

International Journal of Physiology, Health and Physical Education



ISSN Print: 2664-7265
ISSN Online: 2664-7273
Impact Factor: RJIF 8
IJPHE 2024; 6(2): 06-11
www.physiologyjournals.com
Received: 03-05-2024
Accepted: 07-06-2024

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Designing a model for physical abilities and basic skills for ground tennis according to the emotional characteristics of female students of the College of Physical Education and Sports Sciences

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DOI: <https://doi.org/10.33545/26647265.2024.v6.i2a.65>

Abstract

The study aimed to identify the values of physical abilities among female students of the College of Physical Education and Sports Sciences, as well as identifying the values of some basic skills among female students of the College of Physical Education and Sports Sciences, as well as designing a theoretical model for the effectiveness of ground tennis to predict emotional traits among female students of the College of Physical Education and Sports Sciences. The researcher also used the descriptive approach using the comparison method to suit the nature of the problem. The research population was identified as third-year female students in the College of Physical Education and Sports Sciences at Al-Qadisiyah University, who numbered (28) students. Thus, the sample represented 100% of the total research population. The levels are valid for measuring the characteristic to be measured, and most of the levels are the average level for each of the physical abilities, skill performance, and emotional traits.

Keywords: Physical abilities, basic skills, ground tennis

Introduction

Man always seeks to create different horizons in aspects of life, trying to achieve the highest levels of comfortable living thanks to scientific research in general and the sports field in general. Therefore, measuring cultural progress in the science of sports training is one of the basic pillars for raising the sports level through codifying training curricula to create champions for all events. Various sports in general and the effectiveness of boxing in particular, as it seeks to reach the highest levels in all physical, technical and skill aspects to achieve the desired goal.

The major role that contributes to developing physical abilities and achieving achievement is the use of excitement and suspense exercises, and emotional traits have a role in enhancing and preserving skills, as many specialists in the field of sports indicate that these exercises are of great importance in preparing learners physically and skillfully through. Exposure to an atmosphere similar to competition.

The game of tennis is one of the games that has become widespread in recent years and has received wide attention. Therefore, it is natural for each of its categories to have its own physical and skill capabilities, through which one can identify the best elements for this game.

In light of the above, the importance of the research lies in developing a model design to identify the extent of developing physical abilities and skill performance according to the emotional characteristics of female physical education students and the blame for sports.

Research problem

The ground tennis event is one of the activities that depends on the physical capabilities of female physical education students. However, through the researcher's observation and insight into his follow-up of the development in physical capabilities as well as skill performance, he found that although the studies dealt with many activities, they did not employ the actual results.

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In a way that can theoretically predict what emotional traits you might need, and from here the cognitive problem of the study emerges, which is the question of the extent of benefit from designing a model for physical abilities and skill performance among female students of the College of Physical Education and Sports Sciences.

Research objectives

- Identifying the values of physical abilities among female students of the College of Physical Education and Sports Sciences.
- Identifying the values of some basic skills among female students of the College of Physical Education and Sports Sciences.
- Designing a theoretical model for the effectiveness of ground tennis to predict the emotional traits of female students at the College of Physical Education and Sports Sciences.

Research hypotheses

- There is a relationship between some physical abilities and emotional traits among female students of the College of Physical Education and Sports Sciences.
- There is a relationship between some basic skills and emotional traits among female students of the College of Physical Education and Sports Sciences.
- It is possible to design a theoretical model that works to predict the emotional traits of female students in the College of Physical Education and Sports Sciences through the results taken from the sample.

Research fields

Human field: female students of the College of Physical Education and Sports Sciences/University of Al-Qadisiyah

Spatial field: Playgrounds of the College of Physical Education and Sports Sciences / Al-Qadisiyah University.

Time field: 12/1/2024 until 18/3/2024.

Research methodology and field procedures

Research method

The researcher used the descriptive method using the comparison method because it suits the nature of the problem. "Descriptive research, by its nature, is highly suitable for confronting problems on a broad scale, and it is often used as a preliminary research procedure in order to open new areas of study" (Ibrahim Ahmed Salama. 1980) [1].

Community and sample research

The research community was identified as the third-year female students in the College of Physical Education and Sports Sciences at Al-Qadisiyah University, who numbered (28) students. Thus, the sample represented 100% of the total research population.

The researcher also took some variables that represent physical abilities, as well as some basic skills for the purpose of ensuring the homogeneity of the research sample.

Means and devices used

In order for the researcher to be able to complete his experiment, it is necessary to use some means and devices that help to accomplish it and complete the research and

complete it in the best possible way. "They are through which the researcher can collect data, solve his problem, and achieve the goals of his research" (Dhawqan Obaidat and others, 1992) [2]

Data collection methods

1. Observation.
2. Arab and foreign sources and references and the information network (the Internet).
3. Personal interviews.
4. Questionnaire.
5. Data registration form.
6. One Dell computer.
7. (3) Casio electronic stopwatch.

His field research procedures

Determining physical capabilities

For the purpose of determining the physical abilities of female physical education and sports science students, a group of physical abilities and basic skills was identified, which are as follows:

- Explosive Ability
- Ability distinguished by speed

Identifying basic skills

- Serve
- Flying strike

Test description

Standing long jump test (Ibrahim. Marwan Abdel Majeed: 2001) [2].

Tools used: A mat, flat ground, or a jumping hole with a tape measure.

The goal of the test is to measure the explosive strength of the leg muscles.

Description of the test: The tester stands behind the starting line, with the distance between his feet a knot or an inch wide. The fingertips are on the starting line to prepare for the jump. The person swings his arms back and forth next to the knees, where he begins to extend the knees and swing the arms forward at the same time. Rules

- The student is given three attempts
- The distance is measured from the rise line, the heels or any part of the body that touches the ground closest to the rise line

Register: The best attempt from the three attempts is scored to the nearest centimeter.

Ability distinguished by speed

Test of three consecutive jumps (Abdul Jabbar. Qais Naji and Bastawisi Ahmed: 1987) [4].

The aim of the test: is to measure the strength and speed characteristics of the leg muscles.

Tools used: A flat place with a length of (12 m) and a width of (2.5 m) and not smooth, a tape measure.

Test procedures: The athlete stands behind the starting line with his feet slightly apart. From this position, the athlete

jumps three consecutive jumps by pushing his feet abilityfully for the farthest distance.

Test conditions

- Jumping is done with both feet, and landing with both feet.
- It allows swinging the arms.

Register: The distance from the starting line to the nearest mark left by the player is measured in meters and its parts.

Description of skill tests

Serving: Chavez and Neider test of serving: (Elaine Wadih Farag, 1986) ^[5]

Objective of the test: This test measures the ability of the serve.

Tools

- One racket for each laboratory, 14 tennis balls.
- Tennis Court.

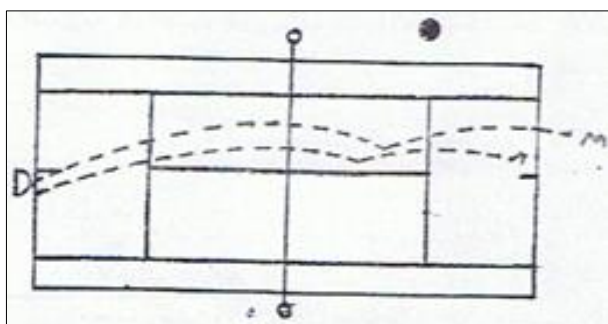


Fig 1: Shows the ability of the serve

Determine the work

- The tested server stands on the individual court in the serving position and approximately one meter away from the left or right side of the center mark.
- The scorer notes and records the correct attempts.
- The assistant collects the balls and assists the scorer in observing.

Method

- 7 balls are placed on each side of the center mark.
- The sender starts from the right side and performs two training attempts.
- The tester hits 5 serves directed to the correct serving area.
- The server moves to the left side of the center mark and does the same thing to the serving area.

Register

- Balls falling outside the specified serving area are scored (zero).
- Balls falling inside the correct serving area are scored 2 points if the next bounce of the ball is in an area in front of the base line, and 4 points are scored if the next bounce of the ball is behind the base line.
- Balls that fall over the lines defining the serving area are considered correct.

Search tool

The researcher relied on the Thomas Tutko scale for emotional traits, prepared by Zahaf Muhammad 1012,

which consists of (42) items. The scale was implemented on female students of the College of Physical Education and Sports Blame, and the scientific foundations of the scale were extracted in order to standardize the scale on the research sample (Zahaf Muhammad, 2012) ^[6].

Scientific foundations of the scale

Scientific foundations of the scale

First: The validity of the scale

Apparent validity was achieved by presenting the items of the scale before applying it to a group of experts, who are characterized by experience that enables them to judge the validity of the test items in measuring the characteristic to be measured. The researcher verified this type of honesty in verifying the validity of the scale by presenting its items, instructions, and answer alternatives to A group of experts specialized in motor learning, sports psychology, and tennis.

Second: Stability of the scale

Reliability is one of the conditions that must be met in the scale in order for it to be accurate. Reliability means "that the test gives the same results if it is re-applied to the same individuals in the same circumstances." (Muhammad Sobhi Hassanein, 1995) ^[7] In order to verify the stability of the creative thinking scale, the researcher used the following methods:

First: split half method

The split-half method is one of the most widely used reliability methods, due to its economy of effort and time. Therefore, the researcher relied on the questionnaires of a group of individuals in the scale's sample, dividing the scale's items into two halves, odd-numbered and even-numbered halves. After applying the scale to the research sample, the researcher corrected the answers in the test section. It is divided into two equal parts, where the first section includes odd items, while the second section includes even items, and since the current scale has (42) items. The grades were summed so that each student had two grades, and the correlation coefficient was extracted between the sums of the grades of the two halves using the Pearson method, as the correlation coefficient reached (0.72). In order to obtain complete reliability of the test, the researcher applied the (Spearman-Brown) equation, and thus the value of the test reliability coefficient was (0.87) which is a high stability index.

Second: The Cronbach coefficient

"It is called internal homogeneity, and it is one of the most common and most appropriate coefficients and indicates the strength of the correlations between the items in the test" (Amira Hanna Markus, 2001) ^[8], as the idea of this method depends on the extent to which the items correlate with each other within the scale, as well as the correlation of each item with the scale as a whole, and the average correlation coefficients The interior between the paragraphs is what determines the Cronbach coefficient, and it appears that the value of the reliability coefficient is equal to (0.82), which is a reliable indicator of stability.

Exploratory experience

A group of (10) female students from outside the research sample was selected to conduct the exploratory experiment on 2/18/2024 for the purpose of:

- Identify the suitability of the educational curriculum and tests with the level of the sample members
- Adapting tests to a sample.
- Identifying the efficiency and adequacy of the assistant work team. The results of the exploratory experiment were as follows:
- The suitability of the questions and the extent of response by the students were identified.
- Efficiency of the work team
- The time required has been identified.

The main experiment

The main experiment was conducted on February 15-18, 2024, and consisted of physical and skill tests and presenting a measure of emotional traits to the sample.

Statistical methods

- Account medium
- Standard deviation
- Standard degree
- Standard levels
- Evaluation model profile.

Display and analyze the results: The results were presented in the form of tables for easy presentation of scientific evidence because it is an appropriate explanatory

tool for research.

Finding the criteria used in the search

The raw values obtained by applying the scale to the study sample, and the sources of the standards are before statistical treatment of them, and it is necessary to know the interpretation of the raw scores and know their meaning. In order to evaluate the strategic performance of the research sample, we resort to using the score conversion method. The raw materials obtained from the research sample reached standard scores for the individuals subject to evaluation. By obtaining the standard scores, the standard levels can be drawn after ensuring their normal distribution, that is, the distribution of the raw scores before converting them to standard scores, because it is not possible to convert to standard scores unless the distribution of the raw scores is moderate. In order to achieve what the research aims to achieve in terms of levels, it enables it to mark six levels with a range of six standard deviations (3) to the right of the mean and (3) to the left of the mean with a proportional and parallel distribution, i.e. moderate. This means that the base range of each level is equal to one standard deviation and with standard degrees (10) for each level. Accordingly, the range of levels in standard grades is equal to (60) grades, limited to (20-80). These levels can be named as follows:

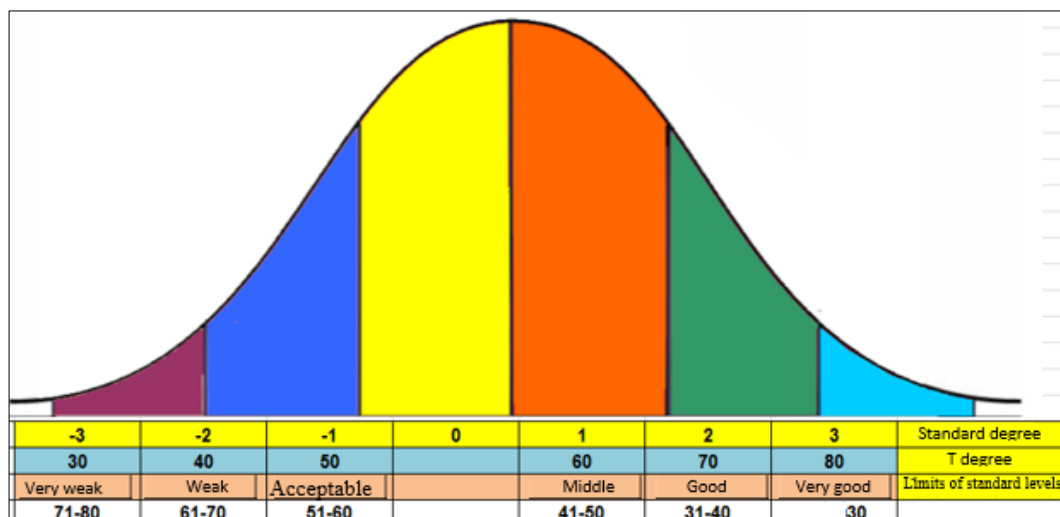


Fig 2: Standard levels and their limits

Building standard levels

The researcher extracted the standard T-scores for the individuals' scores in the evaluation according to the strategic performance axes, as they are very useful in determining the standard scores and levels of individuals on the strategic performance form, and the T-score is nothing but a standard score whose average is equal to (50) degrees and its deviation is equal to (10) degrees. It is usually used

to convert raw scores into scores that can be summed, compared, and made easy to interpret. One of the advantages of this score is that it does not include negative values, and at the same time it is a means that helps us compare strategic performance between individuals.

Standard levels of physical abilities

Table 1: Shows standard levels of explosive ability

Standard levels		Repetitions	percentage	Adjusted ratio	Cumulative percentage
Very weak	28.92-36.59	5	10%	10%	15
weak	36.74-44.26	12	25%	25%	56
acceptable	44.41-51.23	7	15%	15%	140
middle	51.93-59.59	24	50%	50%	213
good	61-70	0	0	0	
very good	71-80	0	0	0	
Total		48	100%	100%	

Table (1) shows the repetitions and percentages of explosive ability, where the highest percentage was average with a repetition of (24) with a percentage of (50%), followed by a

weak percentage with a repetition of (12) with a percentage of (25%), which equals very weak with a repetition of (5) with a percentage of (10).%

Table 2: Shows standard levels of ability characterized by speed

Standard levels		Repetitions	Percentage	Adjusted ratio	Cumulative percentage
Very weak	28.92-36.59	10	21%	21%	31%
weak	36.74-44.26	14	29%	29%	79%
acceptable	44.41-51.23	20	42%	42%	100%
middle	51.93-59.59	4	8%	8%	
good	61-70	0	0	0	
very good	71-80	0	0	0	
Total		48	100%	100%	

Table (2) shows the repetitions and percentages of strength characterized by speed, as the highest percentage was acceptable with a repetition of (20) with a percentage of (42%), followed by a weak percentage with a repetition of

(14) with a percentage of (29%), followed by very weak with a repetition of (10) with a percentage of (21).%

Standard levels of skill performance

Table 3: Shows standard levels of serve with a tennis ball

Standard levels		Repetitions	Percentage	Adjusted ratio	Cumulative percentage
Very weak	28.92-36.59	12	25%	25%	27%
weak	36.74-44.26	13	27%	27%	79%
acceptable	44.41-51.23	12	25%	25%	142%
middle	51.93-59.59	11	23%	23%	100%
good	61-70	0	0	0	
very good	71-80	0	0	0	
Total		48	100%	100%	

Table (3) shows the repetitions and percentages of strength characterized by speed, as the highest percentage was weak with a repetition of (13) with a percentage of (27%),

followed by an acceptable percentage with a repetition of (12) with a percentage of (25%), and it is equal to very weak with a repetition of (12) with a percentage of (25).%

Table 4: shows the standard levels of fly strike

Standard levels		Repetitions	Percentage	Adjusted ratio	Cumulative percentage
Very weak	28.92-36.59	12	25.0%	25.0%	25.0%
weak	36.74-44.26	12	25.0%	25.0%	50.0%
acceptable	44.41-51.23	12	25.0%	25.0%	75.0%
middle	51.93-59.59	12	25.0%	25.0%	100.0%
good	61-70	0	0	0	
very good	71-80	0	0	0	
Total		48	100%	% 100	

Table (4) shows the repetitions and percentages of the plane strike, as all percentages were equal with a frequency of (12) at (25%).

Standard levels of emotional traits

Table 5: Shows the standard levels of emotional traits

Standard levels		Repetitions	Percentage	Adjusted ratio	Cumulative percentage
Very weak	28.92-36.59	14	29%	29%	35
weak	36.74-44.26	12	25%	25%	173
acceptable	44.41-51.23	17	35%	35%	231
middle	51.93-59.59	2	4%	4%	94
good	61-70	3	6%	6%	100
very good	71-80	0	0	0	
Total		48	100%	100%	

Table (5) shows the repetitions and percentages of emotional traits, where the highest percentage was acceptable with a frequency of (17) with a percentage of (35%), followed by a very weak percentage with a frequency of (14) with a percentage of (29%), followed by

very weak with a frequency of (12) with a percentage of (25%). %).

Evaluation model for the variables under study

In order for the researcher to be able to identify and

estimate the reality of the emotional traits of the research sample in each of the ability indicators (physical - skill) while making the necessary comparisons in terms of type, he resorted to using the “personal profile” method or the “profile drawing” method to indicate the levels achieved. For individuals in the research sample of both types when considering any of the variables investigated and concerned with indicators of abilities (Physical - skill), as the idea of developing a model for each game or sporting event has clearly demonstrated its increasing positive value in selecting distinguished female students and setting appropriate training requirements for them” (Nouri Ibrahim Al-Shouk, 1996) [9] and this method Many features allow

researchers and trainers to know the actual reality of individuals’ achievement because they give a clear graphical form for all the variables studied individually and together, which facilitates the process of real-time evaluation, and then determines the level of individuals’ capabilities and enables them to develop appropriate training programs, in addition to making successive comparisons according to the training stages and in order to facilitate The researcher’s task is for the reader to understand how to use these The method in the process of evaluating the indicators of the capabilities (physical - skills) possessed by the individuals of the research sample according to the emotional traits will take the form of a model that represents that.

Table 6: An evaluation model for the variables under study

Variables	Levels						
	Emotional traits	Very weak	weak	Acceptable	average	good	very good
Explosive ability	40		*				
Ability distinguished by speed	60				+		
Transmitter	55			**			
Flying strike	55			**			

Conclusion and Recommendations

Conclusion

- Determining grades and standard levels for female physical education and sports science students
- The levels of physical abilities were determined, which were measured and the results extracted.
- Levels of skill performance were determined, which were measured and the results extracted.
- The levels are valid for measuring the characteristic to be measured.
- He overcomes most of the levels, which are the average level of physical abilities, skill performance, and emotional traits
- The members of the research sample achieved levels of varying percentages in the variables under study according to a normal distribution.

Recommendations

- It is necessary to consider taking tests of a high standard as a condition for success and failure in physical and skill abilities
- Taking advantage of the levels of skill and physical ability tests that were reached in this study by using them to determine the level of skill performance among female students.
- Conduct similar studies on other skills that were not covered in the study.

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