DOI : 10.18843/rwjasc/v8i3(1)/17
DOI URL : http://dx.doi.org/10.18843/rwjasc/v8i3(1)/17

THE EFFECT OF LAZARUS MULTIMODAL OCCUPATIONAL THERAPY ON COGNITIVE EMOTION REGULATION IN STUDENTS WITH ADHD

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ABSTRACT

Emotion regulation is a fundamental and important issue in employing and organizing adaptive behaviors, and preventing negative emotions and subsequent maladaptive behaviors.
present study aims to investigate the effect of Lazarus multimodal therapy on cognitive emotion regulation in students with attention deficit/hyperactivity disorders (ADHD).
This study was a quasi-experimental study with a pretest - posttest and control group. Thirty children with ADHD was selected by purposive sampling and after initial evaluations, from elementary school (9-12) years old in Mashhad in 1395. Data were collect by Cognitive Emotion Regulation Questionnaires (P-CERQ) in the pre-test and post-test. Experimental group received 10 sessions (60 minutes) of Lazarus Multimodal Therapy for two months, as a group intervention. Data were analyzed by SPSS version 19 using descriptive statistics and univariate analysis of covariance.
Results show that Lazarus Multimodal Therapy have had significant effect on cognitive emotion regulation in students with ADHD ($F= 51.97$ $p< 0.05$) and in the post-test after intervention, 58 percent was the effect size of the variation in scores of regulation.
In addition, by controlling the effect of pre-test, , there are a significant difference between the groups in all aspects of regulation scores in the experimental group, significantly reducing the negative strategies and positive strategies for increased regulation. The mean scores of students in the experimental group, significantly reduced in the negative strategies and increased in positive strategies for emotional regulation.
Lazarus Multimodal Therapy is effective for cognitive emotion regulation in children with ADHD.

Keywords: Lazarus Multimodal Therapy, cognitive emotion regulation, ADHD.

INTRODUCTION:

Diverse issues including oppositions, failures, and losses threaten the human health, but human being is highly capable in regulating these aroused emotions. The attempt for emotion regulation widely determines the effect of these disorders on our psychological and physiological well-being (Gross, 2002), since everyday life emotional experiences play a key role in mental health, motivational processes, proper reaction to stressful events, social developments, and actions taken by different people. Although various emotions (e.g. fear, anger, and hatred) have a physiological basis, people are still capable of controlling the intensity, duration, and type of their emotional experiences. These processes are called emotional regulation in psychological texts (Hasani, 2011), and include a wide spectrum of physiological, emotional and cognitive responses (Gross, 2002). Emotion regulation is comprised of a set of processes leading to the retention of optimum arousal needed to achieve desirable performance by people (Driscioll, Laing & Mason, 2014). Cognitive emotion regulation includes dual processes which play a constructive role in the appropriate expression and control of emotions (Tully, Hope, Lincoln & Christine, 2014). Consequently, emotional regulation is a fundamental and important issue in employing and organizing adaptive behaviors, preventing negative emotions and subsequent maladaptive behaviors (Jermann et. al., 2006). People use different ways to regulate their emotions. Cognitive approach is one of the most common procedures people use to manage emotional information (Garnefski, Kraaij & Spinhoven, 2001). Achieving emotional regulation skills in childhood is the most critical issue in the mental growth and development (Wessing et. al., 2015). The theoretical patterns show that successful emotional regulation is associated with better wellbeing, progress in relations, and desirable educational performance (John and Gross, 2004). Other studies have reported a significant relationship between poor emotion regulation and such mental disorders as anxiety and depression in children and teenagers (Duarte, Matos & Marques, 2015). Emotion regulation skill requires training and growth, just like other skill. Ten to eleven years old children were better at regulating their emotions after instruction (Lei et. al., 2014).

Since children with attention deficit/hyperactivity disorder (ADHD) are incapable of retaining and regulating their behaviors, their sleeping and eating habits are not regular and they need continuous care. They are not emotionally stable. They suddenly laugh and cry, or participate in dangerous activities. Their behavior negatively influences their performance in family, school, and society. They may hate school and society. Those children may experience problems in relations, and education, or suffer from anxiety or depression leading to crime (Kezer & Arik, 2012). Barkley and Edwards (1988) claim that they may recover between the ages of (12 - 20) years old, but cure before 12 is rare. The disorder may continue even after puberty and in adulthood. Without treatment, only one third to half of the children suffering from hyperactivity can be adaptive with these symptoms in their lives. Others are apt to secondary disorders. About 5% of the children suffer from hyperactivity and its incident is three times more among males than females (Fisher & Wells, 2008). Most of these students fail in education and leave the school very early. Consequently, if their disorders are left unidentified and without any positive interference, the possibility of other disorders like depression, anxiety and crime is high among hyperactive children (Trute, Worthington & Hiebert-Murphy, 2008). The findings indicate that interference based on functional procedures including metacognitive approaches can improve the performance of students suffering from this disorder (Bley &Thornton 2001, Swanson & Jerman 2006, McLoskey, Perkins & Divner 2009, Meyer, Salimpoor, Wu, Geary & Menon 2010, Gary 2010).

One of the psychotherapy methods encompassing the dimensions of health definition is Lazarus multimodal therapy. It is successfully used in a wide spectrum of disorders (Janbozorgi and Noori, 2003). Lazarus believes that human personality can be defined based on seven modes (behavior, affection, sensory inceptions, image processing, cognition, interpersonal relations and physiology). Although these modes are separately described, they are in fact interacting. Each experience can be explained by a mode interacting with others. An alteration in one mode leads to alteration in other modes (Dryden & Mytton, 1999). Based on this therapy, seven modes are assessed separately but in interaction with others. Treatment is a landscape of meaningful interaction between these modes (Jonbozorgi et al., 2003). The model mainly designed by Lazarus and developed by others like Palmer and Dryden is modal and especially useful in controlling tension and anxiety. Lazarus defines the overall goals of multimodal treatment as reduction of psychological problems and boosting personal development. Moreover, specific goals can be defined, as well. The issues raised in each of seven modes, can be addressed as treatment goals (Jonbozorgi et al., 2003). It is claimed that multimodal treatment is used to treat various cognitive disorders, since all disorders curable with cognitive treatments can be cured via multimodal treatment, as well (Rahimian and Shareh, 2008). In a study, the effectivity of multimodal treatment in a witness group suffering from anxiety and tension was evaluated. Multimodal therapy was implemented on the group for 12 sessions during 3 months. The obtained results showed that the level of anxiety and tension were reduced

significantly in the experimental group (Dabaghi, Dadsetan, & Sa'atchi, 2002). In another study, the effect of multimodal therapy and gradual muscular relaxation on anxiety reduction were compared. A sample composed of 27 students suffering from anxiety (aged 14-18) years were divided into one witness and two experimental groups. The above therapy were administered on two experimental groups for 10 sessions. The results obtained from these appraisals showed that both methods of multimode and gradual relaxation were effective in reducing the overall, observed and state of anxiety. The results also indicated that multimode treatment was significantly more influential in reducing such underlying factors as trait anxiety than relaxation (Dabaghi et al., 2002). In another study, an experimental scheme with three groups, the multimodal treatment was used as one of the independent variables to reduce the exam anxiety among students. In this study, 83 students suffering from exam anxiety were classified into 5 groups as follows: Lazarus multimode treatment, theory of rational-emotional of Robert Ellis, relaxation, placebo, and witness. No significant difference was observed between Lazarus multimode therapy and rational-emotional method of Ellis. Lazarus method was significantly more effective than the rest of treatments in reducing exam anxiety. No difference was observed between placebo and relaxation in decreasing the exam anxiety (Biabangard, 2002). Bahrankhani (2011) also indicated that multimodal treatment is effective for patients suffering from multiple sclerosis.

Based on the importance of what was mentioned above, and because children with deficit attention/hyperactivity disorder are at a lower level of psychological wellbeing and emotional stability (Grossman &Niemann, 2004), offering this treatment is vital for such kind of patients (Bardshaw & Rose, 2008). On the other hand, a good theory should be refutable based on empirical methods (Bahramkhani, 2011). The usual trend in scientific progression shows that theories will be subjected to experiments and gradual revisions. In fact, a theory developed through continuous experiments and adjustments until it can exactly explain all the existing data (Hooman, 2006). Consequently, when a treatment theory is codified, its effectivity is verifiable in different types of disorders including nervous system development, attention deficit/hyperactivity, etc. based on controlled research frameworks. To this end, present study aims to investigate the effect of Lazarus multimodal treatment on cognitive emotion regulation in students with attention deficit/hyperactivity disorders.

RESEARCH HYPOTHESIS:

1. Lazarus multimodal occupational therapy significantly affect cognitive emotion regulation in students with attention deficiency/hyperactivity disorder.
2. Lazarus multimodal occupational therapy significantly affect cognitive emotion regulation components in students with attention deficiency/hyperactivity disorder.

METHODOLOGY:

The present study is a quasi-experimental scheme with pre-test, post-test, and a control group. The statistical population include all ADHD elementary students in Mashhad who have sought medication from psychologists in 2016. Sampling was purposive, based on availability at Alzahra psychological clinic for children and teenagers an affiliate of Medical Science University and Clinical Services in Mashhad. Sample included 30 children randomly selected and divided into two groups based on the gender (15 children in experimental and other 15 in the control groups). Participants had to meet the following criteria to be admitted into the study:

1. Definite ADHD diagnosis by a psychologist.
2. NO record of previous ADHD diagnosis or treatment.
3. All subjects were taking medication for treatment (Ritalin)
4. Age limits of 9 to 12 years old
5. Written consent to participate in the study and subsequent treatment stages.

INSTRUMENTS:

Cognitive Emotion Regulation Questionnaire (CERQ-P): this questionnaire was developed by Garnefski et al. (2001) in the Netherlands. It is a multimodal questionnaire to evaluate the cognitive strategies each person utilizes after experiencing threatening or stressful events. It contains 36 questions designed to measure micro-scales of cognitive emotion regulation (self-blame, acceptance, rumination, re-positive, positive reappraisal, perspective-taking, positive refocus, refocus on planning, positive reappraisal, perspective-taking, catastrophizing, and blaming others). The responses are rated based on the Likert Scale from 1 (almost never) to 5 (almost always). Self-blame, blaming others, rumination, and catastrophizing are negative strategies to regulate emotions, and

acceptance, refocus on planning are positive ones. The score for each strategy is calculated based on the total scores assigned to the phrase comprising that strategy. It can vary from 4 to 20 and the total score is from 36 to 180. The higher scores in each of microscales denote higher application of that strategy to counteract negative and stressful events. The reliability of the questionnaire is reported from 0.62 to 0.80 based on Cronbach alpha ratio (Garnefski and Kraaij, 2007). The reliability of the questionnaire in Iranian culture was determined to be 0.76 to 0.92 based on Cronbach alpha ratio, and its reliability was approved based the analysis of the main factor using varimax. The correlation between microscales (ranging from 0.32 to 0.67) and criterion validity were reported as satisfactory (Hasani, 2011). The reliability of 0.78 (based on Cronbach ratio) was obtained in the present study for the questionnaire as a whole.

INTERVENTION:

In this research, based on Bahramkhani (2011), the treatment method and the goals of the research were totally explained to the patients. Before main group sessions, a briefing session was held and the details (like the number of sessions, time and location of classes, etc.), main rules, goals, and the procedure were explained. The experimental group took medical interference based on Lazarus multimodal treatment in the group. The control group received no treatment. At the end of sessions, the post-test was administered on both groups, and the relevant data were analyzed using SPSS (v. 19), and the descriptive data (mean, and standard deviation) were examined. Then, a univariate covariance was used.

Table 1: Activities conducted in each multimodal treatment session

Session	Content
1	1. Greeting and introduction 2. Rules, goals, and importance of the study was reviewed as it was outlined in the briefing sessions 3. Group discussion and covering the problems 4. Explanation of the interactive model 5. Describing the procedure and its logic 6. Conclusion and answering questions 7. Assignment (self-assessment)
2	1. Review of tasks 2. Review of previous session 3. Group discussion 4. Elaborating on individual problems and multimodal treatment application 5. Explaining the modal profile and assisting all members of the group to prepare their individual profiles 6. Conclusion and answering the questions 7. Assignment (self-assessment)
3	1. Review of tasks 2. Review of previous session 3. Group discussion 4. Explaining the structural profile and assisting all members of the group to prepare their individual profiles 6. Conclusion and answering the question 7. Assignment (self-assessment)
4	1. Review of tasks 2. Review of previous session 3. Group discussion 4. Elaborating on the sequence of arousal problems and preparing a sequence of individual problems 5. Conclusion 6. Assignment (self-assessment, and preparing a sequence for all problems)
5-10	1. Review of tasks and previous session 2. Explaining a technique based on the modal and structural profiles 3. Instructing and training the technique based on the relevant mode and overall profile of the group 4. Bridging the technique to other modes based on the group requirements, practice and teaching another skill 5. Regulation of secondary modes and their sequence if the individual problems are not solved and applying new techniques 6. Conclusion and answer the questions raised by participants 7. Assignment (self-assessment, practicing the techniques at home, preparing report sheets and recording the observed application of the techniques)

FINDINGS:

Table 2: Descriptive statistics of cognitive emotion components in experimental and control groups taking pre-test and post-test

Factors	Groups	Experimental		Control	
		Mean	SD	Mean	SD
Self-Blame	Pre-test	12.36	1.59	12.00	1.3
	Post-test	11.06	1.69	12.07	1.43
Acceptance	Pre-test	11.14	2.14	11.8	2.65

Factors	Groups	Experimental		Control	
	Post-test	10.63	1.99	11.93	2.21
Rumination	Pre-test	13.36	1.94	13.8	2.45
	Post-test	12.7	1.34	13.27	2.63
Positive refocusing	Pre-test	10.71	2.4	10.6	2.02
	Post-test	13.87	2.82	10.2	1.3
Focus planning	Pre-test	10.93	2.10	10.13	1.55
	Post-test	13.94	3.21	10.8	1.47
re-evaluation	Pre-test	13.00	2.41	13.3	2.72
	Post-test	15.44	1.96	13.27	2.93
Perspective-taking	Pre-test	11.93	2.26	10.53	3.29
	Post-test	13.81	3.31	10.27	1.58
Catastrophizing	Pre-test	12.07	1.73	11.47	1.8
	Post-test	9.95	3.01	11.93	2.21
Blame others	Pre-test	11.29	2.16	12.53	1.84
	Post-test	9.31	1.38	12.64	1.44
Total	**Pre-test**	**110.64**	**11.48**	**1.8.93**	**10.25**
	Post-test	**134.25**	**8.75**	**100.87**	**10.16**

Based on data presented in table 2, after comparing the pre-test with post-test in sub-scales of self-blame, acceptance, rumination, catastrophizing, blaming others, after taking the sessions of multimodal treatment these negative traits were significantly reduced, and this reduction was more evident in experimental group. On the other hand, the higher scores in positive refocus, refocus on planning, positive reappraisal, and perspective-taking, compare to the control group, indicate that interference of multimodal treatment can boost these positive traits in people. There is no remarkable improvement for witness group in these sub-scales.

Hypothesis 1) Lazarus multimodal occupational treatment significantly affect cognitive emotion regulation in students with attention deficit/hyperactivity disorder

Levin-Test results to study the equality of variance in cognitive emotion regulation variable between groups are presented in table 3.

Table 3: Levin-Test results on the equality presupposition of variance of cognitive emotion regulation variable in two groups

Variable	Df	F	sig
Cognitive emotion regulation	25	0.337	0.798

Based on the results presented in table 3, the significance level obtained from Levin-Test in both groups for cognitive emotion regulation variable is $p>0.05$. Since this test is not significant, the variances in both groups are homogenous.

Table 4 represents the univariate covariance results to investigate the effectivity of Lazarus multimodal occupational treatment in cognitive emotion regulation of students with attention deficit/hyperactivity disorder.

Table 4: The analysis of univariate covariance results for cognitive emotion regulation scores obtained by both groups

Source changes	Sum of squares	df	Mean of squares	F	Sig	Effect size
Covariate	2895.147	1	2895.147	545.147	0.000	0.158
Group	271.357	1	271.357	51.097	0.000	0.580
Error	143.386	28	143.386	-	-	-
Total	**49457**	**30**	-	-	-	-

Based on the results presented in table 4, after adjusting the pre-test and post-test scores, there is a significant difference between experimental and control groups. Consequently, H0 denoting that there is no difference

between two groups is rejected. We can say that Lazarus multimodal occupational treatment has a significant impact on cognitive emotion regulation in students with attention deficit/hyperactivity disorder (F=51.097, P<0.05). This indicates that 58% of variations in cognitive emotion regulation score are due to educational interference.

Hypothesis 2) Lazarus multimodal occupational treatment has a significant impact on cognitive emotion regulation in students with attention deficit/hyperactivity disorder

Table 5: Summary of Levin-Test to investigate the variance homogeneity in components of cognitive emotion regulation

Factors	F	Df1	Df2	Sig
Self-Blame	3.63	3	76	0.018
Acceptance	0.876	3	76	0.464
Rumination	1.551	3	76	0.211
Positive refocusing	2.241	3	76	0.093
Focus planning	0.681	3	76	0.567
re-evaluation	1.075	3	76	0.367
Perspective-taking	4.128	3	76	0.010
Catastrophizing	2.713	3	76	0.053
Blame others	2.188	3	76	0.100

As can be seen in table 6, the significance level in all components except for self-blame, perspective-taking, and catastrophizing is higher than 0.05. That is variance homogeneity is evident in both groups for components (except for the above components). Since the number of groups are equal, we can ignore this hypothesis. The significance level of Pillai's trace is less than 0.01. It indicates that, after controlling pre-test effect in experimental and control groups, there is a significant difference in at least one of the cognitive emotion regulation components. In order to discover which one of cognitive emotion regulation components is different a univariate covariance analysis was used. It showed that, based on Bonferroni correction alpha (0.005) and controlling pre-test effect, there are significant differences between both groups in all aspects. Based on table 2, in these scales, the average scores of students in experimental group undergoes a significant reduction in negative strategies of regulation, and a significant increase in positive ones. Consequently, we can conclude that Lazarus multimodal treatment has a significant impact on cognitive emotion regulation components in students with attention deficit/hyperactivity disorders. Thus, the second hypothesis is approved. Positive refocus undergoes the highest amount of improvement (0.280). That is, about 28% of variance in the best linear combination of scores can be explained based on affinity to groups. The figures for catastrophizing, perspective-taking, blaming others, self –blame, refocus on planning, rumination, acceptance, and reappraisal are respectively as follows: 18.7, 15.7, 4.9, 1.13, 5.7, 10.11, 10.2, 10.2, and 10.

DISCUSSION AND CONCLUSION:

The present study aimed to investigate the effect of Lazarus multimodal therapy on cognitive emotion regulation in students with attention deficit/hyperactivity disorder. H1 of the research states that Lazarus multimodal occupational therapy significantly affects the cognitive emotion regulation in students with attention deficit/hyperactivity disorder. The findings show that this is the fact (P<0.05, F=51.097) and anticipate 58% variation in cognitive emotion regulation scores of experimental students in post-test due to Lazarus treatment. In line with our findings, we may mention the following studies: Rahimian and Shareh (2008), Dabaghi et al. (2002), Biabangard (2002), Bahramkhani (2011), Bahramkhani and Ghazi-Barzegar (2010), Hamidizadeh, Ahmadi, Asgari (2006), Sun Han (2002), Sartippour, Attari, Ameni, and Haghighi (2003), and Ghorbani (2016).

To explain the findings of the study, we can say that children with attention deficit/hyperactivity disorder utilize non-adaptive strategies (self-blame, rumination, catastrophizing, blaming others) encountering stressful events (Garnefski et al., 2004). When such kind of children experience something unpleasant, relate it to their faults and shortcomings. They blame themselves, and in this condition, the problems are combined with other cognitive deficiencies that make getting along with these variations in life an undesirable situation (Garnefski et al., 2011). Barkli (1997, cited in Taddei et al., 2011) believes that attention deficit/hyperactivity disorder in children is primarily defined based on their inability in behavioral inhibition. These disorders lead to secondary

problems in other areas including active memory and plans for problem-solving. The difference between the children with learning problems and normal ones is defined by Telzrow and Bonar (2003). They claim that such kind of children have an imperfect perception of their surrounding due to insufficient environmental exploration. They experience difficulties in reasoning, flexibility, problem solving, and part-whole relations. It takes longer for them to answer, since they are slower at processing and concentration. When these disorders are combined with other cognitive insufficiencies, they face an undesirable condition coping with alterations in life. The complexity of certain learning deficiencies requires real and thorough identification of children's situation. A team of experts with diverse expertise and experience are needed to assess the factors leading to such kinds of problems. Since children with attention deficiency/hyperactivity face problems in seven key components of human personality (1. Relation and dependence among events 2. Modeling and simulation 3. Unconscious processes 4. Defensive reactions 5. Personal events 6. Meta-communication and interaction 7. Sensory threshold), and based on Lazarus these problems stem from nervous growth deficiency (Nelson, 2001), multimodal treatment can reduce the psychological problems in such kind of children, and pave the way for improving their personal growth. The prominent problem in each mode can be the goal of treatment. An agreement is needed between the therapist and the client for each mode. The therapist and the client determine the most prominent mode. Multimodal therapists select the best technical choice but they are theoretically strong and persistent (Deriden et al., 1999)

The second hypothesis states that Lazarus multimodal occupational treatment has a significant impact on cognitive emotion regulation components in students with attention deficit/hyperactivity disorders. Our findings indicate that, after controlling the pre-test, there is a significant difference between both groups in all aspects of regulation and the average score of experimental students is significantly lower in negative regulation strategies and higher in positive ones. In line with our findings, we may refer to the followings: Karami, Heidar-Sharaf, and Shafi'ee (2015), Abolghasemi, Beigi, and Narimani (2011), Salehi et al. (2011). To explain our findings we can say that from non-adaptive cognitive emotion regulation strategies rumination, self-blame, and catastrophizing, and from adaptive ones reappraisal, perspective-taking, and refocus on planning predict a reduction in problems and psychological disorders (Goldsmith & Davidson, 2004). It should be noted that a large number of children with attention deficit/hyperactivity disorder face problems doing assignments and concentrating on the lesson, based on rules common in schools. Such kind of students may fail to do assignments, positively communicate with teachers, and think positively. These factors deter their educational progress. The teachers spend a lot of time with these children and they need to be aware of social and educational problems caused by this disorder. They should not intensify their communication problems. These children suffer from communication with their peers, as well. Their aggressive behavior, weakness in taking responsibilities, and social skills leads to their rejection by their peers. Parents and teachers help identify such kind of children to take suitable and timely decisions. In acute cases, it is not hard to identify them, but recognition of children with average levels of attention deficit/hyperactivity disorder is not easy. Consequently, utilization of daily behavioral reports under the supervision of relatives can be useful in diagnosis and taking effective medical actions. Multimodal treatment provides a record of collected data using self-assessment sheets, practicing the techniques at home, and reporting and recording observations during application of techniques pave the way for a more precise treatment of these children (Driden et al., 1999).

Some of the serious limitations in this study include the lack of appropriate literature, lack of long-term follow-up studies of the results, and limited population of children with attention deficit/hyperactivity disorder that reduce the possibility of generalizing our findings to other groups. We hope that future studies on other statistical populations and long-term follow-up studies enrich the insight provided by this study.

REFERENCES:

Bahram Khani, M. (2011). Effectiveness of Lazarus multimodal therapy on expanded disability status in patients with multiple sclerosis (MS), *Journal of Mental Health*, vol. (13), no. (50) , pp. (47-136).

Barkley, R. A. (2006). *Attention deficit/ hyperactivity disorder: A handbook for diagnosis and treatment* (3rd ed.). New York: Gilford Press.

Biabangard E. (2002). Effectiveness of Lazarus multimodal, Ellis rational-emotive and relaxation therapy on students' test anxiety. *Andisheh va rafter*; vol. (8), no. (3), pp. (36-42). (Persian)

Bley, N. S. & Thornton, C. A. (2001). Anchoring adolescents understanding of math concepts in rich problemsolving environments. *Remedial and Special Education*, vol. (22), no. (5), pp. (299-314).

Dabbaghi, P., Dadsetan, P., & Saatchi, M. (2003). *Comparing effectiveness of multimodal therapy and progressive relaxation training on reducing anxiety*. [Proceeding of the 2nd Congress of Clinical

Psychology]; Tehran, Iran. (Persian)
Driscoll, C., Laing, J., Mason, O. (2011). Cognitive emotion regulation strategies, alexithymiaand dissociation in schizophrenia, a review and metaanalysis. *Clinical Psychology Review*. Vol. (31), no. (6), pp. (182-194).
Dryden, W., Mytton, J. (1999). *Four approaches to counseling and psychotherapy.* London: Routledge; pp. (135-71).
Duarte, A.C., Matos, A.P., & Marques, C. (2014). Cognitive emotion regulation strategies anddepressive symptoms: gender's moderating effect. *Procedia - Social and Behavioral Sciences*.vol. (164), pp (274 – 283).
Fisher, P.L., & Wells, A. (2008). Experimentalmodification of beliefs in obsessive-compulsivedisorder: A test of the metacognitive model. *BehaviourResearch andtherapy*, vol. (43), no. (6), pp. (821 -823).
Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Cognitive emotion regulation and emotional problems. *Personality and Individual Differences*. Vol. (30), no. (8), pp. (1311 -27).
Garnefski, N., Legerstee, J., Kraaij, V, VanDenKommer, & T., Teerds, J. (2003). *Cognitive copingstrategies and symptoms of depression and anxiety: acomparison between adolescents and adults.* JAdolesc , vol. (24), no. (6), pp. (603-711).
Geary, D. C. (2010). Mathematical disabilities: Reflections on cognitive, neuro-psychological, and genetic components. *Learning an individual Differences*, vol. (20), no. (2), pp. (130-133).
Ghorbani A. (2016). The Impact of Multidisciplinary Occupational Therapy on Reading Improvement of Children with Hearing Impairment (case study). *Exceptional Education*.; vol. (5), no. (142), pp. (59-63).
Goldsmith, H. H., & Davidson, R. J. (2004). Disambiguating the components of emotion regulation.*Child Development*, vol. (75), pp. (361 –365).
Gross, J. J. (2002). *Emotion regulation:Affective, cognitive, and social consequences.* Psychophysiology, Cambridge University Press.Printed in the USA. Vol. (39), pp. (281 –291) .
Gross, J.J. (1998). The emerging fie ld ofemotion regulation: An integrative review. *Review of General Psychology*.vol. (2), pp. (271 -299).
Grossman, P. & Niemann, L. (2004). Mindfulness-based stress reduction and health benefits and psychological well-being: a metaanalysis. *Journal of Psychosomatic Research*, vol. (57), pp. (35-43).
Hamidizadeh, S., Ahmadi, F., & Asghari, M. (2006). Effectiveness of relaxation on anxiety and stress in patients with hypertension. *Journal of Medical Sciences University of Shahrood*; vol. (8), no. (2), pp. (45-51). (Persian)
Hassani, J. (2011). The reliability and validity of Cognitive Emotion Regulation Questionnaire-Short Form, *Behavioral Sciences Research*, vol. (9), no. (2), pp. (229-240).
Hooman, HA. (2006). *Research methodology in behavior sciences*. Tehran: Samt, pp. (102-16). (Persian)
Janbozorgi, M., & Noori, N. (2003). *Anxiety and stress psychotherapies.* 1st ed. Tehran: Samt: pp. (242-90). (Persian)
Jermann, F., Vader Linden, M., d'Acremont, M., & Zermatten, A. (2006). *Cognitive EmotionRegulation Questionnaire (CERQ) ConfirmatoryFactor Analysis and Psychometric Properties of theFrench Translation. Cognitive Psychopathology and Neuropsychology Unit, FPSE,* University of Geneva,Switzerland.
John, O.O., & Gross, J.J. (2001). Healthy andunhealthy emotion regulation: Personality processes, individua l differences, and life span development. *Journal of Personality*. Vol. (72), pp. (1301 -1331).
Karami, J., heidarisharaf, P., & shafeei, B. (2015). Relationship between Emotion Regulation Strategies and Emotional Intelligence with Social Phobia in the Blind and deaf Students. *Exceptional Education*.; vol. (1), no.(129), pp. (5-14)
Kezer, F. & Arik, R. S. (2012). An examination and comparison of the revisions of the Wechsler Intelligence Scale for Children. *Social and Behavioral Sciences*, vol. (46), pp. (2104 – 2110).
Lei, H., Zhang, X., Cai, L., Wang, Y., Bai,M., & Zhuggg ,X. (2011). Cognitive emotion regulationstrategies in outpatients with major depressivedisorder. *Psychiatry Research*, vol. (218), no. (2), pp (87-92).
McCloskey, G., Perkins, L. & Divner, B. (2009). *Assessment and intervention for executive function difficulties.* New York: Routledge Press.
Meyer, M. L., Salimpoor, V. N., Wu, S. S., Geary, D. C. & Menon, V. (2010). Differential Contribution of specific working memory components to mathematical achievement in 2nd and 3rd graders. *Learning and IndividualDifferences,* vol. (20), no. (2), pp. (101-109).
Rahimianboger, E., & Shareh, H. (2008). *Arnold Lazarus.* 1st ed. Tehran: Dajeh: pp. (44-220). (Persian)
Janbozorgi, M. (1999). *Effectiveness of short-time psychotherapy with and without religious orientation on anxiety and stress control. Ph.D. Dissertation.* Teharn: Tarbiat Modarres University, College of

psychology. (Persian)
Sartippoor M., Attari A., Amni M., & Haghighi, S. (2003). Effectiveness of stress management on short-time control of Diabet type1. *Journal of research in medical sciences*; vol. (8), pp. (72-6). (Persian)
Sun Han, K. (2002). The effect of an integrated stress management program on the psychologic and physiologic stress reactions of peptic ulcer in Korea. *Int J Nurs Stud* ; vol. (39), no. (5), pp. (539-48).
Swanson, H. L. & Jerman, O. (2006). Math Disabilities: A selective meta- Analysis of the literature. *Review of educational Research*, vol. (76), no. (2), pp. (249-251).
Taddei, S., Contena, B., Caria, M., Venturini, E. & Venditti, F. (2011). Evaluation of children with Attention Deficit Hyperactivity Disorder and Specific Learning Disability on the WISC and Cognitive Assessment System (CAS). *Social and Behavioral Sciences*, vol. (29), pp. (574–582).
Telzrow, C. F. & Bonar, A. M. (2002). Responding to students with nonverbal learning disabilities. *Teaching Exceptional Children*, vol. (34), no. (6), pp. (8-13).
Trute, B., Worthington, C. & Hiebert-Murphy, D. (2008). Grandmother support for parents of children with disabilities: Gender differences in parenting stress. *Families, Systems & Health*, vol. (26), no. (2), pp. (135-146).
Tully, L.M., Hope Lincoln, S., & Christine I,H. (2011). Lateral prefrontal cortex activity during cognitive control of emotion predicts response tosocial stress in schizophrenia. *NeuroImage: Clinical*. Vol. (6), pp. (13-43).
Wessing, I ., Rehbein, M. A., Romer, G., Achtergarde, S., Dobel, C., Zwitserlood , P., Fürniss,T., & Junghöfer, M. (2014). Cognitive emotionregulation in children: Reappraisal of emotional facesmodulates neural source activity in a frontoparietalnetwork. *Developmental Cognitive Neuroscience*, vol. (13), pp. (20-26).
