Remittances Review
june 2023
Volume: 8, No: 4, pp. 3203 -3213
ISSN: 2059-6588 (Print) | ISSN 2059-6596 (Online)

Received: 11 November 2022 Accepted: 02 February, 2023
DOI: https://doi.org/10.33182/rr.v8i4.221

A COMPARATIVE STUDY OF SOME PHYSICAL ABILITIES BETWEEN FIRST AND SECOND STAGE STUDENTS OF THE FACULTY OF PHYSICAL EDUCATION AND SPORTS SCIENCES, DIYALA UNIVERSITY

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Abstract

This research aims to: Identifying some of the physical capabilities of the students of the first and second stages. A comparative study of some physical abilities among students of the first and second stages. The researchers used the descriptive approach and the appropriate comparative method with the nature of the problem, and the research community included students of the first and second stages in the College of Physical Education and Sports Sciences / University of Diyala for the academic year 2022/2023. (3) Divisions from each stage, and they are students of Division (A, B, and C). Their number reached (110) students, representing (49.11%) of the students of the first stage, from the first stage, and (C, D, and E) from the second stage. (106) students represented (48.40%) of the second stage students. At the end of their current research, the two researchers concluded that there were non-significant differences between the members of the research sample through the tests used, which are (agility, endurance of strength, endurance of speed), there is no There is a difference between the arithmetic mean in the tests, or there is a weak percentage among the members of the research sample, due to the approaching age and physical period between the students of the two stages, and that the training method used had a positive impact on the development of some physical aspects as it developed significantly as it expressed the moral results of all tests, and from Through the conclusions of the research, the researchers recommend the necessity of using tests and measurements for students of all stages in the research by the trainers to predict the effectiveness of the training curriculum on physical abilities.

Keywords: *physical abilities, students*

Introduction

The world has recently witnessed a remarkable development in all fields and various sciences, and among these sciences is the science of sports training, which gives priority to coaches to take care

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of players according to scientific principles and formulas that lead them to achieve the best achievements with the least possible effort according to the use of modern training methods, which has certainly become one of the cards The trump card that trainers have if used correctly. Among the areas that depend on good sports specifications and qualifications are the faculties of physical education and sports sciences, which are the leaders in accepting students with superior physical and skill capabilities through a battery of tests that the applicant undergoes for admission, and this is done according to the age groups, as the upper limit for admission is in The faculties and departments of physical education are 23 years old, and physical preparation with its various elements is the most important component of sports preparation in all sports and games and what they need in implementing their skills to some special physical abilities, and because these colleges include all sports, which varies in their needs for the types of special physical abilities that are appropriate for these Games, most of which require a great effort to reach the required level for the student with his peers, and in order to determine the physical condition of the student, tests and measurements should be used because they are the appropriate means to know the level of their physical and skill abilities, etc., meaning that the tests are "one of the effective evaluation tools in physical education for their effective role in Programs and the extent to which they achieve the objectives set and in knowing the strengths and weaknesses of individuals or in programs and determining the extent of evaluation and the physical condition of the individual and his motor and social characteristics and characteristics. (Hassanin: 1982: 54), and the importance of the research lies in identifying the level of physical abilities of the students of the first and second stages of the college, studying them, and identifying the differences between individuality among individuals.

Research Problem

Individual and team games in the faculties and departments of physical education and sports sciences need physical capabilities, and these capabilities must be employed to serve the nature of the skillful performance of each activity, especially those that require high effort, and because the researcher is interested in the field of sports, he noticed that there are differences in physical capabilities among college students, that is, there must be That their training be towards physical abilities and according to the requirements and conditions of the game, and this omission led to not giving these qualities enough time and attention during training, and therefore the researchers decided to study this subject for the purpose of clarifying the relationship between some physical abilities between students of the first and second stages.

Research Objectives

This research aims to: Identifying some of the physical capabilities of the students of the first and second stages. A comparative study of some physical abilities among students of the first and second stages.

Research Hypotheses

There are hypotheses of significant significance in the physical abilities among the students of the first and second stages.

Research Limits

Human Limits: students of the first and second stages in the College of Physical Education and Sports Sciences / University of Diyala.

Time Limits: for the period from 5/3/2023 to 25/4/2023

Spatial Limits: stadiums and classrooms in the College of Physical Education and Sports Sciences.

Research Methodology

The researchers used the descriptive approach and the comparative method appropriate to the nature of the problem.

Research Community

The research community included students of the first and second stages in the College of Physical Education and Sports Sciences / University of Diyala for the academic year 2022/2023. They were chosen by the intentional method, as the number of students in the first stage reached (224) and the number of students in the second stage reached (219), divided into 6 divisions for each stage. The final total of the study population is (443), and as for the research sample, it was chosen randomly, and they are male students who are actually continuing the study. (3) people were chosen from each stage, and they are students of the section (A, B, and C). Their number reached (110) students, representing a percentage of (49.11%) of the students of the first stage, from the first stage and (c, d, e) of the second stage, who numbered (106) students, representing (48.40%) of the students of the second stage, and thus the final total of the research sample after excluding the sample The reconnaissance and students who are not committed to the implementation of the exams, the repeaters and the postponers are (200) students, with a rate of (45.15%), with a rate of (100) students for each stage.

Devices, Tools and Means of Collecting Information

Means of Collecting Information

Arabic and Foreign sources and references. Testing and Measurement. Registration Form.

Research Devices and Tools

Research Tools

It is the means by which the researcher can solve a problem, whatever those tools, data, samples, and devices are. (Restricted: 1992: 297)

The researcher used the following tools during the experiment:

• Laptop type (Dell Voster).

• Camera type (Nikon).

• Adhesive Tape.

• Stopwatch.

• Indicators (5).

• Foot Ball.

• Measuring tape.

• Whistle.

Tests Used

Determine the most important physical abilities used in the research

The questionnaire form was presented to specialized professors and experts in the field of experiment science, testing and mathematical measurement, numbering (7) experts, to test the most important special physical abilities on which the descriptive approach has the greatest impact than others, and after distributing the forms and extracting the percentage of experts' agreement, the special physical abilities that were obtained were nominated At a percentage of (75%) or more, as shown in Table (1).

Table (1) Shows the importance of the ratio of the agreement of the specialists and experts on determining the most important special physical abilities of the research sample members

No.	Physical Ability	Importance of Variables		Accebted Abilities
		Total Mark 35	The relative importance of the agreement of the experts	
1	Maximum Strength	**16**	**%45.7**	×
2	Explosive Strength	**20**	**%57.1**	×
3	Distinctive strength with Speed	**13**	**%37.1**	×
4	Transition Speed	**21**	**%60**	×
5	Kinetic Speed	**20**	**%57.1**	×
6	Responsiveness	**23**	**%65.7**	×
7	Maximum Speed	**13**	**%37.1**	×
8	Endurance	**16**	**%45.7**	×
9	Strength Endurance	**30**	**%85.71**	✓
10	Speed Endurance	**31**	**%88.57**	✓
11	Agility	**29**	**%82.85**	✓

12	Flexibility	**16**	**%45.7**	×
13	Balance	**10**	**%28.57**	×
14	Precision	**12**	**%34.28**	×
15	Compatibility	**11**	**%31.42**	×

Determining the most important appropriate tests for the physical abilities used in the research

Table (2) Shows the relative importance of the agreement of the specialists and experts on determining the most appropriate test for the special physical abilities of the research sample members.

No.	Physical Ability	Tests	Measuring Unit	Total Mark	Relative Importance	Accepted Test
1	Agility	Zig Zag run between (5) back and forth signs Multi-directional running between (4) runs Cockerel running Running around a circle Running with a directional horn (9-3-6-3-9)	Seconds	20 23 23 13 10	%75.1 %65.47 %65.7 %37.12 %28.5	✓ × × × ×
2	Strength Endurance	Vertical jump from a squat position for 30 counts Continuous partridge with two legs to cover the longest distance per minute Advance Dbni until the effort is carried out Raise the two legs tilted from the ground from standing 30 seconds Full back support with 50% of the athlete's weight	Reps Meter Reps Reps Reps	32 25 15 12 13	%91.42 %71.42 %42.85 %34.28 %37.14	✓ × × × ×
3	Speed Endurance	Run 200m from start high He ran 180m rebounds between 4 runs Tapping the ball for a distance of 30 meters (5 times) continuously	Seconds	25 21 31	%71.42 %60 %88.57	× × ✓

Tests Used (Under Study)

1- Agility Test (Mahmoud: 2007: 38)

- Test name: Zik Zak Run between (5) back and forth signs.

- The aim of the test: to measure agility.

Tools Used

- 5 Signs

- Whistle.

- Stopwatch

Performance Description

- Signs are placed accurately

- The distance between the pillars (1m)

- The distance from the starting line to the first person is (3m).

- When the starting signal is heard, the player runs from the starting line, then runs between the lines, and then returns to the starting line in the zigzag process.

2- Endurance Test

- Name of the test: Vertical jump from a squatting position for (30m). (Sabri: 1993: 136)

- The aim of the test: to measure the endurance of the two legs muscles.

Tools Used

• Stopwatch

• Whistle

Performance Description

At the start and from a squatting position, the tester jumps high so that the knees bend and the feet leave the ground.

In each jump,

He continues to jump for a period of (30 m), as in the following figure.

Test Instructions

- The jump is up with the arms outstretched at the level of the abdomen, noticing the bending of the knees in a squatting position. One attempt is given to each laboratory.

Timing Method

The laboratory records the number of jump times during (30 seconds) as shown in the following figure.

3 - Speed Test

- Name of the test: Rolling the ball for a distance of 30 meters x 5 times continuously. (Abu Al-Enein: 2000: 106)

The purpose of the test: to measure speed endurance.

Tools Used

- Stopwatch.

- Indicators (2).

- Foot Ball.

- Tape Measure.

- Whistle.

Performance Description

- From the high starting position behind the starting line and with the whistle, the player rolls the ball at maximum speed to the end of the distance (30 m), circles around the pole and returns to the starting line, and repeats (5) times.

Test Instructions:

- A distance of (30 m) is determined, and the starting line and the finish line are set by Burke, and markers are placed on those points as in the following figure, and the player performs only one attempt.

Timing Method

The time taken to go back and forth for five times is calculated and recorded to the nearest second.

Field Research Procedures

Exploratory Experiment of physical abilities

It is a practical training for the researcher to find out for himself the difficulties that he encounters while conducting the tests in order to avoid them in the future. (Al-Shawk and Al-Kubaisi: 2004: 59)

The two researchers conducted the first exploratory experiment on 3/14/2023 on a sample of (10) students other than the research sample, who are from the research community.

The aim of the pilot experiment was:

1. Knowing the difficulties and problems that the researcher may face.

2. Identify the time taken to implement the test.

3. Ensuring the efficiency of the work team (Al-Shawk and Al-Kubaisi: 2004: 84) and the extent of

accuracy in implementing the test.

4. Testing the validity of the tools and equipment used.

5. The validity of the selected sample and its response to the test.

6. To identify the suitability of the tests for the sample level and the subject of the research.

The Main Experiment

The researchers conducted tests for the physical abilities of the research sample for the students of the first stage during the days (Monday, Tuesday and Wednesday) corresponding to (27 - 28 - 29/3/2023). As for the students of the second stage, their tests were conducted on the days (Monday, Tuesday and Wednesday) corresponding to (3 - 5 – 5/4/2023).

The exams were completed for three days, one day for each exam, and the exams were conducted in Martyr Dr. Mustafa Hall in the College of Physical Education and Sports Sciences.

Statistical Methods

The researcher used the statistical bag (SPSS) to extract the results and process the data statistically.

Presentation, analysis and discussion of the results

Presentation and analysis of the arithmetic means and standard deviations of the physical ability tests

Table (3) Shows the values of the arithmetic mean and standard deviations of the tests used in the research for the research sample members

No.	Physical Ability	Measuring Unit	Phase 1		Phase 2	
			Sec	±Reps	Sec	±Reps
1	Agility	Seconds	6.725	0.48	8.25	0.746
2	Strength	Reps	22.5	0.801	23	0.707
3	Speed	Seconds	31.485	0.547	33.245	0.781

1- Agility

It was found that the value of the arithmetic mean amounted to (6.725) in tests for first-stage students with a standard deviation of (0.48), while it reached (8.25) in the selection of second-stage students with a standard deviation of (0.746).

2- Endurance

It was found that the value of the arithmetic mean was (22.5) in choosing the first stage with a standard deviation of (0.801), while it reached (23) in choosing the second stage with a standard deviation of (0.707).

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3- Speed

It was found that the values of the arithmetic mean were (31.485) in the choices of the first-stage students, with a standard deviation of (0.547).

While they reached (33.245) in the choices of the second-stage students, with a standard deviation of (0.781).

Presentation of results showing the variance, the computed and tabular value of (f), and the significance of the differences for the tests used in the research:

Table (4) The analysis of variance shows the calculated and tabular value of (f) and the significance of the differences for the tests used in the research for the members of the research sample

No.	Physical Ability	Measuring Unit	Contrast Source	sum of squares of deviation	Mean of squares of deviation	F Value		Significance of differences
						Calculated	Tabular	
1	Agility	Seconds	Between groups	6.66	3.33	3.569	4.25	Non-Significant
			Within groups	8.4	0.933			
2	Strength	Reps	Between groups	4.67	2.335	0.750		Non-Significant
			Within groups	28	3.111			
3	Speed	Seconds	Between groups	8.875	4.437	2.340		Non-Significant
			Within groups	16.79	1.895			

Discussion of the analysis of variance for the tests of the research sample members

It appears from tables (3) and (4) that the differences are not significant at the level of significance (0.05) in the tests of physical abilities. There are no significant differences between the individuals of the research sample in (agility, strength, speed).

The researchers attribute this to the convergence of the age level between the members of the two research samples in anthropometric measurements and physical abilities, being from one community and living within the same living conditions and life variables. On the one hand, and due to the specificity of some abilities that require great effort to carry out some of the duties related to this ability, as well as some students with excellent physical measurements because of their good nutrition, as well as because of the good selection of these students, as this helps the speed of movement and the economy in jumping and jumping movements as a result Some physical abilities.

Some attribute the reason for the increase in these abilities to practice, as "Ali Al-Beik and Yahya Mustafa" affirmed that "under the influence of the practice of sports activities, morphological changes can occur in the bones." (Al-Beik and Mustafa: 1984: 770).

The researcher attributes the reason to the lack of significant differences between the sample members due to the nature of those abilities and their requirements of physical measurements, including the length of the man, as it contributes to the total height of the student, and there are many studies that confirmed "the existence of a significant relationship in the measurements of lengths, total height, leg length and height The leg, the length of the foot, the length of the student with the arm and the strength of the jump" (Al-Saadi: 1996: 123), so some activities need students who are characterized by a suitable length for the leg in addition to other measurements that would play an important role as it affects the total length of the body on the one hand and contributes to Performing jumping and jumping movements up and forward with superiority over the competitor and economy in performing jumping movements and jumping up and forward with superiority over the competitor and economy in movement on the other hand, so the researcher confirms that the randomness of the differences in those games came natural in terms of the convergence of the requirements of physical specifications among them and to the extent big.

Conclusion

The researchers concluded, at the end of their current research, that there are significant non-significant differences between the members of the research sample through the tests used, which are (agility, strength, speed), there is no difference between the arithmetic means in the tests, or there is a weak percentage among the members of the research sample, due to the approaching period The age and physical characteristics of the students of the two stages, and that the training curriculum used had a positive impact on the development of some physical aspects, as it has developed significantly and expressed the moral results of all tests. The possibility of predicting the effectiveness of the training curriculum on physical abilities, and the conduct of similar studies for the purpose of the individual team study among other samples, and that the results of the physical abilities of the research sample members were close and therefore because they are of a similar age group.

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