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The effect of increased intensity training on developing endurance for velocity and shooting accuracy from vaulting in young basketball players

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Abstract

The pursuit of higher levels of sport and breaking records for the types of sporting activities and events that are captured in general and basketball in particular is an important topic that enjoys the interest of workers in the sports field, and as a result of this pursuit, many modern activities have been discovered scientific theories in the field of sports training that have led To explain many phenomena and helped in finding the best solutions to many problems and topics aimed at improving the technical and digital performance of various sports competitions. As for the research problem, physical training is an important means and one of the very necessary requirements in monitoring the development of the functional and physical level reached by the player or team, and through what the researchers touched and their proximity to it. The youth association and their knowledge of many researches and studies found the necessity to prepare increased manual training. The intensity of the use of devices and auxiliary devices to develop the functional and physical condition of young basketball players, where the research problem lies in that previous special exercises using devices and tools did not take into account that every skill performance depends mainly on the physical side and the functional side, as the archery skill cannot be performed from jumping If it is not accompanied by physical or motor ability, so the shooting jump consists of the scoring skill and the explosive power of the legs and arms as well as the endurance, and the case applies to the rest of the skills. The study aimed to investigate the effect of increasingly intense physical training on developing the endurance of speed for young basketball players and improving the accuracy of shooting from jumping. Research Hypotheses: There are statistically significant differences between the results of the pre and post tests in the development of the shooting accuracy variable among young basketball players. Research methodology: The researchers used the experimental approach with the design of one experimental group and the pre and post tests for their suitability and the nature of the problem to be solved. The researchers found that the variables obtained from the FATMET BROO device were a real indicator of the development of the functional variables ((VE - RF -VO2max)). Great importance in the career readiness of the players and the physical effort required of young basketball players.

Keywords: *Athletic training, Basketball, Increased manual training, Hardware use, Tools*

Introduction and importance of research

The pursuit of higher levels of sport and breaking records for the types of sporting activities and events that are captured in general and basketball in particular is an important topic that enjoys the interest of workers in the sports field, and as a result of this pursuit, many modern activities have been discovered scientific theories in the field of sports training that led To explain many phenomena. And he helped find the best solutions to many problems and topics aimed at improving the technical and digital performance of various sports competitions. The sport of basketball has special requirements for its different practice environment, and this can only be done through regular, continuous and planned training, which is the primary factor in all types of other activities, which always aim to

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prepare a player in all directions for the purpose of achieving the training condition that enables him to use the maximum ability His physical skills enable him to perform better, and then reach the best achievement, and know the effect of regular training, the most important of which is modern training methods in the sport of basketball through the use of auxiliary training methods to develop the physical and skill abilities of players, especially basketball. Among these means are ropes. Rubber This method of training, which is used in more than one sporting event, is one of the important methods used worldwide in basketball because of its importance in developing physical abilities such as speed, explosive strength and speed endurance for players. The importance of the research lies in the use of increasingly intense exercises for the purpose of working to improve and develop the capabilities and skills of this group of youth and work to develop endurance of speed as variables that affect achievement of achievement through the incremental and intensive training.

Research Problem

Physical training is considered one of the important means and one of the very necessary requirements in monitoring the development of the functional and physical level reached by the player or team, and through what the researchers touched and their proximity to the Youth League, and to inform them. From many research studies and studies, it has been found that it is necessary to prepare increasingly intense physical exercises using devices and aids to develop the functional and physical state of young basketball players, as the research problem is that previous special exercises using devices and tools were not taken into consideration that every skillful performance depends Primarily on the physical side, as it is not possible to perform the correction skill from jumping if it is not accompanied by physical or kinetic ability, then shooting jumping consists of the skill of recording and the explosive power of the legs and arms in addition to the ability to endure, and the case applies to the rest of the skills, from a physiological position that does not see That every movement, whether skilled, physical or complex, is limited to performing a specific time and this time energy is used to implement it, so studying these functional variables leads to more accurate and reliable measurements in youth basketball training. Therefore, the two researchers decided to study this phenomenon and find appropriate solutions for it.

Aim Search

1. Set up increasingly intense training exercises to develop stamina for the speed and accuracy of shooting youth basketball.
2. Identify the impact of intense physical training on developing endurance among young basketball players.
3. Identify the effect of increasingly intense physical training on developing the accuracy of correction of vaulting to youth basketball

Research Hypotheses

1. There are statistically significant differences between the results of the pre and post tests in the development of the velocity tolerance variable among young basketball players.
2. There are statistically significant differences between the results of the pre and post tests in the development of the shooting accuracy variable among young basketball players.

Areas of research

The Human Field for Al-Amara Club's youth basketball players for the 2019/2020 season
Time Domain: for the period (15/1/2019 - 28/3/2019)
Spatial domain: Hall of the martyr Wissam Oribi in Maysan governorate .

Research methodology and field procedures Research Methodology

The researchers used the experimental approach with the design of the one experimental group and the two pre and post tests for its suitability and the nature of the problem to be solved .

Research community and sample

The researchers identified the research community, which is (5) Southern Region Youth League clubs for the 2019/2020 season, and a sample of young players. The sample was chosen by an intended method that included Al-Amara Basketball Club players who represent the research community consisting of (6) players from the parents' community.

Research tools and information gathering methods

Rubber ropes, medicine balls weighing (2, 3) kilograms, a legitimate basketball court, legal basketballs, number (10), a stopwatch number (2), and a tape measure. Training marks

Methods of gathering information

Arab and foreign sources and references, physical and skill tests, a form to record data, a form to dump data.

Tests used in research

Exam Measurement Bearing the speed for muscles the two men

Tools (1 - tape measure 2 - Lychee tape 3 - stop hours - 4 flat yard longer than (30 M 5 – whistle)

Performance specifications: Draw two parallel lines between them (25 m), the player stands at the starting line and when the signal starts, it gets up by running the maximum speed towards the second line to touch it with his foot and then turns to return to the starting line, this performance repeats (8) times to become a distance (25 m x 8 = 200m) mileage.

Scoring: Record the time of the player who covered the distance

(25 mx 8 = 200 m) per second and its parts.

Correction jump POEINT3

Receipt ending with a jump shot - three points

The purpose of the test: To measure the ability to perform the two attacking skills.Necessary tools: a basketball court, two barriers, one person, eight (8) legal basketballs, a leather tape measure (20 meters), a tape, an electronic stopwatch, two chairs, and a whistle.

Actions: See Figure 11

Defines a central point at the bottom of the basket on which to base some of the main points. Determines a point in front outside the arc between the two parallel lines and at a distance (30 cm) and is perpendicular to the central point, and represents the position of the tested player. Draw two parallel lines from the ends of the free throw line towards the arc with dimensions (3 m). Place two barriers (column height 2 m and the hanging barrier on each of them 100 cm from the top and 50 cm width) at a distance (1.25 m) from the arc line of the far target towards the front the point on which the test player is standing. A sign was placed behind the front point at a distance of (2 m) to turn around. A point is determined on the far left of the central point at a distance of (8 m), and it represents the stance of one of the team members that deliver the ball, and this point is away from the side line (1.50 m)

Performance description

The test player stands on the indicated front point on the ground, and at the same time one of the team members stands with the ball at the set point (the test player's side). At the start signal (whistle) the ball is delivered (handling the box with two hands) to the test player who performs the receiving ending with a jump shot (three points) appearing directly in steps (1,2). The tested player makes eight attempts, and the eight attempts are divided into five survivors, and the last three attempts are made after turning around the mark behind the front point, and returning to the same forward point.

Test conditions

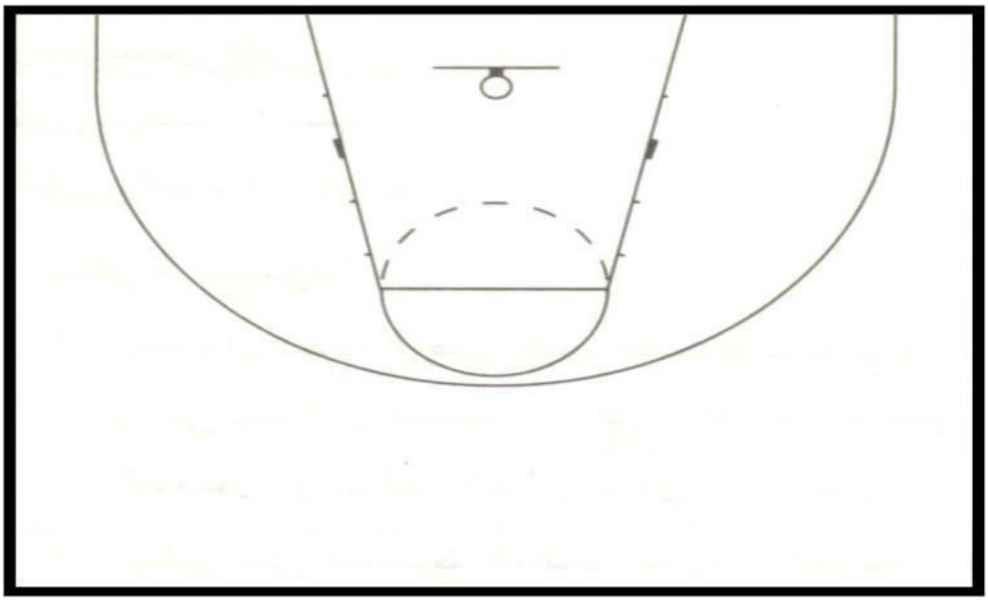
Speed in performance, the person rotating around the person freely in the manner desired by the test player, and the assistance of the test player (alert) to start revolving around the character, and each player has only two wrong attempts.

Test administration :timer :it gives the start signal as well as calculates the time taken to perform the test .

Recorder : It calls first and marks both successful and unsuccessful attempts and time second.

Score calculation :The time is calculated from the time the test player receives the ball until the end of the eighth attempt after the ball leaves the tester's hand .Division of time by (60 seconds

A score is calculated for the player for each successful jump shot.
A player is calculated (zero) in scores for each failed jump shot.
Collect the scores (accuracy) of successful attempts.
Overall (final) score: dividing the precision score over time.



Exploratory Experience

The first exploratory experience

The exploratory experiment was conducted on Tuesday 15/1/2019 at 4:00 pm in the hall of the martyr, Wissam Oreibi, and the experiment was conducted on a sample of the (2) Amara Club players from outside the research sample, and the researcher obtained a number of points to be followed in During the main experiment to facilitate scientific physical and skill tests, the aim of the experiment was the following- :

a. Determine the exact location of the signs during the skill test .
b. Know the time spent during the test.
c. Training of the assisting work team on the test and the emphasis on taking the designated sites for both the recorder and the timer. The researcher concluded through this experience that the players must be committed to the instructions for the test in order to reach accurate results during the test.

Research procedures

Pre-tests for the research sample

The first pre-test was conducted on Friday 18/1/2019 at 4 pm in the Martyr Wissam Oreibi Hall for the physical and skill tests, where the tests were conducted on the research sample after placing all the devices and tools. In the pre-determined location in the exploratory experiment, the skill test was conducted on the same day specifically to correct the areas (3 points). Special pillars were prepared for the personal test in a specific place and for full control over the survey. The variables in this study and the functional test were conducted on Saturday. Brief summary 19/1/2019 in the laboratory of Maysan University for Physiology, College of Physical Education and Sports Sciences.

Main Experience

The experiment began on 3/22/2019, and physical training continued for a period of (8) weeks in the special preparation stage, and the weekly training days were (3) training units (Saturday, Tuesday and Thursday) and the total number of training units for the curriculum reached (24) training units. The duration of the training unit ranged from (28 minutes) to (34 minutes)

Rest time between repetitions 1: 1 minutes

Rest time between groups is (3) minutes. The intensity was calculated based on the algorithm of v2max for each player at 100%, then the intensity of 80% vo2max up to 105% and equivalent heart rate was used, and the total daily and weekly training intensity was calculated by the law of the sum of the intensity of training units on the number of units, then the researchers gradually increased the intensity of the exercises By increasing the volume and fixing the repetitions and periods of rest, the researcher used the method of increasing the intensity of training, and used it to calculate the intensity between what each player achieved separately, the intensity mentioned in the training schedule is the personal intensity of each player.

Exercises Used

Researchers prepared increasingly intense physical exercises to develop physical abilities using some devices and auxiliary tools within the framework of the training curriculum for the special preparation phase, based on the exploratory experience carried out by taking into account the capabilities and physical abilities available for the research. A sample and based on its preparation on scientific foundations for sports training and on some scientific sources and references. When we started applying physical exercises from Sunday (20-1-2019) until Wednesday (20-3-2019). The duration of applying physical exercises to the research sample is two months, at a rate of (3) training units per week and for days (Saturday, Tuesday, and Thursday), including physical exercises (8 weeks) during the special preparation phase, and thus the total training units reached (24) units throughout the period Curriculum application. The physical exercises prepared by the researcher were carried out by the assisting team and under the direct supervision of the researchers. The total time for the training unit ranges between (30 - 34) minutes.

Posteriori tests

Subsequent tests were conducted after the physical exercise application ended on Thursday and Saturday

(21-22-3-2018) for the physical and skill tests at four in the afternoon in the hall of the martyr Wissam Al-Oraibi, and the functional tests were conducted on Saturday (23-3-2018) in the Physiology Laboratory of the University of Maysan, College of Physical Education and Sports Sciences. Provided that the post-test conditions are similar to the pre-test conditions in terms of place, time, test method and auxiliary work team to achieve accurate and guaranteed results.

Statistical methods

The researcher used the appropriate statistical means to solve and collect the data, researching this by relying on the statistical bag which is (SPSS)

The fourth chapter

Presentation, analysis and discussion of results

Presentation and analysis of results

Presentation and analysis of the results of the physical, functional and skill

variables Presentation and analysis of speed endurance test results

Table 1 The arithmetic mean and standard deviations between the results of the pre and post tests in the speed endurance test

indication	Sig	T Calculated	Post test		The pretest		the test
			P	s	P	s	
moral	0.000	18.87	44.83	1.47	63.50	1.87	Withstand speed

Table No. (1) In the speed endurance test shows that the arithmetic mean value of this variable in the pre-test was (1.87) and the standard deviation (65.50), while the arithmetic mean value was in the post test of the variable. The same variable was (1.47) and the standard deviation (44.83), and upon statistical treatment it was found that the value

of (t) calculated was (18.87), while the value of (Sig (0.000) was less than (0.05) at the error level (0.05) and the degree of freedom (5)) , Which means that the difference is important in favor of the post-test, as shown in Figure (2).

Presentation and analysis of the correction test results

Table No 2

Arithmetic means and standard deviations between the pre and post test results

In a correction test from to jump

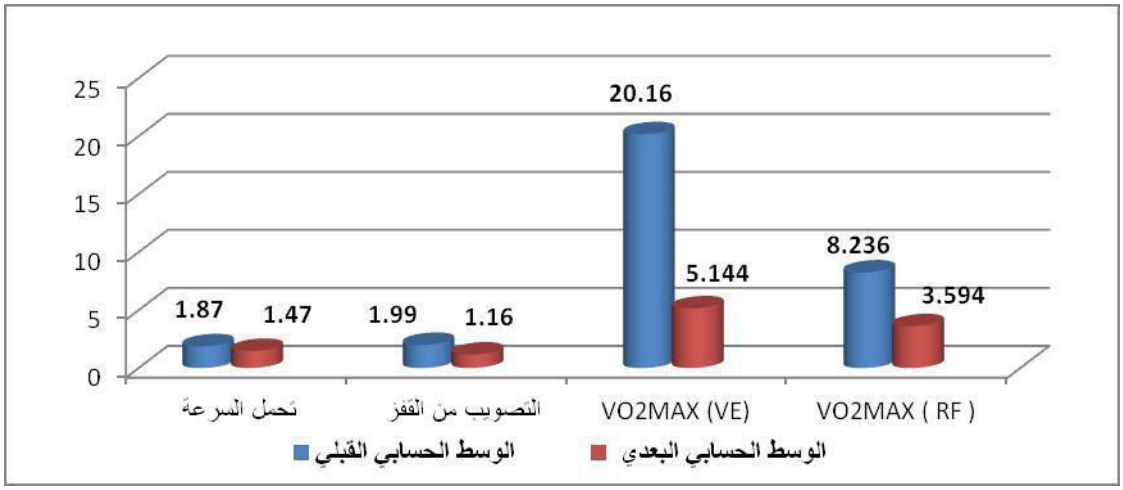
Indication	Sig	T Calculated	Post test		The pretest		the test
			P	s	P	s	
moral	0.000	13.54	14.73	1.16	6.42	1.99	Shooting from jumping

Table No. (2) in the jump correction test shows that the arithmetic mean value for this variable in the pre-test was (1.99) and the standard deviation (6.42), while the arithmetic mean value in the post test of the same variable was (1.16) and the standard deviation (14.73) When treating, the statistic shows that the calculated value of (t) is (13.54), while the value of (Sig) (0.000) was less than (0.05)) at an error level (0.05) and a degree of freedom (5), and this means that the difference is large and in favor of The post test is as shown in Figure (2).

Figure No 2

Shows the tribal and dimensional arithmetic mean of the research sample for a test

Withstand speed - accuracy of aiming from jumping - functional tests



Discussing the results

The results showed that there was a significant difference between the pre and post test for the research sample and in favor of the post test. The researchers attributed this to the large difference in the speed endurance test. The researchers believe that the speed endurance results show that there are statistically significant differences between the pre and post tests for the speed endurance test (8 x 25 m) and in favor of the post test. The reason for this is that the training worked to develop the players' abilities to improve their performance, and this is evident in the post-test results. As the development in this test is due to the effectiveness of the increasing intensity exercises used and scientifically organized in terms of choosing the intensity of training and the volume of training and choosing the appropriate rest that matches the requirements of constant speed, as well as the classification of training loads have a

great impact in achieving a good level and this is confirmed by everyone (Allawi) Abu Al-Ela tells her ([3]), "The training pregnancy is the main means of influencing the physiological effects of pregnancy. Thus, achieving an improvement in its responses and then adapting the body's systems and raising its level, so it is one of the most important factors for the success of the training program and thus improving performance." Use of training aids (rubber ropes, medicine balls, training ladders, arm and leg weight, ropes, and multi-height characters) in the application of the increasingly intense training vocabulary. The fast endurance of speed is very similar to how a basketball hover performs in motion performance. Continuous movement and cutting different running distances with varying intensities between maximum and high speed and for a long period of each period of the match, especially if the training exercise is codified to comply with the requirements of this game in terms of time and transition and in a specific area on the playing field, consistent with what he mentioned (Qasim Al-Mandalawi et al.) ((4) In (Hara), endurance training is one of the most important elements required in basketball in order to maintain the quality of the intensity required in training, on the other hand, this type of training is designed to help improve the energy system of lactic acid for emphasis. On the importance of this characteristic for basketball players, (Muhammad Mahmoud and Muhammad Sobhi) provided an estimated 30% of the total other abilities needed for this game, so stamina speed is an important ability. In order to win the match, as the development of endurance among the players increases s From the ability of the players to maintain their speed throughout the match, and this is evidenced by the player's ability to make a quick attack and score points.With achieving the same efficiency and speed, and with these results, the null hypothesis was rejected and the alternative hypothesis accepted.

And that the gradual training in the intensity of training according to the scientific foundations and according to the needs of the players in the basketball game has increased the player's ability to maintain the speed of his performance for the longest possible period, and this is what (Hanafi Mahmoud Mukhtar) indicated ([5]) "until proper planning, Choosing the appropriate intensity and taking into account the principle of graduation in it up to the state of fatigue is the most effective in developing the athletic level. This was evident in the offensive skill tests (shooting by jumping for three points), where he observed the clear development in the players 'performance by maintaining their skill level during performance in addition to The functional development of the research sample on the other hand, affected the outputs of the functional physical integration appropriate for development in shooting by jumping with basketball, so he mentioned (Muhannad Abdul Sattar). Q ([6]) "This force has a prominent role in achieving good results when practicing Sport, as concentration of strength while increasing its speed is characteristic of good skilled performance. As (Essam Abdel-Khaleq) ([7]) asserted: "The performance of the skill is linked to the individual's physical and motor capabilities. Therefore, care must be taken in the special physical preparation to master skills, as well as the development of (Muhammad Samir) about the functional changes of the muscles and their effect on the technically talented side that" Metabolic adaptation to achieve physiological adaptations that benefit athletes and reflect positively on the technical aspects of (technically). In the specialized sports fields. ((8))

Conclusions and recommendations

Conclusions

The increased intensity of physical exercise using devices and assistive devices led to the development of the ability (endurance of speed)

The development of the physical ability (endurance of speed) contributed to the development of the accuracy of shooting by jumping among young basketball players.

That the variables obtained from a device FATMET BROO It was a real indicator of the development of the functional variables (VE - RF -VO2max) .

Recommendations

The use of increasingly intense physical exercises is under investigation after it has proven effective in developing the physical ability (endurance of speed) for young basketball players.

The researcher recommends that all clubs conduct periodic checks for the variables of the circulatory and respiratory system because of their great importance in the career readiness of the players and the performance of the physical effort required for young basketball players .

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