The effect of circular strength training on some specific physical variables and level Skill performance of female handball players

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Introduction and research problem

Scientific research has become one of the most important factors relied upon to develop societies in order to reach the highest levels in all fieldsGeneral,And the sports field as a wholeespecially,This is done by recognizing the abilities and energies that God has given manMultiple.

Gable also agreesGabel(2001) that muscular strength is one of the basic components of success in sports performance, and the best player is the one who has the amount of genes that allow the development of muscular strength. Muscular endurance training has many benefits, including building the muscular structure of the player's body and protecting him from injuries. (41:19)

And aboutImportancePowerFor the playerBoth Owais Al-Jabali (2000 AD) and Bastawisi Ahmed (2005 AD) agree that a good player is the player who knows how to achieve victory within the limits of his abilities so that he takes advantage of the possibilities.TThe different skills that characterize him, and he must develop his favorite movements in order to be more effective in matches. A player who has high physical abilities and is characterized by good skill performance is able to perform outstandingly. Physical and skill preparation exercises together are considered the main means of developing the sports form during the preparation periods and before competitions, as It contributes significantly to reconnecting the elements of the sports format, and this type of exercise can be organized so that its conditions are more difficult than those of matches (8: 15)(61:2)

Issam Abdel Khaleq (2003), citing Banjarhman, agrees: Baumgartner(1999 AD)The group of muscular strength (maximum strength - muscular ability - explosive strength) is the greatest factor in the success of judo, as this opinion was supported by one of the pioneers of physical education when he provedMecloyMaklawi said that strength is the most important element of physical fitness in the motor performance of players. Players work to develop their strength to suit the technical requirements of the match so that they can perform.nEasily lift, push and hold during struggle(5:85)(34:16)

As Bolden points out,Bilodeau(1999 AD)untilIncreasing the level of physical fitness componentsYIt is considered the basic foundation that enables the player to perform the basic positions and some throwing skills in judo(17:17)

The circular strength training system is considered one of the training forms used recently in the

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sports field. It is a system that combines tradition and modernity, by mixing modern science with ancient training methods. (17: 77)

And she pointsMrs.Seyed,(2012 AD)Until Scott SunonScott Sonnon,He is the founder of this system with the aim of developing training methods that help players perform freely and efficiently.(24:25)

Peter Kim adds:" Patnaikpradyo t"Quoted by Scott SonnonScott Sonnon,(2006)What helped spread the circular strength training system was its avoidance of traditional training restrictions, in addition to its high physical and health benefits and its distinction in motor diversity compared to other training methods.(25:24)

Both agreeHani Jaafar Abdullah (2016 AD)(14), Tamer Ibrahim Nabil(2022 AD)(3) Aisha Muhammad Al-Fateh (2017 AD)(4) The circular strength training system consists of three main elements:

1-Flow exercisesIntu-Flow:They are similar to stretching and flexibility exercises, but they are distinguished from stretching exercises in that they focus on the range of motion of the joints, which performs two basic tasks when performing: (washing and lubricating) the joint with synovial fluid. This method is called (nourishing the joint) in order to restore and coordinate the movement of the joint without causing deformities. For soft tissues in the muscles, they are called (joint strengthening exercises).

2-Prasara yoga exercisesPrasara yogaIt is considered the best type of yoga because it contains a group of poses that are similar in performance to sports movements, in addition to the absence of pauses between each pose and the next. It is characterized by continuity and speed of movement from one pose to another.lastWhile adhering to the basics of yoga, including the variety of breathing techniques used and the use of meditation and concentration when performing.

3-Mace exercisesClubbell exercisesThe mace is considered one of the weapons used by the ancients for thousands of years, starting with the ancient Egyptians, then the Greeks, then the Persians, then the Indians, and finally by the English. Recently, the mace has been used as a training tool with the aim of improving muscular strength and dynamic flexibility, as it falls within the group of free weights.free weightsTherefore, it is distinguished by the diversity of its movements, especially the swings that are performed through the three plans (vertical-The accidental-sagittal)

He adds, "Imad Al-Din Abbas(2000 AD Special physical abilities in handball are an important and essential factor in raising the level of skill performance, as it may not be possibleAAn individual masters basic motor skills in the event that he lacks special physical abilities, and handball, as one of the team sports, is one of the sports that contains a large number of motor skills, and these skills require a certain amount of potential and physical abilities in order to be performed in a good manner and with sound technical performance, and when they are not metRWith these capabilities, the individual fails to

perform the skills in the correct way.(94:6)

As he sees it Al-Bawan Alberto (2014AD),"Bron"Brown (2011 AD)aN sleep-Special physical abilities Ylinked! closely! Developing motor skillsthe basicFor the type of starch-Oh, AndAn individual athlete cannotMasteryMotor skillsthe basicFor the type of activitythatSpecializes inHIn caseHis lackTo physical abilities, he adds that the distinctive character of motor skillsthe basicFor specialized activity it isthatDetermines the necessary physical abilities that must be achieved-BTDevelop and develop it to reachhigherlevel .(91:18) (91:20)

And he points outImad al-Din Abbas(2007) Special physical qualities are a basic requirement for every group game, but they differ from one game to another, according to the nature of the performances and requirements of each game. These requirements must be met by the players of this game so that they can progress in training and reach high levels. (91:6)

Weea guest Yasser Dabour (1996)That muscular abilityIt plays a major role in handball skills, as it is considered one of the crucial elements in many handball skills, which is relied upon for the effectiveness of achievement, efficiency of performance, and deciding matches. (222:15)

The nature of performance in handball depends on the player's degree of proficiency in performing basic skills, whether defensive or offensive, with or without the ball, and employing those skills while performing tactical work. The nature of performance in handball varies and varies from sprinting with or without the ball to running and stopping. (81:9)

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By reviewing the previous studies available to the researcherAs a studyAli Gohar Ali (2023 AD)(7) entitledThe effect of using circular strength training exercises on muscular strength and digital level among 200-meter swimmers in the State of Kuwait, and studyNasser Muhammad Shaaban, Muhammad Abdo Hamada, Ahmed Abu Abbas Ahmed (2023 AD)(12) entitledThe effect of circular strength training using the mace on the development of muscular strength and the effectiveness of performing the Ionic skill among judo players., and studyYoussef Jawad Ali (2023 AD)(13) entitled "The effect of circular strength training on some physical variables and digital performance of javelin throwersThe results of which indicate the effectiveness of the circular strength training system in improving the level of physical variables as well as the level of skill performance.The researcher noticed that some of my trainers...JudoThey are interested in developing the physical requirements along with

developing the skill aspect. The researcher noticed the frequent use of trainersJudoAt the international and local levels, there is a saying that the best trainingJudoheJudoThe same reason they base this on the fact that if we observe the foot movements, we find that they are similar to plyometric exercisesAnd the researcher seesThis aspect has some right and wrong, as repeating the performance may improve the player's muscle memoryyen, which may in turn lead to improved motor abilities, but may also result in a feelingPlayersBored to repeat daily performance, as the focus is on specific muscle groups that may lack muscular integration for performance, and from here comes the importance of diversity in the use of the forms and patterns of training used, including the circular strength training system.Which may have a positive impact on improving the level of physical and skill abilities of female handball players.

Research objective

The research aims to identifyThe effect of circular strength training on some special physical variables and the level of skill performance among female handball players

Research hypotheses

-There are statistically significant differences between the averages of the pre- and post-measurements in the level of some special physical variables among female handball players, in favor of the post-measurement.

-There are statistically significant differences between the averages of the pre- and post-measurements in the level of skill performance among female handball players and in favor of the post-measurement.

Some terms included in the search

Circular force

It is one of the training forms used recently in the sports field. It is a system that combines tradition and modernity, by mixing modern science with ancient training methods. It consists of three components: flow exercises, prasara yoga exercises, and club exercises. (1:20)

Search procedures:

Research methodology:

The researcher used the experimental method as it suits the nature of this research, by using an experimental design for one experimental group using its pre-post measurement.

The research sample:

The researcher chose the research sample intentionally from handball juniors under (14) registered with the Wadi Degla Club and registered with the Egyptian Handball Federation for the sports season (2022/2023).The total sample size before conducting the main experiment was (20) GamerAnd he rose TresearcherH By excluding a number of (8) female players to conduct the exploratory study on them, the basic research sample became (12) female handball players and used them as a basic sample.

The researcher calculated the moderation of the distribution of growth rates (age - height - weight - training age) and some physical variables, Speed of defensive movement and launching a lightning attack,Table (1) shows this.

Table (1)
aModeration of the research sample in the descriptive variables (homogeneity) n=20

Variables	measruing unit	SMA	Mediator	standard deviation	Torsion coefficient
the age	year	14.58	14,50	0,36	-0.245
Training age	year	4.58	4,00	1,15	0.243
height	poison	1.59	1,58	5,22	0.225
the weight	kg	49.37	47,25	5,58	0.187

It is clear from Table (1) that the values of the skewness coefficients in growth rates (age - height - weight - training age) were limited to (±3), which indicates a moderate distribution of the research sample in these variables.

Schedule (2)
aModeration of the research sample inSome physical variables(homogeneity) n=20

Variables	measruing unit	SMA	Mediator	standard deviation	Torsion coefficient
The muscular ability of the legs on the vertical axis	poison	49.11	48,00	2,89	0,450
The muscular ability of the legs on the horizontal axis	meter	1,87	1,80	0,18	1,080
Muscular ability of the arms	meter	18,79	18,00	2,07	0.247

It is clear from Table (2) that the values of the skewness coefficients in the physical variables were limited to (±3), which indicates a moderate distribution of the research sample in these variables.

Schedule (3)
aModeration of the research sample inLevel of skill performance in handball(homogeneity) n=20

Variables	measruing unit	SMA	Mediator	standard deviation	Torsion coefficient
Shooting at the upper corners of the goal	Goal	3.24	3.00	0.51	1.411
Shooting at a wall	meter	6.98	6.50	1.98	0.272
Zigzag running and then shooting	Goal	1.87	1.80	0.36	0.583
	Th	36.84	36.00	4.68	0.538
Shoot 8 balls	Th	68.32	65.00	6.95	1.433

It is clear from Table (3) that the values of the skewness coefficients in (the level of skill performance in handball) were limited to (±3), which indicates a moderate distribution of the research sample in these variables.

Implementation steps for research:

- Data collection tools:

The researcher determined the physical and skill tests under investigation by reviewing specialized scientific references in sports training (4), (11), (28), and this resulted in the following tests:

First: The physical tests under investigation:Attachment (1)

1- Vertical jump test from stability. To measure the muscular ability of the legs on the vertical axis.

2- Stability broad jump test. To measure the muscular ability of the legs on the horizontal axis.

3- A test of throwing a medicine ball the maximum distance. To measure the muscular ability of the arm and shoulder.

Second: The skill tests under investigation:Attachment (2)

1-Shooting at the upper corners of the goal.

Aiming at a smooth wall.

Zigzag running and then shooting.

Shoot 8 balls.

Third:Devices and tools used in research:Restometer device for measuringheight.

Medical scale for measuringthe weight.

Weight machines - handballs - hurdles - adhesive tape - ballsmedical.

Dumbbells of different weights - measuring tape- Stop Watch.

-the studyreconnaissance:

It was completedConduct the study Surveyin Periodfrom (10/31/2023) And even (4/11/2023) on The members of thea sampleIts strength is reconnaissance(8) Juniorsballhand under (16year) From the research community and outside the basic research sample,In order to find out whatNext:-

-Mada MullaandThe number of tests used for individuals in the research sample.

- The number of repetitions and sets appropriate for the daily training unit.

- Determine the heights of the wooden boxes and the weights of the medicine balls, dumbbells, and weights used in the proposed exercises.

- Scientific transactions for tests:

First: Honesty factor:

The researcher used discriminant validity between two groups, one of which was a group with a distinct structure(8)Female playersballhand under(16year) From outside the main sample, the other is a group whose composition is not distinguished(8)Juniorsballhand Under (14 years), the significance of the differences was calculated, and Table (4) shows this.

Schedule (4)
The significance of the differences between the distinguished and unprivileged groupsFeatured in Some physical variables And skill in handball N1=N2=8

Variables	units Measurement	Featured		Unmarked		value (T)
		Q1	P1	Q2	P2	
Physical variables						
The muscular ability of the legs on the vertical axis	poison	48,65	3,30	43,95	1,48	4,11
The muscular ability of the legs on the horizontal axis	meter	1,88	0,22	1,59	0,15	3,54
Muscular ability of the arms	meter	18,65	2,31	15,30	1,23	4,05
						Skill variables
Shooting at the upper corners of the goal	Goal	3.20	052	2.90	0.75	4.18*
Shooting at a wall	meter	6.98	1.17	6.30	0.46	4.60*
Running the glass and then shooting	Goal	1.60	0.24	1.40	0.24	3.85*
	Th	32.1	0.41	35.2	0.46	4.01*
Shoot 8 balls	Th	60.82	0.94	64.1	0.74	3.12*

It is clear from Table (4) that there are statistically significant differences at the level of (0.05) between the distinguished and non-distinctive groups inTests of physical variables and skill variablesAnd in favor of the distinguished group, which indicates the validity of the tests under study.

Second: Stability coefficient:

The method of applying and repeating the test was used to calculate the reliability coefficient, by applying tests of physical variablesAnd skill variablesOn members of the exploratory sample, then repeat the application again on the same sample, and a simple correlation coefficient was calculated between the results of the first and second applications, and Table (5) shows this.

Schedule (5)
Correlation coefficient between the first and second application in testsPhysical variables And skill variables

Variables	units Measurement	First application		The second application		value (R)
		Q1	P1	Q2	P2	
Physical variables						
The muscular ability of the legs on the vertical axis	poison	48,65	3,30	48,60	3,50	0,981**
The muscular ability of the legs on the horizontal axis	meter	1,88	0,22	1,79	0,16	0,901**

Follow Schedule (5)
Correlation coefficient between the first and second application in testsPhysical variables And skill variables

Variables	units Measurement	First application		The second application		value (R)
		Q1	P1	Q2	P2	
Muscular ability of the arms	meter	18,65	2,31	18,20	2,14	0,961**
Skill variables						
Shooting at the upper corners of the goal	Goal	3.05	0.62	3.10	0.41	0.970
Shooting at a wall	meter	6.64	0.10	6.77	0.74	0.960
Running the glass and then shooting	Goal	1.50	0.52	1.53	0.32	0.930
	Th	33.6	0.73	33.30	0.14	0.920
Shoot 8 balls	Th	62.4	1.12	62.10	0.31	0.900

It is clear from Table (5) that there is a statistically significant correlation at the level(0.05) between the results of the first and second applications of the testsPhysical variables and skill performanceWhich indicates the stability of these tests when measuring.

- Design the training program:

The researcher conducted a reference survey of specialized scientific references and previous studies in the field of sports training.(3), (10), (12) in order to determine the nature and form of circular strength training, and based on the above, a program was designedCircuit strength trainingThis was done according to the following steps:

First: The foundations of developing the program:

When developing the content of the training program, the researcher took into account the following principles:

1- Paying attention to performing stretching and flexibility exercises at the beginning of the training unit.

2- The appropriateness of the exercises selected in the unit to the capabilities of the individuals in the research sample.

3- The researcher used the interval training method, both low and high intensity, in light of the use of circular training as an organizational form during the program.

4- The daily training unit included exercises using...Circuit strength trainingThe training takes place for the lower and upper limbs within one complex group, in a neighborhoodThThe young person performs the circular strength system training for the lower limb, followed by separate ball training for the upper limb.

5- The load ripple inside the training unit is (1-1).

6- Taking into account the principle of gradation from easy to difficult in performing exercises throughout the training program.

Second: Components of the training load within the proposed program:

1- Severity of pregnancy:

The intensity of the training load was set at 55% to90%) of the maximum that the athlete can bear, and the intensity is increased by increasing the repetitions of the bag, and the load undulates within the training unit (1-1), the intensity of the training load varies by gradually increasing the training intensity and then decreasing the intensity.

2- Load size (repetitions - sets):

Each exercise consists of 5 repetitions and 2 sets.

3- Interval rest periods:

I identified the researcherThe rest period between exercises (30-50 seconds) and between sets (1 minute).

Third: Content of the training program:

The researcher determined the program contentTraining using the circular strength system by reviewing many references and scientific studies specialized in the field of training. Therefore, the researcher was able to choose a set of training exercises to develop the strength and muscular ability of the legs and arms of female handball players, attached (3).

Fourth: Al-TawziATimeline for the training program:

The researcher implemented the circular strength system exercises in the main part of the training unit. The program was divided into (24) training units, for a period of (8) weeks, with (3) training units per week. This program was implemented on the research sample (6th of October Club). The athlete).

Fourthly the program Suggested usingCircular force system:-

steps Preparation the program

PreparedT researcherH Form reconnaissance opinion Experts Contains on Exercises resistance usingCircular force systemAnd repetitions And the comforts Occasion, And after examining on the reviewer Scientific And networks the information And after Taking Opinions ExpertsTheir names are shown. attached (1)

He roseT researcherH By specifying the shape Final For trainingCircular force systemAnd the programC attached(5)

Fifth:distribution Timeline For the program

Time distribution of the proposed training unit:

*Physical preparation (warm-up).(15) Q

*Exercises to improve the level of skill performance (30) s

*Training using resistance exercises using the Bulgarian bag. (35) Q

* Calm down and conclude. (10) Q

- Tribal measurements:

Pre-measurements were conducted on (11/7/2023) for the research sample regarding the muscular ability of the legs and arms and the level of skill performance in handball.

- Implementing the training program usingCircular force system:

The training program has been implementedCircular force systemOn members of the research sample, during the period from (11/9/2023) to (1/4/2024).

- Dimensional measurements:

Post-measurements were conducted for members of the research sample

regarding muscular ability and skill performance on (1/5/2024), in the same order and conditions.

- Statistical processors:

The researcher processed the data statistically, using the arithmetic mean, standard deviation, median, skewness coefficient, correlation coefficient, t-test, and percentage of improvement.

Presentation and discussion of results:

First: display the results

Schedule (6)

The significance of the differences between the means of the pre- and post-measurements in the research variablesPhysical

Variables	Measurement units	Pre-measurement		Dimensional measurement		value (T)	Significance level
		Q1	P1	Q2	P2		
The muscular ability of the legs to Vertical axis	poison	49,96	3,07	58,07	2,73	27,27	D
The muscular ability of the legs to Horizontal axis	meter	1,90	0,19	2,19	0,23	11,26	D
Muscular ability of the arms	meter	18,28	2,04	23,62	1,64	26.95	D

Tabular t value at significance level (0.05) = (2,074)

It is clear from Table (6) that there are statistically significant differences between the averages of the pre- and post-measurements at the level of some physical variables, where the calculated (t) value was greater than its tabulated value at the significance level (0.05), where it came between (11.26 to 27.27), which indicates There are statistically significant differences in favor of the post measurement.

Schedule (7)

The percentage of improvement between the pre- and post-measurement averages in the physical research variables

Variables	Measurement units	Pre-measurement		Dimensional measurement		Differences between the averages	rate Improvement
		Q1	P1	Q2	P2		
The muscular ability of the legs to Vertical axis	poison	49,96	3,07	58,07	2,73	8.11	16,23%
The muscular ability of the legs to Horizontal axis	meter	1,90	0,19	2,19	0,23	0.29	15,26%
Muscular ability of the arms	meter	18,28	2,04	23,62	1,64	4.34	14,82%

It is clear from Table (7) that there is an improvement between the pre- and post-measurements in the level of some physical variables, as the percentage of improvement came in the levelThe muscular ability of the legs on the vertical axis(16.23) The percentage of improvement reached the level ofThe muscular ability of the legs on the horizontal axis(15.26%) and the percentage of improvement reached the level ofMuscular ability of the arms(14.82%) and in favor of dimensional measurement.

Schedule (8)

The significance of the differences between the means of the pre- and post-measurements inLevel of skill performance

Variables	Measurement units	Pre-measurement		Dimensional measurement		value (T)	Significance level
		Q1	P1	Q2	P2		
Shooting at the upper corners of the goal	Goal	3.13	0.81	5.15	0.18	4.62	D
Shooting at a wall	meter	6.40	1.40	7.80	0.63	4.25	D
Running the glass and then shooting	Goal	1.53	0.98	2.11	0.61	4.11	D
	Th	35.93	3.34	28.62	0.25	4.36	D
Shoot 8 balls	Th	62.33	2.53	56.28	0.11	4.52	D

Tabular t value at significance level (0.05) = (2,074)

It is clear from Table (8) that there are statistically significant differences between the averages of the pre- and post-measurements in the level of skill performance in handball, where the calculated (t) value was greater than its tabulated value at the significance level (0.05), where it came in a percentage of (31.18), which indicates the presence of Statistically significant differences in favor of the post-measurement.

Schedule (9)

The percentage of improvement between the averages of the pre- and post-measurements inLevel of skill performance in handball

rate Improvement	Differences between the averages	Dimensional measurement		Pre-measurement		Measurement units	Variables
		P2	Q2	P1	Q1		
65.49%	2.05	0.18	5.15	0.81	3.13	Goal	Shooting at the upper corners of the goal
21.87%	1.40	0.63	7.80	1.40	6.40	meter	Shooting at a wall
37.90%	0.58	0.61	2.11	0.98	1.53	Goal	Running the glass and then shooting
25.54%	7.31	0.25	28.62	3.34	35.93	Th	
9.70%	6.05	0.11	56.28	2.53	62.33	Th	Shoot 8 balls

It is clear from Table (9) that there is an improvement between the pre- and post-measurement levelsSkill performance in handballThe rate of improvement was in the levelSkill performance in handball(0.970 to 65.49%) and in favor of the dimensional measurement

Discuss the results

It is clear from Table (6) that there are statistically significant differences between the averages of the pre- and post-measurements at the level of some physical variables, where the calculated (t) value was greater than its tabulated value at the significance level (0.05), where it came between (11.26 to 27.27), which indicates There are statistically significant differences in favor of the post-measurement, and the researcher attributes this result to the use of circular strength training exercises for female handball players.

He confirms thisBoth of "Omaima Kamal (2014 AD),George (2006) states that muscular strength is considered one of the most important physical elements that players need, given that all of his movements depend on how he moves his body, and the muscles are the ones that control this movement by contracting and relaxing from one position to another, and the stronger the muscles are, the more effective they are. These contractions helped in completing the skillful task.(1:51-53)(64:7)

In this regard, William confirmsWilliam,(2001)The circular strength training system is an integrated system whose most important goals are to develop the elements of physical fitness, including muscular strength, muscular ability, agility, and flexibility, because it contains puck exercises as a main part of the training system, which relies on the three movement plans because it contains circular swings for the arms. (81:26)

This is consistent with what he pointed out Muhammad Allawi, Nasr al-Din Radwan (2001AD)Training is a systematic, well-planned and organized physical process to develop the individual's physical capabilities.(11: 177)

Thus, the first research hypothesis has been fulfilled, which states that:There are statistically significant differences between the averages of the pre- and post-measurements in the level of some special physical variables among female handball players and in favor of the post-measurement..

It is clear from Table (8) that there are statistically significant differences between the averages of the pre- and post-measurements in the level of skill performance in handball, where the calculated (t) value was greater than its tabulated value at the significance level (0.05), where it came in a percentage of (31.18), which indicates the presence of Statistically significant differences in favor of the post-measurementThe researcher attributes this result to the use of circular strength training exercises for female handball players.

In this regard, Doug Holt agrees.Doug Holt (2001) and GrindaGardiner(2012 AD) that athletic motor excellence in judo in particular, which is characterized by composition and complexity because it is composed of overlapping parts that may be similar or dissimilar, issportsIndividualarousingTIt is distinguished by a special nature from all other gameswhetherIn terms of performance methodaAnd How points are calculated and how they are not relatedWith rhythmspecificThe diversity of its functions, including catching, throwing, and pushing, makes the role of the balance and movement elements play a significant role in improving the level of skill performance.(18:1)(52:20)

And from Most important factors that I helped on Progress Great in area Handball sport in Last few years Height Great in levels Loads Training And that in Levels Supreme Where it ranged the size Training Annual From (900 to 1200) hour annually Which had become With him Difficult Continuation of the riseA With reluctance Training , And it became Progress Futurist Related before all Something is not High Sizes Training but rather will Regard By choice Most effectiveness For means Training and how the focus on Synthesis Dosages Training that verification Results The best , any Progress will It is happening on account Quality Training And not on Upgrade In sizes Private Only.(22:2)(48:23)

to that Diversity in Methods Sports training Important And it is required with Taking in Consideration when Preparation Programs Training necessity Consider the difference shapes Movements that lead to during a period Training , as that to set size Appropriate training And its intensity And the choice optimum For speed the performance during Training Lead to

to improve And development level the performance Physical.(21:14)(20:21)

In this regard, Paul Ld. agreesn Bilodeau(1999AD)(15), MahitaMargarita(2001AD)(20)However, many researchers and specialists in the sports field agree that there is a strong connection between physical abilities and levelthe performance skilled,An individual athlete cannot master the basic skills of the type of sporting activity in which he specializes if he lacks the physical capabilities for this type of activity.Activity.

Thus, the hypothesis of the second research has been fulfilled, which states that:There are statistically significant differences between the averages of the pre- and post-measurements in the level of skill performance among female handball players and in favor of the post-measurement.

Conclusions:

Within the limits of the research sample and its characteristics, the methodology used, the tests and measurements applied, and the available capabilities, and in light of the objectives, hypotheses, and tools used, and through the results of the statistical analysis of the data, it was possible to reach the following conclusions:

1- The impact of circular strength training exercises A positive effect on the muscular ability of the legs And the arms I have my youthhandball.

2-The effect of circular strength training exercisesA positive impact on the level of skill performance among young peoplehandball.

3- Increase the effectIt affected the circular force systemonTraditional training in developing the muscular ability of the legs And the arms And the level of skill performance of young peoplehandball.

Recommendations:

Based on the data and information obtained by the researcher and guided by the conclusions and within the limits of the research sample, the researcher recommends the following:-

In light of the objectives, hypotheses, results and conclusions of the research, the researcher recommends the following:-

1- UseCircular strength training exercisesTo develop the muscular ability of the legs And the arms Because it has an effective impact in developing the level of skill performance among young peoplehandballunder.

2-Use styleIt affected the circular force systemonDifferent samples in terms of age, gender, and sporting activity in order to raise the level of skill performance in handball.

4- Directing the results of the study and the tools used in applying the various training programs toThose working in the field of training in general and in the field of handball in particular, especially the youth stages, to benefit from this program and its results.

5-Conduct other studies onIt affected the circular force systemIn the physiological direction to determine the physiological effects resulting from the use of trainingCircular force systemAnd through high technologies.

reviewer

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