



E-ISSN: 2707-7020  
P-ISSN: 2707-7012  
JSSN 2023; 4(1): 186-189  
Received: 04-05-2023  
Accepted: 05-06-2023

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## Various running to development the changing velocity endurance and its effect on skill full endurance performance of basketball players for Baghdad clubs

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DOI: <https://doi.org/10.33545/27077012.2023.v4.i1c.190>

### Abstract

Basketball is a fast-paced game with high physical effort that requires players to possess physical abilities that enable them to perform the skills of the game, including the variable speed in line with the changing nature of play from defense to offense and vice versa throughout the whole match, including overtime, if there and from here the importance of the research came in emphasizing various jogging exercises in the training units.

As for the research problem, it lies in the low level of sprinting for most of the players, and this is an indication of the low and weak prolongation of their variable speed during the match.

The research aims to know the effect of diversified running on developing the changing speed latency of advanced basketball players, in addition to knowing the effect of developing changing speed on bearing the skill performance of basketball players.

The researchers used the experimental method and the method of equal groups, and it was conducted on the Adhamiya club as an experimental sample and the lines club as a control sample, chosen by the random method (lottery), and by 3 x 33% of the research community, pre and post tests were conducted for the research variables, and it continued from 19/9/2020 and until 24/10/2020, in addition to using appropriate statistical methods.

The researchers concluded that the various running exercises led to the development of the variable speed prolongation of the players, in addition to the effect of the variable speed prolongation in bearing the skill performance, whether in terms of time or degree, the results also showed that there was a development in the control group, and not as in the experimental group.

The researchers recommend the necessity of making use of the various jogging exercises prepared by the researchers after their effect has been proven in developing the length of the changing speed of the players in line with the nature of the changing play, in addition to conducting physical tests to evaluate the training work during the period of training the players.

**Keywords:** Various sprinting, changing velocity endurance, endurance performance, basketball

### Introduction

The modern basketball game is one of the fast and highly physical games that require players to possess physical abilities that enable them to perform game skills and maintain the player's fast pace with high effort and resistance to fatigue.

The changing velocity endurance is considered one of the physical abilities that the players need in line with the nature of the game and the performance of its fast-paced skills that change from the state of defense to the attack and vice versa throughout the time of the match, including the extra time if there is, which requires a high physical effort and skill that the players try to maintain effort Possibility in the match.

The researchers believe that the importance of the research lies in ensuring that various exercises are given to the players in the training units to develop changing velocity flexibility, especially when linking their effect to bearing the performance and duties given to the players, whether defensive or offensive, which has become, at the present time, a clear indicator when evaluating and evaluating players and teams in the match.

### Research problem

Through the work of the two researchers in the field of the game, two players and two coaches, and their continuous follow-up to the Iraqi league teams (the advanced), there is no

decrease in the level of running for most of the players, and this is an indication of the low and weak prolongation of their variable speed during the match, especially since the game requires a change in speed and over the course of the time of the original match as well as the extra time in the event of a tie, and this naturally negatively affects the skill performance of the players, therefore, the two researchers sought to address this problem by working on developing changing velocity prolongation as it is one of the factors of excellent skill performance and in line with this category (advanced) and the high level that should be in the game of basketball.

**Research objective**

- Identify the effect of varied running to develop the changing speed rolling of Baghdad clubs basketball players.
- Knowing the effect of developing the changing velocity prolongation on withstanding the skillful performance of Baghdad clubs basketball players.

**Research hypothes**

- Varied jogging has an effect to developing the changing speed of Baghdad's advanced club basketball players.
- There is an effect to developing changing velocity manipulation by enduring the skillful performance of

Baghdad clubs basketball players.

**Research fields**

**The human field:** Sample of players from Baghdad clubs.

**Time field:** From 19/9/2020 to 25/11/2020.

**Spatial field:** the internal stadiums of Baghdad clubs.

**Research methodology and field procedures**

**Research Methodology**

The researchers used the experimental approach in line with the nature of the problem and its goals.

**Research community and sample**

The research community has been identified with Baghdad basketball clubs and participation in the premier league for the year (2021-2020), which is a club (police, electricity, the popular crowd, lines, oil, and Adhamiya) and there are 12 twelve players for each club, and thus the research community has reached 72 two Seventy players, as for the research sample, was chosen randomly (the lottery), where the Adhamiya club became an experimental sample and the lines club became a control sample.

Measures of homogeneity and equivalence were performed for the sample, and the results were:

**Table 1:** Shows the homogeneity of the sample:

Variables	Measuring unit	Mean	Median	Std. Deviation	Skew ness
Length	Cm	177.70	175.00	11.09	1.41
Weight	Kg	80.66	80.00	9.74	0.22
Age	Year	25.29	25.00	4.84	0.44
Training age	Year	8.95	8.00	3.92	1.09

**Table 2:** Shows the equivalence of the experimental and control groups in the research variables.

Variables	Measuring unit	Experimental		Control		(T) Calculated	Sig type
		Mean	Std. Deviation	Mean	Std. Deviation		
Changing velocity endurance	Second	41.62	1.69	42.87	2.19	1.59	Non-Sig
Accuracy skillful endurance performance	Degree	16.02	1.88	15.92	1.84	0.14	Non-Sig

At a level of significance (0.05) and a degree of freedom (2-24 = 22) and an tabular score (2.07)

**Methods of data collection, devices and tools used**

- Arab and foreign sources.
- Choices and metrics.
- Auxiliary work team.
- Exploratory experience
- Search tools include (medical scale to measure height and weight, basketball court, basketballs, whistle, stopwatch, adhesive tape, number sticker, a tool for measuring pass, a form for recording test results, a defensive sign, cones).
- Personal interviews.

jumping shooting from the inside and outside the three-point arc).

**Determine the tests**

The tests were determined in line with the variables of physical research and skill performance and were represented by the following:

Shuttle run 25 × 8 high start test <sup>[1]</sup>

**The purpose of the test:** to measure velocity elongation Sudair endurance skill test <sup>[2]</sup>.

**The purpose of the test:** To measure the player's ability to withstand the skillful performance (Defensive - offensive).

**Exploratory experience**

The researchers conducted their exploratory experiment, which is a "mini preliminary study and training to refine field procedures before going into data collection" <sup>[3]</sup>, on 7 seven of the (Electricity) club players on Saturday 19/9/2020 and at the club's internal hall, and that is. To achieve the purpose of conducting this experiment.

**Pre-test**

The assistant work team, under the supervision of the two researchers, carried out the pre-test for the experimental and control research sample, on two days, Saturday and Monday 26-28/9/2020, so that one day was allocated for each sample in which the test of velocity and endurance of skill performance was carried out, and the two researchers worked to stabilize the conditions as much as possible For their availability in the post test represented in place, time, tools and work team.

**Main experience:**

- Below is some information about the main experiment, which is:
- The goal is to develop variable velocity prolongation.
- Knowing the impact of development with variable velocity withstand skill performance.
- The exercises lasted for (8) weeks.
- Number of training units to develop variable speed rolling.
- The number of training units per week.
- Weekly Training Days.
- The time allocated in the training unit ranges between.
- Work was done at the minimum intensity, reaching the

maximum intensity.

- The experiment was carried out on 3/10/2020 until 21/11/2020.

**Post-test**

The assistant work team, under the supervision of the researchers, conducted the post-tests after completing the exercises designed to develop variable velocity elongation on the research sample, on Tuesday and Wednesday (24-25/11/2020), where the same procedures were followed that were used in the pre-tests in terms of location, time, tools and team work.

**Statistical means**

- Percentage.
- Mean.
- Standard deviation.
- The rule of (t-test) for symmetric samples.

**Presentation, analysis and discussion of results**

**Presentation and analysis of the results of the variable velocity elongation of the pre and post-tests of the experimental and control group**

**Table 3:** Shows the variables, the unit of measurement, the mean and their standard deviation, the difference of means, the standard deviation, and the value of (t) calculated for the pre and post- tests of the experimental and control group.

Variables	Group	Measuring unit	Pre-test		Post-test		F means	F Std. Deviation	(T) Calculated	Sig type
			Mean	Std. Deviation	Mean	Std. Deviation				
Velocity endurance	Experimental	Second	41.62	1.69	39.32	1.45	2.30	5.29	5.29	Sig
Endurance performance		Second/degree	16.01	1.88	18.50	1.87	2.48	6.15	5.05	Sig
Velocity endurance	Control	Second	42.87	2.19	42.28	1.63	0.59	0.35	2.89	Sig
Endurance performance		Second/ degree	15.92	1.84	16.90	1.85	0.96	0.96	4.46	Sig

At a level of significance (0.05), with a degree of freedom (12 - 1 = 11), and a tabular score (2.20).

Table (3) shows the value of the arithmetic mean of the variable speed stretching and the skill performance tolerance of the experimental group, as they reached (41.62) and (16.02) and a standard deviation (1.69) (1.88) respectively in the pre-tests, as for the post-tests, it reached (39.32) and (18.50) and standard deviation (1.45) (1.87), respectively, as

for the calculated value of (t), it reached (5.29) and (5.05), both of which are greater than the tabular value of (t) of (2.20). This indicates that there is a difference between the pre and post-tests, and this presentation applies to the control group.

**Table 4:** Shows the variables, the unit of measure, the arithmetic means and their deviations, the difference of the means, the deviations, and the value of (t) calculated for the post - tests of the experimental and control group.

Variables	Measuring unit	Experimental		Control		(T) Calculated	Sig type
		Mean	Std. Deviation	Mean	Std. Deviation		
Velocity endurance	Second	39.32	1.45	42.28	1.63	4.57	Sig
Endurance performance	Second /degree	18.50	1.87	16.90	1.85	2.63	Sig

At a level of significance (0.05) and a degree of freedom (2-24 = 22) and an tabular score (2.07).

Table (4) shows the value of the arithmetic mean of the experimental group reached (39.32) and (18.50) and with a standard deviation (1.45) and (1.87) respectively in the post-tests, while the control group reached (42.28) and (16.90) and with a standard deviation (1.36). And (1.85), respectively, in the post-tests, as for the calculated value of (t), it reached (4.57) and (2.36), respectively, and when compared with the table of (7.07), it was found that there is a statistically significant difference in favor of the experimental group.

experimental group, we notice that there is a significant difference between the pre and post-test, as well as between the two post / post-tests of the experimental and control group, both of which are in favor of the experimental group in the research variables. As the two researchers singled out the various jogging exercises that were used in the training units for the players according to a time and a period specified at 8 weeks, which led to the development of prolonged speed and its impact on the skill performance, as Abu Al-Ela confirms that most of the changes resulting from training occur during the training period and within (6-8) weeks " [4].

**Discuss Results:** When looking at Tables 3 and 4 for the

In addition to that, the structured training of the appropriate repetitions and intensity and their uniforms and the gradation with them from below the maximum intensity to the maximum intensity with a suitable rest period led to a direct effect on the main working muscles and functional equipment of the players as "training directed to certain muscles inevitably leads to development events in them." [5], which led to the development of variable velocity prolongation, as it has been scientifically proven that there is a correlation between the volume and intensity of training and comfort and the level of velocity prolongation " [6].

Finally, the two researchers believe that the various running exercises that vary in terms of distance and time have led to an increase in the performance efficiency of variable speed prolongation through the resistance to fatigue of the exerted effort and the ability to withstand defensive and offensive skill performance. The player's ability to resist and carry a load ranging between 90-100% of the individual's ability " [7], as well as overcoming various types of " pressures facing players in training and competitions " [8]. As for the control group, it has achieved it, the other results are significant, and this is due to the trainer's exercises, but not at the level of the experimental group.

### Conclusions and recommendations

#### Conclusions

- The results showed that changing velocity endurance exercises led to the development of variable velocity prolongation for advanced basketball players.
- The results showed an effect of changing velocity endurance on the defensive and offensive skill performance of the players.
- The results showed that there is an effect of velocity on the accuracy of the performance of the defensive and offensive skills included in the test, whether in terms of time or the degree obtained by the player.
- The results showed that there is a development and its effect on variable speed prolongation on the skill performance of the control group and not as in the experimental group.

#### Recommendations

- The necessity of active interest by team coaches in developing the changing velocity endurance of the players in the training units in line with the nature of the changing player, by allocating the necessary time to it.
- The need to take advantage of the various jogging exercises that were prepared and used by the researchers in their experiment, after their effect on developing variable velocity elongation has been proven.
- Conducting physical tests to carry out the training work during the players' training period.
- Conducting similar research and studies on samples of youth and youth, and adding complex skills similar to conditions for matches as well as other games.

#### Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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