



Original Article

Program effectiveness is multidimensional Rasad skills Triple "on decoding, fluency, comprehension" dyslexic children elementary Behbahan city

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Abstract

Introduction: This study aimed to investigate the effect of multidimensional Rasad the triple skills on reading (decoding, fluency, comprehension) first grade and second- grade students was dyslexic.

Materials and Methods: Statistical population of this clinical study included dyslexic students (boy and girl) who were introduced to Disorders Center Behbahan city. At first, the first and second grade students were separated, then, among them 30 people were selected randomly were assigned to two groups. The experimental group is multi-dimensional restoration program was conducted over 21 one-hour sessions and the control group received no intervention. Wechsler Intelligence Scale for data collection and reading diagnostic test (Saman table) and multidimensional program Rasad that was used. To analyze the data using SPSS and univariate and multivariate covariance covariance was used.

Results: The results showed that the mean score in reading, decoding, fluency and comprehension pretest-posttest control group with significant difference ($P=0.001$).

Conclusion: According to the results, it can be said that multi-dimensional program can improve dyslexic students' reading performance.

Keywords: Comprehension, Decoding, Dyslexic, Fluency, Reading

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Introduction

Reading is a fundamental and key skills and the ability to decode text glyphs for speech sounds (1) is defined. It is obvious that the disorder can cause many problems for patients. Children with reading problems are due to the weakness in the skills exhibited in the school educational programs progress can be achieved, which in turn damages their social, economic, cultural, psychological and emotional for them and society (2). Some researchers believe that more than 25 percent of dropout in primary school children from disability stems (3). By analyzing the results of research conducted in the prevalence rate of 5.8 percent to 2.2 percent over 1.1 screw that boys and girls are in trouble with (4). Given that the problems of children with dyslexia in components decoding, fluency and comprehension to

show that (5), the problem is that people in decoding phoneme- grapheme correspondence in creating and linking it with, and extremely poorly understood word association with act that lack of written symbols and understand the connection between speech sounds dehumidified and paid most attention to decode printed words, nearly as, Fluid component is important because the fluid that enables a person to correct a text, accurate and fast read. Fluency and understanding of the text has a close relationship.

Unfortunately, children with dyslexia are little growth in cognitive skills and word recognition and understanding what discrimination (6). That is, that the ultimate goal of reading, the same as the third component of reading comprehension (7) are unable to read and this problem has led to several problems that sometimes it is irreparable, is the problem the importance of the diagnosis of primary school children have doubled. In addition, the evidence demonstrated that the effectiveness of educational interventions is restored for those students from elementary school were the same age. At the same

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time the possibility of commuting problems by providing recovery programs is possible, rarely, after an initial phase of this program early can help children learn next (5).

Is a multi-dimensional program incorporating the various aspects such as cognitive, social, emotional and sensory motor skills necessary actions before reading needs, such as visual, auditory, motor acts as fine and gross motor abilities, cognitive performance and general knowledge like logistics of perception, conceptualization, problem solving, communicative actions such as perception and expression using language and actions of behavioral and mood, attention, self-regulation and the components of reading (decoding, fluency, comprehension), with a variety of methods adapted from approaches metalinguistic awareness, behavioral, cognitive, metacognition, restored and is strengthened in such a way that reading is realized in their true meaning. So far, numerous researches in the field of educational psychological treatments to reduce symptoms of dyslexia and improve their academic performance for and suggest that treatments have been used in teaching students with learning disabilities been effective in increasing academic achievement.

One of the research study may be (8-13) noted that demonstrated the effectiveness of psychological therapies in improving signs and academic-educational learning disability is dyslexia and the importance of special education completely transparent. Due to the importance reading and problem solving dyslexia multi-dimensional study aimed to evaluate the effect of triple turns on the skills of reading (decoding, fluency, comprehension) in first and second grade students were elementary.

Materials and Methods

This study is a quasi-experimental research in the study of pre-test and post-test with control group was used. The choice of subjects and replacing them in control and experimental groups was performed and the effects of other variables such as intelligence, chronological age, grade and gender were controlled and language subjects. By manipulating the independent variable, which is presenting a multi-dimensional program comes in twenty-one hour sessions experimental groups and the lack of presentation of programs to control, the effect on the dependent variable, the performance of read reviews and make have been measured. The population for this study on behalf of children whose schools have been introduced Disorders Center Behbahan city. For the study, 30 dyslexic

students need to be in that number were selected by multistage sampling, In the first phase, from among children who were introduced Disorders Center. The first grade and second-grade students with dyslexia were chosen. Among these, then in the second stage 30 of those chose and randomly divided into two groups of 15 experimental and 15 controls. The following tools were used to collect information:

Research instruments

- *Wechsler Intelligence Scale for Children*: The test was used to assess IQ students. This test has been both verbal and nonverbal subtests. Verbal between both groups in tests of nonverbal subtests had high correlation among themselves but weak correlation between verbal and nonverbal groups. The validity of this test in general (96%), Scale word of mouth (94%) and non-verbal scale is 90%. Standard error of measurement for the total scale are (19.3), verbal scale (60.3) and non-verbal scale (66.4) respectively. Through forms of peer validity and reliability of the test gained almost 90 percent in text reading (87%) and quickly and accurately read texts (94%) is obtained.

- *Test reading (table Saman)*: The test of word recognition and understanding of the text is composed (14). To evaluate and measure the ability to read two texts must be prepared student of PA text for pre-test, the student reads aloud the text at the end of the following questions answered Persian books. And other texts to post-test and after therapy sessions called by the child and the text following questions will be answered read the credibility test conducted on normal children 8 years old, 85% and validity of the test is 87% (15).

- *The program is multi-dimensional*: The program is in 21 one-hour sessions will be held:

In the first interview the mother's observations and recommendations of seven children and parents that these recommendations include:

Provided to a child's diet any more how to prepare recovery program for training the specialists provided under this regime, In the following sessions, two types of massage, which is a type of massage taught parents to wake and the second for a time before the child is sleeping and sleep regulation and type of exercise that children should follow in a specialized manner, and to determine the number of hours of television and CDs and nap time and time creativity. After making sure of the points by parents and parental emphasis on the implementation of the restoration program begins after a week regimen. The restoration program of training for participants re-evaluate the status of each component decoding, fluency, comprehension

of asking them to assess the diagnostic test reading. After reading diagnostic test to identify the student and the student's problems and frequency problems in the Saman intervention program to start, The eleven interview after the meeting of the first session was devoted to decoding stage. Then five sessions devoted to the final stage of fluency and comprehension was four meetings, the last step of the process is reading. After the restoration program to check the result again this time with another text reading diagnostic test was performed on the child.

Results

Table 1. Results of covariance analysis on test scores after "reading process" to control the effect of pre-test between the experimental and control groups

| Source | SS | Df | MS | F | Sig |
|-----------------------------|----------|----|----------|---------|-------|
| Pre-test process of reading | 84.438 | 1 | 84.438 | 26.604 | 0.001 |
| Group | 1592.393 | 1 | 1592.393 | 501.715 | 0.001 |
| Error | 85.695 | 27 | 3.174 | | |
| Total | 20419 | 30 | | | |

Table 2. Mean and standard deviation of the variable "process of reading" in the pre-test and post-test and control groups

| Variable | Pre-test | | Post-test | | |
|--------------------|---------------|-------|-----------|-------|------|
| | M | SD | M | SD | |
| Process of reading | Control group | 33.93 | 2.68 | 32.47 | 2.59 |
| | Groups | 33.20 | 2.17 | 2.17 | 2.34 |

As the tables (1 and 2) shown above, after adjustment by the elimination of the pre-test and post-test scores, intervention and post-test

Table 5. Multivariate analysis of variance for the dependent variables

| Source | Dependent variable | Sum of squares | Df | Mean Square | F | Sig |
|--------|---------------------------------|----------------|----|-------------|--------|-------|
| Group | Post decoded test | 1818.26 | 1 | 1818.26 | 151.98 | 0.001 |
| | Post reading comprehension test | 33.92 | 1 | 33.92 | 104.85 | 0.001 |
| | Post fluid test | 34.01 | 1 | 34.01 | 53.75 | 0.001 |

According to the results, Wilks Lambda index that groups the effect of the linear combination of Dependent variable (in a scale of post-test) shows, is significant (F=58.843, P<0.001). Covariance analysis of univariate statistics for each variable

experimental stage, has a significant effect (F=501.715, P<0.001) in the domains of "reading" is, so that unpaired read in the post-test (M=17.2, SD=2.34) from the pretest (M=33.2, SD=2.17), significantly decreased. However, a significant reduction in the variable "reading" means reducing the frequency of problems is read which means "growth" reading skills. Decoding indicators vocabulary, fluency and comprehension, multivariate analysis of covariance was used which results in Tables 3-5 are seen:

Table 3. Multivariate statistical indicators in the analysis of variance of the dependent variables

| Effect | Value | F | Hypothesis is df | df error | Sig | |
|--------|-------------------|-------|------------------|----------|-----|-------|
| group | Pylay effect | 0.885 | 58.843 | 3 | 23 | 0.001 |
| | Wilks Lambda | 0.115 | 58.843 | 3 | 23 | 0.001 |
| | Hottelling effect | 7.675 | 58.843 | 3 | 23 | 0.001 |
| | The root | 7.675 | 58.843 | 3 | 23 | 0.001 |

Table 4. Mean and standard deviation of variables with pre-test and post-test and control groups

| Variable | | Pre-test | | Post-test | |
|---------------|---------------|----------|------|-----------|------|
| | | M | SD | M | SD |
| Decoded | Control group | 50.67 | 4.43 | 55.27 | 4.98 |
| | Groups | 51.60 | 5.99 | 73.07 | 5.16 |
| Comprehension | Control group | 2.07 | 0.59 | 2.80 | 0.68 |
| | Groups | 2.27 | 0.59 | 5.20 | 1.01 |
| flowing | Control group | 11.11 | 1.06 | 7.64 | 1.09 |
| | Groups | 10.44 | 0.96 | 10.54 | 1.20 |

were calculated separately dependent to a significant source of multivariate statistical effect be determined. Table 5 shows that after controlling for the effect of pre-test and post-test on grade, the effect was significant in all post tests. In other

words, in all the tests, between the experimental and control groups, there was no significant difference. This reflects the positive impact on the growth of experimental intervention skills in trilogy of "decoded words", "fluidity" and "comprehension".

Discussion

This study aimed to evaluate the effect of multi-dimensional program reaches the skills on reading (Decoding, fluency, comprehension) first grade and second- grade students was dyslexic. There are significant differences between pre- test and post-test results reading scores. The desirable effect of multi- dimensional intervention trial showed growth in reading performance is dyslexic students. The results of some research that examines the effectiveness of therapeutic interventions on improving the reading process is carried out, is consistent. For example, the findings of this research study (13,16-18) are concordant with the studies that suggest the efficient review of learning disability centers in Ardabil province showed symptoms of learning disability students. An educational classes centers of learning disabilities in students with learning disabilities is to improve symptoms and academic achievement, In another study (12,13) effectiveness in improving the symptoms of learning disabilities special education and academic achievement of students in this category was And came to the conclusion that special education learning disabilities to improve symptoms and academic achievement of students in this category is very useful. Our findings are consistent with the results of this study.

The results showed a significant increase in post-test score decode in fifteen subjects with induced

experimental intervention program and multi-dimensional growth which uses a combination of direct instruction and phonological awareness. Including research (18) in an experimental study found that regular and systematic training of phonological awareness improves decoding skills in children with reading disabilities and to develop phonological awareness skills in reading decoding text versions of great importance (19) with these findings (18). The researchers examined the effectiveness of combining direct instruction in reading and phonological awareness training among school first grade students in the areas of performance, decode words dummy, free text word recognition and reading comprehension found that when these two educational methods (direct training and phonemic awareness) combined, proved significantly increase its effectiveness. If the result comes time score reading in seconds, 15 subjects in the post-test reading comprehension scores after the intervention sessions to greatly increase the significant differences in two stages.

Pre-test and post-test results from a multi-dimensional program are grown in the dimension of comprehension that using cognitive and metacognitive strategies. In line with these findings, some studies have shown that following a few of these studies may point. For example, research (20-24). The effect of metacognitive strategies on reading comprehension in students with reading comprehension problem was investigated.

Conclusion

It concluded that teaching metacognitive strategies has a positive effect on reading comprehension in dyslexic students.

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