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Dr. Sajjad Hussain Naser

Assistant Professor, Faculty of
Physical Education and Sports
Sciences, University of Babylon,
Iraq

The impact of fartlek exercises using Holmer's method to developing the defensive performance endurance of basketball for youth

Dr. Sajjad Hussain Naser

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Abstract

The game of basketball requires comprehensive preparation in all physical and skillful aspects as well as tactical, psychological and educational aspects. This is achieved through the preparation of comprehensive training curricula in order to develop players, including young people, as they are the basis for achieving the best results and reaching a high level. Through the experience of the researcher and his knowledge of some research and training curricula, he observed that these curricula and research did not devote a significant portion of their content to contemporary training techniques, as well as a lack of interest in them, which adversely affected the performance of young players with defensive skills and a clear weakness when performing them. As a result, this skill always results in challenging circumstances and the presence of A close striker, which adversely affects the outcomes of the match. The goal of the study was to design Holmer-style fartlek drills for improving young basketball players' defensive abilities. To determine if Holmer-style fartlek workouts have a good effect on young basketball players' development of their defensive abilities. The experimental approach was used by the researcher as a measurement appropriate to the study goals. Twelve Al-Hilla Basketball Club players between the ages of 16 and 18 made up the study community. The community was randomly split into two groups (the experimental group and the control group), with six players in each group. The research's most crucial finding is that there has been a development. young basketball players' defensive prowess in both the experimental and control groups. For young basketball players, one of the most crucial pieces of advice is to focus on physical development in a manner that precedes and follows the development of offensive skills.

Keywords: Fartlek exercises, Holmer's method, defensive performance endurance

1. Introduction

Basketball is one of the most well-liked team sports and is rated first among its sports in certain nations throughout the globe because to its amazing blend of technical proficiency and quick tempo, which dazzles the crowd and its supporters. As a result, mastering these defensive skills is one of the most crucial concerns for those who are involved in the game, and it is now accepted that raising any player's training level is impossible without learning the technical performance of all the game's fundamental skills because it includes all vocabulary with various tasks that are performed. One of the most crucial elements that contribute to success and greatness within the confines of the rules of the game is the ability of each team member to execute any kind of collective defensive skill. As there is no difference between the importance of each of these skills and the player's need for each of them throughout the game, he may choose not to use some of them in certain circumstances (such as the ability to get rid of a player who is above the goal line in order to defend against a player who has scored a goal). Good, get rid of the player below the barrier, switching between defenders during offensive detention (switching back), and defensive coverage from player No. 4 are some of the crucial and challenging skills that must be practised under varying match conditions and in the constant presence of an attacker. It should be noted here how crucial modern training methods are in developing these skills, with the fartlek Holmer method being one of the most

Corresponding Author:

Dr. Sajjad Hussain Naser

Assistant Professor, Faculty of
Physical Education and Sports
Sciences, University of Babylon,
Iraq

effective. The researcher made the decision to embark on this investigation into the creation of Holmer-style alfartalk workouts for enhancing young basketball players' defensive abilities.

1.1 Research problem

The researcher tried to answer some questions, including:

1. What is the effect of fartlek exercises using Holmer's technique on young basketball players?
2. What is the level of players in relation to defensive skills in basketball?
3. What is the effect of fartlek exercises using Holmer's style on the defensive performance of youth basketball?

1.2 Research objectives

- Preparing the fartlek exercises using the Holmer style in developing the defensive performance endurance of basketball for youth.
- To identify the effect of fartlek exercises using Holmer's method in developing the defensive performance endurance of basketball for youth.

1.3 Research hypothesis

- Holmer's method of fartlek workouts helps young basketball players improve their defensive endurance and performance.

1.5. Research fields

The human field: Al Hilla Youth Basketball Club players.

Time field: from 1-7-2021 to 1-12-2021.

Spatial field: Al- Shaheed Hamzah Nuri Hall in Babil Governorate.

2. Research methodology and field procedures

2.1 Research Methodology

The experimental approach was employed by the researcher as a measurement that was appropriate for the study goals.

2.2 Community and sample research

Twelve basketball players from the Al-Hilla basketball club (16–18 years old) made up the study community. The community was randomly split into two groups (experimental and control), with six players in each group.

2.3 Devices and tools used

3.3.1 The methods used in the research

- Arabic and foreign sources.
- Personal interviews.
- Measurement and physical and skill tests.

3.3.2 Tools and devices used in the research

- Legal basketball court
- Stopwatch (2)
- Sony electronic calculator
- Standard cloth tape.
- Sign number (10).

2.4 Research Procedures

2.4.1 The tests used in the research

First: To defend against a player with excellent aim, get rid

of the player over the barrier

The aim of the test: Is to assess how long a player can maintain the ability to eliminate a player over the barrier in order to defend against a player with a solid goal.

Performance description: The offensive reservation is made by the attacking player No. 5 for his teammate No. 1 in the front area and on the triple-threat line. In this instance, the defensive player No. 1 has to cross the barrier in order to effectively defend.

Register: Defender No. 1 would get two points if he was able to cross in front of the attacker and stop the player from scoring; if he was able to cross but did not stop the attacker from shooting, he would receive one point; and if he was unable to cross, he would receive zero points.

Note: Each laboratory is given a time limit of (40) seconds, and the number of tries is determined while accounting for the assessment of each instance.

Second: Throwing Down the Barrier Test

Test Name: To protect against the cutting player, get rid of the blocking player's bottom.

The purpose of the test: To assess the durability of the performance of the ability to remove the barrier player's bottom in order to defend against the cutting player.

Performance description: In the side area of the goal and on the triple-threat line, attacking player No. 5 makes an offensive reservation for his colleague No. 3. In order to effectively defend in this instance, defensive player No. 3 must drop from the top of the barrier player.

Register: If defender No. (3) managed to cross behind the attacker and prevented the player from scoring, he would be given (2) marks, and if he was able to cross but did not prevent the attacker from shooting, he would be given (1) degree, and if he could not cross, he would be given (0).

Note: Each laboratory is given a time limit of (40) seconds, and the number of tries is determined while accounting for the assessment of each instance.

Third: Defenders Switch Test

Test Name: When receiving an attacking booking, switching between defenders (switch back)

The purpose of the test: to assess the competence of switching between defenders during the offensive reserve (switch back) and its endurance.

Performance description: The defender No. (1) must switch back to defence after the offensive player No. (5) reserves the defender No. 1. The defending player No. (5) then defends the attacking player No. (1) before switching back to the attacking player's defence No. (5).

Register: The defending player No. 5 would get (2) marks if he was successful in making a defensive switch (switch back) and stopping the attacker. He receives a score of (1) if he successfully made a defensive switch (switch back) and was

unable to halt the opposing player. He receives a score of (0) if he failed to successfully make a defensive switch (switch back).

Note: Each laboratory is given a time limit of (40) seconds, and the number of tries is determined while accounting for the assessment of each instance.

Fourth: Defensive Coverage Test

Test Name: Defensive Coverage from Player No. (4)

The purpose of the test: measuring the endurance performance of the defensive coverage skill from player No. (4)

Performance description: Attacker No. (5) makes an offensive reservation for his teammate No. (1) on Defenders No. (1) and (5) Defending Attacker No. (1) Defender No. (4) works defensively on Attacker No. (5).

Register: The defending player No. 4 would get (2) marks if he successfully made defensive coverage and stopped the attacker. He would get one point if he made defensive coverage and succeeded in stopping the assaulting player, and zero points if he failed to do so.

Note: Each laboratory is given a time limit of (40) seconds, and the number of tries is determined while accounting for the assessment of each instance.

2.5 Exploratory experience

The exploratory experiment is usually conducted to identify the appropriateness of the tests, the level of response of the sample members to those tests, the time taken to perform the tests, and the training unit. The researcher tried to invest in the exploratory experiment in order to serve the experiment. It was on 6/15/2021 and on the youth team of Babel Sports Club.

2.6 The main experimental procedures

2.6.1 Pre-tests

Within the pre-tests of the research sample, which were conducted at six o'clock in the afternoon on Friday 6-25-2021

in Al-Shaheed Hamza Nuri Hall.

2.6.2 The training curriculum and its vocabulary

The researcher prepared a training curriculum based on the foundations and principles of the science of sports training, by building load components of size, intensity and intensity, taking into account the age of the sample and its training age. Basketball experts and professionals in the area of sports training were shown the training programme to confirm its authenticity.

- The time period is (6) weeks
- The number of units per week (3) units represented by days (Saturday, Monday and Wednesday)
- The total number of units for exercises (18) units
- The researcher used the method of training the fartlek with Holmer's method, with an intensity of 80 to 90%.
- The time for performing the special exercises ranges between (20-30) minutes from the time of the section
- The intensity was determined in the exercises that contain strength endurance by the pulse (beat/sec) and the exercises that contain the component of speed in time (m/sec).

2.6.3 Post-tests

After the end of the prescribed period of the training curriculum, the post-tests were conducted for the research sample at exactly six o'clock in the afternoon on Sunday 9/18/2021, taking into account the commitment to the same conditions and procedures for performing the tests that were followed during the pre-tests. The researcher tried as much as possible to establish the conditions surrounding the tests from Where (time, place, tools used, method of implementation, work team) and make them similar in pre and post tests.

2.7 Statistical methods

The researchers used the following statistical methods.

- Mean.
- Std. Deviation.
- T test.

3. Presentation, analysis and discussion of the results:

3.1 Presentation the results of collective defensive skills tests in basketball (for the experimental group)

Table 1: It shows the values of the median and the quartile deviation of the pre and post tests and the calculated Wilcoxon value and its statistical significance for the results of collective defensive skills tests in basketball and for the experimental group:

| Tests | Pre- test | | post test | | Sample | Wilcoxon Calculated | Wilcoxon Tabular | Sig type |
|------------------------------|-----------|--------------------|-----------|--------------------|--------|---------------------|------------------|----------|
| | Median | quartile deviation | Median | quartile deviation | | | | |
| Get rid of above the barrier | 0.778 | 0.441 | 1.444 | 0.527 | 6 | 8 | 2 | Sig |
| Get rid of under the septum | 0.556 | 0.527 | 1.556 | 0.527 | 6 | 0 | 3 | Sig |
| Switch between defenders | 0.667 | 0.500 | 1.556 | 0.527 | 6 | 3 | 2 | Sig |
| Defensive coverage | 0.667 | 0.500 | 1.556 | 0.527 | 6 | 4 | 2 | Sig |

There is a difference between the pre and post tests of the experimental research group, as shown in Table (1) for the

tests of the experimental group, indicating that there are substantial changes.

3.1.2 Presentation the results of collective defensive skills tests in basketball (for the control group)

Table 2: It displays the median and interquartile range of the pre- and post-test findings, as well as the estimated Wilcoxon value and its statistical significance for the control group's defensive performance in basketball.

| Tests | Pre- test | | post test | | Sample | Wilcoxon Calculated | Wilcoxon Tabular | Sig type |
|------------------------------|-----------|--------------------|-----------|--------------------|--------|---------------------|------------------|----------|
| | Median | quartile deviation | Median | quartile deviation | | | | |
| Get rid of above the barrier | 0.667 | 0.500 | 0.778 | 0.222 | 6 | 0 | 3 | Sig |
| Get rid of under the septum | 0.556 | 0.527 | 1.000 | 0.167 | 6 | 2.5 | 3 | Sig |
| Switch between defenders | 0.889 | 0.601 | 0.889 | 0.200 | 6 | 3 | 3 | Sig |
| Defensive coverage | 0.556 | 0.726 | 1.000 | 0.167 | 6 | 4 | 3 | Sig |

There is a difference between the pre and post tests of the experimental research group, as shown in table (2) for the tests of the experimental group, indicating that there are substantial changes.

3.1.3 Presentation the results of the pre and post tests and the calculated value of Mann Whitney for the results of the basketball defensive skills tests (the control and experimental groups)

Table 3: It shows the values of the median, the interquartile deviation of the post test, the calculated Mann Whitney value, and its statistical significance for the results of the basketball defensive skills tests (for the control and experimental groups).

| Tests | Control | | Experimental | | Sample | Wilcoxon Calculated | Wilcoxon Tabular | Sig type |
|------------------------------|---------|--------------------|--------------|--------------------|--------|---------------------|------------------|----------|
| | Median | quartile deviation | Median | quartile deviation | | | | |
| Get rid of above the barrier | .7780 | .2220 | 1.444 | 0.527 | 6 | 11 | 15 | Sig |
| Get rid of under the septum | 1.000 | .1670 | 1.556 | 0.527 | 6 | 0.5 | 0.009 | Sig |
| Switch between defenders | .8890 | .2000 | 1.556 | 0.527 | 6 | 0.7 | 0.040 | Sig |
| Defensive coverage | 1.000 | .1670 | 1.556 | 0.527 | 6 | 0.9 | 0.008 | Sig |

The median value, interquartile range, and Mann Whitney value for the test of collective defensive abilities are shown in Table 3, and it can be seen that there are substantial differences in favour of the experimental group.

4. Discussing the results

The researcher attributes the reason for the development of the control group to the influence of the regular curriculum set by the coach, in addition to the continuity and regularity of the players in the training units. Through the previous incidents, it is clear that there is a development of the defensive skills of the young basketball players for the control and experimental groups. This development leads to the development of stamina among young players, as the fartlek exercises in Holmer's style are in line with the subject objective, as defensive coverage and switching between defensive players are among the important factors for the success of defense in general, and man-to-man defense in particular, because it works to bridge the defensive gaps that result from confusing the attack for defenders, "The strong conscious coverage of the team in defense of its basket has a psychological impact on the team's counter-attack and raises its morale." In addition, I took playing exercises in how to teach the player to cover the attacker, how to get rid of above and below the reservation, switch between defenders, and balance in the movement of the defender, which is similar to the actual playing situations and the defender The conscious aware of modern playing methods must know that defense does not mean that the player performs only one defensive duty, but rather he must participate in more than one defensive position within the defense pressure set by the coach (Zuhair Qasim Al-Khashab and others, 1999, p. 23) [1]. Also, the exercises prepared by the researcher work to increase the player's understanding of defending against the

attacker with or without the ball and the distance between the defender and the attacker who is in the area for which that defender is responsible. In this case, the defender must constantly adjust his body position so that he is on top of a triangle whose base is pressed Passing between the ball and the striker so that he can always see both the ball and the striker at the same time. (Ali Khalifa, Ahmed, p. 24)

5. Conclusions and recommendations

5.1. Conclusions

Through the results of the study, the conclusions were:

1. Both the experimental group and the control group's collective defensive abilities among young basketball players have improved.
2. Through what the results of the research showed, there is a clear and real effect of the Fartlek exercises in Holmer's style in developing the defensive skills of young basketball players.

5.2. Recommendations

Based on the previous conclusions, the researcher recommends:

1. Interest in developing the offensive skills of young basketball players.
2. Interest in developing physical abilities in a way that precedes and accompanies the development of defensive and offensive skills for young basketball players.

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