Identify digital indicators for special tests for fitness measurement for ground tennis players

Dr. Mohammed Abdul Razzaq Nema / Basra University / College of Physical Education and Sports Sciences
mohammed.neemha@uobasrah.edu.iq
Dr. Makki Jabbar Oudah / Basra University / College of Physical Education and Sports Sciences
make.jabbar@uobasrah.edu.iq
Mazin Hadi Kzar / Physical Education and Sport Sciences Department, Al-Mustaqbal University College, 51001 Hillah, Babil, Iraq
mazin_kzar@mustaqbal-college.edu.iq

ABSTRACT

The research included on the introduction and importance of research, through which researchers address and measurement and importance in the sports field, fitness and its importance are one of the most important physical qualities for human movement in general, and success in the sports field, as they play a prominent role in developing results in different events Especially the Tennis game, and moreover in mastermind the motor performance, fitness is associated with all other physical traits. The research problem was that the fitness tests in the sources are few and view of the importance of fitness as well as the presentation of these tests. Creating scores and standard levels for fitness tests for ground tennis players. The researchers used the descriptive approach in the manner to suit its research problem. Metric measurement tape, cheaper and ensured testing procedures for testing tests on experts and specialists and then extract the scientific bases of tests which are honesty, stability and objectivity and then apply the tests on sample members (58) player and extract grades and standard levels and thereby finds researchers to conclusions Which is most important: The tests designed by researchers can be measured by fitness for tennis players.

The most important recommendations are: using tests designed in fitness measurement of tennis players

I. INTRODUCTION

The natural movements performed by the individual to perform certain kinetic duties such as walking and changing sudden movement because of the vulnerability of land or jump to the highest or capture of a ball or something. Many causes determine the degree of difficulty of moving performance and all these movements require fitness by the individual.

Fitness is one of the most important physical qualities for the human movement in general and success in the sports field in particular, as it plays a prominent role in developing results at various events, and in addition to its importance in mastery of motor performance, fitness is associated with all other physical traits, which helps To adjust the correct motor performance. Fitness is one of the most difficult physical and mobility. Fitness is one of the most important physical and mobility that the sports individual needs to link sports skills sequentially such as motor sentences in gymnastics, or in the performance of movements with emergency conditions and needs precision such as in some collective games (11:47: 1999). Fitness can be considered one of the most important physical and
mobility for sports activities that require change in the direction of the body, or change their situations in the air, or on the ground. Technical exercises, diving ... etc., or in the performance of movement under variable and accurate conditions, as in the football, basketball, handball, hand and hockey, for example, or in individual accessories such as boxing, wrestling or a tennis game It is considered one of the individual games that depends and significantly, according to diverse play variables and multi-skilled performance and needs tennis players for the length of play and repeated skeptical performance when exchanging balls between players at a single point, and why the fitness occupies all of the importance, it is important to test and measure it The importance of research lies in designing and underlying tests through which they measure and determine digital indicators for these tests for ground tennis.

1- 2 Research problem:

Through seeing the sources and references for fitness tests, we find specific tests such as zigzag running and, Simo, Jurising Test, , Junior Semo, Junior Solenoid and running spiral of 8 and these tests are very few and to suit the importance they occupied and here lies the search problem which researchers wanted to find a solution Through the design of a group of fitness tests as well as identifying digital indicators of tennis players commensurate and evolution in the game, so the researchers do this study so as to refute the library in general and particularly fitness with new tests and significant importance. By accurate scientific tests in measurement and unprecedented in their performance to exit scientific results serving scientific research.

1-3 Research objectives:

1 - Design and assignment of tests for fitness for ground tennis players.
2. Finding standard degrees and levels of fitness tests with land tennis players in the central and southern Iraq

1-4 Research fields:

1 - Human field: tennis players in the Middle and southern areas of Iraq.
3 - Spatial area: Tennis courts and sports halls of each governorate.

2 - Research approach and field procedures:

2-1 Research curriculum

The researchers used the descriptive method in a survey scanning to prevent the problem of research. Surveyor (means of present and teaches the situation deeper with providing researchers with detailed and analytical information) (9: 304:1993).

2-2 Sample OF Research.

(58) tennis player was selected for a tennis player in the middle and Southern provinces from Iraq and in the meaningful manner as they represent the elite tennis players and represented a number of provincial clubs and forums.

2-3 Hardware, tools and information collection.

(Arab and foreign sources, tests and measurement, expert survey forms on the validity of the proposed tests, stopwatch, measuring tape, cheaper)
2 -4 Steps design Tests.

2-4-1 Preparation of the initial formula for tests and presented to experts and specialists

To achieve the achievement of research requirements and after informing researchers on many Arab and foreign sources and auditor available on the design and assurance of tests and the tests of fitness. The final:

2-4-2 The first test:

Test Name: four characters test for fitness

Purpose of testing: Fitness measurement for tennis players

The necessary tools: Area-free barrier measurement 15 * 15 m four charts each increase of 30 cm, whistle, stopwatch

Performance Method: The player stands on the starting line in Area (a) and when he hears the hole starts at the maximum speed towards the cone (B) to laying with his hand and then launches the speed of jogging aside towards the cone (C) to lame and then launched as a speed tread aside towards the cone (D) and then start at the maximum speed towards the cone (B) to laying with his hand and then jogging jogging at the maximum speed towards the cone (A)

Registration: Calculation of the second time for the nearest 1/10 of the second

![Diagram of the first test (four characters test for fitness)](Shape (1)

Explain a test for four characters fitness)

2-4-3 The second test:

Test Name: Sixty Shape Test 2 for Fitness

Purpose of testing: Fitness measurement for tennis players

The necessary tools: Obstacles-free measurement area 3 * 3 m painted on the ground an hexagonal shape of each rib of 60 cm and must be the angle between the rib and another equal to 120 degrees, whistle, stop clock, colorful adhesive tape display 5 cm
Shape (2) Demonstrates the six-line test for fitness

**Performance Method:** The player stands within the heavier format, and when you hear the steel, jump and rotate towards the clock scorpion and when he arrives in exchange for the red line jumps against the direction of the clock to reach the red line again.

**Registration:** Calculate the performance of the second and for the nearest 1/10 of the second

**Note:** The player must at the end of the first session and when he arrived in front of the red rib to change its direction and if he continues to make it correct the path of performance and jump in the right direction.

2-4-4 Third test:

**Test Name:** 3 Cross Test for Fitness

**Purpose of testing:** Fitness measurement for tennis players

**Tools:** Measurement area 10 * 10 m

Significance of each 50 cm and the distance between them 5 m whistle, a stop hour.

**Performance method:**

The player stands on the starting line in the region (A) and when he hears the hottest to be launched at the area (B) Lids on the diaspora and then starts at the maximum speed towards the area (A) Lidor and then starts at the maximum speed towards the region and then start At the maximum speed towards the area (A) Leading around the diaspora and then starts as a speed towards the area (D) Lidor and then launches the speed of the region (A) Lead on the diaspora and then starts at the maximum speed towards the area (E) Leeds around the diaspora and then start at maximum speed Towards the area (a).

**Registration:** Calculate the performance of the second and for the nearest 1/10 of the second

**Note:** The laboratory must adhere to the performance sequence and if a line obtains the student must correct its performance and continue performance
The three-fitness cross test demonstrates

2-5 Exploratory experience

The researchers held the exploratory experience on Wednesday on Wednesday on 1/5/2019 on a sample of students of Basra University / Faculty of Physical Education and Sports Sciences / Phase III, and the goal was:
- Adjust measurements for each test, means and tools used by tests.
- How to perform tests, sequence and method of recording grades.
- Knowledge of difficulties that may face researchers when performing tests on the search sample.

2-6 Scientific foundations for tests.

To achieve the most accurate and to ensure that the researchers have to be subject to the scientific bases of honesty, stability and objectivity(4 : 252 :2000).

2-6-1 Test: (Virtual Honesty)

The researchers used the tribute to the arbitrators. (6) experts and those already mentioned. (Virtual honesty, which is one of the indicators of the content believing, which points to the extent to which the test is measured (12:73:1997) thereby achieved the most important requirement of good test conditions as (Honesty is the most important consideration to be provided in the test) (6: 101:1984).

2-6-2 Stability of test.

The stability is known as (consistency of results and is constant if we obtain the same results when re-apply on the same individuals) (2: 19: 1989), and for obtaining stability (10) players from Basra Governorate on Sunday 5/5 / 2019 At 4:00 pm in tennis courts at the Faculty of Physical Education and Sports Sciences and then reaffixed tests on the same group after 7 days on Sunday 12/5/2019 and at the same time, after the results were statistically addressed as in the table (1)
Table (1)
The correlation factor values between the two and second testing are shown to calculate the stability factor

<table>
<thead>
<tr>
<th>Processors Statistica Test Name</th>
<th>First Test</th>
<th>Second Test</th>
<th>Stability coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>S</td>
<td>M</td>
</tr>
<tr>
<td>Test four characters fitness</td>
<td>9.179</td>
<td>8.892</td>
<td>9.54</td>
</tr>
<tr>
<td>Test six shape fitness</td>
<td>10.22</td>
<td>0.841</td>
<td>10.05</td>
</tr>
<tr>
<td>The three-fitness cross test demonstrates</td>
<td>11.45</td>
<td>0.93</td>
<td>11.73</td>
</tr>
</tbody>
</table>

* Moral at the degree of freedom (8) and the level of signal (0.05) as the value of r tandem = (0.632). (435: 10).

Through Table 3, all tests have achieved high degree of stability by comparing the values (t calculated) with the value of (T calculated) are greater than the previous value (T).

2.6.3 objective test.

Means the objectivity (to give the test itself or approach that has been accompanied by two or more arbitrations) (7: 44: 2000). The experience was evaluated on 12/5/2019 by arbitrators * The results were obtained and processed statistically as shown in a table (2)

Table (2)
The values of the association between the measurement of the first and second judgments

<table>
<thead>
<tr>
<th>Processors Statistica Test Name</th>
<th>First Referee</th>
<th>Second Referee</th>
<th>Stability coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>S</td>
<td>M</td>
</tr>
<tr>
<td>Test four characters test fitness</td>
<td>9.179</td>
<td>8.892</td>
<td>9.28</td>
</tr>
<tr>
<td>Test six shape 2 fitness</td>
<td>10.22</td>
<td>0.841</td>
<td>10.43</td>
</tr>
<tr>
<td>The three-fitness cross test demonstrates</td>
<td>11.45</td>
<td>0.93</td>
<td>11.31</td>
</tr>
</tbody>
</table>

* Moral at the degree of freedom (8) and the level of indication (0.05) as the value of R tandem = (0.632).

From (table 2) all of the results of the correlation between the results of the judgments were highly assured by objective tests. (13:435: 1999).

2-7 the main experience

The researchers conducted the main experience of 20-30 / 5/2019 on (58) applicant tennis player such as a group of governorates and south (Basra 10, Maysan 7, Karbala 15, Baghdad 20, Babil 6).

2.8 Statistical means:

The researchers used the statistical pouch.

3. Displays and discussion results.

www.turkjphysiotherrehabil.org
3.1 View the results of fitness tests and analyze

<table>
<thead>
<tr>
<th>Processors</th>
<th>Test Name</th>
<th>Arithmetic Mean</th>
<th>Mediator</th>
<th>Mode</th>
<th>Standard Deviation</th>
<th>Skew Modulus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test of Basra University 1 for fitness</td>
<td>9.33</td>
<td>9.14</td>
<td>8.59</td>
<td>0.79</td>
<td>*0.93</td>
<td></td>
</tr>
<tr>
<td>Test of Basra University 2 for fitness</td>
<td>10.21</td>
<td>10.0</td>
<td>11.0</td>
<td>0.81</td>
<td>*0.44</td>
<td></td>
</tr>
<tr>
<td>Test of Basra University 3 for fitness</td>
<td>11.57</td>
<td>11.32</td>
<td>10.97</td>
<td>0.86</td>
<td>*0.49</td>
<td></td>
</tr>
</tbody>
</table>

Through table 3, all the values of the liabilities are less than 1, which means good distribution of sample and therefore the possibility of extracting its standard grades

3.2 Standard grades for fitness tests

To determine the standard grades in fitness tests, researchers used the revised class in a relay manner and the following grades were extracted

<table>
<thead>
<tr>
<th>Standard levels and ratios in the natural distribution curve</th>
<th>Standard grades</th>
<th>Test four sparkle 1 fitness</th>
<th>Test six shape 2 fitness</th>
<th>The three-fitness 3 cross test demonstrates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Crude grades</td>
<td>Player No</td>
<td>Crude grades</td>
<td>Player No</td>
</tr>
<tr>
<td>Very good (4.86)</td>
<td>100-81</td>
<td>6.95 less</td>
<td>7.75 less</td>
<td>8.56 less</td>
</tr>
<tr>
<td>Good (24.52)</td>
<td>80-61</td>
<td>8.53-6.96</td>
<td>9.39-7.76</td>
<td>10.69-8.57</td>
</tr>
<tr>
<td>Middle (40.96)</td>
<td>60-41</td>
<td>10.11-8.54</td>
<td>11.04-9.4</td>
<td>12.44-10.70</td>
</tr>
<tr>
<td>Accepted (24.52)</td>
<td>40-21</td>
<td>11.69-10.12</td>
<td>12.68-11.05</td>
<td>14.18-12.45</td>
</tr>
<tr>
<td>Week (4.86)</td>
<td>20-1</td>
<td>13.2 more</td>
<td>12.69 more</td>
<td>14.19 more</td>
</tr>
</tbody>
</table>

Through (table 4), the levels achieved by the sample are shown in fitness tests and find that the biggest number of The players were at the level (average) as the number of players (28-22 - 26) respectively in fitness tests and the lowest number was weak and the number of players was (3.2.4), while the sample did not achieve any remember ratio at the very good level.

The researchers are due to the reason that fitness needs a great motor consensus and the sample are from the tense players of the applicants. Developing this component where the visual, audio and sensual image (smooth sense) helps www.turkjphysiotherrehabil.org
the kinetic duty required to be implemented, which helps the individual to master and speed performance. (5: 104: 1999)

"Multiple ways must be used within sports training to try to develop and develop the form of fitness in the individual sports individual, including change in the speed, timing of movements and change in exercise performance or exercise performance in certain additional movements." (3: 165;2001). Since the tests are designed for tennis players who have many physical qualities because of a variety of movements and skills and all skills. The designed tests, which were measured as prepared and appropriate for the research sample and as they see (1: 123;2013) Fitness are closely related to all physical qualities and changing trends and a rare property is within the performance of mathematical mobility and shows fitness during the diverse motor performance where the need to complete the movement One and its relay and changes according to certain circumstances. The whole saying is an important factor in the performance of all sports activities. The individual is capable of putting its body to another maximum speed and consensus that has maximum fitness and so that fitness is associated with components, elements and many properties. They are compounded by all components and elements. This is the safety of the nervous system for an individual and the possibility of compatibility with the muscle system

II. Conclusion

The tests are designed by researchers through which a component to measure fitness for tennis players.

1. The standard grades and levels, which researchers extracted represent the true level of performance of the research sample

2. The research sample was distributed on four levels are (weak acceptable, average, good) did not check any sample percentage remember in a very good level

Recommendations:

1. The use of tests designed to measure fitness in a game of tennis and other sports

2. The legalization of tests designed on other samples.

3. A study similar to other physical qualities

REFERENCES

7. Marwan Abdel Majid Ibrahim: 2000" the foundations of scientific research for the number of university theses," i 1, Foundation Allwarq for Publishing and Distribution, Amman
8. Mustafa Mahmoud Imam (and others). 19990" Calendar and measurement”. Baghdad: Dar Al-Hikma Printing and Publishing.
9. J. Mahjoub 1993 "methods of scientific research and methods". Baghdad. Dar Al-Hikma for printing and publishing..
10. Wadih Yassin al-Tikriti: 1999"statistical applications and computer use in physical education research", Mosul Press,
11 - Smolensky V.M: 1996 Gymnastics for physical Education majors”. Physical Education and