



THE EFFECT OF SKILL TRAINING ON THE DEVELOPMENT OF AGILITY AND SOME COMPLEX SKILLS ENDING IN HANDBALL SHOOTING FOR YOUTH

Ammar Naser Kadhlm, Assist. Prof. Dr. Ahmed Kareem

College of Physical Education and Sport Sciences, Al-Muthanna University, Ministry of
Higher Education and Scientific Research, Iraq

jkmslilm@gmail.com

Abstract

The style of handball in recent years has tended to play strong, fast, and thus requires great physical and skillful work, as it is one of the games that need this type of training that contributes to the development of bio-kinetic capabilities and complex skills in handball because of its great importance during play and performance. Where physical exercises receive great attention when designing training curricula, in addition to the skillful, tactical and psychological preparation, as they constitute great goals in the preparation and preparation for the comprehensive preparation of sports games in general and handball in particular in order to integrate them with the player and prepare him for the stage of competitions due to the specificity of this game that differs from the rest of the games. The player in it has continuous tasks and duties without stopping, sometimes defensively or offensively, and effectively throughout the times of the match. The special technical skills in the handball game are multiple and branching, some of them are the main ones, and some of them are secondary, and these skills can be trained individually, but they are in matches or applications during the training unit They appear interconnected with each other, so a compound skill can be formed from two or more skills connected to each other, and by looking at the basic skills mentioned in a previous post, two or more skills can be linked to perform them together, so the compound skills that players always use in order to perform the motor skills tasks appear in The match, and hence the importance of research in the use of skill exercises to develop agility and some compound skills ending with shooting in handball for young people. And because of its benefit in raising their level, preparing them, training them, and bringing them to what they aim for in competitive matches.

Introduction and the importance of research

The basic duty of the handball coach is to keep the dynamic link between the player's skillful performance and the vocabulary of the game in terms of its required motor skills and subtleties to reach the high level. Being one of the referees of the Iraqi handball league, the researcher tried to answer some questions, which are:

1. What is the effect of skill training on the agility of young handball players?
2. What is the effect of skill training on the compound skills ending with shooting in handball for young men?

Research Objectives

1. Identifying the effect of skill training in developing agility in handball

2. Recognizing the effect of skill training on developing some compound skills ending with handball shooting.

Research Hypotheses

1. Skill training has a positive impact on the development of agility in handball youth
2. Skills training has a positive impact on the development of some complex skills ending with shooting in handball among young people

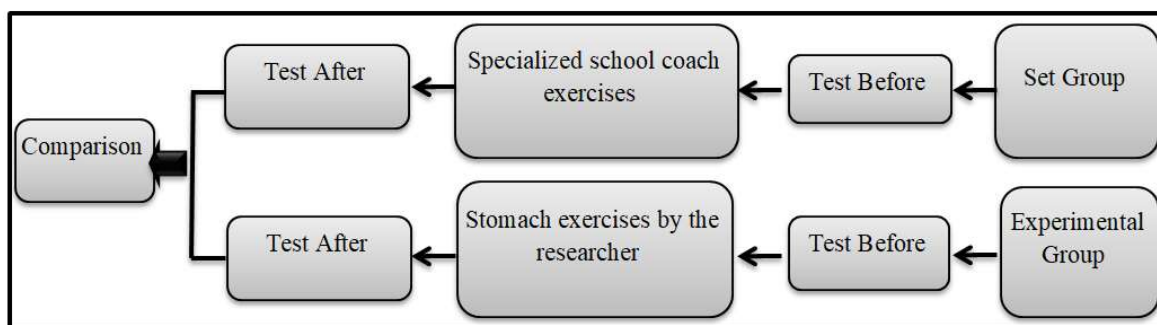
Areas Of Research

- The human field: Players of the National Center for Talented Care in Al-Muthanna for handball.
- Time range: from 16-11-2022 to 1-5-2023
- Spatial field: indoor sports halls - the National Center for Talented Care in Samawah.

Research methodology and field procedures

Research methodology

The researcher used the experimental approach by designing (two equal groups), the control and the experimental, and Figure (1) illustrates this



form (1) Demonstrates the experimental design of the research groups

Research community

The researcher identified his research community, represented by the National Center for Gifted Care, the Specialized School for Handball for Youth in Al-Muthanna Governorate, with a total of (19) players, and they were divided into two control and experimental groups, and each group had (8) players.

Research tools and devices used

What is meant by the means or method by which the researcher can solve his problem, whatever it is, such as tools, data, samples, or equipment, and for this he used many of them in order to reach that:

Data collection methods

- Arab and foreign sources.
- Tests and measurement.
- Registration Form .

Tools and devices used in the research

- Stopwatch .
- Field for throwing and jogging.
- Measuring tape.

- A medical ball weighing (3) kg.
- Colored circles number (8).
- Colored numbers (8).
- Stationary .
- Tennis ball number (20).
- Handball number (20).
- Ball bearing box.
- Squares for accuracy, dimensions of (60 x 60) cm.
- Repelling wall (2 meters high, 3 meters wide).
- Characters.
- Colored tape.
- Electronic calculator (lenovo).

Research Procedures

Determine the tests that measure the variables

The researcher reviewed a number of scientific sources and previous studies, and the opinion of the supervisor was agreed on the tests that measure the variables, and they were as follows: Slalom running test in the form of ∞ (to measure agility).

Second: Composite handball skills tests

- Testing the skill index of shooting accuracy by jumping high after passing and receiving.
- Testing the skill index of shooting accuracy by jumping high after dribbling.
- Testing the skill index of shooting accuracy by jumping high after deception.

Description of research tests

Characterization of the agility test

Zigzag run test in the form of

- The purpose of the test: to measure agility
- Tools: flat ground, cones, measuring tape, colored tape, stopwatch.
- Performance specifications: A rectangle (5 x 3) meters is drawn on the ground, four vertical pillars are fixed to the ground in the four corners of the rectangle, and the fifth pillar is fixed in the middle of the rectangle. The player stands next to one of the four lists specified for the rectangle, and at the start signal, the player runs in the form of (∞) and performs it three times until he reaches the starting point after cutting the three rounds.
- Recording: calculates the time it takes for the player to complete the three rounds.

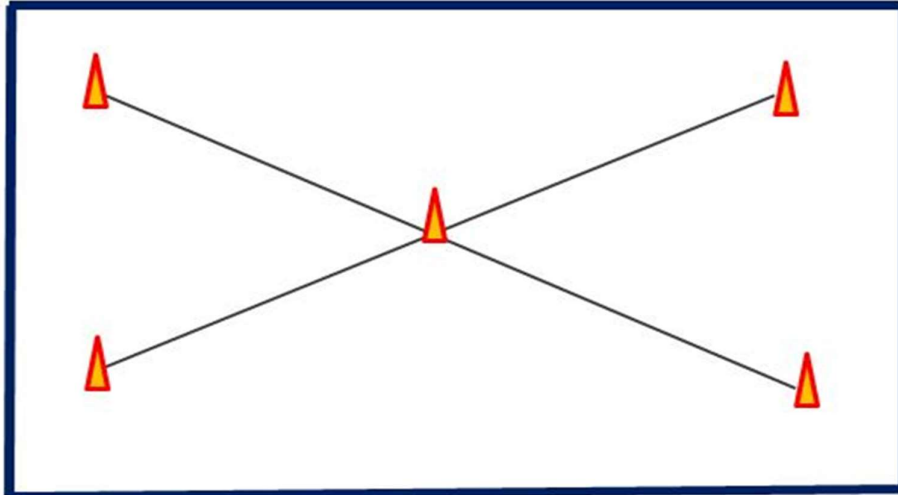


Figure (2) Slalom running in the form of ∞

Description of composite handball skills tests

First - Testing the skill index of shooting accuracy by jumping high after passing and receiving

- The purpose of the test: the speed of shooting by jumping high after passing and receiving. aiming accuracy
- Tools used: 5 handballs, 4 squares (60×60) in the corners of the goal, a stopwatch, a blocking wall 2 meters high and 3 meters wide.
- Method of performance: The shot player (A) stands at the corner confined between the side line and the midfield line, with 5 handballs next to him. Player (B) stands in the confined area between the confluence of the 9 m line with the side line. The shot player (A) passes to the player (b) He runs in the direction of the blocker to receive the ball again from him, and takes three steps or less to shoot by jumping high from the top of the blocking wall and on one of the four corners of the goal, and repeats that until the five balls are finished.
- Test conditions: Not to take more than 3 shooting steps after receiving from the top of the blocking wall in one of the four corners of the goal.
- Recording: The performance time is calculated from the start signal until the last ball is out of the player's hand

A point is calculated when the ball enters any of the four corners.

- It counts as zero for shooting outside the square or hitting the blocking wall.
- The shooting result in which the player moves more than three steps is not counted.
- The performance score is extracted by the (modified FTS) law, which states:

$$\text{Skill performance} = \text{degree of accuracy} / \text{time}$$

Second - Testing the skill index of shooting accuracy by jumping high after dribbling

- Name of the test: Shooting by jumping high after bouncing.
- The purpose of the test: the speed of shooting by jumping high after dribbling, the accuracy of shooting.

- Tools used: a box containing 5 handballs, a blocking wall 2 meters high and 3 meters wide, in addition to 4 precision shooting boxes (60 x 60 cm) in the corners of the goal, a clock, a stopwatch
- Performance method: The shooting player stands with his back to the blocking wall located on the 6m line. There is also a box at the midpoint of the field containing 5 handballs. At the start signal, the player runs towards the box to take a handball, dribbles, then takes three steps before the blocking wall and jumps high. And shooting at one of the four corners of the goal, then repeat that until the five balls are over.
- Test conditions: Not taking more than 3 steps when shooting by jumping high. Not making a legal mistake in dribbling, shooting from the top of the blocking wall without hitting it.
- Registration: The performance time is calculated from the moment the starting signal is given to the moment the last ball is out of the hand of the shooting player.

A point is awarded when the ball enters any of the four corners

- It counts as zero for the shot outside the square or the shot against the blocking wall.
- The result of the shot in which the player moves more than three steps is not counted. If a mistake in dribbling is repeated more than once, the test is repeated again.
- The performance score is extracted by the (modified FTS) law, which states:

$$\text{Skill performance} = \text{degree of accuracy} / \text{time}$$

Third - Testing the skill index of shooting accuracy by jumping high after deception

- The purpose of the test: the speed of shooting by jumping high after deception, the accuracy of shooting.
- Tools used: 5 handballs, 4 squares (60 x 60 cm) in the corners of the goal, a blocking wall 2 meters high and 3 meters wide, and a flag sign.
- Performance method: The five balls are placed at a distance of 2 m from the mother line facing the goal, the shooting player stands next to the five balls, the player faces a flag or a sign 1 m from the balls, the player deceives the outside by stabbing, then takes three steps or less to shoot by jumping High from the top of the blocking wall and on Ahmed the four corners of the goal, repeating that until the five balls are over.
- Test conditions
- Do not take more than 3 steps.
- Shooting from the top of the blocking wall in one of the four corners of the goal
- The need to deceive before shooting.

Registration

The performance time is calculated from the start signal until the last ball is out of the player's hand. A point is awarded when the ball enters any of the four corners

- It counts as zero for shooting outside the square or hitting the blocking wall.
- The shooting result in which the player moves more than three steps is not counted
- The performance score is extracted by the (modified FTS) law, which states:

$$\text{Skill performance} = \text{degree of accuracy} / \text{time}$$

Exploratory experience

The researcher conducted an exploratory study on (4) players from the National Center for Gifted Care and the Specialized School for Handball for Youth. Composite hand reel skills

Main Experience

Pre-tests

The researcher conducted the tests, after preparing the research requirements, tools, and the auxiliary work team, as the tests were applied to (12) players, and the results of the reconnaissance experiment were approved and applied to (4) players, and thus the number became (16) players, as the tests were applied in the closed hall Samawa Club at 3:00 pm.

The Curriculum

The application of the researcher's exercises began during the training unit and in part of the main section only on the corresponding day. The time period is (10) weeks

- The number of units per week (3) units represented by days (Saturday, Monday and Wednesday)
- The total number of units for exercises (30) units
- The researcher used the high intensity and repetitive interval training method
- The time for implementing the researcher's exercises ranges between (20-30) minutes from the time of the main section of the training unit, noting that the compatibility and agility exercises are given at the beginning of the main section, and strength endurance exercises are given at the end of the main section.
- The intensity was determined in the exercises that contain strength endurance by the pulse (z/sec) and the exercises that contain the component of speed in time (m/sec).

Post-test

After completing the application of the curriculum prepared by the researcher, the researcher proceeded to apply the post-tests on the research sample, which numbered (16) players. In the closed hall of the Talent Center in Samawah at three o'clock in the afternoon.

Statistical Methods

The researcher used the statistical program (SPSS 27) for statistical processing, as well as the program (EXCEL).

1. Arithmetic mean.
2. Standard deviation.
3. The value of the LEVEN test.
4. The simple correlation coefficient (Pearson).
5. The value of (t) for correlated samples.
6. The value of (t) for the independent samples.

Presenting, analyzing and discussing the results of the pre and post tests of the control group

Presenting and analyzing the results of the pre and post fitness tests for the control group

Table (3) Arithmetic means, standard deviations, (t) value, and the significance of differences between the pre and post tests of agility for the control group

Statistical significance	significance level	value calculated	Post -test		_ Pretest		measuring unit	variants
			p	s	p	s		

moral	0.028	2,757	0.69 6	13,42 1	1,20 5	14,71 1	second	agility
-------	-------	-------	-----------	------------	-----------	------------	--------	---------

The fitness percentage was smaller than the error percentage (0.05) at a degree of freedom (7), and this means that there are differences between the pre and post tests and in favor of the post test for the control group sample. Presenting and analyzing the results of the pre and post tests of compound skills in handball for the control group

Table Arithmetic means, standard deviations, (t) value, and the significance of the differences between the pre and post tests of the combined handball skills of the control group

Statistical significance	significance level	value calculated	Post -test		_ Pretest		lonliness measureme nt	variants
			p	s	p	s		
moral	0.009	3,565	0.010 0	0.050 6	0.011 7	0.035 8	second degree	Shootin g high after passing and receivin g
moral	0.026	2,818	0.010 6	0.053 3	0.007 7	0.041 1	second degree	Aiming by jumpin g high after plannin g
moral	0.007	3,736	0.016 3	0.091 3	0.011 5	0.066 6	second degree	Aiming high jump after cheatin g

The results of all composite skills were less than the error rate (0.05) at the degree of freedom (7), and this means that there are differences between the pre and post tests and in favor of the post test for the control group sample.

Presenting, analyzing and discussing the results of the pre and post tests of the experimental group

Presenting and analyzing the results of the pre and post tests for the agility abilities of the experimental group

Table (4) The arithmetic mean, standard deviations, (t) value, and the significance of the differences between the pre and post tests of agility for the experimental group

**THE EFFECT OF SKILL TRAINING ON THE DEVELOPMENT OF AGILITY AND SOME COMPLEX SKILLS ENDING IN
HANDBALL SHOOTING FOR YOUTH**

Statistical significance	significance level	value calculated	Post -test		_ Pretest		measuring unit	variants
			p	s	p	s		
moral	0.000	7,611	0.403	12,023	1,145	14,768	second	agility

The results of agility were less than the error rate (0.05) at the degree of freedom (7), and this means that there are differences between the pre and post tests and in favor of the post test for the experimental group sample.

Presenting and analyzing the results of the pre and post tests of the compound handball skills of the experimental group

Table (5) Arithmetic means, standard deviations, (t) value, and the significance of the differences between the pre and post tests of the combined handball skills of the experimental group

Statistical significance	significance level	value calculated	Post -test		_ Pretest		lonliness measurement	variants
			p	s	p	s		
moral	0.005	4,060	0.0184	0.0714	0.0118	0.0357	second degree	Shooting high after passing and receiving
moral	0.003	4,379	0.0196	0.0741	0.0017	0.0437	second degree	Aiming by jumping high after planning
moral	0.002	4,815	0.0350	0.1344	0.0048	0.0715	second degree	Aiming high jump after cheating

All the composite skills values were less than the error percentage (0.05) at the degree of freedom ((7), and this means that there are differences between the pre and post tests and in favor of the post test for the experimental group sample.

Presenting, analyzing and discussing the results of the control and experimental groups in the

post-tests

Displaying and analyzing the results of the control and experimental groups for agility abilities in the post-tests

Table (6) The arithmetic mean, standard deviations, (t) value, and the significance of the differences between the control and experimental groups in agility for the post-tests

Statistical significance	significance level	value calculated	experimental group		the control group		measuring unit	variants
			p	s	p	s		
moral	0.000	4,919	0.403	12,023	0.696	13,421	second	agility

The fitness values were smaller than the error percentage (0.05) at a degree of freedom (14), and this means that there are differences between the control and experimental groups in the research variables in the post-tests and in favor of the experimental group.

Presenting and analyzing the results of the control and experimental groups for compound handball skills in the post-tests

Table (7) Arithmetic means, standard deviations, (t) value, and the significance of differences between the control and experimental groups in handball composite skills for post-tests

Statistical significance	significance level	value calculated	experimental group		the control group		lonliness measurement	variants
			p	s	p	s		
moral	0.014	2,805	0.0184	0.0714	0.0100	0.0506	second degree	Shooting high after passing and receiving
moral	0.019	2,642	0.0196	0.0741	0.0106	0.0533	second degree	Aiming by jumping high after planning
moral	0.007	3,165	0.0350	0.1344	0.0163	0.0913	second degree	Aiming high jump after cheating

All compound skills values were less than the error rate (0.05) at a degree of freedom (14), and this means that there are differences between the control and experimental groups in the research variables in the post tests and in favor of the experimental group.

Discuss the results

By presenting and analyzing the results of the post-tests for the (shooting by jumping high after passing and receiving) test, it was found that there were differences in the research sample. The researcher attributes these differences to the effectiveness of the vocabulary of skillful physical exercises that was implemented by the coach and the assistant staff on the sample members over a period of (10) weeks, the effectiveness of the players and their desire to implement the vocabulary of this curriculum and the direct commitment by them to implement the duties required of their coach in the implementation of these vocabulary Effectively and regularly as well, the curriculum contains exercises that are characterized by being compound performance, so that the implementation of each exercise is a physical exercise related to biokinetic capabilities and skills to develop complex skills. As the repetition of performing the skill correctly will lead to its mastery and to the development of the physical side in the part that performs the repetition, as well as the continuous practice of performing the skill will make the players perform the skill away from mistakes by increasing the repetitions in the training unit, which led to the development of the skill (delivery Receiving and correcting (among the research sample, as "training needs repetition and diversification, as repetition consolidates the player's technical and skillful performance"). The use of exercises in the training unit that emphasizes the aspect of neuromuscular compatibility, (the players stand in front of them a ground ladder at a distance of 2 m, the player performs the handling to the player standing on the right, then jumps between the squares of the ladder, receives the ball from a colleague, and then shoots by jumping high on the goal), because the skill (passing and shooting) needs high neuromuscular compatibility as well as the movement coordination between the ball and the movement of the player's body, and this is consistent with what Qassem Hassan Hussein mentioned, "You must focus on training the movement compatibility and movement interdependence and put it in the training programs that the use of movement coordination for a long time And continuous repetition will lead to getting used to the framework of the ideal motor and temporal path" Care has been taken to change the method of executing the exercises used in order to break boredom and spread the spirit of fun and excitement. The researcher was keen to provide an element of competition among the members of the research sample in carrying out these duties in the best way, so that most of the exercises were collective and not individual, as well as with the presence of defenders so that the exercises would be a simulation of the reality of the matches. one's skills and abilities for any game; As (Brunal) believes that the competition "providing the element of competition in the training unit will increase the motivation of the players"

Conclusions and recommendations

Conclusions

1. The skill exercises develop agility and scoring among young handball players.
2. The skill exercises work on developing the accuracy of distant shooting by jumping for young handball players.
3. The skill exercises work on developing the compound skills ending in shooting for the young handball players.

Recommendations and Suggestions

1. The need to complement special training curricula based on the use of physical exercises before using skill exercises
2. The need to adopt skill training for young handball players in developing scoring for the type of skill into practical application in various sporting events.
3. Emphasizing the development of physical exercises that can be used in line with the real situation of the competitions and works to support the training process.
4. The researcher suggests conducting studies similar to this study on other activities or games.

References

1. Abu El-Ela Abdel-Fattah, Physiology of Sports Training, 1st edition, Dar Al-Fikr Al-Arabi, Egypt, 2003.
2. (Ahmed Khater and Ali Albek: Evaluation and Measurement in the Mathematical Field, Cairo, Dar Al-Maarif, 1978.
3. Risan Khuraibet Majeed: Encyclopedia of Measurements and Tests in Physical Education, Part 1, University of Basra, Higher Education Press, 1989,
4. Muhammad Hassan Allawi, Muhammad Nasr al-Din, Measurement in Physical Education and Sports Psychology, Cairo, Dar Al-Fikr Al-Arabi, 2000.
5. Mezan, S. O., Hello, K. M., Jabbar, A. H., Hamzah, M. Q., Tuama, A., Roslan, M. S., & Agam, M. A. (2020). A REVIEW ON SYNTHESIS OF CONDUCTING WITH POLYANILINE RICE HUSK ASH SILICA NANOCOMPOSITES AND APPLICATION. International Journal of Psychosocial Rehabilitation, 24(03).
6. Moataz Khalil Ibrahim: ((The effect of plyometric exercises on the development of some biokinematic variables, electrical muscle activity, and the accuracy of distant shooting by jumping in basketball)) University of Diyala / College of Physical Education and Sports Science_
7. Allerheiligen, W.B. Speed development and Plyometric Training in Thoms, R.B. (Ed). Essentials of Strength Training and Condition National Strength and Conditioning