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Original Paper

10-15 Years of Visually Impaired Physical Development Investigation with Brockport Tests of the Effect Artistic Gymnastics Program in Elementary School Students

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Abstract

The purpose of this study, is to 10-15 years of age applied to the visually students in elementary school physical fitness program, development of tests to investigate the effect of Brockport.

Blind study of Erzurum of 47 elementary school students studying in 20 (13 male+7 female) students in experiment group, 20 (13 male+ 7 female) students control group of students participated. Research at the weekend (Saturday and Sunday) 60 minute work in the form of 2 and 16 weeks

Brockport physical fitness tests can be applied to children before starting work. Brockport applied tests, flamingo balance, flexibility, push-up 30 sec., 30 sec. Shuttle, barfikste arm hold, barfikste arm pull, right-left hand grip strench, walking the ramp of 40 m, 40 m wheelchair ramp handling, composed. 4 month study was performed again at the end of the students the same tests.

The data were recorded as mean ± standard deviation. The statistics analysis of the collected data is used ssps 16.00 package program.

Our results suggest that studies artiatic gymnastics were developed in a positive way the visually impaired motor development of children.

Keywords

Visually impaired, Artistic Gymnastic, Physical Development, Brockport Tests

1. Introduction

Visual impairment, including blindness, means an impairment in vision that, even when corrected, adversely affected a child's educational performance. The term includes both partial sight and blindness (Office of Special Education and Rehabilitative Service, 2006).

Most people with visual impairments still have some usable sight. Perhaps one in four people with

visual impairments is blind. Among students with visual losses, about half became blind before or at birth.

There are multiple causes of vision loss. Though most causes are associated with aging, occasionally loss of vision occours before or birth. Some causes of blindness are as follows.

Before birth; Abinism, Retinoblastoma, Retinopathy of premeturity (ROP),

After birth or progressive; Cataracts, Cortical visual impairment (CVI), Glaucoma, Macular degeneration, Retinitis Pigmentosa (Winnick, 2011).

Lack or loss of vision causes some disadvantages (depending on the degree of vision loss, personal and social background):

Psychomotor changes: Laterality, balance, mobility, etc.

Emotional problems: Fear of the unknown, instability, anxiety, lack of self-confidence, etc.

Social problems: Social difficulties, loneliness.

Blindness or visual impairment often depends on the moment the event occurred. Genetic or acquired (sooner or later) are some pre-occasion visual experiences.

Lack of vision creates difficulty in movement. The visually impaired person cannot distinguish between objects and people dispersed in space, which often causes accidents and falls. And this ends with the loss of self-confidence and frustration necessary for gap control (Leonardo Da Vinci Program Innovation Transfer Project, (2008).

The general aim of our research is to investigate the psychomotor development of children with visual impairment with the artistic gymnastics application program.

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2. Theory

Our research theory;

Can movement training of visually impaired people contribute to their physical development?

What is the contribution of artistic gymnastic exercises to physical development in movement training?
Can an artistic gymnastics program contribute to the emotional problems of the visually impaired?
Can the artistic gymnastics program produce solutions to children's social problems? It is built on questions.

3. Methods

Blind study of Erzurum of 47 elementary school students studying in 20 (13 male + 7 female) students in experiment group, 20 (13 male+ 7 female) students control group of students participated. Research at the weekend (Saturday and Sunday) 60 minute work in the form of 2 and 16 weeks.

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4. Findings

Table 1. The Test and Control Group, Age, Class, Gender, Height and Weight Status

Test Group				Control Group		
	Station	N	%	Station	N	%
Age	10	5	25	10	4	20
	11	3	15	11	4	20
	12	4	20	12	3	15
	13	2	10	13	3	15
	14	2	10	14	2	10
	15	4	20	15	4	20
Class	4	2	10	4	3	15
	5	6	30	5	5	25
	6	5	25	6	5	25
	7	5	25	7	5	25
	8	2	10	8	2	10
Sex	Male	13	65	Male	13	65
	female	7	35	female	7	35
Height	115-120	2	10	115-120	3	15
	121-130	5	25	121-130	4	20
	131-140	5	25	131-140	5	25

	141-150	3	15	141-150	2	10
	151-160	2	10	151-160	3	15
	161-170	2	10	161-170	2	10
	171 and above	1	5	171 and above	1	5
Weight	20-30	6	30	20-30	5	25
	31-40	6	30	31-40	6	30
	41-50	3	15	41-50	4	20
	51-60	3	15	51-60	3	15
	61-70	1	5	61-70	1	5
	70 and above	1	5	70 and above	1	5

When Table 1 is examined, the ages of the subjects participating in the research are between 10-15 years old, and the 10-year-old group is the group with the highest number of subjects (25%). The class in which the subjects are educated is 4th-8th grade. 5th grade students make up the largest group (30%). In our study, male subjects (65%) were more than female subjects (35%). The heights of the subjects were 115-171 cm. between. 121-140- cm. sized subjects constitute the majority (50%). The weights of the subjects were between 20-70 kilos, and the proportion of subjects between 20-40 kilos (60%) was higher.

Table 2. Test and Control Groups Min. and Max. Values

Tests	N=20+20	Minimum	Maximum	Mean	SS
Flamingo	Test	2	19	10,750	5,55
Balance	Control	8	24	14,950	5,44
Flexibility	Test	1	15,50	6,620	4,07
	Control	3	16,60	8,477	4,04
Push-up	Test	6	20	10,950	3,69
	Control	9	22	13,800	3,67
the right hand	Test	10	26	16İ650	5,13
grip strength	Control	14	29	21,400	5,25
the left hand	Test	10	25	16,750	5,31
grip strength	Control	11	26	16,850	5,67
Shuttle	Test	8	47	25,650	12,13
	Control	14	54	29,750	11,76
Bent Arm	Test	1,20	42,93	9,760	9,98
Holding	Control	2	75	12,882	15,90
Bent Arm	Test	1	4	2,200	1,19
Pulling	Control	2	5	3,550	1,14

40 m walk the ramp	Test	17	29	23,100	3,49
	Control	16	25	20,850	2,75
40 m wheel chair transport	Test	25	39	31,650	3,73
	Control	26	35	30,900	3,04

When Table 2 is examined, the min. and max. There are differences between the values.

Table 3. The Test Group and Control Group, Pre Test and Post test Values

TESTLER	Test Group	X	Z	Control Group	X	Z
Flamingo Balance	Pre test	10,750	,036	Pre test	10,33	,108
	Post test	14,950		Post test	10,57	
Flexibility	Pre test	6,620	,000	Pre test	6,88	,004
	Post test	8,477		Post test	11,41	
Push-up	Pre test	10,950	,000	Pre test	11,00	,006
	Post test	13,800		Post test	10,41	
the right hand grip strength	Pre test	16İ650	,000	Pre test	10,00	,000
	Post test	21,400		Post test	10,50	
the left hand grip strength	Pre test	16,750	,637	Pre test	10,88	,310
	Post test	16,850		Post test	9,94	
Shuttle	Pre test	25,650	,000	Pre test	10,40	,062
	Post test	29,750		Post test	9,86	
Bent Arm Holding	Pre test	9,760	,000	Pre test	7,70	,037
	Post test	12,882		Post test	10,19	
Bent Arm Pulling	Pre test	2,200	,000	Pre test	7,50	,033
	Post test	3,550		Post test	7,50	
40 m walk the ramp	Pre test	23,100	,000	Pre test	9,75	,283
	Post test	20,850		Post test	11,00	
40 m wheel chair transport	Pre test	31,650	,073	Pre test	9,50	,046
	Post test	30,900		Post test	10,93	

$p<0.05$, $p<0.01$

Table 3 shows the significance levels of the pretest and posttest results of the experimental group and control group subjects participating in the research.

5. Conclusions and Implications

When Table 3 is examined, no significant improvement was observed in the pre-test and post-tests of the subjects in the experimental group in the claw strength and 40 m ramp driving tests, while flexibility, push-ups, right hand claw strength, sit-ups, bent-arm holding in the pull-ups, pull-ups in the pull-ups and walking on the 40-m ramps were not observed. A significant improvement was observed in the tests ($p<0.05$, $p<0.01$).

It has been determined from the studies on the visually impaired that there is a difference between the problem solving skills of the physically disabled individuals who do and do not do sports (Şah, H.2005). The artistic gymnastics program made by the children participating in our research suggests that it will contribute to their problem-solving skills in the education process in the future.

In addition, Sevindi et al. (2010) also found that disabled individuals who do and do not do sports have more problems in the effects of those who do not do sports on the family process. While continuing their social life in the future, it may contribute to a smoother marriage in family institutions.

In the study conducted by Kuru et al. (2008), psychologically positive results were obtained in the areas of arousal, perseverance and attention of physically disabled basketball players. According to the results of the study, physical disabilities (sight, hearing, orthopedic, etc.) individuals do sportive exercise, social status, attention, importance, etc. will enable them to be emotionally satisfied. These features were observed in the subjects, during and after the study.

Altun et al. (2011) found that the quality of life of disabled individuals is low, sports exercises increase the quality of life of the disabled, they enjoy life more, they feel better, and they perform daily life activities more positively. As a result of our research, it was stated by the school administrators and teachers that the quality of life of the children increased (they want to travel, they want to participate more in sports activities, they go to competitions willingly).

As a result, while the artistic gymnastics program that we have made has improved the physical characteristics (strength, speed, balance, etc.) of visually impaired children, it has also led to their social development, emotional satisfaction and gaining self-confidence.

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