

THE EFFECT OF COMPLEX SKILL EXERCISES IN DEVELOPING STRENGTH CHARACTERISTIC OF SPEED AND SOME OFFENSIVE SKILLS OF BASKETBALL PLAYERS UNDER 18 YEARS OLD

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Abstract

The purpose of this paper is to preparing complex skill exercises and identifying the effect of complex skill exercises in developing the characteristic of strength characteristic of speed and some offensive skills for basketball players under 18 years of age. The methods used within the training dose, make their application in a scientific and thoughtful manner useful in developing basketball and advancing the level of age groups (youth) in terms of physical, functional and complex skills. From the (National Center for Sports Talent Care) Sports Club, the number of which was (12) players. The researchers concluded that the combined exercises were effective in developing (Strength characteristic of speed for legs, Strength characteristic of speed for arms) and in developing the skill side, and the development of the speed characteristic of the force. The two legs and arms work to raise the players' ability to develop offensive skills that are consistent with what the group members have obtained, and the researcher recommends Emphasis on the use of scientific foundations when developing the training curriculum in terms of the sequence of exercises used and the amount of load given during the training unit, with an emphasis on intermittent rest periods because of this important impact on the development of physical attributes, including the distinctive strength.

Keywords: Strength characteristic of speed, offensive skills, basketball, compound skill exercises.

Introduction:

Basketball occupies a great place among the sports games in the world, but ranks first in some countries due to what this game contains of a wonderful combination of speed of performance in the quick and lightning attack, excitement and suspense in scoring points, as well as the skillful performance of the complex in moving inside the field, which supports The tactical aspect, as it is one of the team games that requires privacy in its training, so it requires

the player to acquire high physical abilities as well as complex skillful performance. Basketball game, and on this basis, this game needs to develop capabilities commensurate with the nature of its performance so that we make the player able to perform the four periods with high efficiency and resistance to fatigue and maintain the speed of his performance at the maximum intensity and under the maximum for the longest period in the game.

This is one of the important reasons for the development of the game of basketball in recent years, and according to the opinion of those concerned, teams have players with physical and functional specifications and then a high level skill, which sheds light on the tactical aspect, which gave the game its quick and exciting feature through the performance of difficult tactical duties that focus on The technical and physical aspect through the matches, and this thus reflects on the overall performance of the team and creates fun for the spectator at the same time.

Training the physical abilities, job and complex skills of youth (under 18 years old) in basketball is one of the basic matters in order to build a base for national teams, as it represents the stage of preparing players for the teams using scientific methods and methods in order to achieve the best results for them in the future.

Several studies have dealt with the subject of the research, including the study (Majeed and Al-Yasiri. 2003), which aimed to prepare complex exercises to develop strength distinguished by speed and some offensive skills for young basketball players, as well as to identify the effect of compound exercises on strength characterized by speed and some offensive skills The two researchers used the experimental method to achieve the objectives of the study, and the research sample included 16 young players from Al-Adhamiya Club. s for the study (Yusuf. 2006), it aimed to prepare tests of complex offensive skills. The researcher used the descriptive approach, but the research sample was chosen in a deliberate way, represented by the players of the youth teams of Baghdad basketball clubs for the season (2005). As for the study (Al-Mali, 2021) it aimed to prepare qualitative exercises by technical means for basketball juniors and to identify the effect of qualitative exercises by technical means in developing attentional control and developing combinatorial abilities and complex skills for basketball juniors. For the National Center for the Care of Sports Talent in Babylon Governorate, which numbered (12) players.

Research importance:

The importance of the research in preparing complex skill exercises and their impact on the performance of some physical and functional abilities and the tactical principles of basketball players, as the compound exercises are a modern trend characterized by posing a greater challenge to the difficulty of training better than the methods used within the training dose, which makes its application in a scientific and thoughtful manner of benefit. In developing basketball and advancing the level of age groups (youth) in terms of physical, functional and complex skills.

Research objective:

- Preparing complex skill exercises.
- identifying the effect of complex skill exercises in developing Strength characteristic of speed and some offensive skills for basketball players under 18 years of age

Research methodology and field procedures:

Research Methodology:

The researchers used the experimental method (one-group design system) with two pre and post-tests.

Community and sample research:

The researchers identified the research community, represented by the Baghdad basketball clubs under 18 years of age, which are (oil, alkhatoot , the National Center for the Care of Sports Talent, Al-Salikh, Al-Mashrah). player, which represents (19.6%) of the original community, which number (61) players, as it is the model on which the researcher conducts his entire work in a random manner and in a lottery method.

Sample homogeneity:

Table (1) shows the homogeneity of the sample

Variables	Measuring unit	Mean	Median	Std. Deviations	Skewness	Type sig
Length	Cm	172.6	170	4.94	0.72	sig
Mass	Kg	74.54	72	6.1	0.98	sig
Age	Year	24.86	24	5.08	1.07	sig

Means of collecting information:

- Note.
- Tests and measurements
- A form for recording and unloading the results of the tests.

Devices Tools used in the research:

- Electronic scale for measuring weight and length measuring tape (1)
- A legal basketball court. Portable electronic calculator (Lap top), type (HP), made in China, number (1).
- Whistle (4) type fox.
- Number 10 figures.
- Four (4) electronic stopwatches.
- Five (5) legal basketballs.

Identifying the tests used:

Strength characteristic of speed for arms

Test name: A test of Forward leaning, flexing and extending the moving arms during (10) seconds.

- Objective of the test: To measure the speed characteristic of the two arms.
- Tools used: a whistle, an electronic stopwatch, a training ladder (3.5 m) divided into (12) squares.
- Test procedures: see picture (9) ,One square measure (35 x 35 cm).
- Description of the performance: The player takes the position of the Push-up in the first square and at the same time the legs are extended and folded back. When the whistle is heard, the player takes a step with the right arm towards the second square with a step with the right leg and bending for several and then extending the elbows with the left arm rounded To the second square and join the two men in preparation for repeating the first action for several seconds, and thus continues until the end of the ten-second time through the whistle.
- Test conditions:
 - The player has the right to start from any side he wishes
 - Only one attempt.
 - The player has the right to make a mistake once.
- Test administration:
 - Timer: Give the start and end signal through the whistle to count the number of repetitions.
 - Recorder: It calls the names with observation and recording the repetitions.
- Calculation of the score: The player records the number of repetitions within (10) seconds by adopting the start and end whistle.

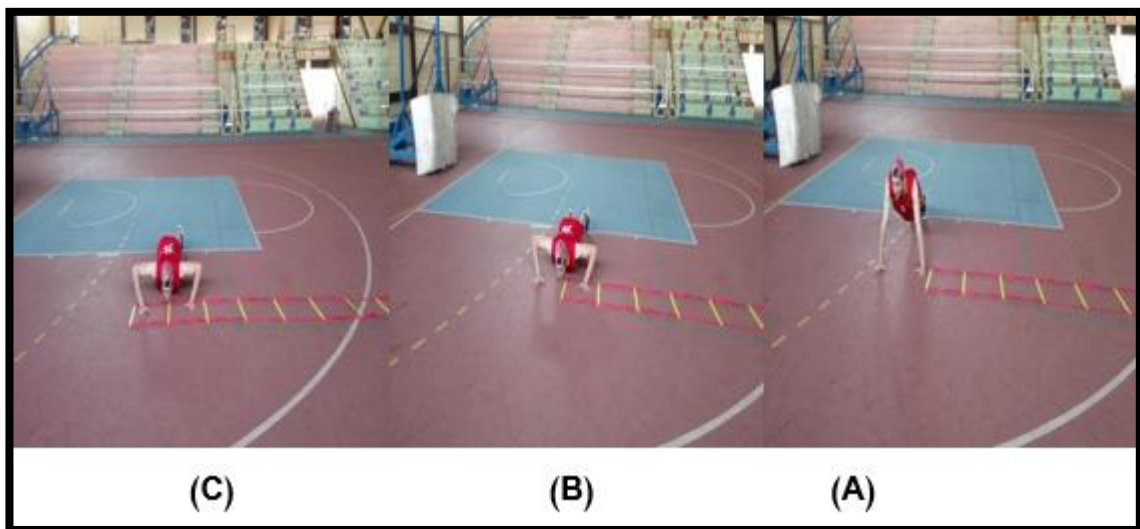


Fig. (1) Shows a test of forward leaning, flexing and extending the moving arms during (10) seconds.

Strength characteristic of speed for legs

Test name: Obstacle course jumping test of different heights.

- Objective of the test: to measure the Strength characteristic of speed for legs
- Tools used: a whistle, an electronic stopwatch, and (8) obstacles.
- Test procedures as shows figure (2).

- Heights of obstacles (30,35,40,50 cm) for each height of two obstacles.
 - The distance from the starting point from the first barrier (1m).
 - The distance from the end point from the last barrier (1m).
 - The distance between one barrier and another (1 m).
- Description of the performance: When the player hears the whistle, he jumps with his right foot over the first barrier, which is 30 cm high, then descends on the right foot, then over the second barrier with a height of (35 cm), then over the third barrier with a height of (40 cm) and then over the fourth barrier with a height of (50 cm) And going down on the right foot, then switching on the left foot over the fifth barrier with a height of (30 cm), and going down on the left foot, then over the sixth barrier with a height of (35 cm), then over the seventh barrier with a height of (40 cm), then over the eighth barrier with a height of (50 cm) And get down on the left foot
- Test conditions:
- Passing the eight hurdles, and stopping the stopwatch after passing the eighth hurdle and landing on the ground.
 - Only one attempt.
 - The player has the right to make a mistake once.
- Test administration:
- Timer: Giving the start and end signal through the whistle to calculate the time.
 - Recorder: Calls the names while recording the time of the test.
- Calculation of the score: The time for the player to pass the eight obstacles is recorded by adopting the start and end whistle.

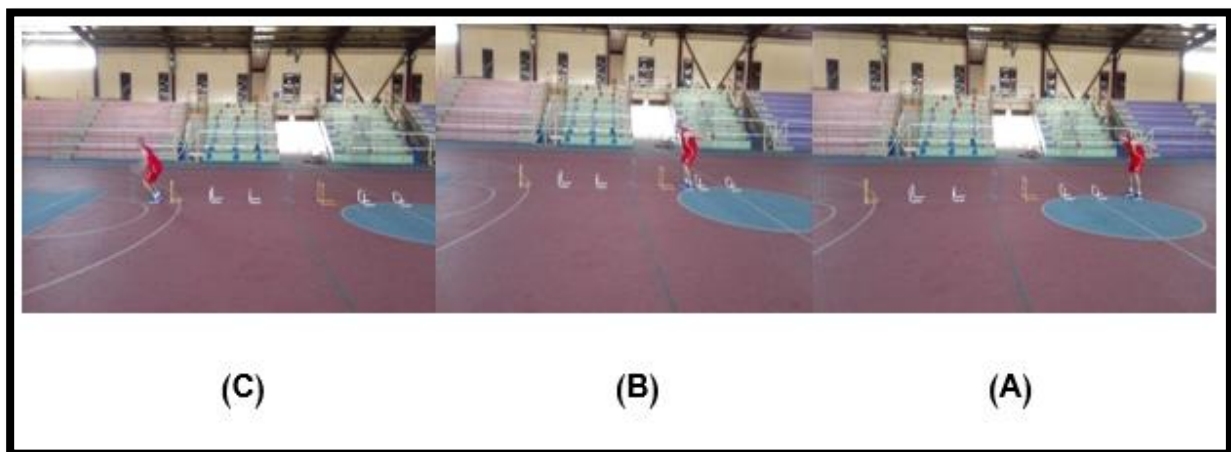


Fig. (2) Shows the test jumping on hurdles of different heights
Receiving And Dribbling High-Ended passing Chest with two hands (Fares Sami Yusuf Shaba, 2006)

- Purpose of the test: To measure the ability Receiving And Dribbling High-Ended passing Chest with two hands.
- Tools: a basketball court, two people, two tools for measuring accuracy, four legal (4) basketballs, a leather measuring tape (20 m), an adhesive tape, an electronic stopwatch, three chairs, and a whistle.

- Procedures as shows in the Figure (3)
 - Determines a central point at the bottom of the basket, on which it is relied upon to indicate some key points.
 - Two points of the two precision measuring tools are determined on both sides and at a distance of (8 m) from the central point, and in turn, away from the sideline of the field (1.50 m) and facing the first line of the volleyball court after the middle.
 - Sets a volleyball court inside the basketball court.
 - Two points (immediately behind the line), the first of them at a distance of (3 m) from the first line of the volleyball court, and the second at a distance of (9 m) from the center line, and representing the top of the tested player in the middle, as well as two points on the left side of the first tested player. The second is away from the tested player in the first and second points (4.60 m), and represents a member of the work team with the ball at each point.
 - Placing two figures on the first line of the volleyball court after the centerline and along the sides of the central circle (representing the permissible limits for implementation).

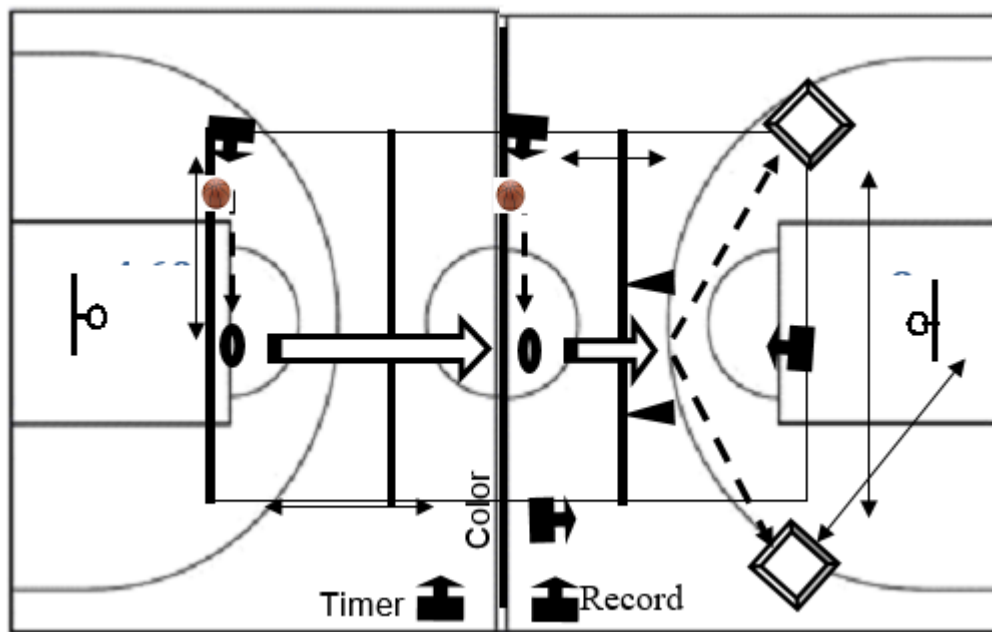


Fig. (3) Shows the Receiving and Dribbling High-Ended passing Chest with two hands

- Performance Description:
 - The tested player stands on the first point identified in the middle and marked behind the centerline, and at the same time a member of the work team stands with the ball next to him from the left side.
 - At the start signal (whistle) the ball is delivered (pectoral handling with two hands) by one of the staff members at the first point to the test player who performs the receiving and the high thump directly towards the first line of the volleyball court after the center line to perform the two-handed pectoral handling towards the two

- precision measuring devices (alternately), returning quickly to the same point to repeat the attempt, and then quickly returning to the second point to repeat it twice.
- Once on the right and once on the left until the end of the four attempts.
 - The four attempts are divided into two attempts from the first point and towards the first line of the volleyball court after the centerline and as in step (1), and the last two attempts are made from the second point and towards the first line of the volleyball court after the center line and as in step (2).
- Test conditions:
- Speed in performance, and assisting the tested player (the warning) to perform the four attempts from their specified places, and the tested player has the right to cross the first line of the volleyball court after the midline after performing the chest handling with both hands and as well as committing to the specified area between the two people, and each player has two wrong attempts only .
- Test Administration:
- Timer: It gives the start signal as well as calculating the time taken to perform the test.
 - Caller: A staff member calls out the colors for the four attempts on the two precision measuring instruments.
 - Recorder: He calls the names first and marks each of the colors and the time second.
- Calculation of the degree:
- Counts the time from the test player receiving the ball until the end of the fourth attempt after it touches the precision gauge net.
 - Divide the time by (60 seconds)) (This division is for rounding to an integer).
 - Three degrees for the red color, two degrees for the blue color, and one degree for the green color are calculated for the player.
 - Two points for the mixed color (The colors are (red + blue + green + blue).) for the four squares (plus $\div 4$), and (2.5) for the red and blue colors (plus $\div 2$), and (1.5) for the blue and green (plus $\div 2$), and a score for half a color blue, and (0.5) degrees for half green, and (0.75) degrees for half blue and half green (plural $\div 2$).
 - Rounding the final number of colors (accuracy) to the nearest whole number, if any.
 - Total (final) score: Dividing the result of accuracy by time.

Exploratory experiment

The researchers conducted the exploratory experiment on a sample of (4) players from (Al-Khatta' Club) in basketball. The exploratory experiment indicated that the researchers identified:

- The validity of the devices and tools used in the research.
- The time taken to perform the physical examinations.
- To identify the difficulties that the researchers may encounter when conducting the main tests.
- Identifying special exercises in developing some physical abilities and the concentration of lactic acid among young football players.

Pre-tests:

The two researchers conducted the tribal tests on 2/2/2022 corresponding to Wednesday in the hall of the National Center for Basketball Sports Talent.

Exercises used in the research:

- The exercises began on February 6, 2022, until March 31, 20.
- The duration of the exercises set in weeks: (8) weeks.
- Total number of training units: (24) training units.
- Number of weekly training units: (3) units.
- Weekly training days: (Sunday - Tuesday - Thursday).
- The training method used: high intensity interval training.

Post-tests:

After completing the implementation of exercises within the prescribed period and then conducting the research tests on 3/4/2022 corresponding to Sunday, the researchers took into account the provision of conditions similar to the tribal tests in terms of (time, place, tools used and the method of conducting the tests) on the center’s hall National Basketball Sports Talent Care.

Statistical methods: The search data was processed through the Statistical Package for the Social Sciences (SPSS).

Results and discussion:

Table (2) shows the arithmetic means and standard deviations of the pre and post-test for individual research sample for physical tests

No.	Variables	Pre-test		Post-test	
		Mean	Standard deviation	Mean	Standard deviation
1	Strength characteristic of speed for legs	5.422	0.727	5.091	0.576
2	Strength characteristic of speed for arms	7.583	1.505	8.916	1.621

Table (3) shows the value of (T) for the pre and post-test for individual research samples for physical tests

No.	Variables	arithmetic mean of difference	standard error of the mean difference	T value calculated	Level Sig	Type Sig
1	Strength characteristic of speed for legs	0.33083	0.07943	4.165	0.00	Sig

2	Strength characteristic of speed for arms	1.33333	0.18803	7.091	0.00	Sig
Significant when the significance value ≤ 0.05 under degree of freedom of 11						

Table (4) shows the arithmetic means and standard deviations of the pre and post-tests for individual research samples for the skill test

No.	Variables	Pre-test		Post-test	
		Mean	Standard deviation	Mean	Standard deviation
1	Receiving and Dribbling High-Ended passing Chest with two hands	7.684	1.093	9.465	1.261

Table (5) shows the value of (T) for the pre and post-test to single the research sample for the skill tests

No.	Variables	arithmetic mean of difference	standard error of the mean difference	T value calculated	Level Sig	Type Sig
1	Receiving and Dribbling High-Ended passing Chest with two hands	1.78167	0.22720	7.842	0.00	Sig

Discussion

Tables (2,3,4,5) show the results of the physical and skill tests used in the research, which showed the presence of significant statistically significant differences between the pre and post-tests in favor of the post-test. The researchers attribute this to the effectiveness of the exercises used in the training curriculum, which led to the development of the strength characteristic of speed for the legs, arms and the skill side on which the study was conducted, as well as the training methods used in the curriculum. This method aims to develop a number of physical attributes, including special endurance, anaerobic endurance, and strength characterized by speed and maximum strength. (Allawi and Radwan. 1982), with regard to the speed characteristic of the arms and legs only, there was a noticeable development. The reason is due to the effect of the physical exercises that the researchers used in the training units represented by medical balls for the arms as well as jumping exercises, forward as well as the use of partridge exercises On one leg for a specific period of time, as these exercises were specific and directed to the special muscles, which led to their development in a way that helps, to perform the duties required to be performed by these muscles "as the training that is directed to training, a specific muscle group leads to the events of development in it" (Mohsen. 1996)., and that the researcher's use of these types of exercises because of their positive impact on developing the muscles of the two legs, "The basketball player needs great strength in his legs, which does not require it in the same proportion in his arms" (Zeidan. 1999), As for the skill side, the reason for this is due to the effective effect of various applied exercises in developing

skill performance, which confirms the effectiveness of the exercises prepared by the researchers, and that these exercises were appropriate to the movements performed during the basketball game. This was confirmed by (Hammad. 2001) that "the training methods or special exercises that lead to achieving an effective and rapid training effect must be in the form of exercises taken from the game, or the sports activity in which the athlete specializes, as a group of muscles works in a manner close to the speed and in The direction of movement performed by the muscles in the movements of a game or a practiced sporting activity. (Star. 2012), and the researchers believe that the exercises used in the proposed training curriculum led to the development of some physical abilities, whose impact was reflected on the skill side, as "Strength has a prominent role in achieving good results when playing sports, as the concentration of force with an increase in its speed is one of the distinguishing characteristics of good skill performance" (Sattar. 2001)

Conclusions:

- The compound exercises were effective in developing (Strength characteristic of speed for arms and Strength characteristic of speed for legs).
- The compound exercises were effective in developing the skill side.
- The development of the types of strength distinguished by the speed of the legs and arms worked to raise the ability of the players to develop offensive skills that are consistent with what the members of the group obtained.
- The compound exercises have a positive effect in developing the strength characteristic of speed and some offensive skills for the performance of the research sample because they were directed to the working muscles of the basketball player.
- Using a variety of training methods and many means to develop some physical characteristics and offensive skills according to an accurate scientific method in determining the components of the training load.
- Emphasis on the use of scientific foundations when developing the training curriculum in terms of the sequence of exercises used and the amount of load given during the training unit, with an emphasis on intermittent rest periods because of this important impact on the development of physical attributes, including explosive power.
- The necessity of using tests of strength and some offensive skills that are researched periodically to know the extent of the development-taking place.
- Serious attention by the trainers to using compound exercises in developing explosive power and some offensive skills by allocating sufficient time during the training units or allocating independent days for that.

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