

## The effect of an educational program of mini-games on improving some basic motor skills among male primary school students (6-7 years)

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### Abstract:

This study aimed to determine the effect of an educational program using reduced games on improving some basic motor skills among first-year primary school students (6-7 years old), males. For this purpose, the experimental method was used on a sample chosen intentionally, consisting of 30 students divided into two equal groups, one experimental and the other control. The experimental group underwent an educational program using reduced games for 8 weeks, with two educational units per week, 45 minutes each unit.

For the purpose of completing this study, the researchers used pre- and post-tests for basic motor skills, namely the throwing test, throwing, the standing broad jump test and the zigzag running.

By analyzing the obtained results, the researchers concluded that the educational program with reduced games had a positive impact on the level of basic skills and that there were statistically significant differences between the control and experimental research samples and in favor of the experimental sample. These differences were in all tests related to motor skills except the broad jump test from Constancy.

**Keywords:** Educational program, mini-games, motor skills, primary school stage.

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### Introduction:

Most educators agree that the primary stage is one of the most important sources from which a child can obtain his experiences, as it is the first external community he meets away from his family, so we must work to make it suitable and comfortable and place for him that he looks forward to going to every day. When a child moves from his home with all his freedom to primary education, most of the

time he is subjected to suppression of his motor activity, which is not consistent with the nature of the characteristics of this age. These children have a need to move, jump, and scream, not only because they have energy to expend, but it is a matter of relative need for integration and control of movement.

Through this great technological development that we are witnessing today, children have become the ones affected by what has changed in their daily routines. Most children now spend their time in non-motor activities such as watching television or playing video and computer games, although these non-motor games may develop some mental abilities, but it negatively affects their motor skills and does not develop their physical fitness (Othman, 2013, p. 28).

From this standpoint, practicing physical activities regularly has become an imperative necessity to restore balance in children, especially from a motor perspective. This is indicated by the World Health Organization and the American Academy of Pediatrics, which recommends that children from kindergarten to the end of secondary school should be given daily lessons in physical education of high efficiency and quality, increasing their awareness of the importance of physical activity, raising their level of activity and improving their physical fitness and basic motor skills, which are the basis for the development of the innate motor capabilities available in the child's body. This is to raise him in a comprehensive manner to the highest motor and physical level, and learning and mastering these movements at an early age helps build a basic base in motor skills through various sports activities (Muhammad, 1999).

Small games are among the earliest foundations adopted by modern education, because they are simple games that are easy to perform, accompanied by joy and pleasure, and carry within them an honorable competition at the same time, they do not contain complex motor skills, and the laws that govern them are characterized by flexibility and simplicity (Sharaf, Abdul Hamid, 2005, page 147), It is also the primary means of training the learner to acquire his basic motor skills. This is what Khaled Al-Sayed (2005) indicated that the main task of small games lies in improving the cognitive aspects of the child, which enables the child to improve physical and skill performance, because there is an overlap between cognitive data and motor data to reach comprehensive growth from all aspects, and the child in play carries out a cognitive process on a wide scale such as perception, attention and recalling mental images (Khaled Al-Sayed Abdel-Razzaq, 2005, p. 21), Abdul Hamid Sharaf believes that small games are one of the methods that can be used in teaching motor activities. They are entertaining and beneficial methods physically, mentally, psychologically and socially. They are also used to teach motor activities from the first year onwards. (Sharaf, Abdul Hamid, 2005, page 148), In this regard, Goudas

points out that playing develops the child's mental and motor abilities, especially the 6-year stage, which is considered a fertile stage for those interested in raising the child motorically, as the child is characterized by activity, vitality, and a tendency towards sports activities that are predominantly playful. The child is also characterized by joy, satisfaction, and an increase in the development of his ability to achieve sports activity. Here, the importance of small games appears in providing opportunities for children to develop their motor abilities (Nabil Abdel Hadi, 2004, p. 65). Hanfy Mahmoud also explains that the development of motor skills is accomplished through classes that include exercises, games and sports activities, and this is what small games provide during complex circumstances such as limited space and limited number of practitioners (Hanfy Mahmoud Mukhtar, 2003, p. 119). Through the above, we wanted to highlight the importance of this study through the use of small games in educational programs in order to improve the most important basic motor skills for students aged 6-7 years.

### **- Methodological procedures followed in the study:**

#### **1- Method and tools:**

##### **1-1- Research methodology:**

Due to the nature of the study, we used the experimental method.

##### **1-2- Research community and sample:**

The research community amounted to 92 students representing three classes of the first year of primary school at Beljilali Belhaj School in Mostaganem. 30 male students were intentionally selected to represent the research sample, divided equally into two groups, an experimental sample and a control sample, at a rate of 32.60% of the original research community.

In order to control all variables that affect the accuracy of the research results, the researchers identified the sample specifications and homogeneity in terms of variables of height, weight and age by using the skewness coefficient as shown in Table N°. (01).

**Table N°. (01):** Shows the sample specifications in terms of height, weight and age.

Variables	measruing unit	Mean Arithmetic	standard deviation	Coefficient of kewness
height	meter	1.204	0.340	0.079
weight	kg	21.10	2.960	0.608
Age	year	6.83	0.316	0.949

From Table N<sup>o</sup>. (01), we note that the values of the skewness coefficient are between (+3) and (-3), which indicates that the individuals of the research sample are homogeneous in terms of the variables of height, weight and age.

### **1-3- Research areas:**

#### **- Spatial area:**

All tests were conducted in the elementary school playground.

#### **- Human area:**

The human area of the research included 30 male students aged 6-7 years.

### **1-4- Methods used:**

#### **1-4-1- Tests:**

##### **- 20-meter running test:**

- **Purpose:** Transitional speed with coordination between foot steps and hand movement while running.

- **Tools used:** Timer, determining a 20-meter line in which a start and end line are determined.

- **Method of performance and calculating time:** The tester stands behind the starting line when he hears the signal, starts running quickly and calculates the time he covered in running from the starting line to the finish line. (Radwan, 2001, page 256)

##### **- Throwing test:**

- **Purpose:** Measure arm strength.

##### **- Tools used:**

- Handball (weight 360 grams) - Metric tape to measure distance - Whistle - Cones.

- **Performance method:** The student stands at the goal line and throws a handball (weight 360 grams) with both hands at chest level and from a stationary position after being given the signal, and the distance between the throwing line and the point of the ball's fall is calculated (Mohamed Sobhi Hassanein, 2002)

##### **- Long jump test from a stationary position:**

**Purpose:** Measure the explosive power of the legs.

- **Tools used:** Flat ground, measuring tape, starting line drawn on the ground.

- **Performance method:** The student stands behind the starting line with the feet slightly apart and the arms to the side, then the student begins to swing the arms

backwards with the knees bent, then swing the arms forward and push the feet forcefully at the same moment of jumping forward to the farthest possible distance.

- The student is given three attempts, and the best distance is counted.

The jump distance is measured from the starting line (inner edge) to the last point of the heel. (Fatima Yas Al-Hashemi, 2012, page 187)

### **- Fleischmann's zigzag running test:**

**Purpose:** Measure agility. (A person's ability to change the direction of body movement)

**-Performance method:** We place 10 cones in a parallel shape, then the student runs as quickly as possible in a zigzag pattern between the cones and then returns to the starting line.

- The time it takes to cover the distance back and forth is calculated. (Mohamed Sobhi Hassanein, 2002, page 289)

## **2- Exploratory study:**

We conducted the exploratory study, which extended from 11-20-2022 to 11-23-2022. Its purpose was to:

- Identify the difficulties that the researcher may face while performing the tests.
- Study the scientific foundations (validity, reliability) of motor skills tests.

### **2-1- Scientific foundations of the tests:**

#### **- Content validity:**

A set of tests for basic motor skills for the age group 6-7 years were selected and then presented to professors specialized in the field of physical education, sports and scientific research. All the reviewing professors agreed to choose the tests for the basic motor skills under study.

#### **- Test stability:**

We selected a group of students from outside the basic sample of the study and from the research community consisting of 10 students, and we applied the basic motor skills tests. After ten days and under the same conditions and at the same time, we repeated the tests on the same group of students. After that, we calculated the Pearson correlation coefficient and found that the calculated values ranged between 0.77 - 0.91, which is greater than the tabular value of 0.49 at a degree of freedom of 09 and a significance level of 0.05, which confirms that the motor skills tests have a high degree of stability.

**Table N°. (02): shows the stability coefficient for the basic motor skills tests.**

Tests	Sample Size	Degree of Freedom	Level of Significance	Tabular Value	Coefficient Reliability
Running	10	09	0.05	0.49	0.88
Throwing					0.91
Broad Jump					0.77
Zigzag Running					0.85

**3- Field application procedures:**

**- Pre-tests:**

- The pre-tests were conducted on 01-09-2023 on the control sample, while the same test was conducted on 01-10-2023 on the experimental sample.

**- Small games program:**

- The educational units were applied from 01/15/2023 to 03/09/2023. On the experimental research sample group for a period of 08 weeks, at a rate of (02) educational units per week, i.e. a total of 16 educational units, where the principle of gradation from easy to difficult was taken into account in implementing the program games, noting that the total training unit time is 45 minutes, divided as follows:

- Preparatory section (10) minutes.
- Main section (25) minutes.
- Final section (10) minutes.

**- Post-tests:**

The post-tests were conducted on the control sample on 03/13/2023 and on the experimental sample on 03/14/2023.

**4- Presentation and analysis of the research results:**

**4-1- Homogeneity between the experimental and control samples.**

**Table N°. (03): Shows the extent of homogeneity between the experimental and control samples in the pre-tests.**

Test	Experimental sample		Control sample		Calculated t-value	Tabulated t-value
	Mean Arithmetic	standard deviation	Mean Arithmetic	standard deviation		
Running	6.54	0.59	6.60	1.09	1.08	1.73
Throwing	2.73	1.85	2.74	2.88	0.89	
Broad Jump	0.94	3.01	0.95	3.02	0.74	
Zigzag Running	17.77	2.45	17.61	3.09	1.12	

**- Significance level: 0.05 - Degree of freedom: 28**

We notice from Table N°. (03) that the calculated "t" value for each of the basic motor skills, which are running, throwing, broad jump and zigzag running, all came smaller than the calculated "t" at a degree of freedom of 28 and a significance level of 0.05. Accordingly, there are no differences in all basic motor skills between the experimental sample and the control sample. From this, we conclude that the two samples are homogeneous in the level of basic motor skills.

**4-2- Presentation and analysis of the results of the first hypothesis:**

**Table N°. (04):** Shows a comparison of the results of the pre- and post-tests of the experimental sample.

Test	Experimental sample				Calculated t-value	Tabulated t-value
	pre-test		Post-test			
	Mean Arithmetic	standard deviation	Mean Arithmetic	standard deviation		
Running	6.54	0.59	5.80	0.36	2.87	1.73
Throwing	2.73	1.85	3.31	0.97	5.17	
Broad Jump	0.94	3.01	1.03	0.56	1.98	
Zigzag Running	17.77	2.45	16.12	1.02	2.31	

**- Significance level: 0.05 - Degree of freedom: 14**

We note from Table N°. (04) that the calculated "t" value reached 2.87 in the running test, while in the throwing test it reached 5.17, and it was estimated at 1.98 in the broad jump test, while it reached 2.31 in the zigzag running test, which is greater than the tabular "t" value, which was estimated at 1.73 at a degree of freedom of 14 and a significance level of 0.05. From this, we conclude that there are statistically significant differences between all the basic motor skills tests before and after the experimental sample in favor of the after tests.

**Table N°. (05):** Shows a comparison of the results of the pre- and post-tests for the control sample.

Test	Control sample				Calculated t-value	Tabulated t-value
	pretest		posttest			
	Mean Arithmetic	standard deviation	Mean Arithmetic	standard deviation		
Running	6.60	1.09	6.53	0.47	0.89	1.73
Throwing	2.74	2.88	2.71	0.98	1.38	
Broad Jump	0.95	3.02	0.99	2.95	1.61	
Zigzag Running	17.61	3.09	18.22	2.56	1.62	

**- Significance level: 0.05 - Degree of freedom: 14**

We note from Table N°. (05) that the calculated "t" value reached 0.89 in the running test, while in the throwing test it reached 1.38, and it was estimated at 1.61 in the broad jump test, while it reached 1.62 in the zigzag running test, which is smaller

than the tabular "t" value, which was estimated at 1.72 at a degree of freedom of 14 and a significance level of 0.05.

From this we conclude that there are no statistically significant differences between all the basic motor skills tests before and after the control sample.

#### 4-3- Presentation and analysis of the results of the second hypothesis:

**Table N°. (06):** shows a comparison of the results of the experimental and control samples in the post-tests.

Test	Experimental sample		Control sample		Calculated t-value	Tabulated t-value
	Mean Arithmetic	standard deviation	Mean Arithmetic	standard deviation		
Running	5.80	0.36	6.53	0.47	1.88	1.73
Throwing	3.31	0.97	2.71	0.98	2.13	
Broad Jump	1.03	0.56	0.99	2.95	1.53	
Zigzag Running	16.12	1.02	18.22	2.56	3.29	

#### - Significance level: 0.05 - Degree of freedom: 28

We note from Table N°. (06) that the calculated "t" value in the running test reached 1.88, while it reached 2.13 in the throwing test, and finally its value in the zigzag running test reached 3.29, which is greater than the tabular "t" value, which was estimated at 1.73 at a degree of freedom of 28 and a significance level of 0.05. From this, we conclude that there are statistically significant differences between the experimental and control research samples in the following dimensional basic motor skills tests: fast running, throwing, and zigzag running, which are in favor of the experimental sample.

However, in the broad jump test, the researchers found that the calculated "t" reached 1.53, which is smaller than the tabular "t", which reached 1.73. From this, we conclude that there are no statistically significant differences between the two research samples in the broad jump test.

#### 5-Comparing the results with the hypotheses:

##### -The first hypothesis:

There are statistically significant differences between the basic pre- and post-motor tests of the experimental research sample, which are valid for the post-tests.

Through the results recorded in Table N°. (03), it becomes clear to us that there are statistically significant differences between the pre-tests and post-tests of the experimental sample. The researchers explain these results by the fact that the small games programmed in the proposed educational units are rich in suspense and excitement situations. Also, the diversity in the play tools made the students more motivated towards practice and learning during the educational session. This makes

them face a greater and higher number of sports situations represented in running in different directions, running with a change in direction, in a straight line and a curved line, and also running with jumping. All of these gain them motor skills and physical abilities. This interpretation is consistent with what Al-Qargouli and Marwan Abdul Majeed stated: "Play is one of the effective means of child development from several angles. Through play, physical and motor abilities are acquired." Jurgen Wiltsch says: "Children's physical, skill and psychological development is achieved thanks to their impulsive desire to move and play constantly" (Jean Keller, 1992).

This was also confirmed by Abdul Majeed 2001 that small games are considered a basic means in developing the physical aspect and basic motor skills of the child (Al Majeed, 2001, p. 103). In this regard, Sobhi Hassanein says that "small games have an effective role in developing motor and skill abilities" (Hassanein, Mohamed Sobhi, 1996, p. 55). These results were consistent with what Hala Fayez Mohamed 2005 reached, who indicated that the small games program worked to improve basic motor skills in children (Hala Fayez Mohamed, 2005), and also the study of Nadia Ali Abdel Moati 2007, which found that the motor games program had a positive impact on the effectiveness of motor activities in developing motor skills and abilities in children in the early years of school (Nadia Ali Abdel Moati, 2007).

This was also confirmed by Intisar Ahmed Othman and others in their study that the proposed games were able to significantly develop the children's basic motor skills in the experimental group (Intisar Ahmed Othman and others, 2012). These results also agree with what Suhair Taha Yassin reached, as she found that the motor games program achieved development in some basic motor skills (Yassin, 2012). From Table No. (04), it is clear to us that there are no statistically significant differences between the pre- and post-tests of the basic motor skills of the control sample, but there was a limited improvement in all basic motor skills. The researchers attribute these results to the fact that the control sample follows the traditional method in the absence of a teacher specializing in physical education and sports, especially since the child at this age stage 6-7 years is growing rapidly and his motor activity increases and motor problems appear significantly. This age stage, about which Abdul Majeed says, "during rapid growth at this stage, neuromuscular coordination is disturbed as the student cannot control his limbs during motor performance." (Ibrahim, 2002) This result is consistent with the study of Suleiman Al-Amad et al. 2015, and the study of Muhammad et al. 2006, which showed the results of differences in the level of motor skills among children 7-8 years between the experimental and control groups in favor of the experimental group that relied on small games (al-amad, 29-30 avril 2015, p. 23). Khaled Mohammed Shaaban

concluded that the experimental group achieved a better level than the control group in basic motor skills tests on the balance beam. (Shaaban, 2014).

**- The second hypothesis:**

There are statistically significant differences between the experimental and control research samples in the post-tests in favor of the experimental sample. From what is stated in Table No. (06), it becomes clear to us that there are statistically significant differences between the experimental and control research samples in the post-tests in favor of the experimental sample, in each of the running skills, throwing and zigzag running skills, while there were no statistically significant differences between the two samples in the broad jump. The researchers explain this to the effective and positive impact of the small games proposed in the educational program on the students of the experimental sample, which were applied in a manner appropriate to the students' abilities and readiness, as at this stage the child's motor abilities begin to improve, and fine motor abilities become more specific through neuromuscular coordination. On this basis, sports practice and small sports games become among the most important means used to exploit and improve these abilities. Small games contain diverse and variable activities, and the situations they carry attract the attention and enjoyment of students, and increase their motivation to learn. They are also characterized by many sudden, unexpected and constantly renewed situations, and the rhythm of play in them is unstable through their motor skills. Each situation in these games has possible and multiple solutions, and it is necessary to combine the elements of physical qualities, and the skill and motor abilities of the student to find the appropriate motor solution for them. This interpretation is consistent with what Al-Rumi 1999 stated that small games can be used instead of physical exercises and target the development of the individual and his physical and motor development. (Al-Rumi, 1999), and this is what Abdul-Maqsoud confirmed that the improvement of basic motor skills is relatively slow as long as there is no appropriate exercise, while this development is rapid and more diverse if we exercise children at the appropriate time (Al-Sayed Abdul-Maqsoud, 1985), and the child at this age tends towards activities and games that are characterized by large movements such as running, jumping and throwing more than other skills, and this is what Mustafa Al-Sayeh confirmed that the games of running, chasing, jumping and zigzag running are accepted by students more for their desires and because they satisfy their needs such as jumping and running (Al-Sayeh, 2007). In this regard, Ijaz and Ne'meh (2006) see that children in the primary stage respond to standardized educational programs with their physical and motor content (Ne'meh, 2006), and Keller indicated that running requires strength and balance until the child reaches 15-18 months of

age, and starting from this age stage, the skill of running begins to increase throughout childhood (Jean Keller, 1992).

As for the throwing skill, which is considered one of the most important and common skills for expressing the movements of processing and handling large muscles at this stage, Kurt Mannell indicates that “the forms of the throwing skill change slightly at the age of 4 years, and between the ages of 5-7 years, children have learned more of the throwing skill” (Kurt Mannell, translated by Abdul-Ali Al-Naseef, 1987). This is consistent with the results of the study of Naheda Abdul Zaid Al-Dailami 2010, which concluded that the small games program had a positive impact on the development of basic motor skills for female students aged 7-8 years (Dailami, 2010), and this is what was concluded by the study of Aqil Yahya Al-Araji 2015 (Al-Araji, 2015). Also, the study of Khaled Abdul Majeed, which concluded that the students of the experimental group who implemented the proposed program by playing in stations outperformed the students of the control group who implemented the regular lesson, and this is consistent with the study of Khalil Ibrahim Hadithi, where he found that the proposed small competitive games and competitions had a positive impact on the development of some basic motor skills specific to kindergarten children (Khaled Abdul Majeed and others, 2007).

The researchers attribute the lack of differences in the broad jump test between the experimental and control samples to the fact that the jumping skill is a difficult motor experience that requires significant growth in muscle strength and speed, which is not consistent with the child’s natural maturation and development process and the physiological growth of the muscles, which makes it difficult to improve these abilities. Neuromuscular compatibility is also the main controller of these factors, because the neurological pattern of this age group has not yet been completed. This argument is consistent with the specifications set by both Heilburn and Cole, and the aim of this is that there is a group of problems that may confront the child while performing this skill (Al-Alawi, 1998).

## **6- Conclusion:**

Given the short period allocated to practice the proposed program and the significant results that were reached, we can only emphasize the need to give physical sports activity based on small games the appropriate and correct place within the sponsorship projects within educational institutions, and given the great importance that distinguishes this stage, we should pay attention to it in the child's life, because it plays a major role in shaping his entity as a whole, and this is through involving him in developing his basic motor abilities that are reflected in the development of his personality. We relied on mini-games because the child at this stage tends to play, as

the games we relied on have different forms through which the mind is provided with new information, skills and experiences that enrich his mental and cognitive capabilities and gain him basic motor skills.

### **7- Recommendations and suggestions:**

- Providing the opportunity for every child to practice sports activities.
- A condition must be set for the existence of a place suitable for free play and movement and providing the means that help in performing sports activities.
- Paying attention to the scientific efforts made in the field of childhood and working on converging and unifying ideas to reach what is best for the child.

The necessity of paying attention to developing special programs for physical sports activities, not only to develop physical, motor and skill abilities, but also taking into account the psychological and social aspects.

- The necessity of providing playgrounds for children, especially in remote areas.
- Raising awareness among parents to encourage their children to practice regular and directed physical activity.

### **- References:**

- 1- Fatima Yas Al-Hashemi. (2012). The origins of motor education for preschool children. Egypt: Dar and Library of Al-Isra and the emergence of university and scientific books.
- 2- Ajaz, Ne'ma. (2006). Using play as a means to treat some types of learning difficulties in children aged (9) years. Journal of Educational Sciences, University of Babylon, Iraq, Volume Five.
- 3- Osama Kamel Rateb. (1999). Motor development. Cairo: Dar Al-Fikr Al-Arabi.
- 4- Osama Kamel Rateb and Amin Anwar Al-Kholi, presented by Muhammad Hassan Alawi. (1998). Motor education for children. Cairo: Dar Al-Fikr Al-Arabi.
- 5- Al-Sayed Abdul-Maqsoud. (1985). The development of human movement and its foundations. Alexandria.
- 6- Aline Wadih Farag. (1994). Experiences in games for young and old. Alexandria: Source of knowledge.
- 7- Amin Anwar Al-Kholi and Osama Kamel Rateb and Muhammad Hassan Al-Alawi. (1998). Motor education for children. Cairo: Dar Al Fikr Al Arabi.
- 8- Intisar Ahmed Othman and others. (2012). The effect of some small games in developing some basic motor skills for kindergarten children.

- 9- Jassim Mohammed Nayef - Al Rumi. (1999). The effect of the small games and motor stories programs on some physical and motor abilities of kindergarten children. Mosul: Unpublished doctoral dissertation, College of Physical Education, University of Mosul.
- 10- Hassanein, Mohammed Sobhi. (1996). Measurement and evaluation in physical education and sports. Cairo: Dar Al Fikr Al Arabi.
- 11- Hanfy Mahmoud Mukhtar. (2003). Football for juniors. Dar Al Fikr Al Arabi.
- 12- Khaled Al Sayed Abdel Razzaq. (2005). Child psychology. Egypt: Alexandria Book Center.
- 13- Khaled Abdel Majeed and others. (2007). The effect of a proposed program of play in stations to develop some motor abilities and motor growth among first grade primary school students.
- 14- Khaled Mohammed Shaaban. (2014). The effect of using video feedback in learning and retaining some basic skills on the balance beam. Iraqi Sports Journal.
- 15- Suhair Taha Yassin. (2012). The effect of using the motor games program in developing some basic motor skills for children in kindergarten at the age of 5 years. Iraqi Sports Journal.
- 16- Sharaf, Abdul Hamid. (2005). Physical and motor education for normal and disabled children between theory and application. Cairo: Kitab Center for Publishing.
- 17- Talal Najm al-Din and others. (2006). The effect of a proposed motor program in developing some basic motor skills for second grade primary school students. Al-Rafidain Journal of Mathematical Sciences (Issue 42).
- 18- Abdul Majeed Ibrahim. (2002). Physical development and motor learning. Jordan: International Scientific House for Publishing and Distribution and Dar Al-Thaqafa for Publishing and Distribution.
- 19- Adnan Darwish Halwan. (1994). School physical education, a guide for the teacher and the student of science education. Dar Al-Fikr Al-Arabi.
- 20- Afaf Othman. (2013). Motor skills for children. Alexandria: Dar Al-Wafaa for Dunya Printing and Publishing.
- 21- Aqeel Yahya Al-Araji. (2015). The effect of the motor fluency program and exploratory games in developing some basic skills and cognitive abilities (sensory - motor) for kindergarten children. Journal of Studies and Research in Physical Education, University of Basra, Issue 42.

- 22- Ali Muhammad. (1999). The effect of a proposed motor education program on the development of motor innovation and some basic movements for first-grade students of basic education. *Scientific Journal of Physical Education and Sports* (Issue 12), 178.
- 23- Qargouli, Marwan Abdul Majeed. (2001). *Motor education and leisure time*. 1st ed., Amman: Al-Warraq Foundation for Publishing and Distribution.
- 24- Kurt Manel, translated by Abdul-Ali Al-Nasif. (1987). *Motor learning*. Baghdad: Ministry of Higher Education and Scientific Research, University of Baghdad.
- 25- Mohamed Hassan Alawi - Nasr El-Din Radwan. (2001). *Motor performance tests*. Cairo: Dar El-Fikr El-Arabi.
- 26- Mohamed Sobhi Hassanein. (2002). *Measurement and evaluation in physical education and sports*. Cairo: Dar El-Fikr El-Arabi.
- 27- Mustafa El-Sayeh. (2007). *Encyclopedia of small games*. Alexandria: Al-Wafaa Le Donia Printing and Publishing.
- 28- Makarem Abu Marjah and Saad Zaghoul. (2002). *Introduction to physical education*. Cairo: Kitab Center for Publishing.
- 29- Nadia Ali Abdel-Moati. (2007). A proposed program for motor education and its impact on the development of basic motor skills, sensory-motor perception and motor innovation for primary school girls. *Journal of Sports Sciences and Arts*, Faculty of Physical Education for Girls in Cairo, Helwan University.
- 30- Nahed Zaid Dilamy. (2010). The effect of a small group of games on the development of specific motor abilities and some basic movements for female students aged 7-8 years. *Journal of Physical Education Sciences*, Issue 4.
- 31- Nabil Abdel Hadi. (2004). *Psychology of play and its impact on children's learning*. Amman: Wael Publishing House.
- 32- Hala Fayez Mohammed. (2005). The effect of a program for motor fluency on the development of physical fitness and basic skills for fifth grade primary school students. Unpublished master's thesis, Faculty of Physical Education for Girls, Helwan University.
- 33- Hoda Al-Nashef. (2001). *Learning and teaching strategies in early childhood*. Cairo.
- 34- Wadih Yassin Al-Takriti, Abdel Moneim. (2012). *Small games*. Iraq: University of Mosul.

35- Jean Keller. (1992). Physical and sportive activity and motility of the child. Paris: Edition vigot.

36- Soliman Al-Amad. 29-30 April 2015). The effect of using small games on improving precision in children aged 9 to 12 years. An ambitious strategy for Arab sports (page 25). Jordan: University of Yarmouk.