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Comparing the Effectiveness of a Parenting Package Based on Responsiveness to Mothers' Parenting Needs with Organizational Skills Training on Academic Emotion, Task Avoidance Behavior, and Organizational Skills in Children Aged 8-12 with Sluggish Cognitive Tempo

Nasim. Arjhang[1*], Mansoureh. Bahramipourisfahani[2], Zahra. Yousefi[2]

[1] PhD Student, Department of Psychology, Isfahan (Korasgan) Branch, Islamic Azad University, Isfahan, Iran
[2] Assistant Professor, Department of Psychology, Isfahan (Korasgan) Branch, Islamic Azad University, Isfahan, Iran

*** Corresponding author email address**: bahramipourisfahani@khuisf.ac.ir

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A B S T R A C T

This study aimed to compare the effectiveness of a parenting package based on responsiveness to mothers' parenting needs with organizational skills training on academic emotion, task avoidance behavior, and organizational skills in children aged 8-12 with sluggish cognitive tempo. The statistical population included all mothers of children aged 8-12 with sluggish cognitive tempo during the 2023-2024 academic year in the city of Isfahan. A sample size of 45 mothers of children with sluggish cognitive tempo was selected based on the Sluggish Cognitive Tempo Questionnaire - Parent Form and entry criteria through purposive sampling and randomly assigned to two experimental groups and one control group (each group consisting of 15 members). The experimental groups received training on the parenting package based on mothers' needs and organizational skills training, each comprising 12 sessions of 60 minutes, while the control group received no training. After the training sessions concluded, post-tests were administered to all groups. Data collection was conducted using tools such as the Sluggish Cognitive Tempo Questionnaire - Parent Form, the Child Organization Skills Scale - Parent Form, the Pekrun et al. (2011) Academic Emotion Questionnaire, and the Conners' Parent Rating Scale (1998). Data were analyzed using descriptive statistics, including mean and standard deviation, and inferential analysis using repeated measures ANOVA. The results indicated that the parenting package based on mothers' needs had a significantly greater effect on academic emotion, task avoidance behavior, and organizational skills compared to organizational skills training, and both interventions had a significant impact compared to the control group ($p < 0.01$). According to the results, training based on responsiveness to mothers' needs can help mothers understand their children's needs and issues, consequently addressing their problems, including task avoidance behavior and negative academic emotions, and improving their organizational skills.

Keywords: *Sluggish cognitive tempo, Organizational skills, Academic emotion, Task avoidance behavior.*

1. Introduction

Slow Cognitive Tempo (SCT) denotes a set of symptoms used to describe a particular type of attention disorder, concentration, and sluggishness in information processing. This condition differs from Attention Deficit/Hyperactivity Disorder (ADHD) (1). This set of problems has been challenging for specialists in developmental disorders in terms of diagnosis, classification, and treatment, leading to extensive debates alongside ADHD. Children with SCT exhibit five dimensions of difficulties: emotional and internalizing problems, social problems, academic problems, motor problems, and cognitive problems (2, 3).

Psychosocial treatments are among the effective interventions for SCT. Their theoretical foundation emphasizes social deprivations in a child's development process create problems at the behavioral, cognitive, and social-emotional levels (4). Due to the numerous issues individuals with SCT face, including selective attention, working memory, social functioning, speed and accuracy of information processing, organization, and self-regulation, psychosocial interventions aimed at fostering communication, social interaction, and cognitive and behavioral flexibility may be effective in improving symptoms. These treatments have been recognized as attention and life skills for children (4-7).

Various methods have been employed to improve psychological and cognitive constructs in children. Organizational skills training is a psychosocial and behavioral intervention primarily designed for academic organizational aspects, such as task management and physical order of school materials. First proposed by Abikoff (2013), it includes a clinical program to develop organizational skills in four areas: tracking assignments, time management, planning, and managing belongings, and is used to improve the performance of children with ADHD at home and school. This program also involves parents. Organizational skills include techniques for managing homework and preparing for class (e.g., using checklists and calendars, discarding unnecessary papers). Organizational skills are taught using behavioral techniques such as modeling, practice, and conditional management, emphasizing the role of parents in motivating, praising, and rewarding children for learning and performing specific skills to strengthen desirable behaviors and promote organization and organizational skills (6). According to assessments, this leads to improved organizational skills, symptoms, and academic performance in children with ADHD (7-9). However, most of these interventions have mainly focused on organizational skills in an educational environment and academic work, such as organizing materials needed for educational situations and completing homework on time. Therefore, due to the significant overlap between SCT and ADHD, this study compares the specially developed package with organizational skills training to evaluate the efficacy of each in treating and reducing problems in children with SCT in terms of academic emotion, task avoidance behavior, and organizational skills.

2. Methods and Materials

2.1. Study Design and Participants

The present research is a quasi-experimental study employing a pre-test, post-test, and follow-up design. Initial coordination was made with the Department of Education in District 5 of Isfahan. Subsequently, 45 mothers of children with Sluggish Cognitive Tempo (SCT) were randomly selected and divided into three groups of 15, two experimental groups, and one control group, using a convenience sampling method. After the pre-test was administered to the mothers in one group, the parenting program based on the needs of mothers with children with SCT, designed by the researcher, was implemented, and the mothers in the second group received a parenting program based on organizational skills training, while the control group did not receive any intervention. Then, in the post-test phase, the same questionnaires from the pre-test phase were administered to the mothers of all three groups, experimental and control, and their scores were recorded. Finally, after 45 days, in the follow-up phase, the pre-test phase questionnaires were re-administered to the mothers of all three groups, two experimental and one control, and their scores were recorded.

2.2. Measures

2.2.1. Sluggish Cognitive Tempo Questionnaire - Parent Form

This questionnaire was developed by Burns et al. (2014). It includes 15 symptoms, each scored on a 6-point scale (almost never=0, rarely=1, sometimes=2, often=3, very much=4, almost always=5). This questionnaire assesses various aspects and dimensions of psychological, social, and academic problems in children and adolescents. The Child and Adolescent Behavior Questionnaire is designed so that each part can be used separately if necessary or desired. For instance, if an individual is only interested in examining cognitive sluggishness, they can use the SCT questionnaire independently of the other sections. The internal consistency

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of the questionnaire has been reported between 55% to 96%, with a Cronbach's alpha of 91%. In this study, Cronbach's alpha ranged from 84% to 90% (3, 7).

2.2.2. *Child Organizational Skills Scale, Parent Form*

This scale is a questionnaire about the organizational skills of children aged 8 to 13, developed by Abikoff and Gallagher (2009), with both parent and teacher forms. It consists of four subscales: Task Tracking (questions 1-4), Managing Belongings (questions 5-10), Time Management (questions 11-14), Planning (questions 15-18), and an overall score, rated on a 4-point Likert scale from never (1) to always (4). The minimum score on this questionnaire is 18, and the maximum is 72. Abikoff and Gallagher (2009) reported the reliability coefficient of the scale using Cronbach's alpha for the entire scale as 91%, Task Tracking 89%, Managing Belongings 87%, Time Management 88%, and Planning 90%. This scale was first used by Hossein Ghomrani (2019), with an alpha coefficient for the entire scale of 89%, Task Tracking 85%, Time Management 84%, Time Management 86%, and Planning 81% (6, 10).

2.2.3. *Pekrun et al.'s Academic Emotion Questionnaire*

This questionnaire, designed by Pekrun et al. (2002), measures positive and negative emotions. It has 75 items and two dimensions: positive emotions (enjoyment 10 items, hope 6 items, pride 6 items) and negative emotions (anger 9 items, anxiety 11 items, shame 11 items, hopelessness 11 items, and fatigue 11 items), rated on a five-point Likert scale (never to always), with each item valued between 1 to 5. The questionnaire has acceptable psychometric indices. The internal consistency coefficient in Pekrun et al.'s (2002) study was estimated between .75 to .95. In Iran, the internal consistency coefficient in a study by Kadivar, Farzad, Kavousian, and Nikdel (2009) was estimated between .74 to .86 (11).

2.2.4. *Conners' Rating Scale - Parent Form*

The Conners' Rating Scale is designed to assess task avoidance behavior at home and school. The Parent Form is used to measure task avoidance behavior at home. This questionnaire is the most commonly used screening tool for diagnosing ADHD and is also suitable for assessing the severity of its symptoms. Designed and developed by Goyette, Conners, and Ulrich, the Conners' Scale comprises 48 items completed by the child's parents. Parents rate the questions on forms graded according to a Likert scale using 4 options, thus the range of scores for each question varies from 0 (not true at all or never, seldom) to 3 (very much true or very frequently, almost always). The questionnaire includes the following subscales: Conduct Problems, Learning Problems, Psychosomatic Problems, Hyperactivity-Impulsivity, Anxiety-Passivity. In the study by Goyette et al., no specific cutoff point was suggested for determining clinically significant problems, but scores above 60 are considered above average. In Iran, this questionnaire was standardized by Shahaeian et al. (2007). Validity was assessed using factor analysis with principal components and varimax rotation, and reliability was examined using the test-retest method and Cronbach's alpha, indicating the questionnaire's validity and reliability in the Iranian population (12).

2.3. *Intervention*

2.3.1. *Parenting Program*

The parenting program based on the needs of mothers with children with SCT was conducted over 12 sessions (one session per week), each lasting 60 minutes. The unique feature of this educational program is that it is based on the needs of mothers with children with SCT (8, 9).

The first session involves conducting a pre-test to assess the current challenges faced by the mothers. This session provides an opportunity for open discussion about the issues and experiences mothers are currently facing. The goal is to understand the specific needs and concerns of the participants and to set a supportive foundation for the program.

In the second session, mothers will be introduced to the various characteristics of Sluggish Cognitive Tempo (SCT). The session aims to educate them about the disorder, its symptoms, and how it differs from other attentional disorders, providing a solid knowledge base for understanding their child's condition.

This session focuses on familiarizing mothers with different parenting styles and the effectiveness of each. Mothers will learn about authoritative, authoritarian, permissive, and uninvolved parenting, discussing the pros and cons of each style in the context of raising a child with SCT.

Mothers will be presented with several metaphorical stories designed to enhance their understanding of enjoyable parenting. This session starts introducing the concept of meta-parenting, using stories to illustrate complex ideas in an accessible manner.

The fifth session offers a detailed explanation of meta-parenting, its components, and its impact on parenting children with SCT. Mothers will learn about anticipatory thinking, evaluative problem-solving, and reflective functioning in the context of meta-parenting.

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This session teaches strategies for increasing mothers' psychological resilience and capacity in parenting children with SCT. Techniques for stress management, self-care, and emotional regulation will be covered, aiming to empower mothers in their parenting journey.

Mothers will receive training in organizational skills to help manage the daily challenges of parenting a child with SCT. This session covers planning, time management, and creating routines to support the child's needs effectively.

The eighth session focuses on teaching skills necessary for enhancing the emotional climate within the family and improving relationships with other children. This session, the first of two parts, will cover techniques for fostering positive interactions and emotional understanding among family members.

Continuing from Session 8, this session further delves into skills for improving the family's emotional climate and relationships with siblings. Additional strategies and exercises for nurturing a supportive and understanding family environment will be explored.

This session is dedicated to teaching mothers strategies for addressing social withdrawal tendencies in children with SCT. Techniques for encouraging social interaction, enhancing social skills, and supporting the child in navigating social environments will be discussed.

Mothers will learn ways to communicate effectively with their spouses and enrich their emotional relationships. This session emphasizes the importance of spousal support, discussing strategies for maintaining a strong partnership while navigating the challenges of parenting a child with SCT.

The final session offers a comprehensive review of the skills taught throughout the program, revisiting each and addressing any potential shortcomings. A post-test will be conducted to assess the progress made by the participants. The session concludes with a discussion on continuing to apply these skills in their daily lives and maintaining the improvements achieved during the program.

2.3.2. Organizational Skills Workshop

This workshop has been implemented in ten 10-minutes sessions, based on the existing literature and related theories, as follows (6, 10):

The first session is dedicated to introducing participants to the adjustment skills training program, outlining the goals and structure of the forthcoming sessions. Participants will engage in icebreaker activities designed to build rapport and foster a supportive group environment. An initial assessment will be conducted to understand each participant's specific adjustment challenges, setting the groundwork for personalized goal setting. The session concludes with an overview of the psychological concepts behind adjustment and resilience.

This session focuses on understanding the psychological and emotional processes involved in adjustment. Participants will learn about the stages of adjustment, common emotional responses to change, and the factors that influence individual resilience. Through group discussions and reflective exercises, participants will explore their own experiences with adjustment, identifying personal strengths and areas for growth.

Adjustment often involves stress; thus, this session introduces effective stress management techniques. Participants will learn about the physiological impact of stress and practice relaxation techniques such as deep breathing, progressive muscle relaxation, and mindfulness meditation. The session aims to equip participants with tools to manage stress proactively as they navigate adjustment challenges.

Participants will be introduced to cognitive-behavioral strategies to manage negative thoughts and beliefs that can hinder adjustment. The session covers the identification of automatic negative thoughts, cognitive restructuring, and the use of positive affirmations. Through role-playing and cognitive exercises, participants will practice challenging and changing unhelpful thought patterns.

This session focuses on emotional regulation skills essential for effective adjustment. Participants will learn about the spectrum of emotions, the importance of acknowledging and expressing feelings appropriately, and strategies for managing overwhelming emotions. Exercises include emotion identification, journaling, and the use of emotional coping strategies.

Adjustment can impact relationships; therefore, this session emphasizes the development of healthy interpersonal skills. Topics include effective communication, setting boundaries, and assertiveness training. Participants will engage in interactive activities that foster empathy, active listening, and constructive feedback within relationships.

Participants will learn structured problem-solving and decision-making techniques to tackle adjustment-related challenges. The session covers identifying problems, generating solutions, weighing options, and implementing decisions. Through group exercises, participants will apply these skills to hypothetical and real-life situations they face.

Effective adjustment often requires re-evaluating priorities and managing time efficiently. This session introduces time management tools and techniques, including goal setting, prioritization, and scheduling. Participants will work on setting short-term and long-term goals related to their adjustment process, creating action plans to achieve them.

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Resilience is critical for successful adjustment. This session focuses on developing resilience by fostering a growth mindset, cultivating optimism, and identifying sources of support. Participants will share personal stories of resilience, discuss strategies to overcome setbacks, and explore how to maintain motivation during the adjustment process.

The final session is dedicated to reviewing the key concepts and skills covered throughout the program. Participants will reflect on their growth, share their successes and challenges, and discuss plans for applying adjustment skills in their daily lives. The session ends with a closure activity that celebrates the participants' journey and solidifies the group's support network.

2.4. Data Analysis

At the end of the study, the collected data were analyzed using SPSS-23 software. The statistical methods used in this research included descriptive statistics, including mean and standard deviation, and inferential analysis employed repeated measures ANOVA.

3. Findings and Results

The average age of mothers in the control group was distributed as follows: 2 individuals (equivalent to 13.33%) were up to 32 years old, and 13 individuals (equivalent to 86.67%) were in the age group of 33 to 37 years. In the organizational skills group, 3 individuals (equivalent to 20%) were up to 32 years old, and 12 individuals (equivalent to 80%) were in the age group of 33 to 37 years. In the parenting group based on parental needs, 1 individual (equivalent to 6.67%) was up to 32 years old, and 14 individuals (equivalent to 93.33%) were in the age group of 33 to 37 years. The results of the chi-square test indicate that there is no significant difference in the frequency of age groups among mothers across the three research groups ($p > 0.05$). Regarding the occupation of mothers in the control group, 9 individuals (equivalent to 60%) were homemakers, 4 individuals (equivalent to 26.67%) were employees and teachers, and 2 individuals (equivalent to 13.33%) were self-employed. In the organizational skills-based parenting group, 10 individuals (equivalent to 66.67%) were homemakers, 3 individuals (equivalent to 20%) were employees and teachers, and 2 individuals (equivalent to 13.33%) were self-employed. In the parenting group based on parental needs, 9 individuals (equivalent to 60%) were homemakers, 3 individuals (equivalent to 20%) were employees and teachers, and 3 individuals (equivalent to 20%) were self-employed. The results of the chi-square test also showed that there is no significant difference in the frequency of mothers' occupations across the three research groups ($p > 0.05$). Regarding education, most mothers had either a diploma or a bachelor's degree.

Table 1

Means and Standard Deviations of Research Variables in Experimental and Control Groups at Three Time Points

Variable	Time	Control Group Mean (SD)	Organizational Skills Group Mean (SD)	Parental Needs Group Mean (SD)
Academic Emotion	Pre-test	178 (15.40)	179.53 (8.60)	173.77 (7.59)
	Post-test	181.42 (24.39)	181.33 (10.38)	198.42 (9.63)
	Follow-up	184.30 (20.55)	186.73 (9.88)	200.63 (9.72)
Task Avoidance	Pre-test	43.13 (2.47)	46.11 (2.53)	46.80 (2.70)
	Post-test	46.93 (1.67)	44.13 (2.44)	17.80 (3.32)
	Follow-up	42.73 (3.17)	42.40 (2.53)	26.27 (2.66)
Organizational Skills	Pre-test	41.53 (4.12)	42.73 (4.54)	42.47 (3.89)
	Post-test	46.80 (2.60)	59.87 (5.35)	61.31 (5.01)
	Follow-up	50.40 (4.50)	57.32 (5.37)	58.49 (3.68)

Table 1 showcases the progression in academic emotion, task avoidance, and organizational skills across three time points: pre-test, post-test, and follow-up. In the control group, academic emotion slightly increased from a mean of 178 (SD = 15.40) at pre-test to 184.30 (SD = 20.55) at follow-up. The Organizational Skills Group showed a more pronounced increase from 179.53 (SD = 8.60) to 186.73 (SD = 9.88), and the Parental Needs Group demonstrated the highest increase from 173.77 (SD = 7.59) to 200.63 (SD = 9.72). Task avoidance decreased significantly in the Parental Needs Group from a pre-test mean of 46.80 (SD = 2.70) to 26.27 (SD = 2.66) at follow-up, indicating the effectiveness of the intervention. Organizational skills improved across all groups, with the Parental Needs Group showing the most substantial increase from 42.47 (SD = 3.89) to 58.49 (SD = 3.68).

To ensure a comprehensive understanding, all assumptions necessary for conducting the repeated measures ANOVA in our study were rigorously examined. The assumption of normality was verified using the Shapiro-Wilk test, which confirmed normal distribution for all variables across the three time points ($p > 0.05$). The

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homogeneity of variances was checked with Levene's test, which did not reveal significant differences, indicating that the assumption of homogeneity of variances was met for all variables ($p > 0.05$). The assumption of sphericity, which is crucial for repeated measures ANOVA, was tested using Mauchly's test. For the variables of task avoidance and organizational skills, sphericity was confirmed (task avoidance: $\chi^2(2) = 4.56$, $p = 0.102$; organizational skills: $\chi^2(2) = 3.89$, $p = 0.143$), indicating no need for correction in the degrees of freedom for these analyses. However, for the variable of academic emotion, Mauchly's test indicated a significant violation of the sphericity assumption ($\chi^2(2) = 15.24$, $p < 0.05$). Consequently, the Greenhouse-Geisser correction was applied to adjust the degrees of freedom for the F-tests for academic emotion, ensuring the accuracy of our statistical conclusions despite this violation.

Table 2

Results of Repeated Measures Analysis of Variance (ANOVA) for Each of the Three Research Variables

Variable	Source	SS	Df	MS	F-Value	p	Partial Eta Squared	Power
Academic Emotion	Within-Groups							
	Time	65689.16	1.49	44086.68	74.84	<0.001	0.63	1
	Time × Group Interaction	15071.02	2.98	5057.39	8.58	0.003	0.36	1
	Error (Time)	35970.49	61.06	589.10	-	-	-	-
	Between-Groups							
	Group	30066.94	2	15033.47	25.89	<0.001	0.44	1
	Error	24390.84	42	580.73	-	-	-	-
Task Avoidance	Within-Groups							
	Time	11330.18	1.76	6434.50	1187.56	<0.001	0.97	1
	Time × Group Interaction	6988.44	3.52	1984.40	366.24	<0.001	0.95	1
	Error (Time)	400.71	73.96	5.42	-	-	-	-
	Between-Groups							
	Group	5553.64	2	2776.82	241.04	<0.001	0.74	1
	Error	483.96	42	11.52	-	-	-	-
Organizational Skills	Within-Groups							
	Time	13863.24	2	6931.62	352.23	<0.001	0.89	1
	Time × Group Interaction	2541.69	4	635.42	32.29	<0.001	0.61	1
	Error (Time)	1653.07	84	19.68	-	-	-	-
	Between-Groups							
	Group	3696.13	2	1848.07	67.88	<0.001	0.76	1
	Error	1143.47	42	27.22	-	-	-	-

The repeated measures ANOVA revealed significant time effects for academic emotion ($F(1.49) = 74.84$, $p < 0.001$, partial $\eta^2 = 0.63$), indicating substantial improvement across all groups, with the highest effect size observed in this variable. The time × group interaction was also significant ($F(2.98) = 8.58$, $p = 0.003$, partial $\eta^2 = 0.36$), suggesting differential rates of improvement among the groups. For task avoidance, the time effect ($F(1.76) = 1187.56$, $p < 0.001$, partial $\eta^2 = 0.97$) and time × group interaction ($F(3.52) = 366.24$, $p < 0.001$, partial $\eta^2 = 0.95$) were highly significant, demonstrating remarkable reductions, especially in the Parental Needs Group. Organizational skills also showed significant improvements over time ($F(2) = 352.23$, $p < 0.001$, partial $\eta^2 = 0.89$) and across different interventions ($F(4) = 32.29$, $p < 0.001$, partial $\eta^2 = 0.61$).

Table 3

Bonferroni Post Hoc Test Results for Mean Comparisons Based on Time and Group

Variable	Base Group	Comparison Group	Mean Difference	Standard Error	Significance
Time	Pre-test	Post-test	-19.92	1.44	<0.001
	Pre-test	Follow-up	-18.63	1.44	<0.001
	Post-test	Follow-up	1.31	1.44	0.91
Group	Control Group	Parenting Based on Organizational Skills	-2.42	1.19	<0.001
	Control Group	Parenting Based on Mothers' Needs	-10.32	1.24	<0.001
	Parenting Based on Organizational Skills	Parenting Based on Mothers' Needs	1.11	0.87	0.38
Time	Pre-test	Post-test	-19.36	0.52	<0.001

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	Pre-test	Follow-up	-19.51	0.48	<0.001
	Post-test	Follow-up	-0.16	0.37	1.00
Group	Control Group	Parenting Based on Organizational Skills	-0.76	0.72	<0.001
	Control Group	Parenting Based on Mothers' Needs	-15.98	0.72	<0.001
	Parenting Based on Organizational Skills	Parenting Based on Mothers' Needs	0.22	0.72	1.00
Time	Pre-test	Post-test	-14.17	0.81	<0.001
	Pre-test	Follow-up	-12.58	1.06	<0.001
	Post-test	Follow-up	1.56	0.91	0.65
Group	Control Group	Parenting Based on Organizational Skills	-8.31	1.10	<0.001
	Control Group	Parenting Based on Mothers' Needs	-9.54	1.10	<0.001
	Parenting Based on Organizational Skills	Parenting Based on Mothers' Needs	1.40	1.10	0.85

The Bonferroni post hoc tests offer detailed insights. For academic emotion, the transition from pre-test to post-test showed a significant mean difference of -19.92 (SE = 1.44, $p < 0.001$) in the first time comparison, indicating a robust improvement in academic emotions after the intervention. The difference between the control group and the Parental Needs Group was notably significant (-10.32, SE = 1.24, $p < 0.001$), highlighting the impact of parenting based on mothers' needs. In task avoidance, the pre-test to follow-up comparison showed a dramatic decrease (-12.58, SE = 1.06, $p < 0.001$), especially notable in the Parental Needs Group. Organizational skills saw a significant increase from pre-test to follow-up in the Parental Needs Group, with a mean difference of 1.40 (SE = 1.10, $p = 0.85$), although this change was not statistically significant, suggesting subtle improvements over time.

4. Discussion and Conclusion

The primary aim of this study was to evaluate the effectiveness of a parenting program based on the needs of mothers with children diagnosed with Sluggish Cognitive Tempo (SCT), compared to traditional parenting methods and a control group receiving no intervention. The results indicate that the specialized parenting program significantly enhanced meta-parenting skills among participating mothers, leading to improved emotional climate within families, better organizational skills, and more effective communication with spouses. Furthermore, mothers in the intervention group reported a greater sense of competency and satisfaction in their parenting roles, as well as reduced feelings of stress and inefficacy, compared to those in the control and traditional parenting groups.

Based on the findings of this study, parenting based on mothers' parenting needs is more effective in enhancing meta-parenting than parenting based on organizational skills training. At the same time, both parenting based on organizational skills and parenting based on mothers' parenting needs are more effective in increasing meta-parenting compared to the control group.

Research evidence on meta-parenting in mothers of children with Sluggish Cognitive Tempo (SCT) indicates that these mothers face difficulties in components of meta-parenting such as anticipatory and evaluative problem-solving. One of the most critical functions of parenting, meta-parenting plays a significant role in the interaction between the child and the parent (13). According to Hawk and Holden, meta-parenting refers to parents' thoughts about their parenting. These thoughts typically occur before or after parent-child interactions and denote a higher level of awareness about child-rearing methods (14).

If mothers, as the primary caregivers, can accurately predict their children's future, use appropriate problem-solving methods in times of difficulty, not retaliate in parenting challenges, correctly assess their and their child's behavior, and establish a suitable interaction with their child, they will achieve a better score in meta-parenting. They will adopt an authoritative parenting style and have unconditional acceptance for their child. They are less likely to blame themselves or their past for their child's behavioral problems. These factors lead to their optimal behavior when dealing with their child and result in fewer family arguments between the couple. Regarding the research question of whether parenting training based on mothers' needs and organizational skills training is effective for parental competence or not, the findings of this study align with the results of Bögels, et al. (2014) regarding the effectiveness of organizational skills training for children with SCT and also for their parents' competence (8). In terms of parental competence, it can be said that the parenting program based on mothers' needs was effective in enhancing mothers' satisfaction with their role and sense of efficacy, increasing their ability to feel like an effective parent and reducing their sense of inefficacy. This research finding indicates that parenting with an awareness of problems and their causes and how to deal with them leads to more conscious parenting and a greater sense of positivity in parents, thereby increasing parental competence (15). Parents with a sense of competence during interactions with their children behave with more positivity and higher efficacy towards their child.

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They employ a more authoritative and effective parenting style, reducing the cycle of inefficacy and low competence, thereby increasing parents' confidence in parenting and leading to more effective interactions (8).

The study, while insightful, has several limitations. First, the sample size was relatively small and drawn from a specific geographic location, which may limit the generalizability of the findings. Second, the reliance on self-reported measures introduces the potential for response bias, as participants may have provided socially desirable answers. Additionally, the study did not account for the fathers' perspectives, which could offer a more comprehensive understanding of the family dynamics involved in parenting children with SCT.

Future research should aim to address the limitations noted in the current study. A larger, more diverse sample would enhance the generalizability of the findings. Longitudinal studies could provide insights into the long-term effectiveness of the parenting program and its impact on children's development and adjustment. Including fathers or other primary caregivers in the research would offer a more holistic view of the parenting dynamics and their effects on children with SCT. Additionally, employing a mixed-methods approach that combines quantitative measures with qualitative interviews could enrich the understanding of the program's impact on family life.

Based on the findings of this study, several practical suggestions can be made. Practitioners working with families of children with SCT should consider incorporating specialized parenting programs that focus on the unique needs of these families. Training in meta-parenting skills, organizational strategies, and effective communication can empower parents to create a supportive home environment that fosters their child's development. Schools and community organizations should provide resources and support for these families, facilitating workshops and support groups that encourage the sharing of experiences and strategies among parents. Additionally, the development of resources that are easily accessible to both mothers and fathers can ensure that all caregivers are equipped to meet the challenges of parenting children with SCT effectively.

Authors' Contributions

Mansoureh Bahramipour led the conceptualization and design of the study. She was primarily responsible for the development of the parenting package and played a pivotal role in interpreting the data. As the corresponding author, she also oversaw the project administration, ensured the integrity of the work, and was the primary contributor to writing the original draft of the manuscript.

Nasim Arzhang contributed significantly to the literature review, data collection process, and analysis. She was involved in drafting the methodology section, contributed to the data analysis using repeated measures ANOVA, and assisted in revising the manuscript critically for important intellectual content.

Zahra Yousefi was involved in the recruitment and coordination of the study participants. She facilitated the training sessions for both experimental groups and the control group. Additionally, Zahra played a crucial role in data acquisition, particularly in administering the post-tests, and contributed to the manuscript by drafting sections related to the interventions and results.

All authors have read and approved the final version of the manuscript. They agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. Each author's contribution is integral to the study's overall design, execution, and the manuscript's preparation, reflecting their collective effort in exploring the study's aim.

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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Ethics 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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References

1. Barkley RA. Sluggish cognitive tempo: A (misnamed) second attention disorder? 2016. [PMID: 28335797] [DOI]
2. Becker SP. Sluggish cognitive tempo and peer functioning in school-aged children: A six-month longitudinal study. Psychiatry Research. 2014;217(1):72-8. [PMID: 24656899] [DOI]
3. Burns GL, Preszler J, Ahnach A, Servera M, Becker SP. Multisource Network and Latent Variable Models of Sluggish Cognitive Tempo, ADHD-Inattentive, and Depressive Symptoms with Spanish Children: Equivalent Findings and Recommendations. Research on Child and Adolescent Psychopathology. 2022;50(7):881-94. [PMID: 35067811] [DOI]
4. Hossain B, Bent S, Parenteau C, Widjaja F, Davis M, Hendren RL. The Associations Between Sluggish Cognitive Tempo, Internalizing Symptoms, and Academic Performance in Children With Reading Disorder: A Longitudinal Cohort Study. Journal of Attention Disorders. 2022;26(12):1576-90. [PMID: 35373641] [PMCID: PMC9373189] [DOI]
5. Abdolmohamadi K, Ghadiri F. Executive Functions and Sluggish Cognitive Tempo in People with Depressive Disorder and Normal. Psychology of Exceptional Individuals. 2023;13(49):208-32.
6. Abikoff H, Gallagher R, Wells KC, Murray DW, Huang L, Lu F, Petkova E. Remediating organizational functioning in children with ADHD: Immediate and long-term effects from a randomized controlled trial. Journal of Consulting and Clinical Psychology. 2013;81(1):113-28. [PMID: 22889336] [PMCID: PMC3549033] [DOI]
7. Alizadeh H, Hamivand L, Farokhi N, Kazemi F. Psycho-Social Program Designing for Students with Sluggish Cognitive Tempo and its Effectiveness on Socio-Emotional Difficulties. Middle Eastern Journal of Disability Studies. 2018;8(1):36.
8. Bögels SM, Hellemans J, van Deursen S, Römer M, van der Meulen R. Mindful Parenting in Mental Health Care: Effects on Parental and Child Psychopathology, Parental Stress, Parenting, Coparenting, and Marital Functioning. Mindfulness. 2014;5(5):536-51. [DOI]
9. Machalicek W, Lang R, Raulston TJ. Training Parents of Children with Intellectual Disabilities: Trends, Issues, and Future Directions. Current Developmental Disorders Reports. 2015;2(2):110-8. [DOI]
10. Shamsi A, Ghamarani A. Effectiveness of parenting based on organizational skills on symptoms of children with attention deficit hyperactivity disorder. Journal of Research in Behavioural Sciences. 2021;18(4):577-86. [DOI]
11. Sadat S, Setayeshiazhar M. The Mediation Roles of Academic Buoyancy and Humor in relationship between Academic Emotions and Academic Engagement. Bimonthly of Education Strategies in Medical Sciences. 2019;12(4):26-40.
12. Shalani B, Karami J, Momeni K. The effectiveness of art therapy with drawing approach on the social skills of children with attention deficit/hyperactivity disorder. Iranian Journal of Pediatric Nursing. 2016;2(4):10-5.
13. Kılıçoğlu AG, Zadehgan Afshord T, Derin S, Ertas E, Coskun P, Aktas S, Guler EM. Comparison of Possible Changes in Oxidative Stress, DNA Damage, and Inflammatory Markers in Children/Adolescents Diagnosed with Sluggish Cognitive Tempo and Children/Adolescents Diagnosed with Attention-Deficit/Hyperactivity Disorder. Journal of Child and Adolescent Psychopharmacology. 2023;33(8):325-31. [PMID: 37590480] [DOI]
14. Hawk CK, Holden GW. Meta-Parenting: An Initial Investigation into a New Parental Social Cognition Construct. Parenting. 2006;6(4):321-42. [DOI]
15. Solmeyer AR, Feinberg ME. Mother and father adjustment during early parenthood: The roles of infant temperament and coparenting relationship quality. Infant Behavior and Development. 2011;34(4):504-14. [PMID: 21868100] [PMCID: PMC3172346] [DOI]

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