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A Comparative Study of the Effectiveness of Intensive Short-Term Dynamic Psychotherapy and Cognitive Emotional Regulation on the Academic Emotions and math learning ability of Fourth and Fifth-Grade Students' Mathematical Learning Disabilities

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Abstract

Introduction: According to recent decade studies, emotional interventions in the treatment of math learning disorders are a more sustainable method of treatment and in the long run, it can reduce the fear of math and improve learning; The aim of this study was to compare the effectiveness of emotional intervention based on cognitive regulation of emotion, and Davanloo intensive short-term dynamic psychotherapy on academic emotions and math learning ability of students with math learning disabilities.

Methods: The method of this research was quasi-experimental using a pre-test-post-test design with a control and follow-up group. The statistical population of this study was all fourth and fifth-grade students of Tehran primary schools with math disorders, 46 of them were selected by purposive sampling method and were randomly divided into three groups. The two experimental groups received Gross and Dovanloo treatment protocols separately in twelve 60-minute sessions, and the control group received no treatment. Changes were measured using K-Matt Questionnaire and Pekran Academic Achievement Questionnaire and the data were analyzed using the variance of mixed scores and Bonferroni post hoc test.

Results: The research results showed emotional interference affected the reduction of math learning disorders ($\eta 2 = 0.612$, $P<0.01$) and achievement emotional of students ($\eta 2 = 0.705$, $P<0.001$), and that effect was sustained after two months. There was no significant difference between the two intervention methods under the scales of hope, shame, anxiety, hopelessness, and fatigue and under the scales of pleasure ($p = 0.047$, $ij = 0.262$) and pride ($p = 0.009$, $ij = 0.352$) in the classroom and anger towards learning ($p = 0.006$, 0.374) ij); the difference was significant.

Conclusion: Based on the results, it can be said, long-term emotional intervention, by increasing positive emotions and reducing negative emotions, prepares the person from within to deal with math learning problems and improves math learning.

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Introduction:

Emotion is a biological reaction to situations. It is a kind of energy circulation that flows in the body due to stimuli (external or internal) with a certain speed (1) and is accompanied by physiological, facial, and functional manifestations and is objectively secreted by blood flow, brain activity, secretion. Hormones, facial expressions, or body postures can be measured (2).

The purpose of emotion is to balance and maintain the existence of an organism that has been temporarily destroyed (3) and manifests itself in both primary and secondary forms in human behavior; Primary emotions are simple and intrinsic responses and secondary emotions are complex and non-adaptive patterns; As a result of various processes such as spontaneous thoughts, fundamental assumptions, judgments or irrational beliefs of the individual, appears behind the initial emotion and is rooted in family patterns (1).

How the parent interacts with the child from birth to the age of five determines the type of main emotions, including anger, love, sadness, sexuality, and guilt that a person feels toward their parents (4). Proper emotional connection increases the secretion of certain hormones and neurochemicals, such as oxytocin, in the child's brain. These substances regulate the neural circuits associated with negative emotions (pain, anger, etc.) at a healthy level. They do. In insecure emotional bonding, the activity and arousal of these circuits are regulated to a higher level, causing internal pain and sorrow, and anger-provoking a reaction to the source of the failure, which is usually the parents (5).

The pain and anger created are sometimes so unbearable that the person unconsciously and in various ways decides to run away from emotional closeness to others; Because closeness to others and intimate relationships may still cause such pain in him, such a phenomenon leads to the formation of defensive layers to protect the psychiatric system (6). Suppressed feelings of breakdown in inner attachment are activated. 7) This defense mechanism is necessary for the child and maintains his mental structure, but in adulthood, when this mechanism expires, it becomes a destructive structure. Slow (4) and these painful feelings remain in the unconscious of many people and become the core of pathogenesis in the unconscious (7, 8) and symptoms such as anxiety, depression, obsession, etc. appear (4). Anxiety is experienced in the individual to prevent these repressed emotions from entering consciousness and manifesting themselves throughout life (6,9). Anxiety disorders in children and adolescents, which are associated with significant negative consequences on personal, academic, and social adjustment, can be one of the aspects of suppressed emotions (10). 25% of children with learning disabilities also experience anxiety

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disorders (11). Research has shown that children with learning disabilities experience more aggression, impulsivity, and behavioral problems than normal children, which can reduce the social status and the exclusion of peers (10).

According to Henschel Wark (2017), this group of children denies their learning disability as a defense mechanism so as not to be labeled stupid and incompetent. Consecutive failures in learning become a factor for apathy and lack of motivation in their learning, and due to humiliation and blame, they lose their self-confidence and leave the educational system with the belief of incompetence and incompetence in learning (11).). Between 3% and 7% of this group have learning disabilities (12). Research has shown that excessive anxiety, forced thoughts, and stress, when confronted with mathematical content (10), keep them in a vicious circle, leading to anxiety, frustration, and depression during math activities; which usually worsens with age and spreads to other areas of life (12). This group of people usually have feelings of loneliness (13), embarrassment, low self-esteem, pessimism, and distrust of others (14) which affect their attitude and motivation, work, self-concept, and socio-emotional development (15).

Frilich, Schechman (2010) showed in their research that long-term emotional intervention can reduce fear of math lessons and a person can more confidently deal with math lessons, math concepts in school and life and have the power to solve their own problems. Increase and experience an improvement in academic performance (16).

One of the emotion-focused therapies is the "cognitive emotion regulation" intervention, which enables a person to experience the ability to understand, adjust, and express their emotions (17) and includes all conscious and unconscious strategies to increase, maintain, and maintain Reducing the emotional, behavioral, and cognitive components of emotional response are used and one learns how to behave in the face of emotions, how to express emotional experiences verbally, and what strategies to use in response to emotions. Specific emotions, how to treat others (18) This internal process is responsible for controlling, evaluating, and changing a person's emotional reactions in the direction of achieving his goals and is an important factor in determining health and successful performance in social interactions (19). According to Harris-Peterson (2017) research, this is a way to reduce the effect of negative emotion and can play an important role in adapting to stressful life events (20) and an important factor in determining resilience, self-esteem, efficiency Is self-regulatory and motivation in academic success and significantly improves the performance of students with learning disabilities in increasing social problem solving, reducing and adverse behaviors of aggression and withdrawal, as well as changing social goals (21).

Another emotion-focused treatment is Dovanloo intensive short-term dynamic psychotherapy. Empirical evidence supports the effectiveness of this type of treatment in improving patients with emotional complaints, anxiety, and interpersonal problems (5-7, 9). In this treatment, attention is paid to the unconscious. By breaking the resistance and producing mental images and vivid memories of the unconscious content, light shines on the structure of the unconscious core (22) and the underlying and deep subconscious emotions appear and are experienced. Patterns that have been the source of suffering and the onset of these symptoms throughout the patient's life can be

identified (6) and the individual is able to develop the ability to express himself/herself, which leads to visible changes in the psychological manifestations of anxiety. (22).

Empirical evidence supports the effectiveness of this therapeutic approach in resolving interpersonal conflicts and shows that people continue to progress and improve after treatment (23). The effectiveness of this type of treatment in reducing symptoms, interpersonal disorders, and occupational-social activities has also been proven (24). It is effective in treating people with social phobia. (6). this approach reduces social anxiety and naturally increases self-esteem. It has been introduced as a useful method in improving children's behavioral disorders (25), which increases children's emotional capacity by modifying their psychological defense mechanisms and regulating their feelings and emotions (26). This approach on the social anxiety of mentally retarded children with visual impairment related to movement in the mentally retarded sample group showed the use of this method in primary children (27). Recent research has shown this approach as a powerful treatment, It has been shown to be accurate, rich, cost-effective, and efficient (28).

Considering that currently 3 to 7% of students in the educational system show poor and unexpected performance in mathematics (9), conventional methods of treating mathematical anxiety do not eliminate them, and this group of knowledge Students Avoid Lessons in Numbers Conducting emotion-based research presents a new opportunity for learning professionals to prepare the individual from within to deal with academic excitement in math and become a more sustainable model in the treatment of learning disabilities. Reach math. Therefore, the aim of the present study was to evaluate and compare the effectiveness of cognitive emotion regulation interventions and Devanloo intensive short-term dynamic psychotherapy in the development of academic emotions and the ability of students with learning disabilities. To this end, it seeks to answer this question: Do cognitive emotion regulation interventions and Duanloo intensive short-term scanning psychotherapy affect the math learning ability of students with learning disabilities? Do cognitive emotion regulation interventions and Dovanloo intensive short-term dynamic psychotherapy affect the academic excitement (in the classroom and concerning learning) of students with learning disabilities?

Method:

Field research in terms of purpose, applied in terms of control over research variables, is a quasi-experimental with pre-test-post-test design with control and follow-up group. The independent variable of this study is the cognitive emotion regulation interventions of Gross, and the short-term intensive dynamic psychotherapy of Dovanloo, which was performed on two experimental groups; Math Learning Ability and Academic Emotions are dependent variables that were measured using the Mathematical Ability Diagnosis Questionnaire, (KMAT) and the Packran Academic Emotion Development Questionnaire.

The study population was all fourth and fifth-grade students of Tehran and surrounding areas who were studying in the academic year 2017-2017 and 46 of them were selected by purposive non-random sampling method in the first stage and randomly divided into three cognitive groups (15

N), psychodynamic group (16) and control group (15) were divided. Criteria for entering the research: • Studying in the fourth and fifth grades of normal schools in the city and having a math disorder, • Average IQ (87.03 11 07.07), • Student and parental consent for participation in the research period, • Criteria for students to drop out of school: Studying in special and special schools, having two learning disabilities at the same time.

Research tool: Stanford-Bineh-Tehran IQ scales: The fifth edition of the Stanford-Binet Intelligence Scales (2003) includes both verbal and non-verbal domains that assess five factors: knowledge, fluid reasoning, quantitative reasoning, visual-spatial processing, and working memory in both domains. It covers 96 years. This tool is effective for measuring preschool children, mental retardation, and high-level cognitive abilities. In 2008, it was re-standardized in Iran by Afrooz and Kamkari. The validity of this test has been reported by splitting and correcting with the Spearman-Brown formula for total scale scores of 0.98, non-verbal 0.95, verbal 0.96. The validity of the set of fluid reasoning and knowledge screening tests is 0.91. Its validity is obtained through content validity (29) (). In the Kamkari study, Shiri Aminlou (30) reported the mean IQ of the total IQ test in children with learning disabilities (88.13 12 12.56). The mean of total intelligence in this study is (87.03 07 11.07).

K-Matt Questionnaire: K-Matt Mathematical Questionnaire, a reference criterion for the first to fifth grades of primary school in 1985-86 was developed by Kennedy to identify students' strengths and weaknesses or failures in mathematical skills. The validity of this test was calculated by the methods of content validity, structure-dependent validity (dissociative validity, predictive validity), and concurrency simultaneously with the Wart test and the rate was between 0.78 to / 84. Has been achieved, the validity of this test using Cronbach's alpha method in five bases is between 0.84- 0.80. The standard scores of this test in three areas and the total score have an average of 100 and a standard deviation of 15. (31) In this study, the validity of Cronbach's alpha method was 0.87 in the pre-test, 0.92 in the post-test, and 0.84 in the follow-up test. The effect of the independent variable intervention on the ability to learn mathematics was measured using this questionnaire.

Academic Emotions Questionnaire: Pekran designed the Academic Achievement Emotion Questionnaire (AEQ) to assess students' academic emotions (32). This questionnaire is a self-report tool and measures students' academic emotions in various academic situations. Academic emotions include active positive emotion: pleasure, hope, and pride; Active negative emotion: anger, anxiety, and shame; Passive negative emotion: is fatigue and despair. The validity of the internal structures of the questionnaire was examined by exploratory factor analysis and confirmatory factor analysis, and for all indicators of goodness of fit, the model was confirmed. The reliability of the questionnaire was calculated by Cronbach's alpha coefficient (0.74 to 0.86). In Iran, this questionnaire was standardized by Kadivar et al In 2004 the questionnaire has 155 questions and its purpose is to evaluate the academic excitement in the classroom and the relationship to learning. To assess the reliability and validity of the questionnaire, Cronbach's alpha coefficient and confirmatory factor analysis were used. The questionnaire has acceptable internal consistency and Cronbach's alpha coefficients under its scales are between 0.74 and 0.86. Also,

the results of confirmatory factor analysis show that the structure of the questionnaire has an acceptable fit with the data and all indicators of good fit the model. In the Iranian norm, Cronbach's alpha is reported between 0.71 and 0.89 (33) (Table 1).

Table 1: Summary of Goodness Indicators Fitting the Academic Emotions Questionnaire related to the class and learning Iranian norm

Scale	Df	X^2	X^2/ df	GFI	AGFA	RMSEA	CFI
Class related	267/2	٥٢١٨/٤	1/9	0/67	0/65	0/060	0/95
Towards learning	3052	614/98	2	0/62	0/60	0/066	0/92

In this study, the academic emotion questionnaire was used to assess the academic emotions of students with learning disabilities. The reliability and validity of the questionnaire in this study based on Cronbach's alpha coefficients for subscales in the Pekran questionnaire in the post-test were obtained between 0.727 to 0.907. Table 2 shows the validity coefficients of the subscales of the Pekran questionnaire in the Iranian norm and in the present study.

Table2. Cronbach's alpha reliability coefficients for the Pekran Academic Emotions Questionnaire

Scale	sub scale	Pekran	Iranian norm	pre-exam	Post-test	Follow-up test
Subclasses related to the class	Class-related fun	0.85	0.75	0.689	0.769	0.767
	Hope for the class	0.79	0.75	0.688	0.767	0.772
	Pride of the class	0.82	0.80	0.514	0.709	0.749
	Anger towards the class	0.86	0.73	0.678	0.746	0.749
	Anxiety about the class	0.86	0.77	0.646	0.772	0.802
	Shame on the class	0.89	0.81	0.677	0.777	0.777
	Disappointment with the class	0.90	0.84	0.675	0.768	0.782
	The boredom of the class	0.93	0.84	0.708	0.780	0.776
Learning subscales	The pleasure of learning	0.78	0.76	0.619	0.757	0.768
	Hope for learning	0.77	0.78	0.704	0.853	0.785
	Pride of learning	0.75	0.75	0.630	0.727	0.776
	Anger at learning	0.86	0.80	0.658	0.907	0.768
	Anxiety about learning	0.84	0.80	0.721	0.771	0.772
	Shame of learning	0.86	0.83	0.728	0.764	0.760
	Disappointment with learning	0.90	0.85	0.754	0.778	0.777
	Tired of learning	0.92	0.86	0.731	0.771	0.770

Duvanloo short-term psychodynamic protocol and emotion grass cognitive protocol: In this study, the process of performing the independent variable in 12-minute sessions based on two short-term intensive psychoanalysis protocols Duvanloo (1990) and emotion regulation training protocol (1996) was done individually. . After the intervention of two protocols in the two experimental groups, post-test and after two months, follow-up test was performed with K-Matt tools and Pekran questionnaire. Table (1) shows a summary of the content of the meetings.

Table3. Summary of intervention sessions by the short-term psychoanalytic protocol of Dovanlu and Gross emotional cognitive protocol

	Cognitive group based on Gross protocol	Scanning group based on Dovanlu intensive scanning protocol
First session	Familiarity and communication between the student and the researcher, initial interview	Interviewing and obtaining basic information, strengthening the therapeutic relationship with the student, performing scanning sequences.
second session	Choosing a position, providing emotional training: paying attention to physical and facial changes, paying attention to behavior and emotion-provoking events.	Emphasis on objective responses and focus on emotions, appropriate verbal intervention to objectively express the problem and attention to emotions, the student's attention to his physical symptoms when expressing the problem, attention to the person's anxiety channel.
third session	Repeat the second session	Execution of seven scanning sequences according to Duanloo intensive short-term scanning protocol.
fourth Session	Assessing emotional vulnerability and emotional skills including self-assessment, emotional vulnerability, identifying self-regulatory strategies.	Repeat the third session
fifth meeting	Repeat the fourth session	Draw the student's attention to the pattern of using his defense mechanisms by example. Non-verbal tactical defense, tactical defense of repeating the third session, familiarity with the types of defense mechanisms that the student uses.
Sixth Session	Situation correction: Making a change in the excitatory situation. List individual, social, and relationship goals.	Repeat the previous session if necessary
Seventh session	Attention expansion, attention change skills training	Repeat the previous session if necessary so that the person can formulate their emotions and expand the student's awareness.

Eighth Session	Repeat the seventh session	Distinguish emotion, defensive patterns, physical symptoms of student anxiety in different situations experienced.
The ninth session	Cognitive assessment, changing cognitive assessments	Given the new insight into the experience of emotion, explore your own feelings and explore how those feelings relate to your parent and the conflicts between the math teacher and the math lesson.
The tenth session	Modulation of response, changes in behavioral and physiological consequences of emotion	The student reports after experiencing their unconscious feelings, the experience of touching them. Evaluate the experience of empathy with yourself
Session Eleven	Reassess and plan for training application	Summary of therapeutic content.
Session Twelve	Review the steps of determining the post-test time and follow-up test schedule	Review the steps of determining the post-test time and follow-up test schedule

Sequences and steps were not linear. During the sessions, the student returned to the previous stages and also showed progress beyond the stated limits. The intervention proceeded flexibly and according to the situation in each session.

The collected data were analyzed by mixed analysis of variance and Bonferroni post hoc test with SPSS 21 software.

Results:

The sample consisted of 46 students, 21 (45.7%) in the fourth grade and 25 (54.3%) in the fifth grade. Two questionnaires of K-Matt and the development of Pekran academic excitement were administered in the three study groups. The mean total score of the K-Matt questionnaire in post-test and follow-up of the two experimental groups increased compared to the control group, showed a higher growth rate than the cognitive group that underwent cognitive emotion regulation intervention (Table 4).

{Post-test--- (11/65 ± 87/116 = M scan) < (9/34 34 66/106 = Cognitive M)}

Follow up-- (14/14 ± 43/114 = M scan) < (11/33 ± 800/103 = Cognitive M}

After the intervention of the two protocols, the mean score of the Pekran questionnaire on positive emotions in the learning classroom increased in the two experimental groups compared to the control group, and this increase was higher in the scanning group than in the cognitive group. The mean of negative active emotions in the classroom and in relation to learning decreased in both experimental groups compared to the control group and this decrease was more in the dynamic group than the cognitive group.

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The mean of passive negative emotions in the classroom decreased in both groups and this decrease is more in the scan group than in the cognitive group, but in learning in, the negative emotions in the cognitive group decreased more than the scan group (Table 4).

Table4. The mean and standard deviation of Pekran and K-Matt questionnaires in three study groups in three tests

New test		pre-exam M ± SD	Post-test M ± SD	Follow-up test ± SD
Cognitive	Ki Matt	10.39±53.69	106.66±9.34	103.80±11/33
	Total score	548.733±23.917	15.768±266.384	381.133±13.937
	Active positive emotions in the classroom	158.2±0.313	3.922±0.258	837.3±282
	Active positive emotions towards learning	133.2±0.277	3.960±0.313	0.4±294.16
	Active negative emotions in the classroom	4.176±0.252	1.82±0.211	780.1±0.150
	Active negative emotions towards learning	4.209±0.324	2.046±0.209	2.0±41.183
	Negative emotions inactive in the classroom	4.248±0.242	148.1±0.123	711.1±0.174
	Negative emotions towards learning	4.048±0.470	633.1±0.185	633.1±0.185
scanning	Ki Matt	98.62±7.07	116.87±11.65	114.43±14.14
	Total score	544.625±14.650	369.12±375.175	11.695±437.372
	Active positive emotions in the classroom	2.044±0.297	3.982±0.217	972.3±0.167
	Active positive emotions towards learning	1.197±0.316	4.079±0.255	116.40±0.176
	Active negative emotions in the classroom	4.326±0.251	1.583±0.191	592.1±0.184
	Active negative emotions towards learning	4.349±0.258	772.1±0.206	801.1±0.211
	Negative emotions inactive in the classroom	4.409±0.290	21.1±0.108	549.186±0.1
	Negative emotions towards learning	4.312±0.331	642.1±0.240	648.1±0.440
Witness	Ki Matt	95.40±9.19	98.06±9.88	99.80±11.97
	Total score	540.466±22.931	479.37±933.967	481.36±400.736

Active positive emotions in the classroom	2.0±096.279	2.0±580.283	2.0±560.282
Active positive emotions towards learning	2.314±0.392	2.0±704.322	2.0±811.283
Active negative emotions in the classroom	4.197±0.188	3.0±204.471	152.3±0.509
Active negative emotions towards learning	4.030±0.286	3.0±259.532	227.3±0.499
Negative emotions inactive in the classroom	3.969±0.311	395.29±0.256	3.0±620.424
Negative emotions towards learning	3.921±0.430	3.039±0.498	315.3±0.498

Below the positive emotion scales, the average post-test and the pursuit of pleasure and pride in the classroom of the dynamic group are more than the cognitive group. It is from the cognitive group. The subscales of negative emotions include anxiety, anger, shame in the classroom, and the ratio of learning in both experimental groups compared to the control group and this decrease is more in the dynamic group than the cognitive group. Fatigue and frustration in the classroom decreased in both groups and this decrease is more in the scan group than in the cognitive group, but in learning the inactive negative emotions of the minister, its scales in the cognitive group decreased more than the scan group (Table 5).

Table5. Mean and standard deviation of the subscales of Pakran Academic Emotions Questionnaire in three tests

sub scale	group	pre-exam		Post-test		Follow-up test	
	Cognitive	in the class	In learning	in the class	In learning	in the class	In learning
Pleasure	Scanning	2.0±2.44	23.2±0.31	0.29±80.3	75.3±0.32	70.3±0.027	76.3±0.29
	Witness	89.1±0.28	14.2±o.30	14.2±0.30	83.3±0.24	96.3±0.023	78.3±0.25
Hope	Cognitive	98.1±0.37	30.20±0.34	40.2±1.33	48.2±0.35	30.2±1.93	64.2±0.30
	scanning	24.2±0.37	3.2±0.5	24.4±0.37	3.4±0.4	23.4±0.38	16.4±0.38
	Witness	39.9±0.47	26.2±0.52	95.3±0.29	23.4±0.43	23.4±0.027	31.4±0.37
Pride	Cognitive	108.2±0.39	33.53±2.0	75.2±0.52	77.2±0.42	75.2±0.048	77.2±0.36
	scanning	21.2±0.36	13.2±0.33	71.3±0.34	12.4±0.34	57.3±0.037	12.4±0.31
	Witness	201.2±0.31	18.2±0.55	94.3±0.29	16.4±0.49	93.3±0.027	25.4±0.32

Anger	Cognitive	20.35±2.0	31.2±0.61	57.2±0.31	85.2±0.59	59.2±0.028	3.0±1.50
	scanning	58.4±0.504	59.4±0.34	15.2±0.28	09.2±0.26	50.2±24	87.1±0.25
	Witness	21.4±0.34	35.4±0.22	1.89±0.40	72.1±0.24	77.1±0.32	71.1±0.31
Anxiety	Cognitive	9.4±0.29	37.4±0.38	18.3±0.43	31.3±0.40	5.3±0.52	26.3±0.56
	scanning	28.4±0.18	30.4±0.18	70.1±0.26	006.2±0.30	69.1±0.25	036.2±0.38
	Witness	49.2±0.24	42.4±0.35	46.1±0.17	76.1±0.29	54.1±0.27	89.1±0.39
Shame	Cognitive	34.4±0.19	21.4±0.33	16.3±0.47	30.3±0.59	20.3±0.50	9.3±0.76
	scanning	18.24±4.0	26.4±0.46	57.1±0.20	13.2±0.24	60.1±0.18	60.1±0.18
	Witness	27.4±0.28	27.4±0.35	39.1±0.17	79.1±0.33	45.1±0.19	45.1±0.19
Disappo intment	Cognitive	15.4±0.26	83.4±0.64	26.3±0.62	32.3±0.45	22.3±0.66	22.3±0.66
	scanning	20.4±0.27	006.4±0.53	56.1±0.27	55.1±0.17	58.1±0.28	54.1±0.16
	Witness	38.4±0.37	23.4±0.43	40.1±0.20	59.1±0.28	45.1±0.24	69.1±0.31
Fatigue	Cognitive	12.4±0.31	16.4±0.36	45.3±0.48	27.3±0.57	45.3±0.44	35.3±0.59
	scanning	29.4±0.34	09.4±0.43	88.1±0.25	70.1±0.20	84.1±0.23	76.1±0.26
	Witness	43.4±0.31	38.4±0.27	66.1±0.23	68.1±0.23	64.1±0.19	68.1±0.19

In data analysis, the condition of normality of variable distribution in the pre-test of K-Matt and Pekran questionnaires, due to the small sample size, was investigated using the Shapiro-Wilk test. The assumption of normal distribution of scores of dependent variables is established (p <0.05) and the use of parametric tests is allowed (Table 6).

Table6. Values obtained from the Shapiro-Wilk test, check the normality of dependent variables

questionnaire	group	pre-exam		Post-test		Follow-up test	
		s-w		s-w		s-w	
Ki Matt	Cognitive	0.975	P=0.635	0.925	P=0.233	0.949	P=0.516
	scanning	0.929	P=0.233	0.968	P=0.807	0.929	P=0.233
	Witness	0.845	P=0.065	0.746	P=0.051	0.849	P=0.017
Pekran	Cognitive	0.956	P=0.616	0.977	P=0.945	0.922	P=0.207

scanning	0.928	P=0.233	0.937	p=0.882	0.960	P=0.655
Witness	0.761	P=0.051	0.805	P=0.14	0.960	P=0.699

In the mixed analysis of variance with repeated measures, the effect of the independent variable (intervention of two treatment methods) on the score of math learning ability is significant. The magnitude of the effect of the intervention of treatment methods is 0.411. ($F_{2.42}$ 14/999=, P⟨0.001, η^2= 0.411)

Bonferroni's post hoc test compared the groups in the post-test showed that there is a significant difference between the cognitive group and scanning in the average mathematical ability. (I-J= 10/208[*], P <0.05) and this difference was maintained in the follow-up (I-J= 10/63[*], P = 0.007), comparison of means indicates that the short-term intensive scanning of Dovanlu more Cognitive emotion regulation is effective in the ability to learn math. Mixed variance analysis with repeated measures was used to evaluate the interventions of cognitive emotion regulation and short-term intensive psychotherapy of Dovanloo on the development of academic emotions of students with learning disabilities. Levin test showed the condition of homogeneity of variances, but because the results of the Machley sphericity test were significant, alternative tests were used. The Greenhouse-Geiser test was used. In all eight subscales of the Academic Emotion Progress Questionnaire, the difference between the experimental groups and the control group inactive and inactive positive and negative emotions in the classroom was significant (Table 7) and the ratio of learning was the same (Table 8). 0.685 to 0.983 has been reported.

Table7. Results of mixed analysis of variance with repeated measures of three groups under the scales of Pekran questionnaire in the classroom

Scales in the classroom		Source of changes	Average squares	Degrees of freedom	Ratio F	Significance level	Effect size
Active positive emotions	Pleasure	Intergroup	43.103	1	655.566	0.000	0.938
		Interaction	6.136	2	93.329	0.000	0.813
		Intergroup	15.173	2	68.119	0.000	0.760
	Hope	Intergroup	54.442	1	618.580	0.000	0.935
		Interaction	4.580	2	52.041	0.000	0.708
		Intergroup	13.343	2	38.324	0.000	0.641
	Pride	Intergroup	31.004	1	273.780	0.000	0.864
		Interaction	3.656	2	32.299	0.000	0.600
		Intergroup	10.442	2	67.519	0.000	0.758
Active negative emotions	Anger	Intragroup (Green.)	65.548	1.486	507.689	0.000	0.922
		Interaction (Greenhouse)	3.618	2.937	27.988	0.000	0.566
		Intergroup	8.807	2	34.800	0.000	0.618
	Anxiety	Intergroup	13.770	1	170.6182	0.000	0.975

		Interaction	7.009	2	104.892	0.000	0.830
		Intergroup	16.514	2	86.973	0.000	۰/۸۰۲
	Shame	Intragroup (Green.)	71.826	1.707	486.455	0.000	0.919
		Interaction (Greenhouse)	5.103	3.415	34.561	0.000	0.616
		Intergroup	13.807	2	46.352	0.000	0.683
Negative emotions Inactive	Disappointment	Intragroup (Green.)	96.786	1.377	120.2822	0.000	0.965
		Interaction (Greenhouse	11.330	2.754	140.619	0.000	0.867
		Intergroup	23.535	2	105.845	0.000	0.831
	Fatigue	Intergroup	26.675	1	681.269	0.000	0.965
		Interaction	13.047	2	191.858	0.000	0.899
		Intergroup	24.528	2	116.846	0.000	0.845
Total score in the classroom		Intragroup (Green.)	11960.0370	1.294	157.0828	0.000	0.973
		Interaction (Greenhouse)	9590.977	2.587	126.542	0.000	0.855
		Intergroup	17521.959	2	63.89	0.000	0.746

Table8. Results of mixed analysis of variance with repeated measures of the group in the subscales of Pekran questionnaire to learning

Scales in the classroom		Source of changes	Average squares	Degrees of freedom	Ratio F	Significance level	Effect size
Active positive emotions	Pleasure	Intergroup	31.583	1	407.455	0.000	0.905
		Interaction	3.915	2	50.508	0.000	0.701
		Intergroup	9.132	2	55.299	0.000	0.720
	Hope	Intergroup	53.046	1.317	328.869	0.000	0.884
		Interaction	6.546	2.634	40.584	0.000	0.654
		Intergroup	12.205	2	32.339	0.000	0.601
	Pride	Intergroup	52.316	1.300	311.908	0.000	0.879
		Interaction	4.998	2.599	27.679	0.000	0.563
		Intergroup	9.110	2	21.589	0.000	0.501
Active negative emotions	Anger	Intragroup (Green.)	69.026	1	832.81	0.000	0.951
		Interaction (Greenhouse)	6.804	2	82.20	0.000	0.792
		Intergroup	11.639	2	58.836	0.000	0.732
	Anxiety	Intergroup	79.412	1	706.290	0.000	0.943
		Interaction	5.017	2	44.617	0.000	0.675

		Intergroup	9.676	2	59.154	0.000	0.733
	Shame	Intragroup (Green.)	77.456	1.259	501.646	0.000	0.921
		Interaction (Greenhouse)	6.946	2.517	45.101	0.000	0.677
		Intergroup	6.417	2	9.702	0.000	0.311
Negative emotions Inactive	Disappointment	Intragroup (Green.)	82.630	1.300	532.694	0.000	0.925
		Interaction (Greenhouse)	10.015	2.599	64.564	0.000	0.750
		Intergroup	17.237	2	50.380	0.000	0.701
	Fatigue	Intergroup	85.741	1.269	752.808	0.000	0.946
		Interaction	10.119	2.538	88.844	0.000	0.805
		Intergroup	15.375	2	64.959	0.000	0.751
Total score relative to learning		Intragroup (Green.)	107972/816	1.344	740.299	0.000	0.973
		Interaction (Greenhouse)	976/005	2.687	66.918	0.000	·/757
		Intergroup	13633/388	2	28/562	0.000	·/571
The total score of the Packran questionnaire		Intergroup	20.348	1.226	158.133	0.000	0.974
		Interaction (Greenhouse)	1.732	2.452	134.762	0.000	0.862
		Intergroup	2.579	2	51.359	0.000	0.705

In Bonferroni post hoc test, there was a significant difference between the two experimental groups and the control group after the test and the follow-up test in all eight subscales of the Academic Emotion Development Questionnaire. Comparison between the two experimental groups under the scales, pleasure (p = 0.047, i-j = 0.262, 3.96 ±3 0.023 3 3.70 <0.027) and pride (p = 0.009, 352 I-j = 0.03 3 0.093 27 0.027 <3.57 03 0.037) In the classroom follow-up test, the scanning group had more growth than the cognitive group. Anger towards learning math in post-test and follow-up test in scanning group had more decrease than cognitive group (p = 0.006, ij = 0.374, 1.72 24 0.24 <2.09 26 0.26); (P = 0.031, i-j = 0.341, 1.71 ± 0.31 <1.87 25 0.25). There was no significant difference in the other subscales.

Discussion and conclusion:

This study was conducted to evaluate and compare the effectiveness of cognitive emotion regulation interventions and short-term intensive SCANNING psychotherapy Dovanloo in the development of academic excitement of students with learning disabilities. In this study, two Gross protocols for cognitive emotion regulation and Dovanloo protocol for short-term intensive SCANNING were performed on two separate experimental groups. With the help of K-Matt math questionnaires and the development of Pakran academic emotions, the increase in the ability to learn mathematics and positive and negative emotions in the classroom and in relation to learning mathematics were measured. The results showed that emotion-based intervention can affect

mathematical ability. Increase positive emotions in the classroom relative to learning math (pleasure, pride, hope) and decrease negative emotions in the classroom relative to learning math (anger, anxiety, shame, frustration, and fatigue). Dovanloo intensive short-term psychotherapy intervention was more effective than cognitive-emotional intervention in increasing the total score of math ability of the Minister of Pleasure and Pride Scales in the math classroom and reducing anger towards learning math.

This finding is based on the results of the research of Freilich, Schechman (16) Goldin, Gross (17) Sattarpour, Ahmadi and Bafandeh (19) Harris and Peterson (20) Leeson, Lito, Gelsen (21) Dovanloo (22) Abbas (6) Port (26) Rashidi, Ghaedi, Karami (34) Krishcher (25) is similar.

Instead of confronting reality, people usually avoid emotions through maladaptive thoughts (cognitive therapy) or relationship patterns (psychotherapy scanning) and choose to use suffering through the defense. Emotional intervention can balance and maintain the existence of an organism that has been temporarily destroyed; Evaluate and control so that the person can express their emotion (35). Emotional interventions (cognitive-emotional, short-term intensive psychoanalysis of Dovanloo) in the long run, by increasing positive emotions and decreasing negative emotions, prepare the person from within to deal with learning difficulties, two emotional interventions on students with learning disabilities Mathematics showed: Anxiety caused by fear and despair in learning mathematics and testing it can be reduced (37,36) so that a person can experience the process of processing mathematical information without distorting perceptions, reduce errors in calculations (38), solve problems Math Meaningful learning of mathematical concepts better by reducing the effect of negative emotion interference (9) and in the long run reduce fear of mathematics lessons and improve academic performance (39) and a person with more confidence in dealing with mathematics lessons and their concepts Do not transfer negative experiences from learning this course to the rest of your life (40) and achieve a more sustainable treatment pattern in the treatment of math disorder. Cognitive emotion intervention enables a person to experience the ability to understand, adjust and express their emotions. (41) This internal process is responsible for controlling, evaluating, and modifying emotional reactions Is an important factor in determining health and successful performance in social interactions (42) and is a way to reduce the negative impact of emotion and can play an important role in adapting to stressful events. It plays a vital role in determining resilience, self-esteem, efficiency, self-regulation, and motivation in academic achievement. Withdrawal, as well as change of social goals, improves (21).

Based on the belief that the conflict between desire and reality is rooted in the nature of human existence, human beings usually avoid emotions and cause suffering and anxiety instead of confronting reality by using defenses. Experience (35) believes that if resistance is broken and light shines on the structure of the unconscious core and one experiences deep subconscious emotions, the patterns that have been the source of suffering and the emergence of these symptoms throughout one's life will be identified (4). And modifying the defense mechanisms and regulating emotions, increases the emotional capacity of the person (6) and the ability to express themselves, and visible changes occur in reducing anxiety. A person can consciously face life issues and problems and find ways to manage conflict within himself, dissatisfaction with life situations is

reduced in him and he is present in public without feeling rejected, he prevents the projection of past emotions into the present (22) The processing of thinking and information processing strategies and problem-solving is facilitated in him (38) and with the correct use of emotions and feelings in personal and social life, he is empowered and becomes a capable, efficient, flexible, adaptable and successful person. Dovanloo Intensive Short-Term Scanning Psychotherapy Intervention Demonstrated Effectiveness in Reducing Math Learning Disorder and Academic Excitement.

Limitation:

The present study has been accompanied by some limitations, including the use of the K-test, which is normalized for the five-year education system in Iran and needs to be revised for the current six-year primary education system. In the Iranian standardized questionnaire of Pekran academic achievement, due to the elimination of questions related to exam excitement, exam-related emotions were not examined and on the other hand, the questionnaire was developed with cognitive infrastructure and may not measure all the features obtained from short-term intensive SCANNING psychotherapy. Take it slow.

The limitations of the statistical population of the research raise barriers to the generalization of the findings that should be considered. This research has been done on a specific age range (11-12) and is limited to the city of Tehran, so the generalization of the results of this research to other age groups and other societies should be done with caution. It is recommended to evaluate the effectiveness of the emotional intervention on different types of learning disorders in different age groups and educational backgrounds with larger-scale examples. , Can be used in the treatment of various learning and behavioral disorders. It is appropriate to use this method in various fields of education.

Research application:

The results of this study are used in centers for learning disabilities in education and private counseling and can be a more cost-effective and sustainable method. No conflict of interest has been expressed by the authors. Ethical considerations: All volunteers and their parents expressed their written consent to participate in the research. Participants were allowed to cancel all stages of the research. The information obtained from the participants is confidential and all information was analyzed anonymously. Thanks for all the knowledge. Dear students and their parents, the officials of counseling centers, and respected professors who cooperated in conducting the research are thanked and appreciated.

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