Comparing Fredrickson's Positive Emotion Training Program and Psychodrama Program in Terms of Emotion Regulation in Students with Dyslexia

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Quantitative Study

Abstract

Background: The present study was aimed at comparing a positive emotion training program based on Fredrickson's broaden-and-build model of positive emotions with the psychodrama program in terms of emotion regulation in students with dyslexia.

Methods: This experimental study was conducted with 3 groups (2 experimental groups and 1 control group), pretest-posttest design, and a follow-up. The statistical population included all fifth-grade female, middle-class, 10-11-year-old primary-school students with specific learning disabilities who were studying in public schools of the 5 educational regions of Isfahan, Iran. Multistage random sampling was used for the selection of the participants. The reading and dyslexia test was administered to identify learning disabilities in the students, and as a result, 38 students with a reading disorder were selected and randomly assigned to experimental group 1 (Fredrickson's positive emotion training program), experimental group 2 (psychodrama program), and control group. Students completed the Cognitive Emotion Regulation Questionnaire (CERQ) at pretest, posttest, and follow-up. Prior to the treatment, the students completed the CERQ. The follow-up phase of the study was conducted 3 months after the end of the treatment. The interventions consisted of 10 sessions (45 minutes each) devoted to positive emotion training and 10 sessions (45 minutes each) devoted to psychodrama program training. The data were analyzed using descriptive (mean and standard deviation) and inferential statistics (repeated measures ANOVA) in SPSS software.

Results: The findings indicated that a positive emotion training program exerted a significant effect on emotion regulation, while the effect of the psychodrama training program was not statistically significant.

Conclusion: It can be concluded that positive emotion training has a more significant effect than the psychodrama training program.

Key Words: Positive emotion training program, Psychodrama, Emotion regulation, Dyslexia, Students

Introduction

Specific learning disorder with a prevalence of 5-15% is the most common cause of poor academic performance. In the Diagnostic and Statistical Manual of Mental Disorders (DMS), learning disorder is classified as a neurodevelopmental disorder. This disability is manifested in learning problems and deficits in acquiring school-age related skills during early school years. These problems last for at least 6 months even though they are not related to mental disabilities and developmental or neurological disorders, including reading, writing, and mathematical computations disorders (Abedi, 2007). Individuals suffering from learning disabilities are a highly heterogeneous group with different needs (Amaury Samalot-Rivera, 2007). To put it differently, learning disorder encompasses a much wider range of cognitive and educational problems that are often neglected at school, and a thorough understanding of this disorder necessitates attending to the social, emotional, and behavioral areas of the individual's life (American Psychiatric Association, 2013).

In many cases, due to the frequent academic failures of students with learning disabilities, belief about lack of progress and achievement will be formed, which, in itself, causes problems that go beyond the major disorder. Studies indicate that children and adolescents with learning disabilities have problems with interpersonal skills, social information processing, social interactions, and mood and depression disorders (Asher & Taylor, 1981). These children frequently encounter the negative reactions of parents, adults, and other children, and ignoring these children will have devastating consequences for both their families and community (Bauminger & Kimhi-Kind, 2008). Students with learning disabilities commonly experience considerable problems (Blatner, 2000). For this reason, when learning and education are subject to repeated and recurrent failures and are harshly criticized by parents and school principals, these children are unable to adequately respond and control the severity or the degree of their emotions. Some of these students display impulsive and aggressive behaviors, while others exhibit passive, inactive, and indifferent behaviors and attempt to protest or attract the attention of others. Such misconduct and misbehavior result in being blamed and scolded by adults and might even lead to mental and physical punishment (Brackett & Salovey, 2004).

Learning disabilities and their social-emotional consequences are the cause of the possible impairment in emotion regulation in these students (Bayrami, Hashemi, & Shadbafi, 2017). Theorists argue that individuals who are unable to manage and correctly regulate their emotions in everyday events display most of the diagnostic symptoms of internalizing disorders such as depression and anxiety (Casson, 2004). In addition, recent theoretical models have shown a correlation between successful emotion regulation and positive health outcomes, interpersonal relationships, desirable career, and academic performance (Diekstra, 2008).

Psychodrama and a positive emotion training program based on Fredrickson's broaden-and-build model of positive emotions , due to the application of absorbing and interesting emotional techniques, are the best interventions for teaching emotion regulation skills to children with learning disabilities (Dogan, 2010). Several psychological treatments have been provided for children with special needs; nonetheless, their social and emotional needs have not been fully taken into consideration and only those needs that negatively influence their educational achievement have been considered (Fredrickson, 2001). However, awareness of these children's behavioral, social, and emotional problems has significantly increased in recent years. Therefore, one of the

interventions that can be used to regulate the emotions of students with a specific learning disorder is Fredrickson's broaden-and-build model of positive emotions (Fredrickson, 2004).

The broaden-and-build theory of positive emotions was proposed by Fredrickson in 1998. According to this theory, specific, objective, positive emotions, although phenomenologically distinct, share the ability to expand thought-action repertoires of individuals and develop personal enduring resources (i.e., intelligence, physical, psychological, and social resources). In general, positive emotions expand the thought-action repertoires, neutralize the remaining negative emotions (Fredrickson, 2001), strengthen psychological flexibility, and ultimately trigger upward spirals towards better psychological well-being (Fredrickson, 2013). Freilich and Shechtman (2010) established the broaden-and-build theory of positive emotions to explain the mechanisms through which positive emotions impact survival. This theory opposes the traditional models grounded in specific action tendencies since the specific action tendencies triggered by negative emotions narrow the thought-action repertoires of an individual (Garnefski, Kraaij, & Spinhoven, 2002). According to this model, positive emotions (i.e., joy, gratitude, serenity, interest, hope, pride, amusement, entertainment, owe, and love) increase one's awareness of and interest in new, diverse, and exploratory actions and thoughts (Gartland & Strosnider, 2007). Individuals who experience positive emotions display considerably flexible thought patterns (Gatta et al., 2010). One study found that cognitive-emotional interventions could predict socio-emotional behaviors and were effective in modifying complex behaviors in children suffering from learning disabilities (Gervais & Wilson, 2005).

Another intervention that might influence the emotion regulation of students with learning disabilities is the psychodrama program, yet it has not been fully taken into consideration by researchers. In general, use of the therapeutic effect of drama dates back to ancient Greece and Aristotle's views on the positive psychological effects of drama; in the history of psychology, figures such as ILjine, Frenczi, and Moreno were the first theorists in this regard. They emphasized the positive effect of drama on counseling and psychotherapy. However, it was only Moreno who was able to put forward his ideas as a comprehensive counseling and psychotherapy approach, which later became one of the most famous and most effective approaches to counseling and group psychotherapy (Hulbert- Williams & Hastings, 2008).

This impromptu drama, which was developed and practiced by Moreno, laid the foundation for what is today called "psychodrama." Using the stage, employing spontaneous techniques, and the application of elements such as the first person and the auxiliary ego were all components of his approach that still form the core of psychodrama (Johnson, 2005). Therefore, the present study was conducted to compare the positive emotion training program based on Fredrickson's broaden-and-build model with the psychodrama program on emotion regulation of students with learning disabilities in primary schools of Isfahan, Iran.

Methods

In the present study, 38, fifth-grade, middle-class, female students with a reading disorder whose ages ranged between 10 and 11 years were selected and randomly assigned to experimental group 1 (emotion training based on Fredrickson's model) (n = 13), experimental group 2 (psychodrama program) (n = 13), and the control group (n = 12). The participants were selected through multistage random sampling; from among the 5 educational regions of Isfahan, 3 were randomly selected, and from them, 4 schools and 3 classes were randomly selected.

The inclusion criteria were moderate or above-average intelligence, no visual and hearing problems, no emotional-behavioral disorder, meeting the learning disability criteria included in the checklist for the diagnosis of a specific learning disorder, and lack of comorbid disorders. The study exclusion criteria were absence from training sessions, suffering from a specific illness, drug use, and the presence of problems and disorders that affect the intervention process. It should be mentioned that the interventions consisted of 10 sessions (45 minutes each) of positive emotions' training based on Fredrickson's model and 10 sessions (45 minutes each) of psychodrama training, and the follow-up was conducted 3 months after the end of the treatment.

Cognitive Emotion Regulation Questionnaire: This questionnaire, which was developed by Garnefski, Kraaij, and Spinhoven (2002), is a multidimensional self-report questionnaire and includes 36 items. The adult and children versions of the questionnaire are distinct and different. The items of the Cognitive Emotion Regulation Questionnaire (CERQ) are scored based on a 5-point Likert type scale ranging from always to never, and every 4 items measure 1 factor. The CERQ includes 9 factors, namely self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing, and other-blame. The results of principal component analysis (PCA) indicated that it is a 7-factor questionnaire including positive refocusing/planning (0.91), positive reappraisal (0.72), self-blame (0.80), other-blame (0.79), rumination (0.65), catastrophizing (0.66), and acceptance (0.62). The results of the alpha coefficient and test-retest for subscales indicated that this questionnaire was valid (Karami Noori & Moradi, 2008). Moreover, the correlation of the subscales with the total score of the Depression, Anxiety, and Stress Scale (DASS) showed convergent and divergent validities (Lousada, 2005; Lyubomirsky & Layous, 2013). It should be noted that only the total score of this questionnaire was used in the present study. The reliability of the questionnaire, estimated using Cronbach's alpha, was 0.80 for the present study.

Wechsler Intelligence Scale for Children-Fourth Edition: The Wechsler Intelligence Scale for Children-Fourth Edition (WISC-IV) was used to ensure that the sample group demonstrates a normal level of intelligence, which is one of the criteria for identifying learning disabilities. Wechsler, in 2003, developed the WISC-IV for children aged between 6 and 16 years, and it measures the full-scale IQ and 4 indexes, namely verbal comprehension, perceptual reasoning, working memory, and processing speed. Abedi (2007) validated and standardized this scale on a sample of Iranian children. The test-retest reliability of the subscales ranged between 0.65 and 0.95, and the split-half reliability coefficients ranged between 0.71 and 0.86.

Reading and Dyslexia Test: In addition to referring to the Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria for dyslexia, , the reading and dyslexia test, developed and standardized by Karami Noori and Moradi (2008), was used to diagnose students with dyslexia and measure their level of ability to read. These researchers validated this test in 1614 students (770 male and 844 female students) in 5 educational levels in Tehran, Sanandaj, and Tabriz, Iran. This test aims to determine the reading ability of normal monolingual and bilingual students in primary school and to diagnose children with reading problems and dyslexia. Considering the cut-off score of 157 for this test, a student whose score is 157 or less (114 or more wrong answers) is recognized as a student with dyslexia. The raw score of each sub-test was recorded in the report summary of each student, and by referring to the tables of each sub-test for each

grade, the corresponding score was estimated, and finally, the student profile in the reading test was prepared (Mauss et al., 2011; Merrifield, 2011). It should be mentioned that the Cronbach's alpha coefficient of the reading and dyslexia test estimated in the present study was 0.81.

As previously mentioned, the aim of the study was to compare two training programs, namely psychodrama and a positive emotion training program based on Fredrickson's broaden-and-build model of positive emotions. A brief description of each program, including 10 sessions, is presented in tables 1 and 2.

Results

The descriptive statistics of the present study, including means and standard deviations, are presented in table 3.

The results of Levene's test indicated the equality of variances; therefore, to test the hypothesis of the present study, repeated measures ANIVA was used. The Kolmogorov–Smirnov test was used to check the normal distribution of variables. The results confirmed the normality of distribution since the P-values exceed the 0.05 level of significance. The covariance assumption of the two groups was tested using the Box test the result of which confirmed this assumption. To check the sphericity of the variance matrix of the dependent variable, Mauchly's test of sphericity was used. Since the result of this test was not statistically significant ($P = 0.07$) for emotion regulation, the values of F statistics and degrees of freedom were reported. The results of the multivariate analysis of variance (MANOVA) are presented in table 4.

Table 1. Summary of positive emotions training sessions

No	Emotion	Summary
1	Positive and negative	Familiarity with various positive and negative emotions
2	Positive	Familiarity with positive emotions with an emphasis on Fredrickson's positive emotions
3	Joy	Familiarity with joy and its various aspects and how to make yourself and others feel joy
4	Gratitude	Familiarity with gratitude and its various aspects and how to express it to others
5	Serenity	Familiarity with serenity and its various aspects and how to make yourself and others feel calm
6	Interest	Familiarity with interest and its various aspects and how to make yourself and others interested
7	Hope	Familiarity with hope and its various aspects, how to boost hope in yourself and others
8	Pride	Familiarity with pride and its various aspects, and how to make yourself and others feel proud
9	Amusement	familiarity with amusement and its various aspects, and how to amuse ourselves and others
10	Awe	familiarity with owing and its various aspects, and how to feel awe and transfer it to others

Table 2. Summary of psychodrama training sessions

No	Summary
1	The first session included preparing and creating a relaxed and safe atmosphere for better communication, and moving to the drama stage (physical warm-up and mental preparation). In the first session, the trainer or therapist performs a humorous play on a variety of individual roles in the community in different situations or performs the possible reaction to the current events in that situation.
2	The second session included continuing warm-up, and then, massaging the face, training to express the feelings needed and appropriate for the facial expressions, and doing the "talking face" practice. The goal is to know and express facial emotions and their impact on social relationships and to point out that we are trying to create a positive emotion in the community, but due to the negative or neutral feedback on the face and its non-compliance with the positive emotion we seek to convey, our social presence may be poor.
3	The content of session 3 consisted of recreating past emotional experiences, controlling negative emotions, and expressing positive emotions. In practicing this technique, the trainer asks the team to individually pantomime their previously experienced emotional reactions using their face and body language. Participants are supposed to visualize the person they encountered in the real and negative experiences, and then, represent the real story, recreate it, and then, analyze it.
4	The techniques practiced on the fourth session were empty seats, psychic refinement, and emotional outpouring. In performing this technique, each person sits in front of an empty seat and imagines this seat is taken by a person with whom he/she has had problems in situations that led to severe negative emotions and impulses.
5	Session 5 consisted of the reconstruction of various scenes of the group members' lives (secret police of the individual's life). In this technique, the members are grouped, and then, each group member practices a situation in his life that led to negative emotional responses, asks another member of the group to play the role he had in that situation, and looks at his life as a secret police officer.
6	The content of session 6 consisted of a 1-minute negative monologue and a 1-minute positive monologue. In this technique, a platform is placed in the middle of the class, and other students gather around it. The trainer then stands on the platform and recounts some of the worries, fears, and frustrations of life in just 1 minute.
7	The content of the seventh session included preparing the participants to answer 5 questions (Who am I?; Where am I?; Why am I here?; How am I?; In which time am I). In this session, the instructor will explain the different situations in which the individual is present and the different social roles he/she takes. Moreover, the instructor teaches the appropriate rules, behaviors, and norms, all of which are the requisites for different behavioral responses.
8	The eighth session consisted of the darkroom technique, and identifying weaknesses and overcoming them. Considering the formation of friendly relationships between people in the group, after explaining the strengths and weaknesses of social relationships, especially among close friends, the trainer or therapist requests one of the participants to stand in the corner of the room and turn his/her back to the others. Others are supposed to express their views on the strengths and weaknesses of that participant. In such a situation, one can hear the impact of one's own behavior and personality on others who have witnessed his/her behavior and better identify and act on his/her defects.
9	The ninth session included the discussing, processing, and reviewing of past techniques. In this session, the trainer explained to the group that each performance was part of the life of a member of the group, and that everyone's efforts to represent events and happenings was aimed at bring awareness, training, or teaching the group.
10	The final session consisted of saying goodbye to students, and getting ready to enter the community, practice emotional control, and express positive emotions. The trainer or therapist stated that, after this session, they will experience the world differently, i.e., with positive and strong emotions. Students are then asked to look at each other and say positive and energetic words and phrases aloud to each other.

As shown in table 4, the four tests related to the difference among research variables in emotional regulation, considering both test and group membership, were statistically significant. In other words, emotion regulation training and psychodrama influenced emotional regulation and its dimensions in the posttest and follow-up stages ($P < 0.0001$).

Table 3. The mean and standard deviation of pretest, posttest, and follow-up of emotional regulation and its dimensions in the experimental and control groups

Variables	Test	Group		
		Control	Positive emotions training Program	Psychodrama
		Mean ± SD	Mean ± SD	Mean ± SD
Emotion regulation	Pretest	91.91 ± 7.03	93.00 ± 10.60	92.53 ± 6.52
	Posttest	92.33 ± 6.51	142.53 ± 10.98	98.46 ± 6.67
	Follow-up	93.66 ± 6.52	141.30 ± 9.65	100.76 ± 6.52

SD: Standard deviation

Considering that the estimated F value is significant at 0.001, it can be stated that the independent variables have influenced the students' emotion regulation. To determine which training method exerted a significant effect on emotion regulation, a pairwise comparison was made the results of which are reported in table 5.

As shown in table 5, the difference between the positive emotions training group and the control group was statistically significant. However, no significant difference was observed between the psychodrama and the control group. Moreover, the difference between the positive emotions training group and psychodrama group was statistically significant.

Discussion

The aim of this study was to compare the effect of the positive emotion training program based on Fredrickson's broaden-and-build model of positive emotions with the psychodrama program on the emotional regulation of primary school students with a reading disorder. Comparing the results of the groups revealed that the positive emotional training program based on Fredrickson's broaden-and-build model of positive emotions was more effective in enhancing emotion regulation of students with a reading disorder compared with the psychodrama program.

In justifying the effectiveness of the positive emotion training program based on Fredrickson's broaden-and-build model, it might be asserted that emotion regulation is related to interpersonal relationships and desirable academic performance (Packman, 2002; Wren, 2006). As previously stated, children with learning disorder have unconscious negative emotions; therefore, the initial step in emotion regulation is teaching emotions, preferably positive emotions. Therefore, a positive emotion training program based on Fredrickson's broaden-and-build model paves the way for developing an awareness of positive emotion, and then, through their juxtaposition with negative emotions and their selection over the negative ones, the children might be able to regulate their emotions. As Gartland and Strosnider (2007) asserted, positive emotions have been expressed as an opposing force against restlessness, fear, or anhedonia in the psychopathology of emotional disorders.

Table 4. Multivariate Analysis of Variance for the effect of group membership on emotion regulation in the experimental and control groups

Source		Sum of Squares	df	Mean Square	F	P	Effect size
Factor	Greenhouse-Geisser	44373.21	1.59	27776.28	4266.40	0.0001	0.98
Factor *group	Greenhouse-Geisser	34156.66	3.50	3545.25	821.02	0.0001	0.98
Error	Greenhouse-Geisser	406.86	53.45	7.61			

df: Degree of freedom

Table 5. Pairwise comparison of emotion regulation scores in the three groups

Variable	Group (i)	Group (j)	Mean difference	Error	P-value
Emotion regulation	Positive emotions training	Control	32.97	2.96	0.0001
		Psychodrama	23.35	2.90	0.0001
	Psychodrama	Control	4.61	2.96	0.12
		Positive emotions training	28.35	2.90	0.0001

Furthermore, as stated by Porges, Doussard-Roosevelt, and Maiti (1994), positive emotion training leads to increased vagal tone, which in turn directly impacts emotion regulation. Consequently, this program potentially improves the emotion regulation skills of children with learning disabilities.

In explaining the findings of this study, it can be stated that the positive emotion training program based on Fredrickson's broaden-and-build model leads to building sustainable personal resources by generating positive emotions and accumulating them over time. Sustainable personal resources result in positive emotions in a reciprocal framework. In later stages, this reciprocal effect forms an upward spiral that leads to higher levels of psychological health (Samani & Sadeghi, 2010).

In fact, positive emotions reinforce the path of individual growth in a positive direction, and repeated experience of these emotions leads to optimal performance (Sepanta, 2018). Positive emotions reinforce the individuals' tendency toward positive and healthy behaviors. When these behaviors are displayed and generate positive results, the individual is further motivated to repeat these behaviors. In the long run, this cycle can keep a person away from what threatens his optimal performance.

The positive emotion training program focuses on creating a fundamental gradual change over time, while children with learning disabilities usually find their disability gradually increasing after school and beginning reading assignments. These disabilities, along with misperceptions and negative feedback from the environment, threaten their self-concept, and result in the severe deterioration of psychological health (Sepanta, Abedi, Yarmohammadian, Ghomrani, & Faramarzi, 2019). Positive emotions can create conditions that influence one's way of interpreting the current situation, and what has so far been an unchanging stereotype of one's own disability will be improved.

The excitement of fun creates lasting social bonds. If a child's learning disorder isolates him or her and disrupts his or her social relationships, the excitement of fun and amusement can improve these relationships by creating lasting sources of social bonds, to the extent that creating creative relationships and sharing funny things provides the opportunity to resume relationships and create happiness. In general, all emotions, either directly or through some links, provide the path to individual well-being. As stated by Fredrickson, positive emotions, though transient, accumulate and combine over time and develop sustainable human resources. Moreover, as positive emotion experiences predict the increase in individual resources, individual resources might also predict the increase in positive emotions. This interaction represents an upward spiral, which leads to higher levels of well-being and functioning over time (Tugade & Fredrickson, 2004).

Regarding the target group of the present study who were students with reading disorder and considering the fact that this is a developmental and neuropsychological disorder, which is not the result of defective relationships, methods that provide direct training on the basic concepts and details, such as training emotions prior to emotion regulation, seem more effective on this group. Since many of these children suffer from secondary problems such as deficit in social relationships, due to the failure schemata, training programs that target their deficits might be more effectual.

Psychodrama deals with each problematic situation separately, while for a child

with a learning disorder whose problem affects all his/her situations, examining individual situations and proposing solutions for each is impossible since he/she might experience many different situations in a day. It seems more important and useful to look at the cognitive and emotional framework of individuals and to develop it so that their emotional system alters and becomes responsive in different situations; however, psychodrama is less capable in this regard since it focuses more specifically on situations than on the processes that shape emotional responses to situations.

No study is devoid of limitations, and the current study is no exception. The first limitation was the small sample size. The second was that the study was carried out in Isfahan, Iran; therefore, the findings might not be generalizable to other cultures or countries. Additionally, this study was conducted only on female primary school students with reading disorder aged between 10 and 11 years, so the generalization of the results to other age groups and educational backgrounds should be cautiously made. According to the results of the present study, besides emphasizing the educational issues of students with dyslexia, a program should be designed and developed that considers their emotional issues. Fredrickson's positive emotion training program and psychodrama, which have fun and entertaining techniques for children, can have a great impact on the regulation of emotions in students with dyslexia, and rehabilitation centers can also benefit from the outcomes of such treatments.

Conclusion

It can be concluded that positive emotion training has a more significant effect than the psychodrama training program.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

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