy be continuously employed in kindergartens, schools, and treatment centers to provide these interventions to children's families. Given the importance of parenting skills that effectively impact parental roles and the quality of the parent-child relationship, as well as the life quality of children with learning difficulties, it is essential that training and assessment in the form of attachment-based play therapy and parent-child relationship-based play therapy be considered as important components of parent-child interaction in the individual and social environment. It is also suggested that similar studies be conducted in other cities. To ensure the reliability of the results, it is recommended that broader research be conducted in larger communities in the future. Future studies should also examine other factors, such as individuals' attitudes and family conditions, to better understand the relationships between the research variables. It is further recommended that other methods, such as interviews with psychology professors, counseling patients, and center administrators, be used for data collection, as there may be personal biases in respondents' answers when filling out questionnaires.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

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

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