THE RELATIONSHIP OF ACHIEVEMENT WITH THE EFFECTIVENESS OF THE TRIPLE JUMP WITH PHYSICAL MEASUREMENTS AND THE PHYSICAL AND MOTOR ABILITIES OF FEMALE STUDENTS

Hayder Naji Habash Alshawi¹, Rasul Alaa Iyad Al-Adari²

¹Republic of Iraq/University of Kufa-Faculty of Education for Girls-Department of Physical Education and Sports Sciences.; Haydarn.alshawi@uokufa.edu.iq
²Republic of Iraq/University of Kufa-Faculty of Education for Girls-Department of Physical Education and Sports Sciences.

ABSTRACT:

The effectiveness of the triple jump is characterized by physical specifications and physical qualifications in line with the nature of the performance of its technical stages, and the importance of the research in finding the relationship between performance and achievement on the one hand and between physical measurements and physical and motor abilities in order to choose or select for players who are suitable for this event, and the research problem was that the researchers would try through This study is to find the relationship between the technical performance and achievement of the effectiveness of the triple jump for female students and their physical specifications and abilities in order to help the coaches in selecting the players in a scientific manner and in a correct direction commensurate with their potential that helps in practicing the effectiveness of the triple jump and thus it is a new and promising way to choose sports talents in the future, and the objectives of the research were to identify At the level of technical performance, achievement, corporeal measurements, and physical and motor abilities that the students enjoy in the triple jump, and finding the correlation between artistic performance and achievement and between physical measurements and physical and motor abilities of players with the effectiveness of the triple jump.

Keywords: effectiveness, physical measurements, motor abilities, female students

I. INTRODUCTION

The effectiveness of the triple jump is characterized by physical specifications and physical qualifications in line with the nature of the performance of its technical stages, and the importance of the research in finding the relationship between performance and achievement on the one hand and physical measurements and physical and motor abilities in order to choose or select for players who are suitable for this event, and the research problem was that the researchers would try through This study is to find the relationship between the technical performance and achievement of the effectiveness of the triple jump for female students and their physical specifications and abilities in order to help the coaches in selecting the players in a scientific manner and in a correct direction commensurate with their potential that helps in practicing the effectiveness of the triple jump and thus it is a new and promising way to choose sports talents in the future, and the objectives of the research were to identify On the level of technical performance, achievement, corporeal measurements, and physical and motor abilities that female students enjoy in the triple jump, and finding the correlation between artistic performance and achievement and between physical measurements and physical and motor abilities of players with the effectiveness of the triple jump.¹

practical part

www.turkjphysiotherrehabil.org
The researchers used the descriptive approach in a survey style and correlations to suit the nature of the research problem, on the second stage students in the College of Education for Girls / Department of Physical Education and Sports Sciences at the University of Kufa and the academic year 2020-2021, totaling (50) students, and the comprehensive inventory method was used to determine a sample.

Determine research variables and ways to measure them:

First, determine the body measurements

To determine the anthropometric measurements related to the research, the researchers reviewed the scientific sources and references for this aspect. A special questionnaire was prepared to explore the opinions of experts and specialists in the field of sports training, the arena, and the field see Appendix (1). It achieved a degree of (60) or more of importance and (54.6%) of relative importance, according to the opinion (11) experts' specialists, and as shown in table (1).

Table (1) Shows candidate anthropometric measurements

<table>
<thead>
<tr>
<th>Anthropometric measurements</th>
<th>Relative importance</th>
<th>percentage</th>
<th>indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>98</td>
<td>89.09%</td>
<td>Acceptable</td>
</tr>
<tr>
<td>body length</td>
<td>106</td>
<td>96.36%</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Stem length</td>
<td>56</td>
<td>50.90%</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>Bottom limb length</td>
<td>102</td>
<td>92.72%</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Thigh-length</td>
<td>60</td>
<td>54.54%</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>Leg Length</td>
<td>57</td>
<td>51.81%</td>
<td>Unacceptable</td>
</tr>
</tbody>
</table>

anthropometric measurement methods

1- weight

The weight was measured using a medical scale, where the student stands on the scale and is measured to the nearest half a kilogram, the unit of measurement is (kg).

2- The total length of the body

The wall measured the length. If we measure a distance of one meter from the ground and put a mark, we continue to mark the marks every 5 cm until we reach a height of 160 cm. Then we ask the person to determine his height to stand facing the back for measurement so that the eagles and the surface of the back body (the back) touch the wall, Including the head, then we determine with a ruler the height of the body and is done by over the head and touching it and perpendicular to the wall, then we read the mark reached by the ruler on the wall where it expresses the length of the individual.

3- The length of the lower end

The length of the lower extremity was measured using a tape measure from the greater trochanter of the upper head of the thigh to the floor.

Second: Determination of physical and motor abilities

To determine the physical and motor abilities, the researchers conducted numerous interviews with experts and specialists in sports training, the arena, and the field to identify the physical and motor abilities that suit the effectiveness of the triple jump. Their number is (11) experts, and after collecting and unpacking the data, the researchers determined the abilities that got (60) or more of importance and (54.6%) of the relative importance, as shown in table (2).

Table (2) Demonstrates candidate physical and motor abilities

<table>
<thead>
<tr>
<th>Physical and motor abilities</th>
<th>Relative importance</th>
<th>percentage</th>
<th>indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>108</td>
<td>98.18%</td>
<td>Acceptable</td>
</tr>
<tr>
<td>body length</td>
<td>101</td>
<td>91.81%</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Stem length</td>
<td>49</td>
<td>51.81%</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>Bottom limb length</td>
<td>83</td>
<td>75.45%</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>
Determining physical and motor abilities tests

After identifying some of the physical and motor abilities related to the effectiveness of the triple jump, the researchers reviewed the scientific sources, and a questionnaire was prepared to solicit the opinions of experts and specialists in this field.

Description of physical and motor abilities tests

1- The triple jump test of stability

Purpose of the test: To measure the explosive force of the working muscles of the triple jump.

Performance description: The tester stands behind the starting line, feet spaced with an appropriate opening, and begins by swinging the arms back with bending the knees, leaning forward a little, then swinging the arms forward, pushing both legs, getting up with both legs, then landing one leg, then swinging the second leg and landing on them and then descend together into the hole, and two attempts are given to each performer and a rest of (5) minutes between one attempt and another. (2)

Recording: The measurement shall be from the starting line to the nearest trace left by the body towards this line, and the best attempt is calculated.

2- Test running 20m from the stationary start.

The purpose of the test, to measure the maximum speed.

Description of performance: The test subject stands firmly behind the starting line, and when she hears the signal, she begins to run as fast as possible to a distance of 20 m.

Recording: Records the time from the beginning of the start of the jog until the end of 20 m. (3)

3- Dynamic Elasticity Test.

Purpose of the test: To measure flexibility.

Description of performance: Draws a mark (X) on the ground between the feet of the laboratory and the wall behind the back of the laboratory. When the start signal is heard, the tester bends the torso forward downward to touch the ground with the fingertips, then extends the torso high with a left turn to touch the wall, then rotates and bends the torso down to touch Mark a second time, then turn to the right to touch the wall. (4)

Recording: Records the number of touches on the two marks within 30 seconds.

Measuring the level of technical performance and achievement

The level of technical performance was determined by arbitrators evaluating the form of technical performance, as the researchers photographed the performance of the triple jump for the students in the test and converted it to discs (CD) and presented it to a group of experts to evaluate it through an attached form, as the maximum degree of skill performance was (10) Scores distributed on the overall performance from the approximate run to the end of the performance, as for the achievement, they were measured by measuring the actual achievement level of the students. (5)

Exploratory experience

The exploratory experiment is one of the essential, necessary procedures that the researchers take before implementing the main experiment procedures. It is known as practical training to identify the negatives and positives that meet the researcher during the test to avoid it. The exploratory experiment was conducted on 25/1/2021 on a sample. Among the students of the second stage in the College of Education for Girls/Department of Physical Education and Sports Sciences at the University of Kufa, their number was (10) students who were chosen randomly. The purpose of conducting this experiment was limited to the following:
Ensure that equipment and tools are ready
Recognize the time each test takes as well as the time of the total tests
Adequate auxiliary staff
Ensure that the form prepared for data registration is valid
Knowing the validity of the tests about the level of the sample members
Knowing the difficulties that the researchers face to avoid them in the future
Obtaining the scientific basis for the tests used. (6)

The scientific basis of the tests
The validity of the test
The researchers presented the contents of the tests to a group of experts and specialists, and in this way, the researchers obtained the validity of the content, which is often done "by logical judgment on the quality of the characteristic, trait or skill in question, whether the proposed measurement method measures it or not.

Test stability
To verify that the tests obtained a reliable degree of stability, the researchers conducted a second reconnaissance experiment on a sample of (10) female students on 3/2/2021. The Pearson correlation coefficient was used between the two experiments, and after obtaining the correlation coefficient values, the researchers Using the (TR) test to measure the significance of the correlation, in which it was found that all the tests have a reliable degree of stability, given that the calculated (T-T) value is greater than the tabular (T-T) value of (2.160) at the degree of freedom (13) and the level of significance (0.05), and as shown in the table.

Main experience
After completing the exploratory experiment and obtaining its results, the researchers implemented the tests nominated by the experts on 9/2/2021 on a sample of (50) female students from the second stage in the College of Education for Girls/Department of Physical Education and Sports Sciences at the University of Kufa and on the sports hall. The researchers first carried out physical measurements, then physical and kinetic abilities tests, then the data was unloaded into unique forms, and then the researchers turned to conduct statistical treatments on them.

Statistical means: (SPSS) program was used to process the data.

II. RESULTS:
For the researchers to know the nature of the test results for the students and evaluate them, it is necessary to follow the studied and sound scientific steps. (7)

The reality of abilities (physical and motor) and achievement among the research sample members:

The researchers sought to know the outcome of the research sample. Its evaluation within the indicators investigated, as it used to test, measurement, which are the tools on which the evaluation is based building the model for research and detection of sample collection and evaluation of its collection to select best in the effectiveness of the triple jump, this is achieved only by extracting the achievement rate in Each indicator of the test items of capabilities (physical, kinetic, anthropometric) as well as the amount of dispersal of its value from the mean of the sample collection, torsion and sampling error to know the normal distribution of the collection of its members. (8)

Table (3) It shows the arithmetic mean, standard deviation, skewness and sampling error for the members of the research sample

<table>
<thead>
<tr>
<th>variables</th>
<th>Unit of mean</th>
<th>Standard</th>
<th>skewness</th>
<th>Standard error</th>
</tr>
</thead>
</table>
The above table shows the difference between the values of the statistical indicators in each of the tests concerned with measuring physical and motor abilities, as the difference in the units measurement of results of tests. Despite this, the difference remains, and the units of measurement for the tests are equal. For example, when running 20 m, which is measured in (Second), we find that the members of the research sample achieved an arithmetic mean of (9.287) and a standard deviation of (0.984), while the sample members achieved arithmetic mean when testing the dynamic flexibility, which is measured by the same unit of measurement (number of times). (28.2) a standard deviation of (2.574), this case can be found in the rest of the results of the research sample members in tests they were subjected to.\(^\text{9}\)

But the thing that the researcher would like to say about the results of the research sample members when the tests (physical, kinetic, and anthropometric) that were presented came with a distribution that is closer to the regular (moderate) distribution and that the error of this distribution was within the acceptable limits. The function of these results is values of the torsion coefficient, came in the form zero, the lowest of these values (-0.909) when measuring the length of the lower extremity and the highest when testing the flexibility, as the value of its torsion coefficient was (0.984). As for the values of sampling errors, none of them when All tests are about (1.049). Thus, the researcher can derive the results of these tests criteria upon which the members of the research sample are based to select any of the outstanding students and select them for training purposes.

Table (4) We are finding the relationship between performance and achievement and between research variables.

<table>
<thead>
<tr>
<th>variables</th>
<th>Explosive force</th>
<th>physical abilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement</td>
<td>0.84</td>
<td>speed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>flexibility</td>
</tr>
</tbody>
</table>

The relationship of artistic performance and achievement with physical measurements and physical and kinetic abilities with the effectiveness of the triple jump for female students

It is evident when we conduct any test or measurement that we obtain raw scores for those tests or measurements used, but an important question arises here, can we interpret these scores and know the purpose of obtaining them? The answer is that it can only be done by converting these grades into standard grades through which the students' results can be interpreted. The obtained scores enable us to compare the students' results among themselves and thus ensure that we build a basis for finding the relationship between physical abilities and achievement. They must be possessed to achieve the best performance in sporting activity.\(^\text{10}\)

III. CONCLUSIONS:

1- The results showed a statistically significant relationship in the physical and motor abilities of the sample with achievement.

2- As the physical abilities of the female athletes develop, the achievement develops with the triple jump's effectiveness.

REFERENCES:

