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The Impact of a Proposed Play-Based Training program on aquatic readiness for swimming on Sensory-Motor Perceptual efficacy of Children (5-6) Years Old

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Abstract:

The study aimed to evaluate the effectiveness of a play-based training program on children aged 5-6 who engage in swimming to enhance water readiness and improve sensory-motor perceptual efficacy. The study utilized a quasi-experimental design and included a sample of 24 children from a swimming club in Mostaganem city. The children were divided into two groups, with the experimental group undergoing a 24-session play-based training program, while the control group received traditional training.

The results showed a significant improvement in sensory-motor perceptual efficacy among children who underwent the play-based training program.

Keywords: play training program; Perceptual-sensory-motor efficacy; a child (5-6) years old; aquatic readiness for swimming.

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1. INTRODUCTION

Parents prefer for their children to join one of the sports clubs specialized in teaching swimming principles and skills, due to their need to form their children's inclinations and interaction with the aquatic environment. The water readiness swimming teacher accompanies the child while he is with his peers in the swimming pool and works to monitor their excellence. It also acts on the molecules that cause a positive reaction in the child while he joyfully expresses his ability to convey everything he thinks during the learning process.

Where the researcher discussed (Bachir Karoum, 2022)in his study published in the Journal of Sports System, University of Djelfa, entitled: The effect of a recreational sports program based on play in developing abilities. Creative thinking for children (5-6 years old) during which early childhood represents the most important stage in a person's life due to its flexibility, ability to learn, and the growth of various skills and abilities, including children at this stage who tend to guess, explore, and experiment. Play is a distinctive feature of these children, as it takes up a large part of their time

In his study published in the Journal of Sports System, University of Djelfa, the researcher (Lagrugh Abdul Hamid, Issa Al-Hadi, 2019)points out the importance of children playing games inside or outside the home in primary schools, which contributes a major role in improving Basic motor skills represented by running movements. (Jumping, throwing, throwing...) as practice and improvement are a basic pillar in their growth and the completion of their various aspects (affective, emotional, cerebral, sensory, motor, etc.), and it also removes their energies from the feeling of loneliness to the outside world.

It also depends on playing in the water environment through problem-solving skills according to the child's ability to use his physical, sensory and cognitive functions to overcome the cycle of fear and avoid drowning accidents, in order to avoid and overcome the child's fears of drowning. The possibility of drowning is known as aqua phobia, and within the framework of this interest, the swimming coach seeks in his training mission through play to provide children with the necessary skills, as the child spends an enjoyable time in which he obtains a direct relationship with his peers at the swimming pool level.

2. The research problem:

Perception is considered a mental process that distinguishes between the stimuli affected by the senses and interprets the meanings of the stimuli to understand and comprehend. Therefore, it is a process in which the mind and senses participate together, as well as the collection of past experiences, and use them to interpret information (Al-Sandakli, Hanaa Ibrahim, 2009)

As researcher Lazri Naceureddine confirms. In his study published in the Journal of Sports System at the University of Djelfa, Perception -motor abilities are considered among the most important mental variables that contribute to understanding, teaching, and performing motor skills that require an accurate appreciation of the spatial and temporal relationships of motor skills. Movement, through which the individual receives information about the position of the body, its direction, its relationship with its parts in space, and the direction and time of its movement, and then he can control the direction of his movements in terms of shape, range, path, and direction (Lazzri Naceureddine, 2023) .

Children's awareness can be exploited if we link this mental process to the motor aspect through games, as it is the child's favorite activity to achieve specific educational goals. Play serves the process of perception in building the child's personality, developing his fine muscles, developing visual synergy, and imparting social values such as cooperation, respect, and learning shapes, colors, and characteristics. and their common features, as well as the development of innovation and (Abdel-Jabbar, 1988) , This means that the child must have a place where he can explore and move freely to learn about himself and the world. For the same purpose, appropriate movement programs must be prepared for the early childhood stage to develop the required skills and different experiences.

In this study, we will discuss a proposal for a training program in swimming through play for the perceptual-motor competence of children (5-6 years), through which they rely on satisfying their play needs as a means of enhancing the learning process. and developing cognitive and sensory-motor abilities to develop basic motor skills in swimming in a way that suits the child's nature when he is in an unfamiliar environment in the swimming pool, for the same purpose, we pose the general problem: What is the extent of the impact of a suggested training program with play in aquatic readiness for swimming on the perceptual and sensory-motor competence of children (5-6) years old?

2.1 General Wondering : What is the effect of a suggested training program by playing in preparation for swimming on the perceptual and sensory-motor

efficiency of children (5-6) years old?

Through it, we ask the following questions:

2.2 Partial questions:

- Are there statistically significant differences between the average scores of the pre-and post-measurements among members of the control group in the items of the sensory-motor perception test for children?
- Are there statistically significant differences between the average scores of the pre-and post-measurements among members of the experimental group in the items of the sensory-motor perception test for children in favour of the post-measurement?
- Are there statistically significant differences between the average scores of the experimental group and the average scores of the control group in the sensory-motor perception test for children in favour of the experimental group?

3. Research hypotheses:

3.1 General hypothesis: The proposed training program for playing in the aquatic readiness for swimming has a positive impact on the level of sensory-motor abilities of children aged (5-6) years.

3.2 Partial hypotheses: There are statistically significant differences at the level of (0.01) between the average scores of the experimental group and the average scores of the control group in the sensory-motor perception test for children in favour of the experimental group.

4. Research objectives:

The current research aims to identify the effectiveness of a training program through play in water preparation for swimming by presenting a program based on the scientific and training foundations used in training children aged (5- 6) years, and it is applied to this category of children involved in one of the sports clubs specialized in teaching... Swimming in the Olympic swimming pool, " Habib Bouhalla" in Mostaganem city, who represents the sample of this study, relies on satisfying their needs with play as a means of enhancing the learning process and developing sensory-perceptual abilities through movement,to develop basic motor skills in swimming in line with the nature of the child while he is present in an environment that he is not accustomed to inside the swimming pool.

We summarize the objectives of this study as follows:

* Detecting the effect of the training program using games in developing sensory-motor abilities in swimming.
* Design the program using gamified training in the form of training units.
* Highlighting the importance of training through play in developing sensory-motor perception in swimming.

5. Defining search concepts and terms:

5.1 Playing training program: The program is an enjoyable group of swimming activities for children aged 5 or 6 years. There will be a swimming coach to help them learn important skills for their age. The researcher has prepared and designed a training program according to the style of play in the water preparation class to develop sensory-motor perception among a sample of children (5-6) years old.

5.2 Perceptual-sensory-motor efficacy: This means that children use their ears, words, and eyes to know where their body is and how it moves. They also use this auditory, verbal, and visual information to guess how far away things are and how long it will take to get there.

5.3 a child (5-6) years old: They are young beginners of both sexes, (boys / girls) who have no background in swimming, and whose ages range between (5-6) years.

5.4 aquatic readiness for swimming: It is the first educational stage that allows a child (5-6) years the opportunity to prepare, desire, and feel the need to train in the water environment with the help of a swimming instructor by making the training process better and faster by focusing on good compatibility of performance so that he can recognize the results of his performance on an on-going basis and be able Evaluate his swimming performance (underwater, jumping in water, sliding, moving in water, water breathing.

6. Methodological procedures followed in the study

6.1 Exploratory experiment: The exploratory experiment was conducted on a sample of children from the Mahdia Swimming Club - Mostaganem, out of (24) boys and girls whose average age ranged between (5.5) years.

The test was conducted on Sunday, October 10, 2021, at approximately ten in the morning at “the Habib Bouhalla“ Olympic Pool - Mostaganem, and its aim was to ensure the suitability of the tools used in the student’s sensory-motor perception tests.

The "Catherine Haywood" scale and the extent of the success of the approach that was developed with a group of individuals from this sample.

To ensure the of our results, we ran the same test on the same group of sample members again.

6. Previous studies:

The first study: A study (Makchouche Moufida, 2020) entitled: (The role of para-sporting games in developing sensory-motor perception for preparatory education children (5-6 years) (a field study in one of the primary schools in the state of Chlef)).

It aimed to identify the role that Para-athletic games play in developing the perceptual and sensory-motor abilities of preparatory education children, where the experimental method was used because it suits the nature of the subject and its goal, which is considered an effective means of achieving accuracy and credibility in the results, and this is based on the experimental design (pre-test). Post hoc) for two equal samples, where we randomly selected the sample from the preparatory education departments in one of the primary schools in the state of Chlef. The study included 32 children who were divided into two groups, the first a control group and the second an experimental group, both of which included 16 children. The "Haywood" test was used for the children's sensory-motor perceptual abilities. At the age of (5-7 years) and applying a program for para-sports games, which included a set of educational units (24 classes - two classes each week), the study resulted in statistically significant differences between the average scores of the experimental and control groups in (visual perception, ability to Recognition and discrimination between body parts, moving balance, auditory perception) after applying semi-athletic games for the benefit of the experimental group.

The second study: A study (Al-Khudari, Sultan Abdul Samad Ismail, 2020), entitled: (The effect of a motor education program to develop sensory-motor perception among children in the age group (11-12) years).

The current research aims to identify the effect of the motor education program using the motor story on the development of sensory-motor perception for children aged 11-12 years. The researcher used the experimental method using two experimental and control groups for its suitability and the nature of the research, following pre- and post-measurements for both groups.

The research sample consisted of (60 children), whose ages ranged from 11-12 years, and the balance control test, the visual discrimination test, the sensory-motor discrimination test, the auditory discrimination test, and the motor synergy test were used. The researcher concluded that the training program using tools The alternative method contributed positively to improving motor balance control

among children in the age group of 11-12 years under study. Also, the training program using alternative tools contributed positively to the improvement of visual discrimination, auditory discrimination, and sensory-motor discrimination among children in the age group of 11 years. - 12 years under investigation.

The third study: A study (Hebat Allah Essam Eddine Al-Diasti, 2019) entitled: (The effect of a proposed educational program using some recreational games on the development of perception (sensory-motor) and the level of skill performance of swimming buds.

The study aimed to design a proposed educational program using some recreational games and identify its impact on the educational level

Developing perception (sense-motor) and skill performance of swimming buds. The study was carried out by the researcher according to the experimental method with pre- and post-measurement for the two groups, one experimental and the other control, due to their suitability to the nature of the study. The sample was chosen intentionally, which included (51) boys and girls. Several () were excluded. 5) Children from the research community did not complete the research measurements. Several (16) children were drawn as a group for the exploratory study sample, and the sample members were randomly distributed into two groups, one experimental and the other a control group, and each group included (15) male and female children. Homogeneity and parity were conducted among the sample members in the variables under study, and one of the most prominent results was The study showed that there were statistically significant differences between the pre-and post-measurements in favour of the post-measurement of the experimental group in both sensory and kinesthetic perception in the horizontal distance inside and outside the water belly and back and in the direction inside and outside the water belly and back and by the force of pushing the arm out of the water and by time inside the water belly and back, and this is due to the effect of the program. Proposed tutorial on kinaesthetic perception of swimming buds.

6.2 Benefits from previous studies:

Formulating research hypotheses and determining the appropriate approach to the study.

Research tools used. Good selection of statistical methods for the study.

Analysing the results and comparing them with the results obtained in our study with previous studies and making inferences from them.

7. Research methodology and field procedures:

7.1 survey: The exploratory experiment was conducted on a sample of children from the Mahdia Swimming Club - Mostaganem, out of (24) boys and girls with an average age ranging from (5.5) years. The test was conducted on Sunday, October 10, 2021, at approximately ten o'clock in the morning at the Habib

Bouhalla Olympic Swimming Pool-Mostaganem, and it aimed to ensure the suitability of the tools used in sensory-motor perception tests for the "Catherine Haywood" scale and the extent of the success of the approach that was developed with a group of individuals from this sample.

To ensure the accuracy of our results, we conducted the same test on the same group of sample individuals again.

7.2 Procedures for homogeneity and equivalence of the research sample: In terms of (chronological age, mental age, weight, sensory-motor perception, intelligence) to determine whether the research sample is homogeneous and normally distributed (between groups and within groups) Table 1.

Table 1. Indication of the differences in age, weight, intelligence, and sensory-motor perception between the two groups under study.

Variables	measuring unit	Experimental group (n=12)		Control group (n=12)		T value	T value Tabulation	Significance level 0.05
		Arithmetic average	standard deviation	Arithmetic average	standard deviation			
Chronological age	the month	66.56	2.42	66.69	1.54	1.31	0.11	Not a sign
the weight	kilogram	21.34	3.55	21.48	2.49	1.71	1.64	Not a sign
Mental age	the month	65.55	2.41	66.12	2.41	0.81	0.24	Not a sign
Intelligence	Class	98.46	5.70	99.13	5.71	1.01	0.15	Not a sign
sensory-motor perception	Class	27.17	3.21	26.25	2.83	0.74	0.24	Not a sign

7.3 Study population: The study population included children who began training in aquatic readiness for swimming at the Mahdia Sports Club, located in the "Habib Bouhalla Olympic Swimming Pool", located in the Major Farraj Sports Complex in Mostaganem - Algeria. Their number reached 81 boys and girls.

7.4 Study sample and method of selection: For the same purpose, the study sample was selected in a purposive manner from a group of children (5-6) years old who practice swimming from the study population who are present at the "Habib Bouhalla Olympic Swimming Pool" located at " the Major Farraj Sports Complex" in Mostaganem city - Algeria.

7.4.1 The study sample: The application sample included 24 boys and girls from the research community. The researchers divided them systematically into two groups, control and experimental, with 12 (boys and girls) in each group.

7.4.2 Application of study tools: The study tools were applied in the period extending from the beginning of September 2023 to the end of January 2024 in "the Habib Bouhalla Olympic Swimming Pool", located in " the Major Sports Complex, Farraj" - Mostaganem.**,** The application procedure was in the morning and evening periods.

- **Time taken**: According to each case: 45 minutes.

7.5 Identifying variables and how to measure them: The research variables included two variables:

7.5.1 Independent variable: It is the influencing factor in the study (a training program with play in water preparation for swimming).

It contained 40 training units, which were implemented over 20 weeks, with two 90-minute units, at the level of the shallow water swimming pool in "the Habib Bouhalla Olympic Pool", located in "the Major Sports Complex, Farraj" – Mostaganem (Algeria).

7.5.2 The dependent variable: It is the factor affected by the independent variable (perceptual sensorimotor efficiency).

7.6 Tools and means of collecting data

7.6.1 Non-verbal test to measure intelligence "Florence Goodenough": The man drawing test is one of the non-verbal tests to measure intelligence. It is based

on drawing a picture of a man. This test was prepared by the American researcher "Florence Goodenough" in 1926 and was modified into Arabic by the researcher "Naeem Attia". The test consists of: 51 units**.**

- Intelligence quotient (IQ) using the well-known Truman equation:

100 x (in months, mental age)/(in months, chronological age) = (IQ)

Table (02) shows the results of the sample children on the man drawing test. These results ranged between (80.5 and 94.44), which are normal intelligence scores.

7.8 Sensory-Motor Perception Scale (Catherine Haywood) for children aged (5-6) years:

7.8.1 Instructions to be followed when using the scale:

- Target age group starting from (5) years and above, with the addition of a month, if any.
- We need to know whether the child uses his right (hand/leg) or left (hand/leg) more.
- Before we start the test, we need to explain to the child what the test is about.

Duration required to conduct the test: (20) minutes.

7.8.2 Components of the scale: This scale consists of 6 parts in the form of tests, as follows:

-Visual perception test (consistency of the size of objects, place and time):

The first test checks whether the child can see objects the same size all the time.

-Visual perception test (complete and partial):

Checks his ability to see and recognize different parts of objects.

- Sensory-Motor Perception test (identifying body parts):

Check if the child can tell the difference between the right and left sides of his body.

- Sensory-Motor Perception test (distinguishing between the right and left parts of the body):

The fourth test checks if he can tell the difference between his right and left sides

Sensory-Motor Perception test (balance):

The fifth part checks how well the child feels and understands things around him.

Sensory-Motor Perception (location):

The last test checks whether the child can tell where things are.

7.9 tools used: There are different pictures, a small table, a small chair for the child to sit on, a large chair for the person testing the child to sit on, a timer to keep track of time, a pencil, a balance platform, a small bell to ring, and blocks of different colours such as red, blue and yellow.

7.10 Correction and interpretation:

Table 3 : Correction and interpretation.

Parts	Items of the sensory-motor perception scale	Grades
part One	Visual perception test (consistency of object size, place and time)	From 0 to 6 degrees
The second part	Visual perception test (complete and partial)	From 0 to 6 degrees
the third part	Test (identifying body parts)	From 0 to 12 degrees
part Four	Test (distinguishing between the right and left body parts)	From 0 to 5 degrees
Fifth part	Test (balance)	From 0 to 2 degrees
Part Six	Test (locate)	From 0 to 5 degrees
The grade as a whole		From 0 to 36 degrees

7.11 The scientific foundations of the sensory-motor perception scale (Catherine Haywood)

Table (5): Significance of the stability of the Sensory-Motor Perception Scale (Haywood) when the tabular value at a degree of freedom (18) and a significance level (0.05) equals (2.10).

T	Tests	reliability coefficient	Expected T value	objectivity coefficient	reliability coefficient	statistical significance
1	Visual perception test (consistency of object size, place and time)	0,92	9.7	0,94	11,5	Significant
2	Visual perception test(complete and partial)	0,93	10,7	0,93	10,7	Significant
3	Test (identifying body parts)	0,88	7,8	0,88	7,8	Significant
4	Test (distinguishing between the right and left body parts)	0,91	9,1	0,94	11,6	Significant
5	Test (balance)	0,80	5,6	0,82	6,5	Significant

6	Test (locate)	0,89	8,2	0,94	12,41	Significant

We found that the results were very similar, which means the test is trustworthy. We used another mathematical formula called (t) to check whether the similarity between tests was significant. We found that similarity is very important because the calculated (t) values were greater than the expected values at a degree of freedom (18) and a significance level (0.05) of (3). This tells us that the test is reliable and we can trust the test results because they have a high degree of stability.

6.10.3 Scale objectivity factor: To make sure the scale was fair, we asked experts to measure how well each child was doing. Then we compared the scores given by the experts and found that they were similar. This is shown in Table 3.

6.11 Basic experiment

6.11.1 Pre-test procedures: Before the start of the study, all children in the group took a test at the office of the Mahdia Sports Association (Swimming Branch) Mostaganem on Tuesday, October 26 at 10 am. They took a test to see how well they could use their senses and move their bodies. It was ensured that everything was the same for all children, such as where and how the test was done. This was so they could run another test later and compare the results.

6.11.3 The main experiment: The research team conducted the training program through play, which aims to develop sensory-motor perception, taking into account motor preparations for the beginning children aged (5-6) years participating in the study. The program began on Tuesday, November 2, 2021, after reviewing the scientific information. The program included Of (24) training units over a period of (8) weeks, at a rate of (2) two units per week, and the time of each training session ranges within 45 minutes, and the research group's program ended on Thursday, February 1, 2022.

In the first week, the training units were in the form of motor exercises aimed at raising the motor ability of the research sample, as well as the psychological accompaniment highlighted by the role of the swimming instructor in an effort to make the communication relationship successful with the children of the research sample, with the aim of the children being prepared and comfortable, participating and listening well, and being confident and happy. Swimming coach. We also made sure there was a schedule and a good place to swim. Each practical session lasted about 40-45 minutes, and we also had some

special activities planned through the training program through play and the communicative process by the swimming instructor and under the supervision of the researcher. This program included activities such as games and exercises that helped the children improve in moving their bodies, thinking, and speaking with others. And feeling good about themselves. The aim was to help children understand how their bodies work and how to feel better about themselves, with the aim of developing their sensory-motor perception.

In implementing the program, the researchers took into account the gradual provision of exercises, games, and accompaniment through the assistance (direct or indirect) of the swimming instructor to observe the child's noticeable expressions by closely identifying the judgment rules for a particular skill according to each observed level.

6.11.4 Post-test procedures: After we finished using the program, we conducted a test on the same sample members that we had tested before, on Tuesday (1/28/2022) at ten in the morning, in the same way and the same place.

6.11.5 Methods used in the program: A standardized observation card to evaluate the level of performance of basic swimming skills for children aged 5-6 years. Basal motor skills test for swimming, pre-and post-test, as follows:

* A child floating on his stomach means lying on his stomach in the water and letting his body float without sinking.
* The child performs the process of sliding on his stomach by pushing from the edge of the pool.
* The child performs the process of sliding on his back by pushing from the edge of the pool.
* The child floats on his stomach and regulates his breathing while moving around using leg movements
* The child floats on his back and regulates his breathing while moving around using leg movements
* The child jumps into the water head first.
* The child swims using his hands and legs to move in deep water.
• The child performs deep water diving by swimming underwater (diving to eat colorful rings from the bottom of the pool at a depth of 1 meter).
• Use the checklist (Langendorfer, S. et Bruya, LD, 1995) to calculate the rate of progress through an observation schedule for the achieved basal motor skills.

• Among the educational aids used are: (a leg kick board, buoyancy belts around the arms, coloured buoyancy sticks, coloured submerged sticks, coloured submerged hoops, slide...)

6.11.6 Proposed program units: The most important basic water skills that swimming instructors should consider when planning swimming lessons are the following: (Langendorfer, S. et Bruya, LD. (1995). .,L:., 1995)

* The first skill (learning how to enter the water safely).
* The second skill (he can move his body through the water).
* The third skill (learning how to float on his stomach in water).
* The fourth skill (learns how to float on his stomach and slide in the water).
* Fifth skill (learning how to float on his back and slide in the water).
* Sixth skill (he can move his body while sliding while changing his position).
* Seventh skill (body position during the front and back somersault).
* The eighth skill (using the floating board, he can perform leg strikes while floating on his stomach, as his breathing must be controlled while doing this).
*The ninth skill (leg strikes with self-control from a floating position on the Stomach).
*The tenth skill (using the floating board, he can perform leg strikes while floating on his back, as his breathing must be controlled while doing this).
* The eleventh skill (he can perform leg strikes while floating on his back, as his breathing must be controlled while doing so).
* The twelfth skill (jumping with both feet into the water).
* The thirteenth skill (jumping from the head into the water).
* Fourteenth skill (swims in deep water using his hands and legs).
* Fifteenth skill (floating vertically in depth).
* Sixteenth skill (diving in deep water).

2.7 Statistical methods used in the study: To process the results of the study, the researchers used a set of the following statistical methods:

- Pearson correlation coefficient: It was used to calculate the stability of the sensory-motor perception scale, as well as to calculate the correlation between the study variables.
- T-test for two unequal samples: to find differences between the means.

- The Statistical Package System (SPSS) was used to process the data using the Social Sciences Statistics Package System, Using a table of the intelligence scores of the sample members on the man drawing test.

3.1 Presentation, analysis and discussion of test results for measuring sensory-motor perception (HYD)

3.1.1 At the control sample level: To ensure accurate results, the data was looked at using a special test called the t-test, which helps us find out if there are any important differences by understanding the extent to which children can sense and move. We measured them before and after the experiment and used two tables to show the results.

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Table 6. It shows the average scores, the extent of difference in scores, and the comparison number for the tests before and after the study for the control group in the sensory-motor perception test of the Haywood scale.

Statistically treated variable	Pretest		Posttest		Sample number	Calculated T value	Tabular (T) value	Statistical significance
	S	A	S	A				
sensory-motor perception	26.25	2.83	28.08	0.78	12	-1.61	0.120	Not a sign

It is clear to us from Tables (6) and (7) that when comparing the average scores and their spread to test the ability of the children of the control sample group to use senses and move (sensory perception - motor) before and after the exercise, we see that the average score before the exercise was (26.25). With a difference of (2.83). After training, the average score increased to (28.08), with a smaller difference of (0.78). When we calculated "T", we found that it was (-1.61), which is less than the number (0.120) that we expect, this means that the difference is not significant, and the researchers attribute this to the fact that despite a slightly noticeable increase in the level of the arithmetic mean value recorded after the pre- and post-measurements, the training program prepared with exercises proved effective on children (5-6) years old, in a way that is not sufficient to reach the results. what is desired of him.

Table 7. Average estimates of the sensory-motor dimensions of perception among children (5-6 years) before and after applying the program to the control group. Sample (n=12)

The applied program	Control sample category	Statistical variables for the Haywood scale	measuring unit	SMA	standard deviation	(V) Calculated	Moral value sig	the decision
Exercise training program	(tribal) Before training	Item 1	Repetition	4.58	0.66	-6.91	0.12	No Statistically significant
		Clause 2		4.17	0.57			
		Clause 3		8.33	0.98			
		Clause 4		4.00	0.73			
		Clause 5		1.42	0.51			
		Clause 6		3.75	0.62			
		Scale Haywood		26.25	2.83			
	(dimensional) After training	Item 1		5.00	0.73			
		Clause 2		4.42	0.79			
		Clause 3		8.92	1.44			
		Clause 4		4.33	0.77			
		Clause 5		1.50	0.52			
		Clause 6		3.92	0.66			
		Scale Haywood		28.08	2.71			

It is clear from Table (7) that there are no statistically significant differences between the means of the control group's scores, whether in the pre-measurement or the post-measurement, about the items of the sensory-motor perception test for children, and thus the validity of the first hypothesis is verified.

3.1.2 At the level of the experimental sample: The research results were analyzed using a t-test for identical samples to obtain objective results. We need to conduct this research to understand the reason for the difference in test results before and after the experiment.In the sensory-motor perception test for children, as shown in Table (8).

Table 8. shows the significance of the differences in the Haywood Sensory-Motor Perception Scale scores between the pre-and post-measurements for the

experimental sample.

The applied program	Experimental sample category	Statistical variables for the Haywood scale	measuring unit	SMA	standard deviation	(v) Calculated	Moral value sig	Significance level	the decision
Play training programme	(tribal) Before training	Item 1	Repetition	4.58	0.66	-6.91	A function at a level 0.01	0.00	Statistically significant
		Clause 2		4.17	0.57				
		Clause 3		8.33	0.98				
		Clause 4		4.00	0.73				
		Clause 5		1.42	0.51				
		Clause 6		3.75	0.62				
		Scale Haywood		26.25	2.83				
	(dimensional) After training	Item 1		5.00	0.73				
		Clause 2		4.42	0.79				
		Clause 3		8.92	1.44				
		Clause 4		4.33	0.77				
		Clause 5		1.50	0.52				
		Clause 6		3.92	0.66				
		Scale Haywood		28.08	2.71				

It becomes clear to us when reading Table (8) by measuring the extent to which the children (the experimental sample) are able to feel and move their bodies before and after some activities. On the first test, the average score was 27.17 out of 100, and some children scored above or below this. On the second test, the average score was 34.50 out of 100, with less variation from person to person. The calculated "t" was used to compare the two tests, and the value we obtained was (-6.91). This means that there was a significant difference between the two tests, which is higher than the tabular "t" value of (0.00) at the significance level (0.01). This means that the difference is significant and in favor of the posttest. The researchers attribute this to the fact that the prepared program included fun activities to help children improve in distinguishing between objects, especially by touching them. This is important because touching things helps our hands and

brains work together. The children were also allowed to play as they wanted with balls, pellets, floating buoys, and colorful floating rings...of different sizes, weights, and colors, and to use specific body parts for various jumping in the water, sliding, moving in the water, and water breathing. This increased the child's sense of the water environment in which he was present, which increased their Fun, joy, and fun without stress reflected positively on the children's psyche, as they showed their desire to learn by playing games, so the program included fun activities such as swinging their arms and moving their legs to keep them interested. (Jumping or jumping in place, jumping to the farthest distance around the ring that the child can reach, playing the game of crossing the pool walls, sliding on the slide, etc.) which increases children's learning and awareness of how to move their bodies better over time. When they trust their swim teacher, they get along better and do better. Jumping exercises help children coordinate arm and leg movements and improve their mobility (Ghassan Muhammad Sadiq, 1989), The American researcher (Wade Boykin, 2002) indicates that using fun stories that include movement and play can help children improve in movement and play. It is a good way to help them learn and improve their skills.

Table 9. the significance of the differences in the scores of the sensory-motor perception scale "Haywood" between the two samples (control and experimental).

Statistically treated variable	Control sample		Experimental sample		Sample number	Calculated T value	Significance level	Degree of	Moral value sig	the decision
	S	**A**	**S**	**A**						
sensory-motor perception	28.08	2.71	34.50	1.78	12	6.84	0.01	10	0.00	Statistically significant

Through the presentation of statistical data, Table (9) shows the results of the arithmetic mean and standard deviation for all dimensions of the Haywood scale in the proposed program for developing sensory-motor perception between the control and experimental samples in favor of the experimental sample. The Haywood scale for the control sample reached a mean of (28.08) and a standard deviation. (2.71), while the average of the Haywood scale for the experimental sample was (34.50) and standard deviation (1.78), where we reached the value of (t) which is (6.84). This number is important because it helps us determine if

something is true or just a coincidence. We looked at it using a special level called (0.01), degree of freedom (10), and moral value (0.00). By comparing the significant value to the level of significance, it was found that the level of significance (0.01) is greater than the significant value (0.00), which indicates the presence of moral significance. And so the researchers concluded. There are statistically significant differences at the level of (0.01), as the results showed that the performance of the children of the experimental group that underwent the program was better in the test than the children of the control group. Thus, the effectiveness of the proposed training program for aquatic readiness for swimming was proven with positive play on the children of the experimental group, as it effectively contributed to helping the children feel more confident and able to choose at the appropriate times so that they could not feel afraid or ashamed. Help them develop a positive outlook on themselves and feel comfortable in different situations. Teach them how to work with others through fun games. For example, pretending to be different characters to learn how to act in front of others and express their feelings. Playing games in the water helped them learn and grow faster than other children, which led to the development of sensory-motor perception in the children in a faster period compared to their peers, children in the control group.

4. CONCLUSION: Through the reality of the data and information obtained, and in light of the statistical treatments of this data within the scope of the nature of the study and its sample, in addition to the purpose and objective of the study on the application of training on the water preparation program through play, the researchers concluded that the program that was prepared It helps learning and developing sensory-motor perception and water readiness in children (5 to 6) years old. The results of the pre-and post-tests showed a significant difference, which means an improvement in the ability to feel and move, which is a good thing in favor of the post-test. The proposed training program has a positive effect in reducing the fears associated with learning to swim among beginning children, as evidenced by the results obtained through jumping in the water and diving games... This has effectively contributed to quickly learning some basic swimming skills and reducing the fears associated with learning to swim. A set of conclusions were drawn that highlight the effectiveness of the training program by playing in the water to prepare for the proposed swimming, which contributed

better to the program. Prepared with exercises to bring about developments in the cognitive and sensory-motor competence of children (5-6) years.

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