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Effectiveness of Schedule-Based Paradoxical Therapy on Separation Anxiety Symptoms and Mother–Child Relationship Functioning in Children Aged 6 to 9 Years

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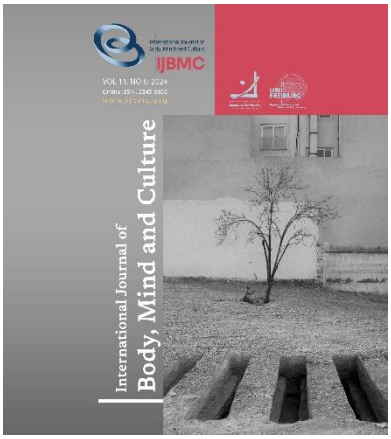

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ABSTRACT

Objective: Separation anxiety disorder is a common emotional disturbance in children and often disrupts family dynamics. Paradoxical therapy has emerged as a promising intervention strategy, yet its application in schedule-based formats remains underexplored. This study aimed to assess the effectiveness of schedule-based paradoxical therapy in reducing separation anxiety symptoms and enhancing mother–child relationship functioning among children aged 6 to 9 years.

Methods and Materials: A quasi-experimental, pretest–posttest design with a control group was employed. Twenty children diagnosed with separation anxiety were selected from psychological clinics in Saveh City, Iran, in 2024. Participants were randomly assigned to an intervention group (n = 10), which received six weekly 90-minute therapy sessions, or a control group (n = 10). Data were collected using the Separation Anxiety Scale and the Parent–Child Relationship Questionnaire and analyzed via MANCOVA.

Findings: The intervention group demonstrated significant reductions in separation anxiety ($F = 6.91$, $p = 0.016$, $\eta^2 = 0.26$) and improvements in mother–child relationship scores ($F = 14.97$, $p = 0.001$, $\eta^2 = 0.42$) compared to the control group.

Conclusion: Schedule-based paradoxical therapy effectively reduces separation anxiety symptoms and strengthens the mother–child relationship. This approach provides a culturally adaptable and time-efficient therapeutic option for clinical child psychologists.

Keywords: Paradoxical Therapy; Separation Anxiety; Parent–Child Relationship; Children; Schedule-Based Intervention.

Introduction

Anxiety disorders are among the most common emotional disorders in childhood and adolescence, with prevalence rates reported between 9% and 18% (Essau et al., 2013). Separation anxiety is predictable in children entering school for the first time; however, it is diagnosed as a disorder when the anxiety is excessive, developmentally inappropriate, and triggered by separation from an attachment figure. According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013), diagnosing separation anxiety disorder in children requires at least three symptoms related to

excessive worry about separation from attachment figures, lasting for a minimum of one week. These concerns may manifest as school refusal, fear and distress upon separation, recurrent complaints of physical symptoms such as headaches or stomachaches during separation, or recurring nightmares involving separation themes.

During childhood, separation anxiety disorder may also be associated with increased internalizing problems, physiological arousal in separation situations, academic difficulties, school phobia, and challenges within family functioning when it comes to managing the child's anxiety (Lebowitz et al., 2013; Zolog et al., 2011). Moreover, researchers have shown that disturbances in the early caregiver-child relationship can have severe consequences (Eisen & Schaefer, 2005). Indeed, disruptions in early emotional bonds often underlie the development of later emotional disorders. Children who receive insufficient attention and care and fail to form secure attachments are more likely to develop anxiety and experience difficulties in establishing relationships with others in the future (Hahn et al., 2003). Attachment, therefore, is a concept used to conceptualize and measure the quality of emotional relationships between two individuals, characterized by an emotional bond that fosters a sense of psychological safety (Mofrad et al., 2009).

In today's psychological discourse, numerous therapeutic approaches have been proposed for addressing separation anxiety in children, though only a few have demonstrated consistent effectiveness. One of the newer integrative alternative approaches is schedule-based paradoxical therapy. While theoretically rooted in psychodynamic, psychoanalytic, and systemic models, in practice, paradoxical therapy remains loyal to behavioral techniques. This model incorporates two core components that accelerate the therapeutic process. The first paradox involves prescribing the very behavioral symptoms or problematic behaviors for which the client is seeking help. In this technique, the client is asked to consciously recreate and experience the symptoms they suffer from, as instructed by the therapist. The second component, the schedule, refers to a structured task in which the client is required to experience the prescribed symptoms or behaviors at specific times and for a set duration (Basharat, 2023, 2025).

In this context, some studies have shown that schedule-based paradoxical therapy can significantly reduce worry and symptoms of social anxiety (Basharat, 2023, 2025). Separation anxiety is a common childhood disorder that, if left untreated, can impair the child's social and academic functioning. Thus, evaluating the effectiveness of innovative therapeutic interventions—such as paradoxical therapy—within Iranian populations is of great importance. Accordingly, the present study aimed to assess the efficacy of a schedule-based paradoxical therapy program in reducing separation anxiety symptoms and improving the functioning of mother-child relationships in children aged 6 to 9 years.

Methods and Materials

Study Design and Participants

The present study employed a quasi-experimental design with a pre-test–post-test control group. The statistical population included all children aged 6 to 9 years with separation anxiety who visited psychological and counseling clinics in Saveh city in 2024. From this population, 20 children, along with their parents, who expressed a willingness to participate in the therapy program, were selected through purposive sampling. Participants were then randomly assigned to either the experimental group (n = 10) or the control group (n = 10). Inclusion criteria included: Informed parental consent, Presence of separation anxiety, no simultaneous participation in other psychotherapy programs, no psychiatric medication for at least one month before evaluation, Age between 6 and 9 years, and Physical and psychological readiness to respond to questions. Exclusion criteria included: Absence from more than two sessions, Unwillingness to continue participation, Participation in other therapeutic or counseling programs during the study, Lack of cooperation in completing the pre-test and post-test questionnaires.

Instruments

1. **Parent-Child Relationship Scale:** This 22-item self-report scale, initially developed by Pianta (1994), assesses parents' perceptions of their relationship with their child. Items 1, 5, 6, 8, 13, 16, 29, and 30 measure closeness; items 9, 11,

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15, 18, 20, and 22 assess dependence; and items 2, 3, 4, 7, 12, 14, 17, 19, 21, 23–28, 31–33 evaluate conflict. Responses are rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). A positive overall relationship score is calculated by summing the closeness scores and reversing the scores for conflict and dependence. Cronbach's alpha coefficients reported in various studies were 0.83 (conflict), 0.69 (closeness), 0.46 (dependence), and 0.84 (total score). Validity and reliability were confirmed by Abarashi et al. (2010). In Monfared's study (2011), alpha values were 0.74 (closeness), 0.50 (dependence), and 0.87 (conflict) (Abareshi et al., 2010). In the present study, Cronbach's alpha coefficients were 0.87 (total score), 0.82 (closeness), 0.82 (dependence), and 0.85 (conflict).

2. **Parent Version of the Separation Anxiety Scale:** Developed by Hahn et al. (2003), this 21-item scale includes four subscales: fear of being alone, fear of abandonment, fear of physical illness, and worry about dangerous events. Parents rate items on a 4-point Likert scale (1 = never to 4 = always). Previous studies have reported an internal consistency of α = 0.91 and a test-retest reliability of r = 0.83 (Eisen & Schaefer, 2005; Hahn et al., 2003). In Iran, Mofrad et al. (2009) reported a reliability coefficient of α = 0.94 for the total score (Mofrad et al., 2009). The scale was translated and back-translated by Talaeinejad et al. (2016), and two expert psychologists confirmed content validity. Cronbach's alpha was estimated at 0.87 for the total score and between 0.62 and 0.74 for the subscales. In the present study, Cronbach's alpha for the total score was 0.87.

Therapeutic Intervention

The intervention followed the Paradoxical Therapy Protocol developed by Besharat (2017) and previously applied in studies by Besharat (2019), E'tesamipour et al. (2021), Tahernezhad Jouzem et al. (2022), and Saeidinejad et al. (2024). The intervention consisted of six weekly sessions.

The paradoxical therapy protocol consisted of six structured sessions. The first session focused on introduction, rapport building, assessment, treatment planning, and pre-test administration. This was followed by symptom prescription, which involved three scheduled daily enactments of school-morning routines with role-switching between the child and mother, and one nightly participation from the father. General guidelines included eliminating non-essential activities and ensuring no history of trauma. In the second session, homework was reviewed, symptom prescription intensity was reduced, and mechanism two—disrupting the symptom-anxiety cycle—was introduced, along with the "Sharing Worries Game," involving the child expressing separation fears and engaging in mutual emotional role-play. The third session reviewed prior work and focused on mechanism three—reframing symptom meaning—with continued symptom prescription and the introduction of the "Commander and Soldier Game" to strengthen mother-child communication. The fourth session maintained emphasis on mechanism four—reinforcing positive interaction—by continuing the same game. In the fifth session, the focus shifted to mechanism five—addressing separation anxiety—through simulated school scenarios with rotating roles (mother, teacher, child) practiced three times daily. The final session reviewed relapse prevention strategies using paradoxical techniques, concluded the intervention, and administered the post-test.

After obtaining the necessary permissions from the Hamrah Counseling and Rehabilitation Center in Saveh, the researchers accessed participant files. Initial phone interviews were conducted with the mothers, and after random assignment into groups, all participants completed the research questionnaires as a pre-test. The experimental group underwent the schedule-based paradoxical therapy in eight 90-minute weekly group sessions. The control group received no intervention during the same period. After completion of the sessions, both groups completed the questionnaires again as a post-test.

Data Analysis

Data were analyzed using multivariate analysis of covariance (MANCOVA) with SPSS version 26.

Findings and Results

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The sample of the present study consisted of 20 children, with 10 participants in the experimental group (mean age = 7.34 ± 1.04) and 10 in the control group (mean age = 7.06 ± 1.55). These statistics indicate that the two groups were homogeneous in terms of age. Table 1 presents descriptive statistics for the variables of separation anxiety and mother–child interaction.

Table 1

Descriptive Statistics for Study Variables

Variable	Group	Pre-test Mean	SD	Post-test Mean	SD	Kolmogorov-Smirnov Statistic	p
Separation Anxiety	Experimental	45.40	14.73	28.55	13.32	0.147	0.078
	Control	45.75	13.62	44.01	10.00	0.132	0.072
Mother–Child Interaction	Experimental	75.55	35.53	116.75	3.13	0.111	0.059
	Control	76.10	36.70	77.20	4.00	0.119	0.061

As shown in Table 1, the mean scores for separation anxiety and mother–child interaction are presented for both the control and experimental groups at pre-test and post-test stages. While the control group showed minimal change in these variables, the experimental group exhibited a noticeable reduction in separation anxiety and a significant increase in mother–child interaction following the intervention.

The Kolmogorov–Smirnov test indicated that the distribution of data did not significantly deviate from normality (p>0.05), fulfilling the assumption of normal distribution. Additionally, preliminary analysis for ANCOVA assumptions revealed no outliers (confirmed via boxplots), and homogeneity of regression slopes was met. The interaction between group and pre-test score for separation anxiety was not significant (p = 0.247), and for mother–child interaction, it was also non-significant (p = 0.316).

The MBox test showed that the covariance matrices of dependent variables were equal across groups (F= 1.802, p= 0.148), and Levene's test confirmed homogeneity of variances: For separation anxiety: F= 2.802 (p>0.05) and for mother–child interaction: F = 1.433 (p > 0.05). Thus, multivariate ANCOVA assumptions were met, and analysis proceeded using Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root—all results are shown in Table 2.

Table 2

Multivariate ANCOVA Significance Test for Group Differences

Test	Value	F	p-value	Partial Eta Squared
Pillai's Trace	0.99	2013.762	≤ 0.01	0.89
Wilks' Lambda	0.005	2013.762	≤ 0.01	0.89
Hotelling's Trace	191.787	2013.762	≤ 0.01	0.89
Roy's Largest Root	191.787	2013.762	≤ 0.01	0.89

The results indicate a statistically significant difference between the two groups on at least one of the dependent variables, which can be attributed to the effect of paradoxical therapy.

Table 3

ANCOVA Results for the Effect of Schedule-Based Paradoxical Therapy on Separation Anxiety and Mother–Child Interaction

Source	SS	df	MS	F	p-value	Eta^2
Separation Anxiety						
Corrected Model	1456.902	3	458.634	8.878	0.001	0.571
Pre-test	441.679	1	441.679	8.078	0.010	0.288
Group	378.242	1	378.242	6.914	0.016	0.257
Error	1094.056	36	30.390			
Mother–Child Interaction						
Corrected Model	233.731	3	116.866	82.906	0.000	0.888
Pre-test	153.065	1	153.065	108.586	0.000	0.838

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Group	21.103	1	21.103	14.971	0.001	0.416
Error	29.602	36	0.822			

Based on the above results, there is a statistically significant difference between the experimental and control groups for both variables examined. The F-values were significant at $p < 0.05$, and the differences favored the experimental group. Therefore, the schedule-based paradoxical therapy program was effective in reducing separation anxiety symptoms and improving mother–child relationship functioning in children aged 6 to 9 (Table 3).

Discussion and Conclusion

This study aimed to investigate the effectiveness of a schedule-based paradoxical therapy program in reducing separation anxiety symptoms and improving mother–child relationship functioning in children aged 6 to 9 years. The findings demonstrated that the paradoxical schedule-based intervention was effective in both reducing anxiety symptoms and enhancing mother–child interaction. These results are consistent with the prior findings (Basharat, 2023, 2025).

The results can be interpreted through the conceptual framework of paradoxical therapy, a therapeutic approach particularly effective for addressing separation anxiety in children. While separation anxiety is a natural response in early childhood, its intensification and disruption of daily functioning can signify a disorder. In such cases, paradoxical therapy serves as a powerful tool to both reduce anxiety and foster positive relational patterns between the child and the caregiver. Unlike direct approaches that aim to eliminate anxiety symptoms, paradoxical therapy operates on reverse psychology principles. It encourages the child not to avoid, but rather face and experience the symptoms in a controlled and supportive setting. Through exposure to anxiety-provoking situations in a paradoxical manner, children learn to recognize, tolerate, and regulate their emotional responses (Basharat, 2025).

The turn-taking management program, through two mechanisms—self-reduction and interaction —forms both communication changes and personal changes at the behavioral, cognitive, and personality levels, based on the emotional experiences arising from this technique and the interaction mechanism. For example, role-playing practice will be effective in two ways, in that the situation that caused the child anxiety is now artificially recreated, in a situation where anxiety does not exist and indirectly, ego empowerment takes place through controlling anxiety in a situation that has always been present (Saadati et.al, 2025). On the other hand, with the mother's role-playing, a sign that was valuable and with which the child received the mother's attention appears ineffective in the child's eyes. In general, paradoxical therapy uses techniques that artificially expose the child to separation, cutting off the connection between anxiety. (Besharat, 2025).

Overall, paradoxical therapy uses techniques that artificially expose the child to separation without posing a threat to their safety or mental health, allowing the child to gain a new understanding of separation. The child learns that separation from the parent is not something that threatens them, and this process helps reduce separation anxiety. It also strengthens the emotional bond and fosters positive interactions between the parent and child, as the parent is actively and supportively present with the child and guides them in dealing with their anxiety by creating a safe environment (Basharat, 2023).

In short, paradoxical therapy indirectly reduces separation anxiety in children by creating time-limited paradoxical conditions and helps improve communicative and emotional interactions between parents and children. The duration of PTC therapy enables changes in the structure of everyday life by maintaining the normal course of life, ultimately leading to a reduction in problems and an improvement in the quality of relationships.

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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 Declaration of Helsinki, which provides guidelines for ethical research involving human participants. Ethical considerations in this study included the fact that participation was entirely optional.

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 contribute to this study.

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