

Effect of Emotion Regulation Skill Training Based on Dialectical Behavior Therapy upon Affective Styles

¹Rahim Badri, ¹Shahram Vahedi, ¹Monsour Bairami and ²Javad Einipour
¹Department of Educational Sciences, ²Department of Educational Psychonology,
University of Tabriz, Tabriz, Iran

Abstract: Emotional self-regulation has been defined as a tendency to keep the control of internal status, impulses and behaviors to adjust them with standards until obtaining goals. This research was conducted with 60 boy subjects of high school in order to determine effectiveness of emotion regulation training on affective styles. The randomly selected subjects were divided randomly to three groups of experimental, placebo and control. Instruction lasted 11 sessions and results showed the instruction of emotion regulation is effective on adjusting and tolerance. Also results showed, the instruction of emotion regulation is more effective on adjusting than tolerance.

Key words: Emotion regulation, dialectical, adjusting, tolerance, concealing

INTRODUCTION

One of the most remarkable features of humans is the capacity to regulate and adjust their emotions depending on particular situational demands. It is likely that this capacity is evolutionarily adaptive (Davidson, 2003; Ekman, 2003; Izard, 1992; Lazarus, 1991). Emotion regulation refers to the process by which people influence which emotions they have when they have them and how they experience and express these emotions. Consistent with previous researchers, we define affective style as inter-individual differences in the sensitivity to and regulation of emotions (Davidson, 1998). Some affective styles effectively regulate the experience and expression of emotions in ways that increase progress toward valued aims whereas other strategies have apparently unintended, counter productive effects. For example, attempts to suppress emotions increase physiological arousal (Gross and Levenson, 1997) and rumination over negative emotional events prolongs angry and depressed affective states (Nolen-Hoeksema and Morrow, 1993; Rusting and Nolen-Hoeksema, 1998).

Emotional self-regulation has been defined as a tendency to keep the control of internal status, impulses and behaviors to adjusting them with standards until obtaining goals (Hofmann and Kashdan, 2010). One of the most important human capabilities is the ability of regulating and adjusting their emotions according to obligation of special situations (Davidson, 1998). Emotional self-regulation in different levels of life is very important in various dimensions of psychic-physical, social and moral aspects (Strongman, 2006). Students use practices such as individual experience, trial and error to regulate their emotion status (Karimi and

Faeahbakhsh, 2012). The investigations support the idea that emotions impact and influence attention, decision making, memory, physical responses and social interactions (Hassani *et al.*, 2009). Management of emotions as internal and external process makes important contributions in controlling, assessment and changing of emotional reactions into access of goals and aims (Garnefski and Kraaij, 2006) and is a basic factor for effective functions (Garnefski *et al.*, 2001) that plays a significant role in tensional events of life (Thompson, 1994; Gross, 1998, 2002).

Emotional regulation styles comprises of concealing, adjusting and tolerating (Hofmann and Kashdan, 2010). Characteristics of concealing style include inhibition and other strategies focused on avoiding and concealing of emotions that considered as incompatible emotion regulation and is problematic in individual's life. Adjusting style introduces individuals who are able to obtain and apply appropriate emotional information for resolving their communication and adaptation problems. Persons belonging to this style are able to moderate and adjust their emotions and experience of emotions according to conditions and commitment of situations and environments. Finally, individuals belonging to tolerance style response to emotional experiences in a comfortable and non-defense way and show enough and high tolerance contrast to distress and stress. These two recent styles are considered as compatible styles and accessing to them can result reduction of psychological problems.

There is some evidence from experimental studies that indicates emotion regulation affected by instruction (Berking *et al.*, 2008). For example, a study of panic patients found that the instruction to accept one's

emotions was associated with less subsequent anxiety in response to a carbon dioxide challenge paradigm than was the instruction to suppress one's emotions (Levitt *et al.*, 2003). This effect was also found for participants with a high tendency to avoid aversive inner experiences (Feldner *et al.*, 2003). Therefore, there is evidence that the ability to accept one's emotions (vs. avoid them) that is very important in skills of emotion regulation of dialectical behavior therapy precedes emotion self-regulation especially adjustment. However, many other possibly important emotion-regulation skills have not yet been investigated in experimental studies and experimental studies cannot clarify whether these short-term effects will have stable effects in a naturalistic environment. Further, support for the hypothesis that instruction of emotion regulation precedes emotion self-regulation such as adjustment comes from coping research: several studies suggest that avoidance-focused coping predicts mental health problems at a later point in time (Herman-Stabl *et al.*, 1995; Seiffge-Krenke, 2000) and a number of "cognitive emotion-regulation strategies" are associated with subsequent levels of depression and anxiety (Garnefski and Kraaij, 2007; Kraaij *et al.*, 2002). However, these and other coping studies assess ways in which participants deal with stressful situations. Thus, it is not clear whether the coping behavior refers to the emotions cued in these situations or to other aspects of the situation. On other hand, distress tolerance as a component of emotion style is closely related to emotion regulation and is a clinically relevant construct contributing to psychopathology across adults and adolescents, yet limited research has examined the development of this construct (Daughters *et al.*, 2014).

Increasing the evidence of effectiveness of instruction on emotion regulation, several theorists and scholars assumed that emotional self-regulation is teachable and educable (Zimmerman, 1989; Dembo and Eaton, 2000; Azizi *et al.*, 2013). In some new therapeutic approaches, training of emotional regulation strategies assigned and allocated some parts of intervention to behavioral problems to itself: treatment of obsession (Babai *et al.*, 2012), depression and anxiety (Aldao *et al.*, 2010), impulsivity (Hesslinger *et al.*, 2002). One of these approaches named Dialectical Behavior Therapy or DBT that was provided by Linehan. This approach proposes four components for resolving of behavioral problems: mindfulness, distress tolerance, emotional regulation and interpersonal effectiveness. Emphasizing on skill training, acceptance and validation of emotions, this approach consists of observation, description, willingly participating, non-judgment, concentrating more on present moments and effectiveness than justness (Linehan, 1993; McKay *et al.*, 2007). Skills of emotional regulation in this approach help individuals know their feeling better and observe them without being involved

(McKay *et al.*, 2007). In fact, main purpose of these skills is adjusting or modifying of feeling and emotions without destructive and negative reaction.

In this regard, Linehan (1993) emphasizing on powerful impact of validation of emotions no reply or negative, vehement and violent response to emotions that usually occur in educational environments-upon behavioral problems believes that if emotions and beliefs constantly become disparaged and devaluated, this makes the person begin to doubt about what he should exactly believe in? How he should exactly feel? Is his/her internal perceiving of feelings and emotions correct or environment infuses to her or him? And finally people become unable to rely on themselves (Mahmoudalilo and Sharifi, 1390). Despite student abilities to regulation of their emotion, unfortunately such opportunity is not made for them in schools (Feldlaufer *et al.*, 1988). This can result in forming damaged and defective self-regulation skills in them and experiencing more negative emotions. In this research, we investigated the effect of instruction of emotion regulation based on dialectical behavioral therapy upon affective styles and in addition, we also decided to reach affection degree of various emotion styles by instruction of emotion regulation.

MATERIALS AND METHODS

Participants: The participants of this study were 60 boy student of high school in Rasht in the province of Guilan, located in the North of Iran. They were studying in the governmental schools and in the Literature and Humanities field (10 subjects), Empirical field (5 subjects), Mathematics-Physics field (8 subjects) and in the general field of first grade (others). The 10 of participants were studying in third grade, 13 of them in second grade and others in first grade.

Measures

The Affective Style Questionnaire (ASQ, Hofmann and Kashdan, 2010): The ASQ is a 20-item scale, measured on a 5-point Likert scale. It has three factors: concealing, adjusting and tolerating. The internal consistency values of the ASQ sub-scales in the US samples were 0.84, 0.80-0.82 and 0.66-0.68 for concealing, adjusting and tolerating, respectively. The Cronbach's alphas calculated by Karashki for concealing, adjusting and tolerating are orderly: 0.70, 0.75 and 0.50 in Iranian students (Karashki, 2013). He evaluated its content validity appropriate and adequate by referring its items to psychology experts and also evaluated its construct validity by factor analysis. We calculated its Cronbach's alphas in high school students orderly: 0.79, 0.75 and 0.50 meaning that its reliability is appropriate.

Training package of emotion regulation based on dialectical behavior therapy: Emotion regulation skills provided by McKay *et al.* (2007) based on Linehan's views toward quality and modality of emotion regulation. Techniques provided by them include: training of identifying and description of emotions, skills training focused on overcoming barriers to healthy emotional experience, skills training focused on reducing physical vulnerability of negative emotions, skills training focused on reducing cognitive vulnerability of negative emotions, skills training focused to increase positive emotions, advanced skills training focused on mindfulness and without prejudice to the emotions, teaching advanced skills to deal with emotions, advanced skills training focused on acting against the emotional tendencies, advanced skills training focused on solving problems and review of training sessions. We can access its content and social validity adequate and well because the only way to get content validity is experts' judgment and social validity also is achieved from experts' judgment on the changing of behavior before and after the intervention (GhobariBanab and Mirnasab, 2014) and also these skills are driven from Linehan himself theorist of this approach and achieved positive judgment of experts and researchers about its effectiveness on removal of behavioral and emotional problems (Dimeff and Koerner, 2007). Nonetheless, to ensure more and making it fit to student of high school, first of all, its foreign names were changed to Iranian names and all of its examples to those of appropriate and related to schools

and educational tasks. Then to investigate its validity, it had been instructed to a group of 15 subjects comparing to a control group. Results showed that it was effective upon emotion regulation comparing to control group. Finally, it was prepared for the final text and used in this investigation.

Procedure: In the beginning, some schools were selected by cluster sampling and then we selected 60 subjects by random sampling. We assigned to each group 20 subjects because of experts' opinion and recommendation of selecting >15 subjects in each group of experimental research. We divided subjects into three groups; experimental, placebo and control. Then, we performed the pretest of affective styles questionnaire in each group. Before the invention, participants were informed briefly and told they could avoid involving in the study if they wanted to. Then, we instructed the emotion regulation based on dialectical therapy during 11 sessions in experimental group, also 11 sessions the social skills in cities in placebo group whereas remained the control group without any instruction. During conduction research, 5 subjects fell in experimental group, 4 in placebo group and 3 in control group. At the end of sessions, all groups performed post test of affective styles questionnaire and finally the groups' means were analyzed by Mancova in SPSS that will be brought in the part of results. Outline of sessions in experimental group can be seen in Table 1.

Table 1: Outline of sessions and its content

Contents	Session
Training of identify and description of emotions	1
Sufficient explanations to identify of emotions, identify emotion by delivering emotional identification forms, writing of emotions with delivering emotional writing forms	
Skills training focused on overcoming barriers to healthy emotional experience	2
Expressing enough explanations for understanding of affectability of emotions by thought and behaviors, learning cope with self-destructive behaviors	
Skills training focused on reducing physical vulnerability of negative emotions	3
Identify how emotions affected by of dietary habits and help to improve dietary habits, identify the behaviors and emotions that strengthen going into the temptation of drugs and psychotropic substances, identify how emotions affected by of diet and exercise habits and help to improve diet and exercise habits, identify how emotions affected by habits and help to improve sleep habits, identify how emotions affected by of stress and physical tension and help to escape from stress	
Skills training focused on reducing cognitive vulnerability of negative emotions	4
Measurement of thoughts evoking turbulent emotion, practice thought and emotion diffusion, practice using coping thoughts, practice of creating balance between thoughts and feelings	
Skills training focused to increase positive emotions	5
Aid for the plan to increase the pleasurable experience, exercise for registration of enjoyable activities	
Advanced skills training focuses on mindfulness and without prejudice to the emotions	6
3 min of deep breathing, focus on emotion, attention to the physical feelings emotions, naming emotions, observing and discharging of judgments	
Teaching advanced skills to deal with emotions	7
Practice of recording emotional on the sheets	
Practice of confrontation with emotions	
Focus on breathing, attention the physical sense, note and description of excitement, considering of emotions as a wave of and accuracy to its reduce and increase, describe any new emotion or changes in emotions, help to continuation of emotions without preventing or interruption, discharging of judgments, observation of emotions until silencing, deep breathing	
Advanced skills training focused on acting against the emotional tendencies	8
Find an emotion and describe it in words, assess how dangerous an emotion, note on body language and behaviors with emotion, identify practice contrasting with previous behavior, doing opposite behavior, review how change conflicting emotions during operation?	
Advanced skills training focused on solving problems	9
Practice on behavior analysis sheet, ABC problem solving exercises (alternatives, the best ideas and being commitment to implemented)	
Review of training sessions	10, 11

RESULTS

After entering data in SPSS, Table 2, reports descriptive statistics of pretest and posttest variables as we can see. Before conducting multivariate analysis of variance, we observed the key assumption of MANCOVA; homogeneity of regression slopes and result showed this assumption is established and met.

We also observed normal distribution of variables by Shapiro-Wilk test and all statistics were not significant ($p>0.05$), homogeneity of between variance across the groups ($p>0.05$), homogeneity of variance-covariance matrices by Box's M ($p>0.05$), independence of covariates by Leven's test ($p>0.05$) as other assumptions important to multivariate analysis of variance. In the final step for analysis, we observed the effect of independent variable upon dependent variables by MANCOVA analysis as we can see in the Table 4.

Noting statistic mentioned in Table 4, shows that F is not significant for variable of concealing ($p>0.05$) and states that training of emotion regulation has been not effective upon it. But F-values in adjusting and tolerance are significant ($p>0.05$) and states that training of emotion regulation has been effective upon them. Partial eta square shows training of emotion regulation has been effective upon adjusting 0.17 and upon tolerance 0.15.

Table 2: Descriptive statistics

Variable	Statistics	Groups					
		Experimental		Placebo		Control	
		Mean	SD	Mean	SD	Mean	SD
Adjusting	Pretest	20.60	4.15	23.93	3.67	23.41	4.44
	Posttest	23.46	5.79	19.62	4.03	20.17	4.92
Tolerance	Pretest	12.13	1.79	14.37	2.18	14.00	2.95
	Posttest	13.33	2.63	12.93	2.61	12.64	3.25
Concealing	Pretest	20.60	4.71	20.75	3.29	18.47	4.77
	Posttest	20.40	3.64	19.50	3.66	18.64	5.44

Table 3: Homogeneity of regression slopes

Covariate	Dependent variables	Type III df	Sum of squares	Mean square	F-values	Sig.
Group						
Pretest of adjusting	Adjusting	3	56.48	18.82	0.85	0.47
Pretest of concealing	Concealing	3	26.59	8.86	0.46	0.70
Pretest of tolerance	Tolerance	3	2.71	0.90	0.16	0.91

Table 4: Multivariate of analysis

Dependent variables	df	Type III sum of square	Mean square	F-values	Sig.	Partial eta square
Group						
Adjusting	2	196.58	98.29	4.52	0.017	0.17
Concealing	2	9.69	4.84	0.26	0.760	0.01
Tolerance	2	37.96	18.98	3.72	0.030	0.15

DISCUSSION

One of the results in this research is the affection of adjusting by emotion training. This outcome is completely according to Berking *et al.* (2008) stating that deficits in emotion-regulation skills have widely been shown to be associated with poor emotional adjustment and generally is supported by some studies (Levitt *et al.*, 2003; Feldner *et al.*, 2003; Herman-Stabl *et al.*, 1995; Seiffge-Krenke, 2000; Garnefski and Kraaij, 2007; Kraaij *et al.*, 2002). For interpreting of this result, we can refer to Linehan (1993). Emphasizing on powerful impact of validation of emotions no reply or negative, vehement and violent response to emotions-upon behavioral problems, he believes if emotions and beliefs constantly are disparaged and devaluated, this would result other problems in behavior dominated by adjusting.

Another finding of this study is effectiveness of emotion regulation training on tolerance. This result is completely according to Daughters *et al.* (2014) indicating distress tolerance is closely related to emotion regulation. By the fact that distress tolerance is a main aspect of dialectical behavior therapy and also tolerance is constantly emphasized and followed in emotion regulation skill, we can understand why tolerance in affective style is affected by instruction of emotion regulation based on dialectical behavior therapy.

And the last finding of this study is not effectiveness of emotion regulation training on concealing. For interpreting this result, we should note that concealing is an incompatible style for regulation of emotions and isn't followed by skills of dialectical behavioral therapy for regulation of emotions.

CONCLUSION

Emotion regulation is as a tendency to keep the control of internal status, impulses and behaviors to adjust them with standards until obtaining goals is very important in many aspects of student's behavior related to emotions. We find that emotion regulation is teachable and able to be instructed for high school students. We can say that emotion regulation based on dialectical behavioral therapy is effective on adjusting and tolerance. It has been found that adjusting is affected by emotion regulation training more than tolerance.

ACKNOWLEDGEMENTS

Finally, it is necessary to thank all of the principals, teachers and student in Rasht's high school that participated in this research and researchers wish their success in all aspect of their life.

REFERENCES

- Aldao, A., S. Nolen-Hoeksema and S. Schweizer, 2010. Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clin. Psychol. Rev.*, 30: 217-237.
- Azizi, A., A. Borjali and M. Golzari, 2013. The effectiveness of emotion regulation training and cognitive therapy on the emotional and addictional problems of substance abusers. *Iran J. Psychiatry*, 5: 60-65.
- Babai, Z., J. Hassani and S. Mohamadkhani, 2012. The impact of emotion regulation skill training based on dialectical behavior therapy upon tempt of people with substance abuse: A study of a single subject. *J. Clin. Psychol.*, 4: 33-41.
- Berking, M., U. Orth, P. Wupperman, L.L. Meier and F. Caspar, 2008. Prospective effects of emotion-regulation skills on emotional adjustment. *J. Counseling Psychol.*, 55: 458-494.
- Daughters, S.B., S.M. Gorka, H.J. Rutherford and L.C. Mayes, 2014. Maternal and adolescent distress tolerance: The moderating role of gender. *Emotion*, 14: 416-424.
- Davidson, R.J., 1998. Affective style and affective disorders: Perspectives from affective neuroscience. *Cognition Emotion*, 12: 307-330.
- Davidson, R.J., 2003. Darwin and the neural bases of emotion and affective style. *Proc. N. Y. Acad. Sci.*, 1000: 316-336.
- Dembo, M.H. and M.J. Eaton, 2000. Self-regulation of academic learning in middle-level schools. *Elementary School J.*, 100: 473-490.
- Dimeff, L.A. and K. Koerner, 2007. *Dialectical Behavior Therapy in Clinical Practice: Applications Across Disorders and Settings*. Guilford Press, New York, USA., ISBN-13: 9781606237885, Pages: 363.
- Ekman, P., 2003. *Emotions Revealed*. Times Books, New York, USA.
- Feldlaufer, H., C. Midgley and J.S. Eccles, 1988. Student, teacher and observer perceptions of the classroom environment before and after the transition to junior high school. *J. Early Adolescence*, 8: 133-156.
- Feldner, M.T., M.J. Zvolensky, G.H. Eifert and A.P. Spira, 2003. Emotional avoidance: An experimental test of individual differences and response suppression using biological challenge. *Behav. Res. Ther.*, 41: 403-411.
- Garnefski, N. and V. Kraaij, 2006. Relationships between cognitive emotion regulation strategies and depressive symptoms: A comparative study of five specific samples. *Personality Individual Differences*, 40: 1659-1669.
- Garnefski, N. and V. Kraaij, 2007. The cognitive emotion regulation questionnaire: Psychometric features and prospective relationships with depression and anxiety in adults. *Eur. J. Psychol. Assess.*, 23: 141-149.
- Garnefski, N., V. Kraaij and P. Spinhoven, 2001. Negative life events, cognitive emotion regulation and emotional problems. *Personality Individual Differences*, 30: 1311-1327.
- GhobariBanab, B. and M.M. Mirnasab, 2014. *Behavioral and Emotional Disorders in Children and Adolescents*. Shadow Word Press, New York, USA.
- Gross, J.J. and R.W. Levenson, 1997. Hiding feelings: The acute effects of inhibiting negative and positive emotion. *J. Abnormal Psychol.*, 106: 95-103.
- Gross, J.J., 1998. The emerging field of emotion regulation: An integrative review. *Rev. Gen. Psychol.*, 2: 271-299.
- Gross, J.J., 2002. Emotion regulation: Affective, cognitive and social consequences. *Psychophysiology*, 39: 191-281.
- Hassani, J., P. Azadfallah, S.K.R. Tabatabai and H. Ashayeri, 2009. Down from negative emotional experiences reassess the impact on frontal EEG asymmetries based on the dimension of neuroticism and extraversion. *J. Psychol.*, 13: 37-71.
- Herman-Stabl, M.A., M. Stemmler and A.C. Petersen, 1995. Approach and avoidant coping: Implications for adolescent mental health. *J. Youth Adolescence*, 24: 649-665.
- Hesslinger, B., L. Tebartz, V. Elst, E. Nyberg and P. Dykierik *et al.*, 2002. Psychotherapy of attention deficit hyperactivity disorder in adults. *Eur. Arch. Psychiatry Clin. Neurosci.*, 252: 177-184.
- Hofmann, S.G. and T.B. Kashdan, 2010. The affective style questionnaire: Development and psychometric properties. *J. Psychopathol. Behav. Assess.*, 32: 255-263.
- Izard, C.E., 1992. Basic emotions, relations among emotions, and emotion-cognition relations. *Psychol. Rev.*, 99: 561-565.
- Karashky, H., 2013. Assess the scale factor in students' emotional styles. *Behav. Sci. Res. J.*, 11: 85-95.
- Karimi, M. and K. Faeahbakhsh, 2012. The relationship between emotional self-regulation and study skills and academic performance of students of Isfahan university of medical sciences. *Iran. J. Med. Educ.*, 11: 1149-1161.
- Kraaij, V., E. Pruyboom and N. Garnefski, 2002. Cognitive coping and depressive symptoms in the elderly: A longitudinal study. *Aging Mental Health*, 6: 275-281.
- Lazarus, R.S., 1991. *Emotion and Adaptation*. Oxford University Press, New York, USA.

- Levitt, J.T., T.A. Brown, S.M. Orsillo and D.H. Barlow, 2003. The effects of acceptance versus suppression of emotion on subjective and psychophysiological response to carbon dioxide challenge in patients with panic disorder. *Behav. Therapy*, 35: 747-766.
- Linehan, M.M., 1993. *Cognitive Behavioral Therapy of Borderline Personality Disorder*. Guilford Press, New York, USA.
- Mahmoudalilo, M. and M.M. Sharifi, 1390. *Dialectical behavior therapy for borderline personality disorder*. Counseling Center of Tehran University, Tehran, Iran.
- McKay, M., J. Wood and G. Brntly, 2007. *Dialectical Behavior Therapy Techniques*. Arjmand Publisher, Tehran, Iran.
- Nolen-Hoeksema, S. and J. Morrow, 1993. Effects of rumination and distraction on naturally occurring depressed mood. *Cognition Emotion*, 7: 561-570.
- Rusting, C.L. and S. Nolen-Hoeksema, 1998. Regulating responses to anger: Effects of rumination and distraction on angry mood. *J. Personality Social Psychol.*, 74: 790-803.
- Seiffge-Krenke, I., 2000. Causal links between stressful events, coping style and adolescent symptomatology. *J. Adolescence*, 23: 675-691.
- Strongman, K.T., 2006. *Applying Psychology to Everyday Life: A Beginner's Guide*. John Wiley and Sons, New York, USA.
- Thompson, R., 1994. Emotion Regulation: A Theme in Search of Definition. In: *The Development of Emotion Regulation: Biological and Behavioral Considerations*, Fox, N. and J.J. Campos (Eds.). University of Chicago Press, Chicago.
- Zimmerman, B.J., 1989. A social cognitive view of self-regulated academic learning. *J. Educ. Psychol.*, 81: 329-339.