International Journal of Psychosocial Rehabilitation, Vol.24, Issue 09, 2020
ISSN: 1475-7192

Developing functional adaptation in terms of physical competence of some tennis skills

[1] Muhanad Karim eabd alzahah , [2] Dr. Imad Kadem Yasser

Abstract: *The tests are one of the most important sciences because they are closely related to the amount of results that they seek through the field application to know the scientific truth and through the results, prediction is the goal that the researcher wanted to know the amount of adaptation through some physical abilities and efficiency and some tennis skills, and the researcher concluded to obtain equations to predict from The studied variables are of clear scientific significance, consistent with the nature of the approved components.*

Key words*: tests, prediction, adaptation, physical abilities and aptitude.*

1- Introduction:

Global sport has developed during the last two decades a great development, as this development included all individual and group sports that achieved the highest levels of achievement as a result of research and scientific studies in addition to that, diversification of means had an important and essential role in the development of the game, and tennis is one of the games Individuals that have received a large share of interest and this game is practiced in various parts of the world, in addition to that achieving great achievements as a result of scientific planning for the various variables that would lead to achieving the goal, and statistical operations such as forecasting are one of the tasks that He revealed to us the amount of logical aspects that are based on application processes in order to know the true reality of performance and then we can reach equations that can achieve the result for us that he wants to reach in the most accurate scientific details that benefit the player or coach alike to what is the scientific truth to be known ,Hence the research problem crystallized through the field experience of the researcher for this game as a player. Notice the lack of scientific research that dealt with this scientific aspect as well as the difficulty of judging objectively and accurately about the real level of the skill mastery process according to the level of physical competence of the player as well as the amount of recognition of his ability to physical efficiency, and with regard to goals It included identifying predictive equations for the cumulative adaptation of some of the skills of tennis in light of the Designing tests for skill compatibility and skill balance included identification and equations level of physical competence among the members of the research sample, identifying the level of some skills of tennis for the members of the research.

2- Research methodology:

The research method is the method used by the researcher to determine the steps of his research and through which a solution to his problem can be found." In light of this, the researcher used the experimental approach to suit his nature of the research problem, in addition to that the most important characteristic of accurate scientific activity is Using the experiment.

2-2 Research Sample:

The sample is the main factor to reach the goal in order to achieve accurate results, and in light of this, the research sample was randomly chosen from the third stage students in the Faculty of Physical Education at Dhi Qar University, for the academic year 2019-2020, and the final number of the research sample reached (30) A student from the parent community of (60) students, and the final sample constitutes a percentage of (50%) of the community of origin.

[1] *AL Shatrah Education Directorate, Mhndw182@gmail.com*
[2] *Physical Education and Sports Sciences, Thi -Qar University, drsportam@gmail.com*

2-3 tests used (1):

First: Measuring Physical Efficiency PWC170:

-Measurement name: Bio-efficiency (Carpman).

- purpose of measurement: to measure the level of vital efficiency.

Physical efficiency is calculated after the heart rate is calculated by the electrocardiograph. Then the Carbmann equation is used to extract the value of absolute physical efficiency at a pulse level (170 beats / minute) and based on the measurements obtained from the tests as follows: -

$$PWC170 = N_1 + (N_2 - N_1) \frac{170 - PS}{PS_2 - PS_1}$$

2-4 tests used.

First - skill tests:

1- Transmission skill.

Name of the test: (White test of transmission accuracy) [2]

Test tools: Test equipment: tennis court - rackets - tennis balls (6) colored tapes - tennis net.

* Method of performance: The tennis court is planning, and a rope with a diameter of 1/4 inch from its ends is fixed in the two net legs from the top so that the distance between it and the net is (4) feet, and the distance between it and the ground is (7) feet, and it is noted that it is tight and parallel Exactly for the grid, - the numbers 6-5-4-3-2-1 are values that indicate their dimension regions as follows:

The number (1) indicates a rectangle of 15 x 13.5 feet.

The number (2) indicates a rectangle of 6 x 10.5 feet.

The numbers 3,4,5,6 indicate rectangles of dimensions of 1.5 x 3 feet each.

The same numbers 6-5-4-3-2-1 indicate the degrees assigned to each of the regions where the ball falls.

The test is explained and modeled before it is applied to players.

The test application is preceded by a warm-up of no less than

(10 minutes at a tennis court).

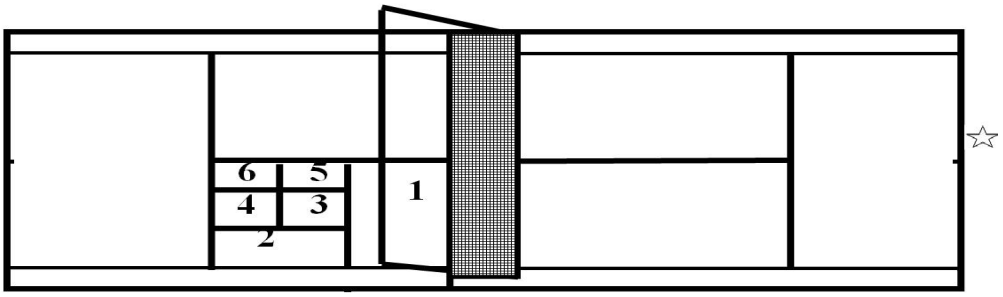

Figure (1)

Special scores illustrate conducting white hitting tests

* Method of performance: After that, the player stands behind the base and then strikes (5) consecutive balls on the targets set in the opposite half of the field provided that all balls pass between the net and the rope, and where the player tries to get the highest score by dropping the ball in the region No. (6)

*: calculate grades.

Balls that touch the net or rope are not counted as an attempt and are repeated again.

* The ball that passes over the rope is counted as an attempt and granted a zero score even if it falls in any of the goals.

* Each correct sphere is calculated for the value of the degree in the area in which it falls and shown in the figure later.

The player's score is the sum of points earned from the five attempts

2- Frontal Stroke Test:

* Test name: (Revised White 1966)… (3)

* Test purpose: To measure the forward ground stroke skill.

Test tools: Test equipment: tennis court - rackets - tennis balls (6) colored tapes - tennis net.

* Method of performing the test: The tennis court is planning from one of its sides, attaching a rope from both ends in the two legs of the net parallel to it and at a height of (7) feet from the ground and (4) feet from the net and it is noted that it is tight and completely parallel to the net, draw three parallel lines between a line The transmission and the baseline so that the distance is (4.5) feet.

* The numbers (5-4-3-2-1) indicate the degrees assigned to each of the regions where the ball falls.

* The player stands on the midpoint, which is located in the middle of the baseline, while the coach or teacher stands in the middle of the stadium facing the midline and has a box or basket filled with tennis balls.

* The coach (the teacher) strikes the ball with the paddle towards the player behind the transmission line, where he moves to take the appropriate position to hit the ball by the front floor way to pass over the net and below the rope to fall in the areas shown by the numbers in the middle of the facing field, trying to achieve the highest score every time in the region no (5).

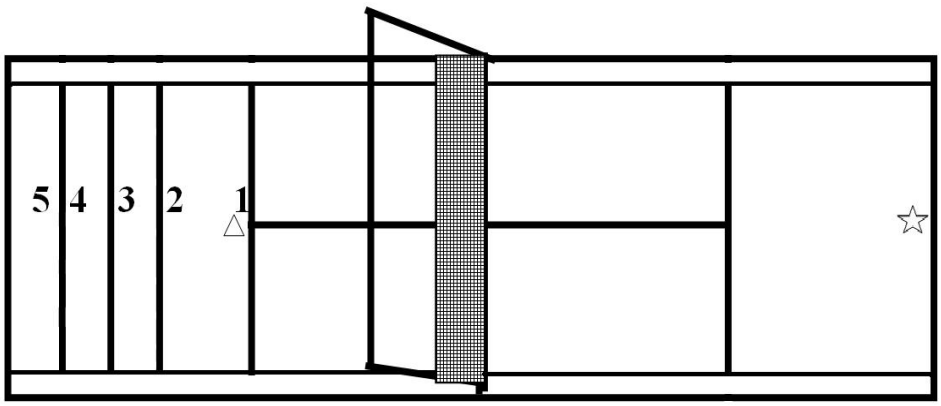

Figure 2

Demonstrate special scores for a modified HBT test for the front and back hitting skills

The player repeats the previous performance (5) consecutive attempts for the purpose of training on the test.

The test begins when the player performs the performance (5) times.

* In the same way in all attempts, the coach (the teacher) strikes the ball in a uniform and legal manner so that it is as similar as possible to the balls in the actual game situations.

* Calculating grades: -

The ball that passes over the rope and the net is returned and no attempt is counted.

The player's score is the sum of points he earns from hitting (5 balls) using the forward ground strokes method.

2-4 The foundational principles: In order to obtain the scientific basis for the perception test, which is determined by honesty, consistency and objectivity, the following has been done:
First - The stability of the test: In order to verify the stability of the tests used, the researcher used the test and re-test method, as the test was applied to a sample consisting of (4) players from the members of the research sample and this experiment was conducted on 25/2/2019 and the test was repeated after (7) Days on 4/3/2019 after which the data were statistically processed, as the fakronbach coefficient was used as shown in Table (1).

Table (1)
Scientific coefficients tests show the tests in some basic tennis ground skill

Variables	Sample	معامل"ألفا كرونباخ Cronbach's Alpha	Sig (0.05)	Honesty Self
Transmitter accuracy	4	0.92	0.02	0.95
Forehand		0.93	0.01	0.96
Backhand		0.91	0.02	0.95
Physical efficiency		0.94	0.01	0.96

Mann by observing Table (1) shows that the test has acquired the characteristic of stability and stability as stability is considered a condition of the scientific foundations because the correlation coefficient between the results of its return twice indicates the coefficient of the test stability, if the correlation is significant (1) ….(4) .

Second - honesty of the test: honesty is the most important condition for a good test, for an honest test is the one that succeeds in measuring what was set for it (1), In order to give legitimacy to this test in its application to the research sampl .

a- Content honesty: by presenting the test to experts and specialists in the field of mathematical specialization to judge the validity of this test in measuring the trait to be measured, where experts and specialists agreed on the validity of this

test as it states that "we can prepare the test truthful if it is presented to a number of specialists In the field that the test measures and they judge that it measures what was set to measure it efficiently. "…(5) By this, the researcher has achieved one of the types of honesty which is content honesty. .

b- The objectivity of the test: "The test is considered objective if it gives the same degree regardless of who corrects it." This means excluding the experimenter's autonomy, meaning that the greater the subjectivity, the less objectivity will beif the degree of its stability is high……(6). .

2-5 final exams: The tests were conducted in their final form after completing the appropriate period of time for the coach program, which took a period of two months, which was prepared for the youth team for the purpose of preparing for the Arab Youth Championship that will be held in one of the Arab countries and the researcher was keen that the conditions be similar to the tribal tests that were used for the purpose Homogeneity and parity in terms of location and time, and the same steps were used in the pre-test in the method of measuring and special tests for this research to find out the amount of cumulative adjustment that occurred as a result of applying a group of players to physical exercises and a skill that was used The trainer served her during this ti. . **2-6 Post-tests**: The post-exams were conducted on Saturday and Sunday, 15/1/2020 after completing all performance requirements for the appropriate tests for the purposes of the research sample, for the measurement process that suits the tests and the extent of the real level of the sample members in light of the capabilities their levels of physical efficiency gain basic skills in tennis , By using the same tests that he used in the tribal tests with all their conditions, supervisors, tools and means, in addition to that, using feedback and encouraging students to perform well, through the researcher adopting the competition method to show their best See the possibilities. .

2-7 Statistical means: The necessary statistical methods were used that helped in solving the problem of research using the statistical bag (spss) version 23. .

3- Presenting, analyzing, and discussing results to predict cumulative adjustment.

3-1 Presentation, analysis and discussion of the results of the variable measurement (physical efficiency). Table (2)

Shows the results of the amount (f) of the stability of the analysis of variance in the variable (physical efficiency)

ANOVA[a]

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	5668.575	1	5668.575	21.861	.000[b]
Residual	7260.392	28	259.300		
Total	12928.967	29			

a. Dependent Variable:
b. Predictors: (Constant) .

Table (3)

Shows a significant amount of degree (t) and a formula for predicting the cumulative adjustment in the variable of physical competence among the individuals in the research sample

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	. Sig
	B	Std. Error	Beta		
(Constant)	28.052	8.929		1.574	.127
Efficiency	6.428	.519	.662	4.676	.000
Y= a*x+B= 34.48					

After the presentation and analysis of the two tables (3,2), which indicate the amount of the significance of the prediction as the statistical method for forecasting indicates the high significance of the amount of adaptation, the researcher attributes this development to the effectiveness of the method used which led to effective adaptations in the functional condition of the cardiovascular system, especially in terms of The ability of these devices to adapt to the given voltage, and the ability of these devices to supply the energy needed to continue the effort, and since the physical efficiency depends on using them on the heart rate after the first voltage (PS1) and after the second voltage (PS2), according to the Carpman equation, the efficiency values Physical It is higher when the heart rate drops after the first and second efforts and when the difference between them is slightly.

He pointed out that "structured athletic training clearly affects the functional efficiency of the cardiovascular system, and with the improvement of the functional condition the athlete can perform a greater work with economics with the energy expended from what is achieved from physiological adjustments is the result of the athlete's subject to a set of regular and codified exercises… (7) , Also, the absolute development rates for physical efficiency (PWC170) have topped the development rates for the rest of the functional indicators - under research - which confirms that the physical efficiency was the most influential functional variable as a result of the volume of exercises embodied in the time period that was applied to the members of the experimental sample, and that the researcher attributes that To achieve the required level of forecasting by upgrading the level of physical fitness elements, and this is what the first and second effort index indicated, and on the other hand, this development that resulted from the integration in the level of physical characteristics was reflected in a direct way to an increase in ability in the level of skill performance in Afra D sample of the research, he confirmed, "The development occurring to any part of the physical traits leads to an improvement in the skill level"… (8).

Likewise, the researcher believes that the adaptation processes occur as a result of practicing any type of physical performance, and this in turn leads to achieving adaptations in most functional systems. The body's systems are linked to the type of activity and the time period "(7).

Conclusions:

1- The evolution of the physical aspects as a result of the time period used by the individuals in the research sample.

2- Predictive equations indicate the amount of adaptation that exists for the members of the research sample.

Recommendations:

1- Adopt equations to predict the level of adaptation as one of the measurement methods.

2- Applying equations to predict other levels of activities or other skills of this game.

3- Carrying out other studies that include different sports activities.

References

(1) Brown , Jim success , second Edition , Human Kinetices , Tennis steps to, 2010 .
(2) Carolyn , Kessler : Cooperative language learning teacher resource book chapter , 1.5.8.9 , 1999 .

(3) Divera, Diae, Pedrotty, " using cooperative learning disabilities the university of taxas at Austin, " L D forum: council for learning Disabilities,1996 .
(4) Imad.k.Yassir : Testing of Fsulogy &Buocmstery,Iraq,2019,p45.
(5) Hussein,T,the international Encyclopedia of education,Vo1.2Newyork , Pergamum Press,2014 .
(6) Johson ,D.W.R.T.Johnson - comprativ in the class room , Eding,Minn,Intraction book – 2012.
(7) Kagan , s , Cooperative learning Reassure for Teachers River Side California , 2013, p241 .
(8) Okebukola , P.A : The Relative effectiveness of Cooperative and Competitive intraction Techniqes in science Classes – science Education , Vo1.69 , No.4 , 2017,p54 .