

The Impact of Special Training for Physical Abilities in Development Some Basic Skills in Handball for Juniors

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Abstract. The development in training was not improvisation, but came as a result of the use of modern scientific methods in planning and training continuously. Based on this fact, the researcher adopted a hypothesis that supports the use of special physical exercises with the difference and diversity of these training exercises, which will thus be reflected in increasing the ability to adapt to the different requirements of play and the relationship of that on the development of basic skills in handball.

Because of the lack of focus on exercises for physical abilities, the researchers decided to study this problem and develop appropriate solutions to it through the preparation of special physical exercises for physical abilities aimed at developing basic skills.

The study aimed to: Preparing special exercises for physical abilities to develop some basic handball skills for young players. It aimed also to identify the extent of the impact of physical training in the development of some essential handball skills for young participants. The analysis assumed that there is a favorable outcome of training for physical abilities in the development of some basic handball skills for young players. The researcher used the experimental approach and the research sample was the players of Al-Qasim Club, junior category and to extract the results the researcher used the statistical bag (SPSS) and through the results of the research were the following conclusions: The use of special exercises for physical abilities to develop basic skills in handball and that the exercises had an impact on physical abilities as well as basic skills.

Key words: *physical abilities, basic skills, handball, training.*

Introduction

As a result of the advancement of scientific knowledge and support across various sciences, the world is witnessing growth in various spheres of vitality. This is especially true in the sports sector, where there is currently "development and improvement in the digital accomplishments performed, whether at the class of global or Olympic championships and consistent Arab championships and for different occasions and matches." This was the outcome of ongoing planning and training using contemporary scientific methods rather than improvisation.

Handball is considered one of the games that are distinguished by velocity, force, and excitement, and the competition resumes between the teams to reach a win this game depends in its motor performance on the physical capabilities and the degree of integration between them, physically and technically to get the perfect performance. The performance with special repetitions and trying to reach the ideal performance, are affected by the fatigue factor with the continuation of the effort within this competition, especially in the second half. Based on this fact, the researcher adopted a hypothesis that supports the use of special physical exercises with

the difference and diversity of these training exercises, which will thus be reflected in increasing the ability to adapt to the different requirements of the play and the relationship of that to the development of basic skills in handball.

The Main Problem

The outcome of the level of implementation needs the structure of scientific curricula that consider the evolution of physical capabilities and essential skills connected to the sport of handball. A fact that the researchers are former players and are working in the field of training at the present time for the game of handball , They witnessed that there is a flaw in some of the particular physical capabilities and the importance of their influence on the level of implementation of skills, which influences the energy of the implementation of the players, as most teams suffer from a straightforward reduction in the status of implementation due to the absence of emphasis on activities for physical capabilities. Thus, the investigator fixed to examine this issue and invent suitable keys to it via the practice of particular physical activities for physical capabilities at acquiring essential skills and aiding the growth of interpretation for players in the handball junior class with the expectancy of getting outcomes that help the growth of this sport of a creative spirit understood aesthetically and well-known in different countries of the world.

Research Objectives:

- 1- Preparing Unique exercises for physical abilities to develop the essential handball skills for junior players.
- 2- Determine the impact regards to physical training in developing some basic handball skills for young players.

Research hypotheses:

There is a positive impact of physical training in developing some basic handball skills for young players.

Research Areas:

Human area: acadimic School of Al-Qasim Sports Club, junior filed.

Time range: from 10/ 11 / 2022 to 20/ 1/ 2023.

Spatial field: The sports hall for the training of Al-Qasim Handball Club.

Part Three

Methodology

In order to address the nature of the research topic, the researcher employed the experimental method and designed two equivalent groups (the experimental and the control).

Table (1) Refers investigation frame of the research samples

Post-test	Experimental processing	Pre-test	The group
Basic handball skills under research	Physical abilities training	Basic handball skills under research	Experimental Group
Basic handball skills under research	Trainer Approach	Basic handball skills under research	Control group

Research community and sample

The research community was determined within the junior players aged (13-14) years of handball in the technical academy of Al-Qasim Sports Club, total (30), where the study instance was appointed in a straightforward random manner with (24) players and then split into two levels: testing and control, where the ratio of the sample (80%) of the size of the society and by (12) players for individually group.

Table No. 2 Refers the distribution samples.

Total	Control group	Experimental Group	Exploratory Sample	Total Sample	society
30	12	12	6	30	Specialized School

Means, tools and devices utilized in study: -

Standard of data collection

Many references.

Questionnaire layout to investigate the views of specialists and experts.

Data collection layout.

Observation.

Particular interviews Appendix (1).

Identification of search variables

Identify some basic skills and their forms for handball juniors:

Behind examining the suitable quotations and references, the basic skills and their forms in handball were identified and presented to experts and specialists (Appendix 1) after arranging them in a questionnaire form (Appendix 2) as shown in the table below .

Table No. (3)

Statistical significance	Ka2 Calculated	Disagree	I agree	Forms of skills	Basic Skills	t
Moral	11	zero	11	1-Shooting from jumping high	Shooting	1
Moral	4.45	2	9	2- Whip handling from head level	Handling	
Immoral	0.090	5	6	1-Receiving the ball with the hands	Pickup & Delivery	3
Immoral	0.818	7	4	2-Receiving the ball from jumping		
Immoral	4.45	9	2	1-Pampering in a straight line	Pampering	4
Immoral	11	11	zero	2- Pampering in a zigzag line		
Immoral	0.090	6	5	Simple dece -living without a ball	Deceiving	5
Immoral	7.36	10	1	Simple -2deceiving with the ball		
Moral	7.36	1	10	1defensive wall	Defensive skills	6

Moral	11	zero	11	1- Defensive moves 2-For both sides		
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Test Description

Shooting via leaping elevates the precision of the shooting:⁽¹⁾

Purpose of the test: Measuring the skill of shooting

Tools:

Handball court

50 x 50 cm shooting accuracy squares hanging in the upper corners of the goal.

6 Handballs for players .

Performance specifications: The player performs from two or three steps and then jumps from the line of the 9 m and shoot on the squares of accuracy of shooting from jumping high and to send three balls on each of the square's accuracy of shooting successively.

Evaluation: Records for the laboratory the number of successful attempts of aiming in which the ball is fully included in the boxes of accuracy of shooting

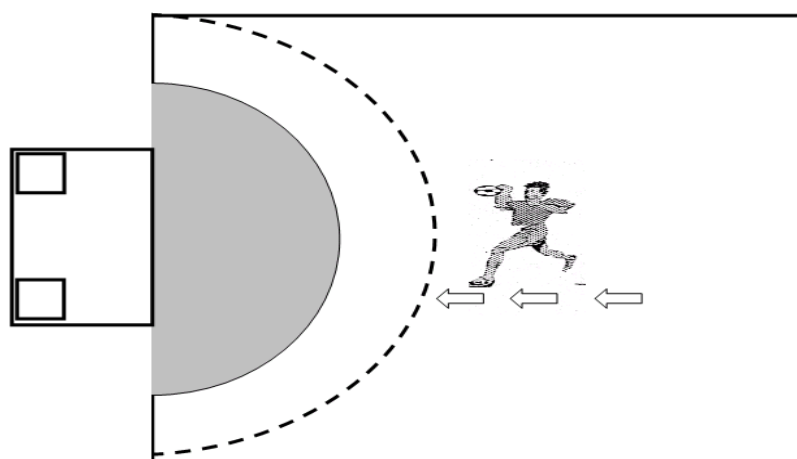


Figure (6)

Demonstrates the skill of aiming from jumping on squares of shooting accuracy

Whip Handling of the level of the head in the figure of an elliptical drawn on the wall for 30 s and from a distance of 3 m: ⁽²⁾

Purpose of the test: Measurement of handling skill

Tools:

A wall painted on it an oval shape.

One Handball for players

Tape measure

Stopwatch

Adhesive tape

Implementation properties: The player stands in front of a line drawn on the ground 3 m away from the wall and with the word (start) the player handles the ball from the level of the head in the form of an oval drawn on the wall and more than once within 30 seconds

1- Kamal Abdel Hamid and Mohamed Sobhi: Handball Measurement, 1980, Cairo, Dar Al-Fikr Al-Arabi, p 175.¹

(1) Samer Yusuf tired. The effect of an educational curriculum to generalize motor programs in learning the skills of handling, shooting handball and motor behavior of cubs, PhD thesis, College of Physical Education, University of Baghdad, 2004, p 139

Evaluation: the no of times of correct handling and receiving the ball only is calculated

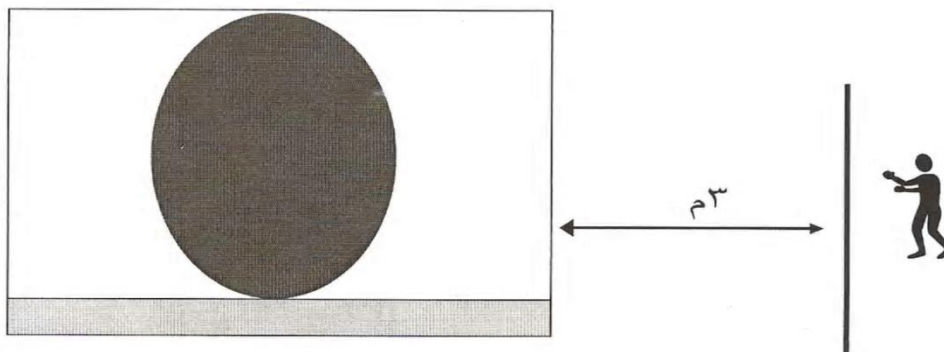


Figure (7)

Demonstrates whip handling skill from an overhead level in an oval shape

3.5.3 Miscellaneous defensive movements:

Tools:

Adhesive tape to draw figure (1) in the playground

Performance specifications: When starting, the player moves from point A to point B via executing the defensive interrogation. Then transfer between point (b) to point (c) via thrusting back with a pitch and then from (c) to (a) via thrusting sideways and then duplicate the identical version in thrusting from (a) to (b) to (d) and then to (a) and the player resumes to duplicate the implementation to the needed limit (30)s Evaluation: A score is calculated for each mark

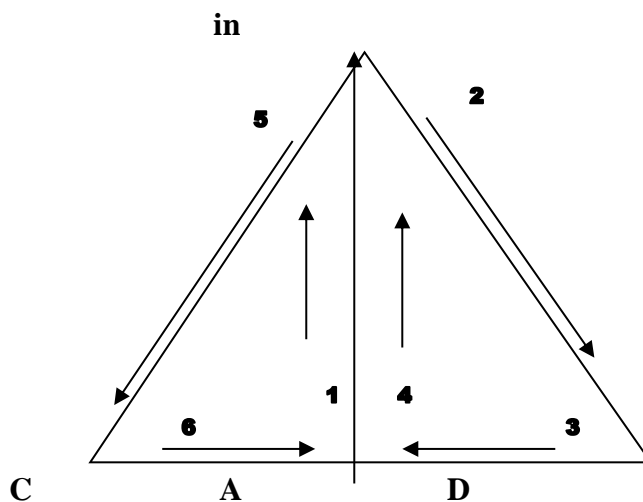


Figure (8)

Illustrates defensive moves

3.5.4 Various defensive moves (3)

Purpose of the test: Measuring the skill of the defensive

Tools:

Two crossbars 2.60 cm high fixed to the floor and hanging a rope length in which a ball hangs from each side in the 50 سم 9 م

(1) Hossam Ghaleb Abdel Hussein: the impact of the methods of comparative and collective competition in the development of some basic skills of handball cubs , Master Thesis, University of Babylon, Faculty of Physical Education · 2011, p 69

Performance: The work done in the 6 m area and tries to move forward to reach the 9 m area and tries to jump up and touch the ball with the hands and returns to the 6 m area and repeats this performance within (30) seconds

Evaluation: The score is calculated for each correct attempt in which the ball was touched with the hands.

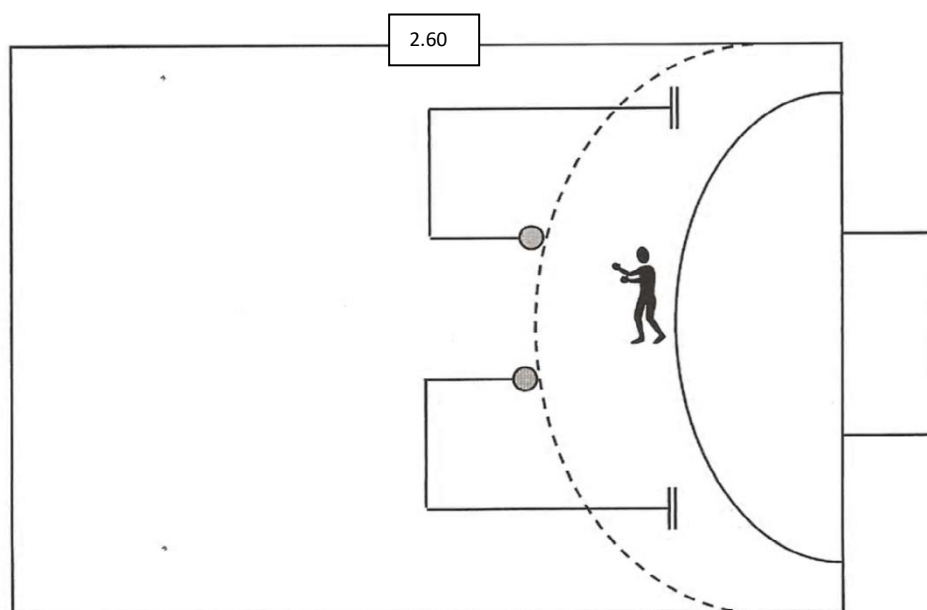


Figure (9)

**Demonstrates the skill of the defensive
Exploratory experiment**

The exploratory experiment is "a practical training for the researcher to identify for himself the negatives and positives that he encounters during the tests in order to avoid them in the future".⁴ The researcher conducted an exploratory experiment on (Saturday) 9/11/2022 on an instance of (6) players different than the study sample, and the purpose of the investigation was as observes:

1. Assure the Effectiveness of machines and instruments
2. Know the duration of separate test handles as well as the general test time.
3. Effectiveness of the assistant job team.
4. The status of complications of the examinations for the study sample.
5. Understanding the complications meeting the experimenter in order to evade them in the future.
6. Discovering scientific coefficients for examinations (equilibrium and detachment).

The scientific basis of fundamental skills examinations:

Validation of the test:

The author of the study will show the test contents to a group of experts and specialists in order to extract the validity of the candidate tests for basic skills. In this way, the researcher obtained the truthfulness of the content, which is typically accomplished "by logical judgment on the

⁽¹⁾ Qasim al-Mandalawi (et al.). *Tests, measurement and evaluation in physical education*. Baghdad: Dar al-Hikma, 1989, p. 107

existence of the trait, trait or ability in question to investigate whether the proposed measurement method actually measures it or not."

Stability of the test

The principle of constant testing, which states that tests "give close results or the same results if applied more than once in similar circumstances," must be used in order to obtain the reliability coefficient for basic skills assessments (1). Similarly, "the value that expresses the accuracy of the test in extracting consistent results if the test is repeated more than once on the same sample to give close results" (2) refers to the stability of the test. It was used in conjunction with a time and the test-and-retest method to ascertain the reliability coefficient. Seven days separated the results of the first and second tests, and the significance of the correlation was extracted using the (T) test for significance. Because all estimated T values are more than the tabulated value (2.77) and have a degree of freedom (5), the researcher came to the conclusion that the fundamental skills tests had high significance and high reliability, as demonstrated by Table (5).

Objectivity

It is defined as "the extent to which the arbitrator or examiner is free from subjective factors" . The author utilized the correlation coefficient (Spearman ranks) to determine the objectivity of testing between the phases of the first judgment and the second judgment. The degree (arbitrators) * was used for tests. Because the estimated values of (T) were higher than the tabulated values of (T) and (2.77) at the significance level, the results showed that the tests as a whole are highly objective and significant. as displayed in Table 5.

Table(5) Shows the coefficient of stability and objectivity of the tests

Statistical significance	T for morale	Objectivity coefficient	T for morale	Coefficient of stability	auditions	t
Moral	7.18	0.88	8.04	0.90	Aiming from jumping high	1
Moral	6.50	0.86	7.18	0.88	Handling	2
Moral	5.56	0.82	6.20	0.85	Defensive moves	3
Moral	5.93	0.84	6.28	0.87	Firewall	4

Pre-tests:

The author executed the pre-tests for the study sample on (Monday) 17/11/2022 before beginning the major investigation with all variables adjusted.

Sample equivalence procedures:

To equalize the study classes among themselves, the experimenter selected the pre-test of whole essential skills as well as height and weight, and this guarantees the equality of both groups before executing the area investigation. As shown in Table 6.

Table 6

Shows equivalence between the two groups in pre-tests

Statistical significance	The value of	The value of Man	Second experimental group	First Experimental Group	Statistical milestone	t

nce	Man and Netn ey Tabul ar	and Netney Calcula ted							nes	
			Coeffici ent of variation	Spring deviati on	Brok er	Coeffici ent of variatio n	Spring deviati on	Brok er	audition s	
Immoral	61	83	5.12	6.5	127	5.77	7.5	130	Length	1
Immoral		71	16.07	4.5	28	15.83	4.75	30	Weight	2
Immoral		62	75	1.5	2	75	1.5	2	Aiming from jumpin g high	3
Immoral		78	38.89	3.5	9	19.44	1.75	9	Handlin g	4
Immoral		66	12.17	1.75	14.5	23.33	3.5	15	Defensi ve moves	5
Immoral		69	12.5	0.75	6	41.67	2.5	6	Firewal l	6

Exercises for physical abilities:

After reviewing the appropriate sources and references, the experimenter examined the Al-Qasim Sports Club coach's academic curriculum and decided to use the physical capabilities exercises. The experimenter also demonstrated in-person conversations with a number of professionals who specialize in motor learning, sports training, and handball (Appendix No. (6)) to develop appropriate exercises and special duties and how to apply them through the main experience in line with the capabilities of players aged (13–14) years in handball. where the application for the educational program was finished on Saturday, January 17, 2023, after it began on Wednesday, November 17, 2022. There were 48 training units total, divided equally between the two groups, or 24 training units for each group and three units per week for each group and the time of the unit (90) minutes for a period of (8) weeks.

* The experimenter even assumed exercises for physical capabilities through the training units, which are as follows.

* **Special explosive power exercises for legs and arms**

1. Vertical jumping from stability .
2. Wide jump of stability .
3. Push the ball by hand not after a possible distance of stability .

◆ **Speed strength training for legs and arms**

1. Jumping on one leg (20) m.
2. Get up and jump from sitting (10) seconds .
3. Bend and extend the knees for (20) seconds .
4. Front support (20) seconds

* **Translational speed exercises**

1. Running at full speed (30) m from the starting position .

2. Jogging (40) meters .

3. Jogging (30) meters from the flying start .

*** Kinetic speed exercises**

*** Special fitness exercises**

1. Slaying running between signs for a distance of(10m)

2. Running between two parallel lines(10×4).

***Flexibility exercises**

1. Bending the trunk from standing on a terrace

2. Bend the trunk and touch the ground from a mark between the feet and then touch a mark drawn on the wall behind the back left and right.

Post-tests:

The test conducted the post-tests on (Sunday) 18/1/2023 after completing the implementation of the exercises for physical abilities one day, taking into account the same conditions in the pre-tests.

Statistical methods used in research:•

The researcher used the statistical bag (SPSS) to process the data collected . (5)

Part IV

Presenting the results of basic skills tests in handball in a comparative competition method, analyzing and discussing them: After gathering data and dealing with it statistically, the experimenter arrived at several outcomes that were determined shown in the table.

Table (20) Shows the median values, the interquartile deviation, the coefficient of variation for the pre- and post-tests, the calculated Wolcoxon value and its statistical significance for the results of tests for the basic skills of the control group

Statistical significance	Wilcoxon Tabular value	Wilcoxon value Calculated	Sample size	Post-Test			Pre-test			Statistical Features		t
				Coefficient of variation	Spring deviation	Broker	Coefficient of variation	Spring deviation	Broker	Unit of measurement	auditions	
Moral	21	zero	14	12.5	0.5	4	75	1.5	2	number	Aiming from jumping high	1
Moral		2.5		11.54	1.5	13	19.44	1.75	9	number	Handling	2
Moral		zero		11.29	1.75	17	23.33	3.5	15	degree	Defensive moves	3
Moral		15.5		6.25	0.5	8	41.67	2.5	6	degree	Defensive	4

(1) Mohamed Nasr al-Din Radwan: Inferential statistics in the sciences of physical education and sports, 1st edition, Cairo: Dar Al-Fikr Al-Arabi, 2003, pp. 128-303-259

4.2 Presentation, analysis and discussion of the results of basic skills tests in handball in a group competition style:

Table (21)

Shows the median values, the interquartile deviation, the coefficient of variation for the pre- and post-tests, the calculated Wolcoxen value and its statistical significance for the results of the basic skills tests of the experimental group

Statistical significance	Wilcoxon Tabular value	Wilcoxon value Calculated	Sample size	Post-Test			Pre-test			Statistical milestones		t
				Coefficient of variation	Spring deviation	Broker	Coefficient of variation	Spring deviation	Broker	Unit of measurement	auditions	
Moral	21	1	14	15	0.75	5	75	1.5	2	number	Aiming from jumping high	1
Moral		8		12.5	1.5	12	38.89	3.5	9	number	Handling	2
Moral		zero		1.42	0.25	17.5	12.17	1.75	14.5	degree	Defensive moves	3
Moral		13		5.55	0.5	9	12.5	0.75	6	degree	Defensive	4

4-3 Discussion of the results between the pre- and post-tests of the experimental and control group in favor of the experimental group:

It is clear through the previous results to clarify the impact of special exercises used in training units and prepared by the researcher and followed by the coach in the development of basic handball skills, the research method has achieved its goal in learning in terms of moral impact with the presence of moral differences between the two groups and the researcher attributes the reason for this to the effectiveness of the exercises used in the research and because of their clear impact on the evolving of essential handball skills, as the presence of players in a state of competition and suspense This led to increased mobility and activity and the development of skills used in research.

The researcher also attributes this development of basic skills in handball for regularity and continuity in the training units for a duration (2 months), in which a players practiced new methods that were not known in the regular units, which increases the time invested in skill performance, as he confirms (Saad Mohsen, 1996) "The opinions of experts, regardless of the different sources of their scientific and practical culture, that the training program inevitably leads to the development of achievement, if it is built on a scientific basis in organizing the training process and programming and using the appropriate and gradual intensity and noting individual differences as well Use optimal repetitions and effective intervals under the

supervision of specialized trainers under good training conditions in terms of space, time and tools used."⁶

As well as increasing the accuracy of the performance of skills and assimilation and this situation gives stability and firmness and absorption of the skill and as a result is to increase the experience of the players, as he points out (Nizar student, 1976) that "the ways and techniques of education are of significant implication in the academic approach and that these practices and procedures impact the acceleration of knowledge "⁷.

As well as that the appropriateness of the exercises used for the ages of the players, which increases the fun of the learner and suspense and eliminates boredom during the exercises has) helped to speed up learning and this is confirmed by 1984 Ian word that "training methods (must be appropriate to the ages of learners and their mental and physical abilities and must take into account the general situation and circumstances surrounding the lesson in order to achieve .)"⁸ educational goals

The researcher attributes this development to the two research groups also to the number of appropriate repetitions that accompanied the educational units, training as well as the careful selection of exercises, taking into account their suitability for the research sample and their capabilities, taking into account the repetition of exercises continuously as well as the gradation in the level of difficulty, which ensures performance by everyone and the need to take advantage of the devices and means that worked to increase the speed in the development of learning and thus have agreed vocabulary of the curriculum and what came out (Mufti Ibrahim, that " The coach's choice of difficult exercises will increase the experience of some (1988 .)"⁹ ".players

It also agrees with what he said (Najah Mahdi Shalash, Akram Muhammad Sobhi, 2000) " That practice and effort training and continuous repetitions are necessary in the learning process, and training is an auxiliary and necessary factor in the process of interaction of the individual with the skill and control of his movements and achieve consistency between the movements that make up the skill in a proper sequential performance and an appropriate time and continuous training alone increases the development of skill learning, development and mastery "¹⁰.

The researcher also attributes to the players' response to all the requirements of training during the competitive units were the most important effective means to highlight the energies and maintain the level and achieve the goals has pointed out (Nizar student, Kamel Alois, 2000) "that the athlete who exercises towards a certain goal will have an incentive in his work and that the work without a goal is a sterile and boring work must coach to help the athlete in the development of an appropriate goal for him can achieve so that the exercise has value and so that the athlete knows the extent of his progress "¹¹.

Saad ⁶ Mohsen Ismail. The effect of training methods for the development of explosive power of the legs and arms on the accuracy of long shooting by jumping high in handball. PhD thesis. Baghdad: 1996, p. 98

.Majeed Al-Talib: Principles of Sports Psychology, Baghdad, Al-Shaab Press, 1976, p. 41 ^{Nizar}⁷

(⁸) Ian word : physical Education in Elementary school in England - cultural company , 1984 , P.92 London

Mufti⁹ Ibrahim Hammad: Modern Sports Training, Planning, Application, and Leadership, 1st Edition, Cairo, Dar Al-Fikr Al-Arabi, 1988, p. 199.

Najah¹⁰ Mahdi Shalash, Akram Muhammad Subhi Mahmoud: Kinetic Learning, University of Mosul, Dar Al-Kutub for Printing and Publishing, 2000, pp. 129-130.

Nizar¹¹ Al-Talib, Kamel Al-Owais: Sports Psychology, University of Mosul, Dar Al-Kutub for Printing and Publishing, 2000, p. 120

The researcher believes that one of the reasons for this development is the overlap in the sense of diversification through continuous changes in the form of exercises, distances, directions, time, as well as diversification in the nature of the research variables of the increase in movements and skills such as running and then scoring or jumping over obstacles and then receiving handling and other formations that make the player more adaptable to the requirements of play, control and control the level of performance, diversity renews the player's activity and then there is the motivation to continue in Performance in order to face the changing playing situations that occur in the competition, as he emphasizes (Adnan Jawad, 1989) "the need to introduce the element of diversification in training" ⁽¹²⁾

Part Five

. Conclusions and recommendations

Conclusions:

- 1- The use of special exercises for physical abilities led to the development of basic handball skills.
- 2- The exercises had an impact on physical abilities as well as basic skills.

Recommendations:

Emphasis on training physical abilities because of their important role in developing skills.
Conducting this experiment on another skill and another sample.

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