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Selection of orientation and mobility tests for the blind majority of boys with disabilities aged 7 to 11 years

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Abstract
Orientation and mobility are two important contents to assess the level of access to the world through the senses of people with vision loss. The author has boldly built several tests and established evaluation criteria for these two contents, including Compiling some tests, Investigating Experiments, Testing Reliability, and Making Scales of Tests for boys from 7 to 11 years old with vision loss in Vietnam. The article publishes the results of the work "Research on compiling some motor sensory and motor orientation tests for male children from 7 to 11 years old with visual loss".

Keywords: Orientation, mobility, visually impaired children; children with vision loss.

1. Introduction

Visually impaired children have difficulty in recognizing their own body, surrounding objects, and spatial parameters necessary for independent movement.[12].
Orientation and mobility of blind children are two very important contents that every teacher teaching blind children needs to know to serve their teaching well.
Sensation - movement: Feeling and receiving the world through feeling and movement are two sides of the inner and the outer, the process of feeling and emotion are intertwined.
Movement is one of the basic needs of visually impaired children. Help visually impaired children develop their motor-sensory abilities and orientation so that they can move on their own in daily activities. Orientation skill is a skill to identify the directions of the body, and the position of the body about the objects of the surrounding space, an extremely important factor for children with the visual loss for their development in the future of children's independence and community integration.[12].
The human sense of movement and motor orientation are adaptive to stimuli, and it is developed by training. Therefore, teachers need to teach visually impaired children to have sensory and motor orientation tests to help develop appropriate teaching plan content, and with the effect of back-testing the results. The teaching of assessment standards helps teachers improve their teaching and enhance teaching effectiveness.
Visual information serves as both a stimulus to the child's movement and as feedback through which a child learns to correct and improve his or her movement. Perception of visual stimuli affects the organization of human motor actions and its absence restricts the child to the space occupied by his or her body, limiting the child's exploration closer to you and to objects that your child comes into direct contact with [1]. Therefore, motor development in visually impaired children is expected to be different from motor development in normally developing children [2]. In addition, other factors may interfere with a child's development, such as intellectual and cognitive skills, the presence of other disorders, and the home and learning environment [4]. Some motor skill difficulties in children with visual impairments include difficulty learning gait and posture problems; changes in spatial orientation and temporal structure; difficulty in coordinating perceptual information and its adjustment to external reality; problems in the perception of surroundings; Delays in body mapping and the acquisition of functional habits, such as dressing and eating [5]. In addition, studies have discussed changes in standing posture maintenance and postural correction speed [6], postural control [8], manual dexterity [9], posture parameters normal ride [11], and rough engine [10].

2. Methods

The research process uses the following methods: Analysis and synthesis of documents; interviews, seminars; pedagogical observation; pedagogical examination, and mathematical statistics.[12].

3. Results

3.1. Compilation of several motor sensory and motor orientation tests for male children aged 7 to 11 years with visual impairment. The project took place in 3 steps:

3.1.1. Establish guidelines for compiling motor sensory and motor orientation tests for male children aged 7 to 11 years with visual impairment.

The principles of compiling the tests of the research work are:

1. The tests are intended to meet the correct content of the test. Here is the sense of movement and the direction of movement.
2. Equipment to make the test easy to perform.
3. The tests are easy to perform, and suitable for children's performance capacity.
4. The tests are highly safe and do not affect the child's fitness.

3.1.2. Compilation of motor sensory and motor orientation tests for male children aged 7 to 11 years with visual impairment.

The work compiled 8 tests including 5 sensory tests and 3 motor orientation tests as follows.

Feeling of movement.

1. Take a stick of test

Purpose: To assess motor sensory fastness.

Preparation: Blindfold, An empty plastic tube, length 1m, weight 160g (plastic pipe for water), use a ruler in cm and white tape, stick the ruler along the length of the tube. The subject of the investigation was blindfolded sitting on a chair, resting his arm on the table, his wrist and hand outstretched, his fingers extended, thumb and forefinger open in preparation to catch a stick. The enumerator placed the stick vertically, holding the head with the index of 1m, the head with the number 0 of the stick placed horizontally between the thumb and forefinger of the investigated subject.

Procedure: The investigator dropped the stick at the same time shouting "Take" the subject closed his hand and caught the stick.

Evaluation method: The result is calculated at the closed position of the thumb and index finger. The unit of measurement is centimeters (cm). The lower the number, the better the sense of movement.

2. Hand grip strength (kg)

Purpose: To assess the sense of control of hand muscle strength in children with visual impairment

Preparation: Eyepatch, Electronic hand squeeze dynamometer.

Determine the dominant hand: The dominant hand is the hand often used to perform important movements in life such as throwing punches... The dominant hand is usually stronger than the non-dominant hand.

How to do it: The subject of the investigation was blindfolded standing with his feet shoulder-width apart, the dominant hand holding the dynamometer extended straight to the horizontal, creating an angle of 45 degrees relative to the longitudinal axis of the body, the other hand stretched naturally, with the body. , the dynamometer points to the palm and squeezes as hard as possible for 2 seconds, without jerking or adding redundant movements. The investigated subject squeezes the dynamometer with 100% force, then rests for 15 seconds, followed by a squeeze of 50% of the force compared to the squeeze of 100%. Perform 3 squeezes of 100% strength alternating with 3 squeezes of 50% strength.

Evaluation method: The unit of measurement is (kg). Calculate the deviation of the 50% force squeeze compared with ½ of the 100% force squeeze value. The smaller the value, the better the feeling of controlling hand muscle strength.

3. Single movement frequency of hand muscles (Tapping Test)

Purpose: To evaluate the sense of control of hand muscle strength in children with visual impairment

Preparation: Blindfold, hand-held counter (check counter), stopwatch.

The subject of the investigation was blindfolded sitting on a chair, the three-fingered dominant hand held the pen on the button, the non-dominant hand held the meter to count the quantity, and the two elbows rested on the desk.

How to do it: Investigator calls start and timers. The investigated subject used 3 dominant fingers to press continuously for 10 seconds on the machine with 100% speed, then rest for 15 seconds, then repeat, but the self-determined dot speed reduced 50% the number of times compared to the number of dots. Hits of 100% max speed. Perform 3 hits of 100% speed alternating with 3 times of 50% speed.

Evaluation method: calculate the number of points for each time. Calculate the difference between 50% strength and 100% strength. The smaller the value, the better the feeling of controlling hand muscle strength.

4. Touching hands above head

Purpose: To assess the sense of control over the strength of the upper extremity muscle group, and consider the feeling of flexibility in the upper extremity muscle group of children with vision loss.
Preparation: Blindfold, Stopwatch. The investigated subject was blindfolded and stood upright with his legs wider than his shoulder and arms along his body.
How to do it: When the investigator shouts start and time. The investigated subject's hands were raised horizontally, palms lightly touching each other on the head, then lowered to the horizontal after the two hands touched each other lightly below the back, maximum speed 100%, time to 10 seconds, then rest for 15 seconds, then do the same but the auto-determined execution rate reduces the number of touches by 50% compared to the number of touches of the 100% max speed. Do 3 hand touches at 100% speed alternating with 3 touches at 50% speed.
Evaluation method: The unit of measure is the number of touches on the head of each performance. Calculate the offset of the 50% head touch from ½ of the 100% head touch. The smaller the number, the better the sense of control over the strength of the upper extremity muscle group.
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5. Thigh lift exercises
Purpose: To assess the feeling of control of the lower limb muscle group's speed, and consider the feeling of the flexibility of the lower limb muscle group of children with vision loss.
Preparation: Blindfold, Stopwatch. The subject of the investigation was blindfolded, stood upright, with both hands propped against the wall in front of him, then on tiptoe to prepare to listen to the command.
How to do it: When the investigator shouts start and time. The two-legged investigation subjects quickly performed the movement, raised the thighs on the spot, the knees did not raise above the hips, the maximum speed was 100%, the execution time was 10 seconds, then rested for 15 seconds, then performed the same, but the self-determined execution speed is 50% less power than the thigh lifts of the 100% max speed. Do 3 thigh lifts at 100% speed alternating with 3 thigh lifts at 50% power.
Evaluation method: The unit of measurement is to calculate the number of times to raise the thigh in place of each exercise, each time the leg raises, and then lowers to count once. Calculate the number of times that both feet hit the ground. Calculate the difference between a 50% power touch and ½ of the 100% power hit. The smaller the number, the better the sense of control of lower limb muscle group strength.
Movement orientation.
6. Go straight blindfolded
Purpose: To assess the ability to direct movement when moving.
Preparation: Blindfold, measuring tape, flat training ground 25m long, 4m wide, draw a line along the middle of the field from 0m (start) to 20m (finish). At the landmarks of 5m, 10m, 15m, and 20m, draw secondary horizontal lines perpendicular to the main road as a basis for calculating the deviation from the main road. The subject of the investigation was blindfolded and stood at point 0 of the starting position and the person headed towards the destination.
How to do it: When the signal starts, the object of investigation moves on its own to the destination, the test yard needs to be very quiet so that the object is not affected in orientation. When the subject of the investigation moves to the road crossing the distance of the secondary roads 5m, 10m, 15m, and 20m, the enumerator accurately marks the crossing point to measure the deviation from the center line. Do it 3 times.
Evaluation method: The unit is centimeters (cm), Measure the deviation from the center line at each distance. Record the deviation to the left or right of the investigated object. The smaller the number, the better the ability to orient movement when moving.
7. Hands raised in front of shoulder level
Purpose: To assess the ability to orientate the posture in front of the face.
Preparation: Blindfold, Ruler
The subject of the investigation was blindfolded and stood upright next to the wall, leaning at right angles to the wall, his arms hanging along his body, the back of his left hand lightly touching the wall. Three horizontal lines parallel to the ground were drawn with chalk on the wall. in positions 90cm, 100cm, 110cm to help with orientation.
How to do: When there is a signal to start, the subject of investigation raises both hands to parallel from bottom to front to shoulder level, then stops, the outer edge of the left hand lightly touches the wall. The enumerator used chalk to mark on the wall the muzzle landmarks on the shoulder, the middle finger of the right or left hand, choosing the hand with the greatest deviation above or below. The equivalence point at the shoulder level has a value of 0, from 0 to the bottom has a larger negative value (-), and to the top has a larger positive value (+). Then measure the deviation from the center line. Do it 3 times.

Evaluation method: Unit is centimeters (cm), Measure the deviation from the center line across the shoulder snout. Enter the offset above or below the center line. The smaller the number, the better the ability to orientate the front posture.

8. Two hands raised horizontally, shoulder level

Purpose: To assess the capacity for lateral orientation.

Preparation: Blindfold, Ruler

The subject of the investigation was blindfolded, standing upright with his back against the wall, his arms hanging along his body, the outer edges of his hands lightly touching the wall. 3 horizontal lines were drawn parallel to the ground with chalk on the wall. 90cm, 100cm, 110cm to help with orientation.

How to do: When the command starts, the subject of investigation raises both hands from bottom to side, at shoulder level, stops, and the outer edge of the left hand lightly touches the wall, palm down. The enumerator used chalk to mark on the wall the muzzle landmarks on the shoulders, the middle finger of the right or left hand, choosing the hand with the most deviation above or below. The equivalence point at the shoulder level has a value of 0, from 0 to the bottom has a larger negative value (-), and to the top has a larger positive value (+). Measure the deviation from the center line. Do it 3 times.

Evaluation method: The unit is centimeters (cm), Measure the deviation from the center line across the snout and shoulder of the investigated subject. Enter the offset above or below the center line. The smaller the number, the better the lateral orientation ability.

3.1.3. Test the reliability of the compiled tests.

The work has examined visually impaired male children twice the motor sense and motor orientation tests, the test time between the two times is 5 days apart, and the test conditions between the two times are the same. . Then proceed to calculate the correlation coefficient r of the contents between the two tests. The results are shown in all tests with a correlation coefficient of $r > 0.8$, so they are reliable enough to use for evaluation in the study of the work.

3.2. The data collection organization investigated selected motor sensory and motor orientation tests for male children aged 7 to 11 years with visual loss: conducted 2 steps:

3.2.1. The sense of movement and the direction of movement of children with vision loss are studied.

The survey results are shown in the characteristic parameters: mean (M), standard deviation (SD).

Table 1. Statistics on motor orientation data of male children from 7 to 11 years old with visual loss

Contents	**Male : n=36**			
A. Go straight blindfolded	*Error number*			
	left		**right**	
	SL	%	SL	%
5m	*19*	31	*41*	68
10m	*27*	42	*36*	57
15m	*28*	45	*34*	54
20m	*18*	29	*44*	70
Totals	*92*	**37**	*155*	**62**
B. Hands raised	*Error number*			
	short		**hight**	
	SL	%	SL	%
Hands raised in front of shoulder level	*35*	36	*60*	63
Two hands raised horizontally, shoulder level	*42*	50	*42*	50
Totals	*77*	**43**	*102*	**56**

3.2.2. Comments on investigation results of motor orientation tests for boys aged 7 to 11 years with visual loss have been compiled.

The motor sense of the children with visual loss: The results of the investigation of the motor sense of the visually impaired students are not good, the reaction is poor. The deviation from the 50% level of performance in the tests is large.

Motor orientation of children with visual loss: The right and left deviations through the blindfolded straight test showed that there were 62% right deviations compared to 37% of left deviations. The low-to-high range of the combined forward and horizontal swings showed 56% high deviations compared with 43% of low deviations.

3.3. Scoring of motor sense and motor orientation tests for 7 to 11-year-olds with visual loss has been compiled. The project carried out the following 3 steps:

Scientific basis of a scoring scale.

Build a standard classification table.

One of the conditions of the standard classification is based on the characteristic parameters mean and standard deviation. The works are constructed according to 3 levels of good, average, and poor as follows: Good: (> M+0.5 SD); Medium: From (M-0.5 SD) to (M+0.5 SD); Poor category: (<M-0.5 SD). From this classification, standard Teachers will know information about the physical condition of the children they are teaching and assess the child's strengths and weaknesses from there. the basis of orientation to develop appropriate teaching plan content, and with the effect of back-checking the teaching results of the assessment standards to help teachers improve their teaching to enhance teaching effectiveness.

Table 2. Criteria for assessing motor sensation and motor orientation of male children aged 7-11 with visual loss.

No.	**CONTENTS** Deviation from center line/cm		7 yr old			8 yr old			9 yr old		
			Weak	*Average*	*Good*	*Weak*	*Average*	*Good*	*Weak*	*Average*	*Good*
1	Take a stick of test		< 20.45	20.45→25.15	> 25.15	< 16.55	16.55→21.25	> 21.25	< 21.10	21.10→29.90	> 29.90
2	Deviation from 50% strength	Hand grip strength / time	< 0.60	0.60→0.80	> 0.80	< 0.45	0.45→0.75	> 0.75	< 1.10	1.10→1.50	> 1.50
3		Single movement frequency of hand muscles 10 s / time	< 1.75	1.75→2.65	> 2.65	< 1.70	1.70→2.70	> 2.70	< 1.15	1.15→2.85	> 2.85
4		Touching hands above head 10 s/ time	< 0.80	0.80→1.40	> 1.40	< 0.70	0.70→1.10	> 1.10	< 0.80	0.80→1.40	> 1.40
5		Thigh lift exercises 10 s / time	< 1.15	1.15→1.85	> 1.85	< 1.10	1.10→1.70	> 1.70	< 1.40	1.40→2.20	> 2.20
6	Go straight blindfolded	5m	< 10.70	10.70→13.10	> 13.10	< 10.70	10.70→13.10	> 13.10	< 15.05	15.05→25.15	> 25.15
7		10m	< 15.20	15.20→28.40	> 28.40	< 15.20	15.20→28.40	> 28.40	< 22.90	22.90→37.90	> 37.90
8		15m	< 16.35	16.35→24.45	> 24.45	< 16.35	16.35→24.45	> 24.45	< 27.50	27.50→52.50	> 52.50
9		20m	< 19.25	19.25→28.75	> 28.75	<19.25	19.25→28.75	> 28.75	< 21.95	21.95→39.85	> 39.85
10	Hands raised	Hands raised in front of shoulder level	< 16.05	16.05→23.35	> 23.35	< 16.05	16.05→23.35	> 23.35	< 1.95	1.95→3.45	> 3.45
11		Two hands raised horizontally, shoulder level	< 10.80	10.80→16.60	> 16.60	< 10.80	10.80→16.60	> 16.60	< 1.10	1.70→3.30	> 3.30

No.	**CONTENTS** Deviation from center line/cm		10 yr old			11 yr old		
			Weak	*Average*	*Good*	*Weak*	*Average*	*Good*
1	Take a stick of test		< 24.45	24.45→35.15	> 35.15	< 18.60	18.60→30.40	> 30.40
2	Deviation from 50% strength	Hand grip strength / time	< 1.00	1.00→1.60	> 1.60	< 0.85	0.85→1.55	> 1.55
3		Single movement frequency of hand muscles 10 s / time	< 2.05	2.05→3.15	> 3.15	< 2.10	2.10→2.90	> 2.90
4		Touching hands above head 10 s/ time	< 0.75	0.75→1.25	> 1.25	< 1.00	1.00→1.60	> 1.60
5		Thigh lift exercises 10 s / time	< 1.30	1.30→1.90	> 1.90	< 1.30	1.30→1.90	> 1.90

6	Go straight blindfolded	5m	< 13.95	13.95→25.45	> 25.45	< 2.90	2.90→10.70	> 10.70
7		10m	< 15.95	15.95→25.85	> 25.85	< 7.10	7.10→13.50	> 13.50
8		15m	< 21.00	21.00→35.60	> 35.60	< 12.45	12.45→19.35	> 19.35
9		20m	< 29.50	29.50→47.10	> 47.10	< 19.25	19.25→29.35	> 29.35
10	Hands raised	Hands raised in front of shoulder level	< 1.45	1.45→3.15	> 3.15	< 1.15	1.15→2.65	> 2.65
11		Two hands raised horizontally, shoulder level	< 1.85	1.85→3.35	> 3.35	< 1.15	1.15→2.25	> 2.25

Build a rating scale.

The assessment scale helps children determine their ability in learning, stimulates the spirit of learning, and is the basis for them to know and try to promote the results they have achieved and discovered. overcome the existing weaknesses to perfect the technique to achieve the goal of having good learning results. The work uses the construction of a rating scale in the form of a standard scale which is a scale using standard deviation as the scale, a C scale with levels from 1 to 10 using the following formula:

Formula for C scale: C = 5 + 2 Z where Z = $\frac{X-Mean}{SD}$ [12]

Table 3. Scale to assess the motor sensory level and motor orientation of 7 to 11-year-old male children with visual loss.

Ages	C	**Feeling of movement** Deviation from 50% strength					**Movement orientation** Deviation from center line/cm					
		Take a stick	Hand grip strength / time	Single movement frequency of hand muscles 10 s / time	Touching hands above head 10 s/ time	Thigh lift exercises 10 s / time	Go straight blindfolded				Hands raised	
							5 m	10 m	15 m	20 m	Hands raised in front of shoulder level	Two hands raised horizontally
7 yr old	10	13.40	0.30	0.40	0.10	0.10	7.10	-4.60	4.20	5.00	5.10	2.10
	9	15.75	0.40	0.85	0.20	0.45	8.30	2.00	8.25	9.75	8.75	5.00
	8	18.10	0.50	1.30	0.50	0.80	9.50	8.60	12.30	14.50	12.40	7.90
	7	20.45	0.60	1.75	0.80	1.15	10.70	15.20	16.35	19.25	16.05	10.80
	6	22.80	0.70	2.20	1.10	1.50	11.90	21.80	20.40	24.00	19.70	13.70
	5	25.15	0.80	2.65	1.40	1.85	13.10	28.40	24.45	28.75	23.35	16.60
	4	27.50	0.90	3.10	1.70	2.20	14.30	35.00	28.50	33.50	27.00	19.50
	3	29.85	1.00	3.55	2.00	2.55	15.50	41.60	32.55	38.25	30.65	22.40
	2	32.20	1.10	4.00	2.30	2.90	16.70	48.20	36.60	43.00	34.30	25.30
	1	34.55	1.20	4.45	2.60	3.25	17.90	54.80	40.65	47.75	37.95	28.20
8 yr old	10	9.50	0.00	0.20	0.10	0.20	1.13	0.30	1.80	11.70	0.30	0.90
	9	11.85	0.15	0.70	0.30	0.50	3.58	5.50	7.35	15.95	1.35	1.75
	8	14.20	0.30	1.20	0.50	0.80	6.03	10.70	12.90	20.20	2.40	2.60
	7	16.55	0.45	1.70	0.70	1.10	8.48	15.90	18.45	24.45	3.45	3.45
	6	18.90	0.60	2.20	0.90	1.40	10.93	21.10	24.00	28.70	4.50	4.30
	5	21.25	0.75	2.70	1.10	1.70	13.38	26.30	29.55	32.95	5.55	5.15
	4	23.60	0.90	3.20	1.30	2.00	15.83	31.50	35.10	37.20	6.60	6.00
	3	25.95	1.05	3.70	1.50	2.30	18.28	36.70	40.65	41.45	7.65	6.85
	2	28.30	1.20	4.20	1.70	2.60	20.73	41.90	46.20	45.70	8.70	7.70
	1	30.65	1.35	4.70	1.90	2.90	22.25	47.10	51.75	49.95	9.75	8.55
9 yr old	10	7.90	0.50	-1.40	-0.10	0.20	-0.10	0.40	-10.00	-4.90	-0.30	-0.70
	9	12.30	0.70	-0.55	0.20	0.60	4.95	7.90	2.50	4.05	0.45	0.10
	8	16.70	0.90	0.30	0.50	1.00	10.00	15.40	15.00	13.00	1.20	0.90
	7	21.10	1.10	1.15	0.80	1.40	15.05	22.90	27.50	21.95	1.95	1.70
	6	25.50	1.30	2.00	1.10	1.80	20.10	30.40	40.00	30.90	2.70	2.50
	5	29.90	1.50	2.85	1.40	2.20	25.15	37.90	52.50	39.85	3.45	3.30
	4	34.30	1.70	3.70	1.70	2.60	30.20	45.40	65.00	48.80	4.20	4.10
	3	38.70	1.90	4.55	2.00	3.00	35.25	52.90	77.50	57.75	4.95	4.90
	2	43.10	2.10	5.40	2.30	3.40	40.30	60.40	90.00	66.70	5.70	5.70
	1	47.50	2.30	6.25	2.60	3.80	45.35	67.90	102.50	75.65	6.45	6.50
10 yr	10	8.40	0.10	0.40	0.00	0.40	-3.30	1.10	-0.90	3.10	-1.10	-0.40

old	9	13.75	0.40	0.95	0.25	0.70	2.45	6.05	6.40	11.90	-0.25	0.35
	8	19.10	0.70	1.50	0.50	1.00	8.20	11.00	13.70	20.70	0.60	1.10
	7	24.45	1.00	2.05	0.75	1.30	13.95	15.95	21.00	29.50	1.45	1.85
	6	29.80	1.30	2.60	1.00	1.60	19.70	20.90	28.30	38.30	2.30	2.60
	5	35.15	1.60	3.15	1.25	1.90	25.45	25.85	35.60	47.10	3.15	3.35
	4	40.50	1.90	3.70	1.50	2.20	31.20	30.80	42.90	55.90	4.00	4.10
	3	45.85	2.20	4.25	1.75	2.50	36.95	35.75	50.20	64.70	4.85	4.85
	2	51.20	2.50	4.80	2.00	2.80	42.70	40.70	57.50	73.50	5.70	5.60
	1	56.55	2.80	5.35	2.25	3.10	48.45	42.70	64.80	82.30	6.55	6.35
11 yr old	10	0.90	-0.20	0.90	0.10	0.40	-8.80	-2.50	2.10	4.10	-1.10	-0.50
	9	6.80	0.15	1.30	0.40	0.70	-4.90	0.70	5.55	9.15	-0.35	0.05
	8	12.70	0.50	1.70	0.70	1.00	-1.00	3.90	9.00	14.20	0.40	0.60
	7	18.60	0.85	2.10	1.00	1.30	2.90	7.10	12.45	19.25	1.15	1.15
	6	24.50	1.20	2.50	1.30	1.60	6.80	10.30	15.90	24.30	1.90	1.70
	5	30.40	1.55	2.90	1.60	1.90	10.70	13.50	19.35	29.35	2.65	2.25
	4	36.30	1.90	3.30	1.90	2.20	14.60	16.70	22.80	34.40	3.40	2.80
	3	42.20	2.25	3.70	2.20	2.50	18.50	19.90	26.25	39.45	4.15	3.35
	2	48.10	2.60	4.10	2.50	2.80	22.40	23.10	29.70	44.50	4.90	3.90
	1	54.00	2.95	4.50	2.80	3.10	26.30	26.30	33.15	49.55	5.65	4.45

4. Discussion and Conclusion

In some studies, poor motor activity in children with visual impairment was associated with visual acuity, but not with the severity of the disability. These studies show that modifications in the environmental and mission context are important for optimizing engine performance [14]. Adaptive features include extra time, a stable environment, and the use of sensory cues (visual and auditory) [14]. However, there is no consensus on this association. relationship between the degree of visual impairment and motor performance, and only a few authors acknowledge the existence of this relationship [10].

Studies have shown that the motor performance of children with visual impairment can be improved by participating in activity programs [3]. Therefore, early identification of the problem engine is crucial as inadequate performance can lead to long-term consequences [17]. Therefore, reliable tools are needed for professionals to identify children with motor impairments, assess development and the effectiveness of interventions, and help reduce and minimize the consequences of problems. However, the literature reviews by Skaggs and Hopper [16] and Houwen et al [15] on motor performance in children with visual impairments draw attention to the assessment tools used in this study. assist. Some of the applied tests have undergone changes, such as the use of brightly colored materials, increasing the contrast of materials, allowing children to feel the test of the material before test instructions, or even presenting additional instructions before performing a task test [14]

The work has compiled 1 table (table 2) classification criteria and 1 evaluation table (table 3) according to the scale of motor sensory and motor orientation tests for male children aged 7 to 11 years old. age lost to sight.

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