Original Article

The Effectiveness of Unified Protocols for Transdiagnostic Treatment on Detective Thinking and Reflective Functioning of Children with Type 1 Diabetes

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Abstract

Background: This study aims to explore the efficacy of unified protocols for a transdiagnostic treatment approach in enhancing detective thinking and reflective functioning in children diagnosed with type 1 diabetes (T1D). **Methods:** This quasi-experimental study involved pre- and post-tests with two experimental groups and one control group, followed by a 2-month follow-up period. Participants, T1D children aged 8–12 years old, were recruited from specialized pediatric clinics. They were randomly assigned to either experimental or control groups. The experimental group underwent a 10-session unified protocol for transdiagnostic treatment intervention, each lasting 60 minutes, with an additional 30-minute session involving mothers, conducted weekly. The control group did not receive any intervention during this period and remained on a waiting list. After completing the treatment sessions, both groups completed research questionnaires assessing detective thinking and reflective functioning in the post-test phase for comparison. **Results:** The study included 30 children with T1D across two groups. Repeated measures analysis of variance revealed that unified protocols for transdiagnostic treatment significantly enhanced detective thinking and reflective functioning in children with T1D ($P < 0.05$). The effects of the treatment persisted during the follow-up phase ($P < 0.001$). **Conclusions:** Integrated transdiagnostic therapy demonstrated effectiveness in improving detective thinking and reflective functioning in children diagnosed with T1D. Notably, these positive effects were sustained beyond the intervention period, indicating the treatment's potential as an efficient intervention strategy to enhance the psychological well-being of children with T1D.

Keywords: *Child, detective thinking, reflective functioning, type 1 diabetes mellitus, unified protocols for transdiagnostic treatment*

Introduction

Type 1 diabetes (T1D) is a metabolic disorder that poses significant physical and psychological challenges for children and their families.[1] The prevalence of T1D has been increasing globally, with rates rising from 0.61 in 2015 to 1.06 in 2020 in Iran, and an estimated 1.24 million people having T1D in the United States, a number projected to reach 5 million by 2050.[2-4]

Children with T1D often face disruptions in their family, school, and social lives, as well as physical and psychological difficulties. Research has consistently demonstrated a strong link between T1D and cognitive dysfunction, which can impede the management and emotional coping mechanisms related to the illness.[5-8]

Two key cognitive factors that are particularly relevant for children with T1D are detective thinking and reflective functioning. Detective thinking involves a systematic approach to scrutinizing emotional situations, while reflective functioning refers to the conscious capacity to introspect and contemplate one's own and others' mental and emotional states. Previous studies indicate that these cognitive abilities are often impaired in children with T1D, suggesting that psychological interventions could potentially ameliorate these challenges.[9-15]

Various psychological approaches, such as cognitive-behavioral therapy, mindfulness-based interventions, and metacognitive training, have been explored to improve detective thinking and reflective functioning in different patient populations. However, research specific to individuals with T1D remains limited and yields varying results. One promising approach is the use of transdiagnostic therapies, which

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focus on addressing the shared underlying mechanisms of emotional disorders. Integrated transdiagnostic therapy, in particular, combines cognitive-behavioral therapy strategies, mindfulness techniques, and heightened awareness, and has shown superiority over other treatments in addressing various emotional, anxiety, and mood disorders. This comprehensive approach targets the core processes that contribute to emotional dysregulation, making it a potentially effective intervention for the psychological challenges faced by children with T1D.[12,16-25]

Given the critical role of detective thinking and reflective functioning in effectively managing the disease and promoting mental well-being among children with T1D, alongside the escalating global prevalence of this condition and its associated complications and burdens on healthcare systems, the current study is of paramount importance. Investigating the impact of integrated transdiagnostic treatment on these key cognitive factors in children with T1D can provide valuable insights and inform the development of targeted psychological interventions to enhance the overall well-being of this patient population.

Materials and Methods

This is a quasi-experimental design of pre-test and post-test with a control group and a 2-month follow-up period. The study population consisted of children aged 8–12 years diagnosed with T1D, sourced from the pediatric endocrinology clinic in 2022. Thirty children meeting the inclusion criteria were randomly assigned into either the intervention or control group, with 15 participants in each. The inclusion criteria were being diagnosed with T1D by a pediatric endocrinologist, not taking psychiatric drugs, lack of acute or chronic mental disorders (based on clinical interviews), and not using concurrent psychological treatments. Non-cooperation or unwillingness of parents and their children to continue participating in sessions, failure to complete homework, and absence of more than two sessions in therapy sessions were noted as the exclusion criteria.

Before the intervention, parents' consent was obtained for their child's participation in the study, and parents and students were informed that their information remained confidential and that they could withdraw from the study whenever they were not willing to continue participating in the study. This research has been approved by the Research Ethics Committee of Isfahan Islamic Azad University(Khorasgan branch) with ethics code of IR.IAU.KHUISF.REC.1403.118.

To conduct the study, participants in each group completed questionnaires assessing problem-solving styles and reflective functioning. The intervention group underwent a unified protocol for transdiagnostic treatment intervention, comprising 10 weekly sessions lasting 60 minutes for children and 30-minute sessions for mothers (the protocol of the intervention is presented in Appendix 1), while the control group remained on a waiting list without receiving any intervention.

The study employed a group-based intervention format. The sessions were structured as follows:

Children's group: All the children participated in a 1-hour group session, during which they received educational lessons and engaged in practice exercises.

Mothers' group: After the children's group, the mothers joined a 30-minute group session to receive the training and educational materials.

In addition to the group-based components, the intervention included individual counseling sessions. Patients and mothers were provided with personalized consultations to address any specific problems or concerns they had. This allowed for tailored support to be offered to those who required it.

The group-based structure and the individual counseling sessions were designed to provide a comprehensive approach, targeting both the children and their mothers. This format aimed to maximize the benefits of the intervention by addressing the needs of the entire family unit.

The unified protocols for transdiagnostic treatment utilized in this study were structured according to Ehrenreich's treatment protocol[21] (2018) and conducted in a group format resembling a training class for participants in the experimental group [Table 1].

Data collection

Questionnaire of problem-solving style (Cassidy and Long, 1996)

The problem-solving styles questionnaire, developed and validated by Cassidy Long in 1996, comprises 24 closed-answer items categorized on a three-level spectrum, with options of "yes," "no," and "don't know."[26] Participants express their reactions to specific issues and situations by indicating agreement, disagreement, or uncertainty. Each response is scored accordingly: 1 for "yes," 0 for "no," and 0 for "don't know." Scores are tallied, with scores ranging from 0 to 6 indicating a weak level of the variable, scores between 6 and 18 signifying an average level, and scores above 18 indicating a very high level. The questionnaire assesses six dimensions of problem-solving: helplessness, inhibition, avoidance, trust, tendency, and creativity. In Iran, the questionnaire has demonstrated favorable reliability and validity, with reported reliability exceeding 0.7.[27] Internal consistency coefficients for the dimensions of helplessness, inhibition, avoidance, trust, tendency, and creativity have been reported as 0.86, 0.66, 0.71, 0.52, and 0.65, respectively, according to Cassidy Webernide's study (1996).[26] In the current study, Cronbach's alpha coefficient was calculated

as 0.82, indicating good internal consistency, and the test-retest reliability coefficient was determined to be 0.905.

Reflective Functioning Questionnaire (Fonagy, 2016)

The Reflective Functioning Questionnaire, developed by Fonagy *et al*. (2016),[28] exists in two versions: a long version comprising 54 questions and a short version with eight questions, both translated into multiple languages, including Persian. Items are scored on a 7-point Likert scale, ranging from 1 (completely agree) to 7 (completely disagree). The long version assesses feelings and thoughts together, specific emotions such as anger, curiosity, and understanding of behaviors. In contrast, the short version includes questions on general feelings, anger, insecurity, behavior, and action. In this study, the short form was utilized. Scores range from 14 to 50, with lower scores indicating greater mental development and higher scores indicating less mental development. Given that the children's reflective performance scale was applied for the first time in this study, its validity was assessed and confirmed by five experts in terms of structure, content, and timing. In the present study, Cronbach's alpha coefficient was calculated as 0.85, indicating good internal consistency, and the test-retest reliability coefficient was determined to be 0.972.

Statistical analysis

The data were analyzed using repeated measures analysis of variance in the IBM SPSS-23 software (SPSS Inc., Chicago, IL, USA). Student's *t*-test and Chi-square test were employed to compare the mean of quantitative [presented as means ± standard deviation (SD)] and qualitative [presented as number (%)] variables, respectively. Analysis of variance (ANOVA) was utilized to test the significance levels between the studied groups, and ANOVA for repeated measures was used to assess significance levels between the measurement times. The analysis focused on comparing the patients in the two studied groups. A *P* value less than 0.05 was considered statistically significant.

Results

In this study, 33 children diagnosed with T1D, with a mean age of 9.64 (SD = 1.39) years and a mean duration of diabetes of 3.5 years (SD = 1.10), were initially enrolled. Eventually, 30 children across both intervention and control groups completed the study [Figure 1]. The groups were matched in terms of sex, age, and duration of diabetes ($P > 0.05$).

Table 1 presents the mean scores of detective thinking and reflective functioning across the groups at the pre-test, post-test, and follow-up stages. Initially (pre-test), there were no significant differences in the mean scores of detective thinking and reflective functioning between the two groups ($P > 0.05$). However, in the intervention group, there was a significant increase in detective thinking scores and a significant decrease in reflective functioning scores at both the post-test and follow-up stages compared to the pre-test ($P < 0.05$). Conversely, in the control group, the mean scores of detective thinking and reflective functioning at the post-test and follow-up stages did not show significant differences from the pre-test ($P > 0.05$).

The study examined the intra- and inter-group differences in detective thinking and reflective functioning among the participants [Table 2]. The results are presented in a comprehensive manner.

Inter-group analysis

There were significant differences in the mean scores of detective thinking ($F = 31.79$, $P < 0.001$, $\eta = 0.55$) and reflective functioning ($F = 49.11$, $P < 0.001$, $\eta^2 = 0.654$) between the two groups.

Intra-group analysis

The intra-group analysis revealed a significant main effect of time for both detective thinking ($F = 45.39$, $P < 0.001$, $\eta = 0.636$) and reflective functioning ($F = 87.85$,

Table 1: Descriptive indices of research variables categorized by two groups and three research stages

Variables	Groups	Pre-test		Post-test		Follow-up	
		Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Detective thinking	Experimental	8.36	2.79	16.57	4.60	17.64	4.68
	Control	8.21	1.88	8.29	1.94	8.65	1.82
Reflective function	Experimental	41.64	4.89	22.64	5.77	21.86	5.33
	Control	41.19	5.15	41.21	5.36	40.5	5.47

Table 2: The inter- and intra-group analysis of variables

Variables	Effect	Source	Squared sum	Df	Mean squared	*F*	*P*	Effect size	Statistical power
Detective thinking	Inter-group	Group	708.76	1	708.76	31.79	0.001	0.55	1.000
	Intra-group	The effect of time	385.14	1.22	316.19	45.39	0.001	0.63	1.000
		The effect of time × group	338.95	1.22	278.27	39.95	0.001	0.60	1.000
Reflective function	Inter-group	Group	3169.71	1	3169.71	49.11	0.001	0.65	1.000
	Intra-group	The effect of time	1841.35	1.29	1417.92	87.85	0.001	0.77	1.000
		The effect of time × group	1678.35	1.29	1292.40	0.07	0.001	0.75	1.000

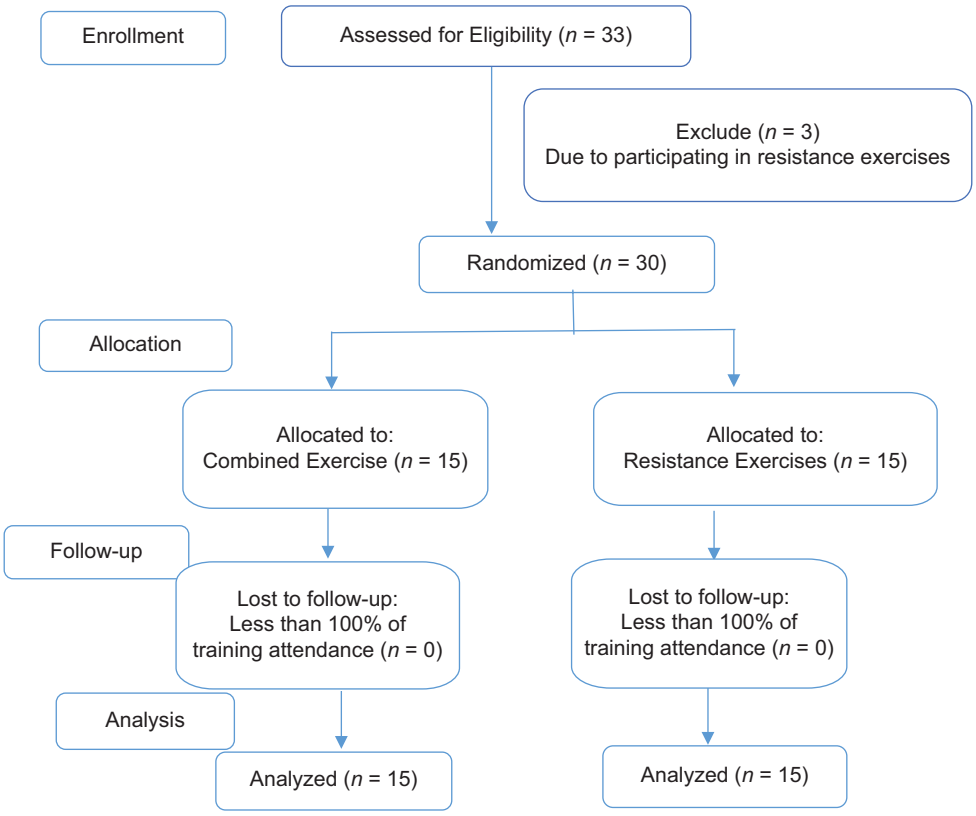

Figure 1: CONSORT flowchart of participants for recruitment, application, follow-up, and analysis

$P < 0.001$, $\eta^2 = 0.772$). This indicates notable differences in the average scores across the study period within each group.

Interaction effect

The interaction of time and group membership for detective thinking (F = 39.95, $P < 0.001$, $\eta = 0.606$) and reflective functioning (F = 80.07, $P < 0.001$, $\eta^2 = 0.755$) was found to be significant. This suggests substantial changes from pre-test to post-test and follow-up stages within each group ($P < 0.05$).

The degree of difference between groups in detective thinking was 60.6%, and in reflective functioning, it was 75.5%.

Post-hoc analysis

Bonferroni post-hoc analysis revealed no significant difference between the experimental and control groups in detective thinking and reflective functioning during the pre-test stage ($P > 0.05$). However, significant differences emerged between the two groups in both variables during the post-test and follow-up phases ($P < 0.001$).

The integrative unified protocols for transdiagnostic treatment demonstrated an effect of 59.7% on detective thinking and 74.9% on reflective functioning in the post-test, and 63.3% and 76.2%, respectively, in the follow-up phase.

Intra-group changes

There were significant differences in the mean scores of detective thinking and reflective functioning between the pre-test and post-test, as well as the pre-test and follow-up stages within the integrative transdiagnostic treatment group ($P < 0.001$). However, no significant difference was observed between the post-test and follow-up scores in this group ($P < 0.05$), suggesting stability in scores between these phases.

Visual representation

Figure 2 presents a linear diagram illustrating the intra- and inter-group changes across the three groups in detective thinking and reflective functioning.

In summary, the integrative unified protocols for transdiagnostic treatment had a significant impact on enhancing detective thinking and decreasing reflective functioning among 8–12-year-old children with T1D. These treatment effects were maintained during the follow-up phase.

Discussion

In this investigation, we examined the impact of unified protocols for transdiagnostic treatment on detective thinking and reflective functioning in children with T1D. Our findings demonstrate that this psychological intervention fosters an increase in detective thinking and improvements

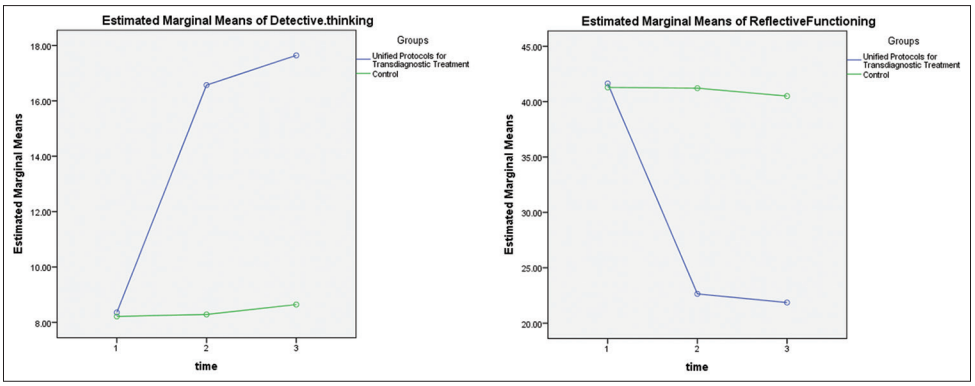

Figure 2: The results of repeated measures analysis of variance for evaluating the differences within and between studied groups during the pre-test, post-test, and follow-up for detective thinking and reflective functioning

in reflective functioning throughout the course of treatment and follow-up.

Prior research has consistently shown that children with T1D exhibit poorer performance in detective thinking and reflective functioning compared to their healthy peers. These cognitive deficits are linked to decreased academic achievement, problem-solving challenges, and reduced independence and self-efficacy, ultimately hindering the quality of life and adaptation of children with T1D. These cognitive shortcomings may be attributed to fluctuations in blood sugar levels and their impact on brain function. Therefore, it is crucial to assess and enhance these cognitive abilities in children with T1D to address these significant challenges.[29-31]

Different psychotherapeutic interventions have been introduced and used for management of emotional and cognitive disease in children with T1D. Results of a recent systematic review of different psychotherapeutic interventions indicated that cognitive behavioral therapy (CBT) was the base intervention used in this field. Other interventions include CBT group-based intervention; coping strategies were another intervention evaluated in this field and among T1D patients. There were no studies using unified protocols for transdiagnostic treatment in this field.[32] However, the effectiveness of these approaches for improvement of emotional problems in other chronic diseases has been reported.[33,34]

Unified protocols for transdiagnostic treatment, a novel psychological intervention, effectively ameliorates symptoms in children with T1D. By enhancing metacognitive and self-regulation abilities through mindfulness, acceptance, and cognitive change strategies, the treatment improves detective thinking and reflective functioning and alleviates anxiety and depression, ultimately enhancing quality of life. Its holistic, multifaceted approach contributes to its effectiveness.[34,35]

Prior studies have demonstrated the effectiveness of transdiagnostic treatment in improving treatment adherence, self-care, and reducing anxiety in patients with type 2 diabetes.[36,37] Ghasemzadeh *et al*.[38,39] indicated that this approach has been shown to enhance quality of life, reduce depression, and positively impact emotional regulation in children with T1D and their mothers. Shahriari *et al*.[40] in a quasi-experimental study found that transdiagnostic treatment enhanced parent-child interaction and lowered blood sugar levels in adolescents with T1D. Further, based on the findings of Rahimi *et al*.[41] this approach has been documented to improve detective thinking in anxious children aged 8–12 years.

In interpreting the outcomes of this research, it can be inferred that the emotion-based approach of transdiagnostic treatment helps patients develop emotional intelligence by enhancing their ability to recognize, analyze, and regulate emotions. By confronting and responding constructively to unpleasant emotions, individuals gain skills in identifying, diagnosing, and regulating emotions, as well as heightened emotional awareness. This process familiarizes children with negative experiences, enabling them to recognize, express, and empathize with their own and others' emotions without judgment.[42,43]

Children and their families must first identify the problems they face and then find suitable solutions to address them. The transdiagnostic treatment approach employs a detective thinking method, which teaches children to examine their interpretations of emotional situations, consider alternative perspectives, and arrive at more insightful and realistic interpretations. This process helps children develop flexible, efficient, and insightful thinking regarding the problems they face, similar to how a detective investigates a case.[44]

Treatments targeting mental thoughts and interpretations, such as cognitive restructuring or re-evaluation, can be effective. This technique, which is part of the unified protocols for transdiagnostic treatment, helps individuals recognize the relationship between their thoughts, emotions, and behaviors, and address ineffective thoughts and beliefs. By increasing cognitive flexibility, the unified protocols can reduce maladaptive thoughts and interpretations, leading to more effective therapeutic outcomes.[45,46]

The unified protocols for transdiagnostic treatment include techniques to identify dysfunctional thoughts, stereotypes, and mental traps, and teach flexible thinking methods to reduce negative and maladaptive interpretations. The treatment also incorporates problem-solving training, which enhances children's ability to face and solve problems, instilling a sense of efficacy and empowerment. In addition, the treatment utilizes mindfulness-based techniques, encouraging children to observe situations objectively, consider alternative solutions, and choose appropriate actions, rather than automatically interpreting them in a catastrophic or threatening manner.[47]

Mentalizing is a reflective functioning that aims to understand the reasons for one's own and others' behaviors. It is a unique, preconscious, and reflexive human capacity to understand mental states, beliefs, thoughts, feelings, desires, and needs of oneself and others.[42]

The literature review found no prior studies on the impact of unified protocols for transdiagnostic treatment on reflective functioning. However, this study observed that the treatment improved reflective functioning in children with T1D. The therapeutic techniques, combined with the use of games, facilitated the understanding of coping mechanisms for negative emotions. By learning to identify and differentiate emotions and thoughts, individuals can enhance their ability to recognize and express emotions, ultimately improving interpersonal interactions.[43]

The findings suggest that children with T1D may exhibit overeating and non-adherence behaviors due to anxiety, leading to poorly controlled diabetes. However, the integrated transdiagnostic treatment, involving both the child and parent, initiates a process where the patient and parent gain the motivation to address emotional challenges. Through familiarization with the treatment structure, self-efficacy and motivation for change are enhanced.[43]

The treatment focuses on acquainting the patient with their emotions and behaviors. First, the child receives psychological education about the nature and experience of various emotions, facilitating the identification of thoughts, physical sensations, and behaviors. Second, the treatment aims to elucidate the cycle of emotions and strategies to effectively interrupt and manage this cycle. The child is encouraged to consider the immediate and long-term consequences of behaviors stemming from intense emotional experiences, particularly how they contribute to perpetuating avoidance cycles and ongoing difficulties in managing strong emotions.[43]

The study findings suggest that integrating clinical psychologists into diabetes centers could mitigate the negative physical and psychological impacts of T1D in children and their caregivers through transdiagnostic treatment. It is recommended that relevant health authorities mandate psychotherapeutic interventions, such as integrated transdiagnostic treatment, for these children and their families, and establish medical records to support their care.

The study acknowledges limitations, such as a small sample size that may restrict the generalizability of the results. In addition, the study did not explore the functional and behavioral outcomes of improving detective thinking and reflective functioning in children. Furthermore, no placebo intervention was provided for the control group. Future research with larger samples and longer durations is needed to assess the durability of transdiagnostic treatment effects and provide more robust insights for clinicians and healthcare systems.

Conclusions

The current study highlights the efficacy of unified protocols for transdiagnostic treatment in enhancing detective thinking and reflective functioning in children with T1D. While acknowledging the study's limitations, these findings provide a basis for future investigations. It is recommended to integrate transdiagnostic treatment into intervention programs aimed at improving psychological well-being in children with T1D. Further research should explore the impact of this approach on other psychological variables, such as quality of life and disease adaptation, as well as compare it to other conventional psychological interventions for T1D.

Ethical approval

The protocol of the study was approved by the ethics committee of Isfahan Islamic Azad University (Khorasan branch) with ethics code of IR.IAU.KHUISF.REC.1403.118.

Written informed consent was obtained from each participant or their parents after describing the aim and methods of the study.

Authors' contributions

All authors (MHZ,MBI and IS) have participated in the conception of the study as well as in the analysis and interpretation of data, elaboration, or critical reviews of the report, and they have read and approved the final version of the manuscript. The authors confirm there are no concerns of financial involvement with organizations, entities, or individuals with an interest in the subject matter or materials discussed in the manuscript, and no conflict of interest.

Availability of data and materials

The datasets generated and/or analyzed during the current study are not publicly available due to privacy/ethical restrictions but are available from the corresponding author upon reasonable request.

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Conflicts of interest

There are no conflicts of interest.

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Appendix 1: Description of Unified Protocols for Transdiagnostic Treatment sessions based on the Ehrenreich protocol (2018)

Arrangement of meetings	Description of meetings
Session 1: Introducing the integrated protocol of transdiagnostic treatment	Children: Familiarizing children with the pattern and structure of treatment, identifying the main problems and goals of treatment, establishing communication between group members and therapists, familiarizing children with the purpose of emotions, and beginning to form emotional awareness.
	Parents: Familiarizing parents with the structure of treatment and clue skills, familiarizing parents with the three-part model of emotion, discussing the cycle of emotional behaviors
Session 2: Identifying your emotions, changing your emotions and behaviors	Children: Learning to identify and grade the intensity of different emotions, continuing to normalize emotional experiences, getting to know the three parts of emotional experience, getting to know the cycle of avoidance, identifying rewards for new behaviors, learning the relationship between activity and emotion, getting to know follow-up level of excitement and activity in the form of an experiment
	Parents: Familiarizing parents with the follow-up process before the excitement and after excitement, familiarizing parents with emotional educational behaviors and conflicting educational behaviors, discussing positive reinforcement as the opposite behavior of scolding
Session 3: Our physical clues	Children: Describing the concept of body cues and their relationship with strong emotions, learning to identify the body cues of different emotions, teaching body scanning skills to increase awareness of body cues, helping children to practice experiencing body cues without using avoidance and distraction
	Parents: Getting to know the concept of physicalization, teaching parents the skill of body scanning, getting to know the sensory interface and practicing it in the group, and teaching how to express empathy to parents
Session 4: Tracking my thoughts	Children: Familiarity with the concept of flexible thinking, teaching children to recognize common intellectual traps
	Parents: Familiarity with cognitive flexibility, familiarity with four common thinking traps, discussion about the emotional educational behavior of instability and its opposite educational behavior, that is, the use of rules and stable reinforcement
Session 5: Using detective thinking and conflict management	Children: Familiarity with detective thinking, application of detective thinking
	Parents: Familiarity with investigative thinking, practicing investigative thinking, familiarity with over-controlling emotional educational behavior and its opposite educational behavior, that is, giving independence, discussing reassurance, and adaptability
Session 6: Awareness of emotional experiences	Children: Learning the skill of "re-experiencing my emotions," teaching children about awareness of the present moment with the game "using my five senses," and introducing the concept of non-judgmental awareness
	Parents: Discussing the importance of learning, emotional experiences instead of avoiding them, getting to know the awareness of the present moment and practicing it, getting to know non-judgmental awareness and practicing it, and starting to complete the emotional behavior form
Session 7: Getting to know emotional exposure	Children: Review of the emotion detective skills learned up to this session of the Integrated Children's Protocol, review of the concepts of emotional behaviors and conflicting behavior to prepare for a new type of scientific experiment called exposure, performing exposure using a toy or other object, and finalizing forms of emotional behavior with children and parents
	Parents: Familiarizing parents with the concept of encountering situational emotions, which is another type of scientific experiment, explaining the role of parents in confronting practice at home, familiarizing parents with emotional educational behavior, extreme modeling of extreme emotions and avoidance, and educational behavior that is opposite to it. It means healthy emotional patterning, continuing to expand the form of emotional behavior in preparation for the upcoming confrontation exercises.
Session 8 and 9: Facing our emotions	Children: Reviewing the concept of using scientific experiments to deal with strong emotions, getting familiar with protective behaviors and subtle avoidance behaviors, practicing a scientific experiment to deal with strong emotions in a group, and planning and initial implementation of dealing with situational emotions
	Parents: Reviewing the concept of coping with situational emotion and discussing the use of coping for different symptoms, getting to know the concept of protective behaviors, explaining to parents how they can use all the opposite educational behaviors to support their child's coping, and getting to know the ladder of excitement to face and help parents to finalize the emotional behavior form
Session 10: Summary of relapse prevention program	Children: Reviewing emotional intelligence skills learned in the Integrated Children's Protocol program, planning for future strong emotions, and celebrating progress from the treatment program
	Parents: Reviewing emotional intelligence skills and conflicting parenting behaviors, discussing each child's progress and appreciating it, planning for continuation and further progress after the end of treatment, distinguishing slip from relapse, and helping parents recognize warning signs