

# On the Impact of Teaching Verbal Self-instruction on the Improvement of the Emotional, Educational, and Social Adjustment in Students Afflicted with Mathematical Disorders

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**Abstract Introduction:** Among every learning issue, issues connected with mathematics are particularly critical in light of the fact that all kids are obliged to do mathematical calculations in the early years of grade school. The present examination looks to explore the viability of showing verbal self-instruction on enhancing the social, emotional, and educational adjustment in understudies burdened with mathematical disorders. **Methodology:** This is an experimental research and used posttest-pretest plan and catch up with the control group. The study populace of this exploration incorporates all the male junior secondary school students of Koohdasht city harassed with mathematical disorder in the school year 2013-2014. The exploration test comprised of 40 male understudies tormented with this issue. The samples were picked randomly taking into account a multistep cluster example among understudies after they were recognized by Keymath numerical test and after the structural clinical interview and set in inside of experiment and control groups. The research devices included auxiliary clinical interview, Keymath scientific test, and Sinha and sing's social, emotional and educational adjustment scale. Both gatherings were liable to pretest, posttest and a two-month follow-up. during the time spent the exploration, the experiment group attempted verbal self-guideline training for two months (8 session, every session 60 minutes), while the control group got no education. Covariance analysis technique was utilized to break down the information. **Results:** The results of multivariable covariance analysis (MANCOVA) indicated that teaching verbal self instruction can influence social, emotional, and educational adjustment among the students afflicted with mathematical disorders ( $P < 0.01$ ). The results also indicated a significant difference between the experiment and control group in posttest and follow up stages in terms of social, emotional and educational adjustment. **Conclusion:** Based on the results of this study, teaching verbal self-instruction helps to increase social, emotional and educational adjustment among the students afflicted with mathematical disorder and this method can be utilized as an appropriate interventional method.

**Keywords:** teaching verbal self instruction, mathematical disorder, adjustment, students

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## 1. Introduction

Mathematical learning disability has highly attracted the attention of scholars and experts in the field of education and training [49]. Learning disability is a disorder in one or several basic psychological procedures which includes language comprehension or its application.

This disorder is manifested in the form of disability in listening, thinking, speaking, reading, writing, or mathematical calculations. However, it does not include learning problems caused by visual, audio, or motor disabilities, mental retardation, emotional disorders, environmental, cultural or economical inappropriate conditions [35]. Just like reading ability, mathematical ability also plays a vital role in human life; however, scholars believe that researches conducted in the field of

psychological processes for math competency or failures underlying mathematical disability are much fewer than reading disabilities [21,34]. The prevalence level of this disorder is estimated 5 to 8 percent [22,40,41]. Students suffering from this disorder have great difficulties in solving verbal problems and the skills associated with, identifying the obvious information in the problem, utilizing self-regulatory and self-supervising strategies in the process of doing homework and maintaining the concentration till the end [37].

Learning disabilities cause problems in various social, emotional, and educational fields for the student [20] whose full interpretation requires a great deal of attention to be paid in terms of social, emotional, and behavioral modules of life [30]. One of the variables probably impaired due to the presence of learning disabilities in students is social, emotional, and educational adjustability. The social adjustability refers to one's adjustment with his social environment by either changing himself or the environment. Emotional adjustment can be described as good mental health, satisfaction with the personal life, and coordination among emotions, actions, and thoughts. In other words, emotional adjustability can be defined as mechanisms through which one finds emotional stability [39]. Finally, social and emotional abilities and merits are among the determining factors that influence educational adjustment [36]. Generally, adjustability is defined as the ability to blend, match, cooperate, and deal with yourself, your environment, and others. The studies indicate that children and adolescents with learning disabilities have problems in interpersonal skills [29,47], behavioral disorders and depression [48,45], social information processing [14], in social interactions and social abilities [3], higher levels of social isolation and loneliness [19], and adjustability problems [10,11,42,47]. The results indicate a great relationship between educational, social, and emotional success [18,12]. [38] showed that students suffering from learning disabilities have some sort of unwillingness towards their peers especially in educational activities. [23] proved that students with learning disabilities report more emotional problems such as anxiety and depression. The results indicated a significant difference among students with and without learning disabilities in terms of motivation, anxiety, and hopelessness. [11,28] showed that children with learning disabilities have a greater rate of social and emotional problems and adjust abilities than normal children [20] found that many students with learning disabilities also suffer from social, emotional, and educational problems which are usually ignored in the school.

One of the most common therapeutic methods which can be widely applied to students with learning disabilities and which has not attracted enough attention is verbal self instruction training (SIT). This therapeutic method is a cognitive behavioral therapy in which students are trained to change their undesirable behaviors via talking to themselves. Before responding to social situations, children learn how to take a problem apart by a five-step method. This cognitive approach was firstly developed quoted [6] to teach some sort of reflective problem solving to impulsive children in order to improve their educational performance. Verbal self training, just like a therapeutic method, focuses on the correction and reinforcement of the cognitive processes of the mind because inappropriate

behavior and emotions are the result of absence or failure in some cognitive processes [9]. Accordingly, the therapist must educate the appropriate cognitive processes [46]. Treatment includes giving a cognitive paradigm from the therapist to the kid [9].

[31] showed that teaching verbal self instruction in students with learning disabilities promotes self-awareness, a healthy relationship with others, and affects the physical, psychological, and emotional health. [13] demonstrated that behavioral-cognitive treatment helps children with learning disabilities to improve their mood, adjust their emotions, and control their anger. [17] concluded that self instruction training contributes to the welfare, social emotional and psychological improvement of the retarded students. They indicated that students in the experiment group had a greater level of social adjustability than control group students. [8] derived that social-cognitive problems solving skills training improves the performance of students afflicted with disabilities in social problem solving, reduces aggressive undesirable behaviors, and removes or changes some social goals.

Taking into account the psychological properties, behavioral problems, moods (anxiety and depression), experiencing the negative emotions of these students afflicted with mathematical disorder [27] coincidence with other childhood psychological disorders, the great prevalence of this disorder in the students, and the role of teaching social skills as the key factors of success, promotion of health, and reduction of their psychological problems and the shortage of appropriate researches in the field, applying the results of the study in the pathology and treatment of those afflicted with this disorder are some important necessities of the current study. Thus the purpose of the present research is to investigate the effectiveness of verbal self instruction training on improving social, emotional, and educational adjustability of students with this disorder.

## 2. Methodology

**Research design:** The research design is based on pretest-posttest pattern with the control group in which the effectiveness of one independent variable (verbal self instruction training) on dependant variables (social, emotional, and educational adjustability) are investigated.

**Population, sample, and sampling method:** The statistical population included all the male junior high school students of Koohdasht in the school year 2013-14 with mathematical disorders. Multi step cluster sampling method was utilized. Among all the junior high schools of Koohdasht, 10 schools were chosen, and then five schools were selected randomly. The teachers were interviewed, and based upon DSM-IV factors, students suspected of having mathematical disorders were introduced (68 individuals). Then, Keymath mathematical scale was completed for those students (with 2 standard deviations above the normal level). After scoring the answer sheets, 50 students who had gained the highest marks were selected from 40 students (based on DSM-IV criteria) and randomly put in the experience and control groups (20 in the experiment group and 20 in the control group). As for selection of the sample, each subgroup must have at least 15 subjects, but we decided to put 20 in each group so that

they can be the real representative of the population, hence obtaining high levels of external validity [1]. Utilizing exit and entrance criteria, the benchmark of the respondents' homogeneity was also observed: A) entrance criteria included diagnosis of mathematical disorder based on the clinical interview and Keymath mathematical test, age range of 12 to 16, IQ of at least 85, no medicine taken while answering the questions and during the research, sufficient levels of mental and physical health, and appropriate level of literacy needed for answering the questions by parents; B) the exit criteria included high levels of disorders such as attention deficit/hyperactivity disorder, oppositional defiant disorder (ODD) and depression, IQ level below 85, and having some sort of medical illnesses that makes one to immediately look for treatment.

**Structural clinical interview for DSM-IV disorders:** SCID is a semi-structural clinical interview used to identify disorders based on DSM. In a study conducted by Besco et al., the potential procedure of SCID was tested, and the results indicated that it can be used to guarantee a valid and precise diagnosis.

**Keymath mathematical test:** This test was normalized by Cornoli, Natchman, & Pritchett in 1976. It is used to determine the points of weakness and strength of students in various modules of mathematics. The validity coefficient of this test was calculated 0.80 based on

Cronbach's alpha. This test is used to identify students with mathematical disorders.

**Students Adjustability Questionnaire:** this questionnaire was developed by and [25] and translated into Persian. The questionnaire includes 60 questions answered by Yes or No. It separates students with good levels of adjustability from weak students in three modules of adjustability (social, emotional, and educational). The answers that indicate adjustability in all three fields get 0 and answers that indicate no adjustability get 1. Higher scores indicate lack of adjustability while lower scores indicate adjustability. The validity of this test was reported to be 0.95 and 0.93 respectively through bisecting and retesting [25]. reported retesting coefficient and Kuder-Richardson coefficient 0.89 and 0.82, respectively. The validity of this test was confirmed by a group of psychologists (quoted by Saghi and Rajaiee, 2008). The Cronbach's alpha for the current questionnaire was 0.84 for social adjustability, 0.86 for educational adjustability, and 0.78 for emotional adjustability. The total coefficient was 0.82 indicating a desirable validity for this scale.

**Verbal self instruction training program for students:** Here, we have tried to develop a training program based on the theory of Maiken Bam and Goodman (1971; quoted by Kratochoil & Morris, 2002). Thus, the therapeutic program was administered for students in eight 1-hour sessions which is briefly discussed below.

**Table 1. Verbal self instruction training program based upon Maiken Bam and Goodman approach**

Structure of the session	Contents of verbal self instruction training sessions
1 <sup>st</sup> session	Introducing the members of the group to each other and getting them talk about their disabilities (with the goal of accepting the problem), conceptualizing and describing the learning disability, its signs and effects on social performance, getting familiar with the goals of intervention sessions and the reason for holding them, signing the participation contract and describing the effects of instruction (to boost motivation)
2 <sup>nd</sup> session	A paradigm (the researcher) talks to himself loudly and does a homework (cognitive paradigm). For example, he asks himself: what is my problem? What is my plan and design? Shall I use this plan? How should I put this plan and design which is internal into practice? Training verbalization of problems, self observation, and exercising constraint. In this step, the researcher asks all students to practice this assignment and then assigns them to practice the skills for the next session.
3 <sup>rd</sup> session	A review of the previous session and asking questions about the application of the skills over the last week was carried out. The researcher asked the students to do the same task again under the educational supervision of the pattern (therapist). Then, the assignments were done by the students under the supervision of therapist for several times. Homework was assigned to practice the skills for the next session.
4 <sup>th</sup> session	A review of the previous session and asking questions about the application of the skills over the last week were done. In this step, the students were asked to guide themselves loudly (evident self-guidance). Then, all the students in the experiment group were asked to repeat this exercise several times. Homework was also assigned for the next session.
5 <sup>th</sup> session	A review of the previous session and asking questions about the application of the skills over the last week: In this step, the student is asked to practice quietly (gradual omission of evident self-guidance). Homework was assigned as well.
6 <sup>th</sup> session	A review of the previous session and asking questions about the application of the skills over the last week: Students began doing their homework while whispering to themselves (evident self-guidance). Homework was assigned.
7 <sup>th</sup> session	A review of the previous session and asking questions about the application of the skills over the last week: Students were taught how to regulate their emotions (the goals of teaching regulation of emotions, knowing why emotions are important, identification of emotions, reduction of vulnerability and emotional suffering, positive emotions), and how to change negative emotions through positive self-expressions. Homework was assigned for the next session.
8 <sup>th</sup> session	A review and summing up of the previous sessions and asking questions about the use of the skills over the last week. Assigning skill tasks to be practiced forever.

**The process of conducting the research:** After making the arrangements and gaining permission from the bureau of education of Koohdasht city, the research participants were asked to participate in the study after complying with moral considerations and statement of the goals, informing the parents, and gaining their consent. Then, the sample students took the Keymath test and the students with high scores (two standard deviations above average) were identified and interviewed. Of the students with mathematical disorders, 40 were placed randomly in the experiment and witness groups. Furthermore, to justify the students and state the goals of the research, they were

asked to take part in the course of treatment. The experiment group was divided into two groups each consisting of 10 students so that they could be controlled in the training sessions. Two assistants were used to better control the kids; then each group underwent verbal self-training while the witness group received no intervention (during the educational intervention course, the witness group merely underwent regular class training). The training courses included eight 1-hour sessions in a place specified by the bureau of education of Koohdasht. During these sessions and after the end of training, students in both groups took the posttest. Finally, the students

answered the question booklets after a 2-month period again to check the consistency of interventions. Finally, the data were analyzed through multivariable covariance analysis test (MANCOVA). The students were also assured that their responses are confidential, so got prepared mentally and spiritually. No loss of the participants was observed in both experiment and control groups. Verbal self-learning training course was implemented by two graduate students of clinical psychology over eight sessions. After making the required arrangements with parents, the trainings were scheduled for Fridays.

### 3. Results

**Table 2. the mean and standard deviation in the scores associated with social, educational, and emotional compliance in the pretest, posttest, and ad hoc test of the groups studied**

Variable	Experiment					
	Pretest		Posttest		Ad hoc	
	M	SD	M	SD	M	SD
social Adjustment	14.26	2.21	9	2.32	8.36	2.14
Educational adjustment	11.33	1.42	7.53	2.09	6.57	2.21
Emotional adjustment	13.12	1.88	7.36	2.06	7.12	2.13
Variable	Control					
	pretest		posttest		ad hoc	
	M	SD	M	SD	M	SD
Social adjustment	13.23	1.36	11.29	2.05	11	1.36
Educational adjustment	14.15	2.10	13.45	2.11	12.14	1.55
Emotional adjustment	12.75	1.87	11.18	1.42	10.59	1.16

Based on Table 2, the following means (and standard deviations) were reported regarding the students' pretest scores in the experiment group for the following components: social adjustment 14.26 (2.21), educational adjustment 11.33 (1.42), and emotional adjustment 13.12 (1.88). The means (and standard deviations) of the scores of the posttest the students of the experiment group were 9 (and 2.32) for social adjustment, 7.53 (and 2.09) for educational adjustment, and 7.36 (and 2.06) for emotional adjustment, while their ad hoc scores were as follows: 7.63 (and 2) for social adjustment, 7.1 (and 2.1) for educational adjustment, and 6.23 (and 2.36) for emotional adjustment. The following means (and standard deviations) were reported for the students' pretest scores in the control group for the following components: social adjustment 13.23 (1.36), educational adjustment 14.15 (2.05), and emotional adjustment 12.75 (1.87). The means (and standard deviations) of the scores of the posttest of the students of the experiment group were 11.29 (and 2.05) for social adjustment, 13.45 (and 2.11) for educational adjustment, and 11.18 (and 1.42) for emotional adjustment, while their ad hoc scores were as follows: 11 (and 1.63) for social adjustment, 12.14 (and 1.55) for educational adjustment, and 10.59 (and 1.16) for emotional adjustment. To check the normality of the distribution of coherent variables, Shapiro-Wilkes test was utilized. Based on the resulting possible values ranging from 0.117 to 0.336, it

can be concluded that the distribution of all research variables were normal.

**Table 3. Testing the normality of distribution in the stage of pretest and posttest based on the group**

Variable resources	Shapiro-Wilkes			
	Scale	Statistics	DF	P
Pretest (verbal self-learning training)	Social adjustment	0.929	40	0.145
	Educational adjustment	0.948	40	0.336
	Emotional adjustment	0.937	40	0.212
Pretest (witness group)	Social adjustment	0.935	40	0.192
	Educational adjustment	0.924	40	0.117
	Emotional adjustment	0.928	40	0.128

According to Table 3, the zero hypothesis for the normality of the distribution of the scores in social, educational, and emotional scales in both groups (verbal self-learning education and witness group) is confirmed, i. e. the scores of both groups in the scales of social, educational and emotional adjustment have a normal distribution in the pretest status.

**Table 4. the results of Box's and Leven's test on the presupposition of the equality of the variances of both groups in terms of the scores gained for social, emotional and educational adjustment in the pretest and ad hoc test of the groups studied**

Leven's	Leven			
	DF1	DF2	F	P
Social adjustment posttest	1	38	0.814	0.423
Social adjustment ad hoc test	1	38	1.226	0.145
Emotional adjustment posttest	1	38	0.968	0.214
Emotional adjustment ad hoc test	1	38	0.569	0.617
Educational adjustment posttest	1	38	1.856	0.112
Emotional adjustment ad hoc test	1	38	0.519	0.602

Prior to utilizing the multivariable covariance analysis parametric test, Box's and Leven's tests were applied to comply with its presuppositions. Based on the Box test which was not significant for any of the variables in the posttest stage with (BOX= 4.124 and F=1.361, P= 0.471) and the ad hoc with (BOX= 6.546 and F=2.181, P= 0.264), the condition of the homogeneity of variance/covariance matrixes is observed. Based on Leven's test and her insignificance in posttest and ad hoc test, the condition of the equality of intra-group variances is also observed (Table 4).

As it is seen in Table 5, after moderating the test marks, the intra-subjects factor of the group (verbal self-learning skills education) had a significant influence on components of social, emotional and educational adjustment in the posttest (F(33 and 3)= 4.361, P<0.001) and ad hoc (F(33 and 3)= 2.563, P<0.001) stage. In other words, the hypothesis that teaching verbal self-learning improves social, emotional, and educational adjustability of the students afflicted with mathematical disorders is confirmed in the significance level of P<0.001.

Based on MANCOVA, after moderating the pretest scores, teaching verbal self-learning has a significant influence on social adjustability in the posttest (F(35 and 1)= 111.321, P<0.001) and ad hoc (F (35 and 1)=106.451, P<0.001) stages. It also has a significant influence on

emotional adjustability in the posttest ( $F(35 \text{ and } 1) = 98.119, P < 0.001$ ) and ad hoc ( $F(35 \text{ and } 1) = 86.654, P < 0.001$ ). Its significant influence has also been observed on educational adjustability in the posttest ( $F(35 \text{ and } 1) = 163.202, P < 0.001$ ) and ad hoc ( $F(35 \text{ and } 1) = 119.310, P < 0.001$ ) stages. There is also a significant difference between the moderated scores of social, emotional, and educational adjustability between the educational groups of verbal self-learning and witness. In other words, these findings indicate an increase in social, emotional, and educational adjustability in the experiment group as compared with the witness group. The efficiency value in

the posttest stage for social, emotional, and educational adjustability is respectively 0.745, 0.718, and 0.803, i.e. 74, 71, and 80 percent of the changes in posttest scores are associated with verbal self-learning education. The efficiency value in the ad hoc stage for social, emotional, and educational adjustability is 0.654, 0.601, and 0.776, respectively. It means that 65, 60 and 77 percent of the changes in ad hoc scores are associated with the durability of the influence of verbal self-learning education, indicating the durability of the influence of teaching verbal self-learning in the experiment group.

**Table 5. information associated with the credential indexes of multivariable covariance analysis test (MANCOVA) in posttest and ad hoc test stage**

Situation	Test	Value	DF of hypothesis	DF of error	F	P	Eta	Statistical power
Group membership of posttest	Pilai-Bartlet	0.765	3	33	4.361	$p \leq 0.001$	0.765	1.00
	Wilks lambda	0.216	3	33	4.361	$p \leq 0.001$	0.765	1.00
	Hetling effect	13.263	3	33	4.361	$p \leq 0.001$	0.765	1.00
	The highest root above	13.263	3	33	4.361	$p \leq 0.001$	0.765	1.00
Member ship in ad hoc group	Pilai-Bartlet	0.723	3	33	2.563	$p \leq 0.001$	0.765	1.00
	Wilks lambda	0.142	3	33	2.563	$p \leq 0.001$	0.723	1.00
	Hetling effect	11.142	3	33	2.563	$p \leq 0.001$	0.723	1.00
	The highest root above	11.142	3	33	2.563	$p \leq 0.001$	0.723	1.00

**Table 6. the results of multivariable covariance analysis test (MANCOVA) on the scores of the components of social, emotional, and educational adjustability in verbal self-learning and witness groups**

Variable	Component	SS	DF			MS	F	P	ETA	Statistical power
			group	error	total					
Adjustability	Social adjustability posttest	141.365	1	35	40	141.365	11.321	$p \leq 0.001$	0.745	1.00
	Social adjustability ad hoc	112.745	1	35	40	112.745	106.451	$p \leq 0.001$	0.656	1.00
	Emotional adjustability posttest	214.126	1	35	40	214.126	98.119	$p \leq 0.001$	0.718	1.00
	Emotional adjustability ad hoc	163.452	1	35	40	163.452	86.654	$p \leq 0.001$	0.601	1.00
	Educational adjustability post test	310.713	1	35	40	310.713	163.202	$p \leq 0.001$	0.803	1.00
	Educational adjustability ad hoc	212.542	1	35	40	212.542	119.310	$p \leq 0.001$	0.776	1.00

### 4. Conclusion and Discussion

The goal of the present research was to investigate the effects of teaching verbal self-learning on the social, educational, and emotional adjustability of the students afflicted with mathematical disorders. The results manifest that verbal self-learning has a positive influence on social, emotional, and educational adjustability of students afflicted with mathematical disorders. These results are in line with other studies [8,13,31]; which claim cognitive-behavioral skills (verbal self-learning) improve the social and cognitive adjustability of the students afflicted with mathematical disorders. In an attempt to elaborate on the results, we can say that attending verbal self-learning training sessions helps learning disorders to be considered as something natural for the students and their families because in the majority of cases there is only one individual in the school who is formally diagnosed with learning disability (mathematical disorder, etc.), and this sense of loneliness and exceptionality is bothering. As a matter of fact, participating in verbal self-learning training sessions helps the students admit their problem and deal with it rationally. Stating the successful and unsuccessful

experiences in the presence of individuals who share a lot with him gives the persona sense of friendliness, responsibility, and self-efficiency. Thus, verbal self-learning gives the students an opportunity to deal with their problems and feel they are capable of having a joyous relationship despite educational, emotional, and social problems. Furthermore, the education was conducted in such a way that made students think as it was based on questioning and thinking, and repetitive emphasis was made that required students avoid quick and impulsive responses and needed more deep contemplation. On the other hand, social adjustability promotion might be due to practical and verbal participation of the individuals to find the solution for problems as they were encouraged and reinforced a lot, and desirable behaviors and students' responses were encouraged as well [8]. This state has probably resulted in positive experience and promotion of the students' attitude towards others and promotion of intrapersonal relationships. Meta-cognitive strategies for these students are steps to improve their cognition and help them abandon the role of "a defeated individual". Choosing inappropriate social goals such as isolation of children from learning disabilities indicates their ignorance by their peers .

In an attempt to explain others' results, it is claimed that students with learning disabilities (mathematical disorders) suffer from low social skills, low psychological and physical welfare, and weak intrapersonal relationships [8], thus they have significant problems in personal and emotional adjustability and regulation of emotions [27]. This fact leads to lack of social and emotional adjustability among them. By teaching the verbal self-learning skills, these students gain social relationship skills, emotional management, regulation, and friend making art. Since they receive positive feedback from their friends and the researcher after each behavior, they would have more desirable social goals and less undesirable feelings towards their peers. Accordingly, the individual differences of children in terms of social, cognitive, and emotional relationships are associated with their acceptance by their peers and family. If the level of relationships gets closer to the peers, the child will choose more social goals (the most important of which is social problem solving). Although these children are identified with lower levels of self-efficiency and adjustability and higher levels of negative emotions [26], the results demonstrate a reduction of undesirable social behaviors after receiving training in the field of verbal self-learning. On the other hand, the oral review of the previous session's assignments indicated that students tended to use the skills they had learnt at home and, particularly, in interaction with their mothers. Perhaps, some sort of emotional security and higher sympathy might have been taken place between the mother and child.

Thus, the skills utilized in this training program seem to provide children with a pattern for social skills and appropriate ways of interaction in different situations. Based on the behavior analysis approach, these patterns can teach children new behaviors, improve and organize the purposeful behaviors that exist in their behavior inventory, incite them to act in a particular way, reduce their anxiety, and indirectly encourage their positive behaviors.

In another interpretation of verbal self-learning, it is suggested that rehabilitating the students with mathematical disabilities in application of internal speech helps them guide their behavior through self-expression and direct their behavior through utilizing plans and designs (Crane, translated to Persian by Khoy Nejad and Rezaiee, 2005). In other words, verbal self-learning results in verbal thinking which helps a child with learning disability to internalize his behavior so that he may predict future and maximize long-term consequences. Activation of internal speech as a result of verbal self-learning education acts as an automatic fulcrum point. Teaching students methods to fight against inappropriate thinking patterns, emotions, and cognitive styles helps them to control and guide their behaviors and emotions through talking to themselves [33] Since this sample is merely confined to Koohdasht, it is hard to generalize the results to other cities. The sample included only male junior high school students, so making it difficult to be generalized for female students. Considering the abundance of this disorder in childhood and adolescence period and voracious references to treatment centers, conducting psychological researches associated with the problem can make a great contribution to identification and solving the psychological problems in these people. It is recommended

that consultants and educational planners form curricula for verbal self-learning, promotion of adjustability, and identification and expression of emotions in schools and families. This treatment method is suggested to be tested on other disorders such as ODD and ADHD; the results of which can be utilized in counseling centers.

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