

Suggesting a Training Program for Development of Flexibility Through Muscular Lengthening and its Effect on The Skill of Shooting in The Focus of Handball Players Class Less Than 10 Years Old

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Abstract:

The study aimed to Knowing the development of flexibility by proposing a training program for stretching muscular and Study the effect of it On the skill of shooting from U.S To anchor handball players under 10 years old And to achieve this This sample was subjected to a special training program after conducting pre-tests for flexibility and observing the ejection technique from the fulcrum after completing the program to study the possibility of the development that occurred on a skill, for a sample of 20 player, deliberately selected from "Team Athlete Jaafar Suleiman CHERAGA class under 10 year, where the researcher used Experimental method, The results were processed by SPSS, the results showed that there were statistically significant differences between flexibility and kinetic path tests(smoothness) for shooting skill Foliation.

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The theoretical Side

An Introduction:

The developed countries of the world paid great and comprehensive attention to training young people in all respects and for all sports, as they opened private schools for them to receive in addition to the regular lessons they received in other schools, where the handball is taught theoretically and scientifically, in addition to examinations and intensive care. On the health side, as youngsters are the broad base through which future champions in the handball game grow. And since the efficiency of the sports training process must be improved for the age group that starts from childhood until the stage under the age of 21 years, and investment in all aspects that contribute to expanding the base of young people, which led to high levels of competitive sports as a result of the physical and skill numbers of players when developing training programs, which The researchers paid attention to a category under the age of one year by developing a training program based on well-studied scientific foundations for the purpose of developing physical abilities and some basic skills in order to improve the level of performance of players for the better.

Handball is one of the team games that witnessed a great development on the physical and skill level, in a way that was reflected in response to the pace and level of play. The attention of the countries of the world to the small groups and investment from all sides contributed to expanding the base of this category and raising the level of this sport, whether from the physical or skill side. motor performance of this activity. The methods of developing the element of flexibility varied, so we mention muscular stretching exercises, which are used because they work to increase both the elasticity of the muscles and the flexibility of the joints.

According to Mufti Ibrahim and Obeida Saleh, “training is based on basic aspects, namely physical, skill, planning, psychological and mental preparation, and all of them must be integrated in one line to achieve the main goal, and this can only come through a rational, long-term plan that has a specific and scientific basis.”(Obaida Saleh, Mufti Ibrahim, 1994, p. 99), and the emerging groups are the strong foundation upon which to build an advanced level for the future of handball and represent the base and the main pillar if they are chosen in a scientific and thoughtful way and prepared physically, skillfully, psychologically, psychologically



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and educationally correctly and this does not It comes only through correct planning based on knowledge of the basics and shortcomings with the development of programs based on the results of tests and measurements that give a real indication of the reality of performance that characterizes these categories after taking into account the nature of the art of motor performance, as the motor range varies from the effectiveness of one sport to another, and thus for sports training Multiple goals, the most important of which is improving physical fitness by improving its components because of its relationship and impact, either directly on physical growth or indirectly on human production, and flexibility is one of these basic components that most sports activities need, if not all, and is an important and helpful factor in the performance of techniques and movements Sports with success and mastery High with less effort and avoiding injuries as little as possible as it must be available in children at an early age because flexibility is that prominent element in motor performance, and flexibility plays an effective role in various sports movements Where the range of movement in the joints of the body is one of the elements of physical preparation and reaching the highest levels when playing games (Hashem Yasser Hassan, 2008, p. 19), and muscle stretching is one of the ways to develop flexibility as it helps to obtain the best coordination within the muscle.

Among the motives that led us to the desire for this study is the lack of reference to muscle lengthening as a factor to improve flexibility on the one hand, and the lack of reference to serious research in this age group, which is the basic basis for building high-level players

1- The problem of research:

Developed countries have placed physical preparation on top of other aspects of preparation, believing that the elements of physical fitness must first be developed in an appropriate degree because the rest of the skill and planning aspects that are formulated for individuals and teams in various sports activities must be considered within the limits of the physical capabilities of the players, and the integrated preparation of the players represents a stone The basis in the training process, where recent research has focused on studying many of the players' problems in order to achieve better results using the scientific method. Planning and directing the sports training process, which requires coaches' knowledge of multiple aspects



and clear and objective indications of the players' condition in order to achieve high results. The idea of the hand with its competitive nature, which requires the player to have high physical qualities that contribute to the performance of skills correctly. The handball player who is not physically prepared at the level of competition cannot perform the aspects entrusted to him in addition to the inability to focus and think unlike the physically prepared player who finishes the match without trouble (Gerges Ibrahim, 2004, p. 57).

The availability of special articular flexibility in the joints of the hips, trunk and shoulders leads to ease of motor performance in defense and attack, as it leads to an increase in the ability to compatibility of motors. As for the percentage, it is 15%. Of the total physical attributes (Qassem Hassan Hussein, 1998, p. 195), it is one of the important physical attributes as it is considered a key factor in mastering the skill and tactical performance of the handball player, in addition to being an important factor for protecting joints and ligaments from injuries. It also contributes to the development of physical attributes that contribute to an important role in raising the level of the player's motor performance such as strength, endurance, speed, and agility during the practice of the handball game in the closed halls and the performance of various motor skills in addition to the art of motor and tactical performance, it is necessary to increase the articulatory flexibility, during the two halves, each of which consists of 30 minutes Requires special flexibility. The game of handball, like all other sports, is affected by flexibility and needs the presence and availability of this characteristic in the players because of its great importance and its relationship to the physical and technical aspect of this game, and the ways of its development differ, and the ideal age for the development of this important physical characteristic must be taken into account.

In light of all these data, we find a source for asking the following question:

- ❖ **Do muscle lengthening exercises contribute to the development of flexibility, and does this positively affect the skill of shooting from the center for handball players under 10 years old?**

The general question is divided into the following sub-questions:

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- Are there statistically significant differences between the pre-test and the post-test in terms of flexibility through muscle stretching exercises in favor of the post-test?
- Are there statistically significant differences between the pre- and post-test of the skill of shooting from the center in favor of the post-test?
- Is there a relationship between the development of flexibility and the skill of shooting from the technical point of view?

2- Hypothesis:

General hypotesis:

- ❖ **Muscular lengthening has a role in developing flexibility and does this positively affect the skill of shooting from the center for handball players under 10 years old**

- **Partial Hypotheses:** There are statistically significant differences between the pre- and post-test in the trait of flexibility through muscle stretching exercises in favor of the post-test
- There are statistically significant differences between the pre- and post-test of the skill of aiming from the center in favor of the post-test
- There is a relationship between the development of flexibility and the skill of shooting from the technical point of view

3- The importance of the study:

The importance of this research is reflected in highlighting the impact and role of muscle stretching exercises in developing flexibility in handball defects less than 10 years old in the necessary form that allows their bodies M The most appropriate adaptation to this game, and this is one of the characteristics that has an effective impact on developing the capabilities of the two players It also contributes to the development of the physical aspect, which is the most important link in this sport, in order to reach the highest level of achievement Going into muscle lengthening is enough to improve flexibility by using and studying its impact on the shooting skill of the smallest handball, which lies in the fact that this category has a great role in building the champion of tomorrow, and in raising the level of the handball game in general and the return of skill performance in particular.

4- Objectives of the study:

- ✓ Know the positive aspects of improving resilience.



- ✓ Recognize the effect of muscle stretching in improving flexibility.
- ✓ Reveale the advantages of programming muscle stretching exercises before entering the exercises or entering a handball match.
- ✓ Recognize the proverbial period and a special time for the use of stretching exercises during training.

5- Defining terms and concepts :

- **Flexibility:**

idiomatically: It is the ability to achieve a specific range of motion without any objection from the tissues surrounding the knuckle (Muwaffaq Majeed Al-Mawla, 2010, p. 21).

procedurally: is a physical characteristic of the knuckles and muscles, which enable the player to perform sports movements in a wide range and acquire greater mastery and comfort, and reduce the possibility of injury to the player, what many scientists believe is the ideal age for their development in 6-12 years.

- **Muscle lengthening:**

idiomatically: Muscle lengthening is the ability of a muscle to stretch or elongate to the extent permitted by the physiological properties of muscle fibers (Hussein Ammi Al-Ammi and Amer Fakher Shaghati, 2010, p. 225).

procedurally: The term stretching means the extent of the extension or what length the muscle working on a joint can reach, and it also means the length of each of the muscles and tendons that act on the joint. and connective tissue.

- **Skill:**

idiomatically: It means the stability of the movement and its mechanism and its use in different situations and successfully (Nahida Abdel Zaid Al-Dulaimi, 2016, p. 59)

procedurally: It is the high ability to perform beautifully and correctly.

Correction: idiomatically: It represents the outcome of individual or collective technical and tactical performance and teams. It represents the skill of ending the attack with all its skills and behaviors, and no matter how many types and methods of its performance, it serves one purpose, which is to cross the ball in its entirety, the boundaries of the goal (Ahmed Youssef Motab, 2005, p.79)

Procedurally The shooting skill is the end of the effort the team makes to achieve the goal, as good preparation and



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mastery must be done during training in order to achieve a good end to the skill of shooting and achieving goals.

- **Shooting from center:** It is a sudden shooting, and it may be more reliable and performs from near and far distances, but it is slower in performance (Posta Aziz and another, 2015–2016, p. 24).

- **Age group :**

idiomatically: It is the end of the middle childhood stage and the late childhood stage. It is also called the pre-adolescent stage. The behavior of the child at this stage is characterized by more seriousness and some changes in preparation for the stage of adolescence (Omar Ahmed Hamshary, 2001, p. 20).

Procedurally Young people are that stage of childhood in which skill is developed, where we notice the increase in energy and activity, and it is the stage in which the child needs to know the motor activity that he is doing, and in which the child must be encouraged to train in some organized sports.

- **Handball :**

idiomatically: Handball is a team game played by hand, which takes place inside a special court, through which the team tries to score goals within the opponent's goal according to the laws in force by the World Handball Federation (Mohammed Sobhi Hassanein and Kamal Abdel Hamid Ismail, p. 22).

procedurally: It can be defined as a team sport in which two teams of seven players each compete (6 players with a goalkeeper) in which the team that scores the most goals wins. Its players are characterized by many physical and skill characteristics.

6- Previous studies:

The first study: Prepared by and all Popovici Ileana Monica 2015 under the title: Development of flexibility in female handball players (11-12 years) through muscle stretching exercises, this study aimed to determine the real development stage of knuckle movement and ways to improve it through stretching exercises. The study was conducted on a sample of 16 female handball players between the ages of 11 and 12 years, and a 7-month training program was applied to develop flexibility, containing 20 minutes of stretching exercises for each training session. There were statistically significant differences between the pre and post news for each of the flexibility of the spine, Thigh and shoulder, and one of



the most important results of the study is the efficacy of the stretching program and the recommendation to use the stretching program more often, in order to maintain its current movement.

The second study: Prepared by Hossam Mohamed Haidan (2017), under the title The effect of muscle stretching exercises associated with resistance in developing explosive strength and flexibility of the shoulders and trunk and its relationship to the shooting strength of handball players. From the Diyala Sports Club, handball for the youth category. Muscular stretching exercises were used, as they are among the exercises that help develop flexibility, as well as the use of the resistances accompanying these exercises and with light weights to ensure achieving the goal of the exercises and so that their effect does not have a different direction. Working in skillful performance and similar to the motor paths of this performance, and one of the most important conclusions of the study is the development of flexibility for the shoulders and trunk, as well as the development of the explosive power of the muscles of the arms, which has a high correlation with the strength of shooting.

The third study: Prepared by Harith Ghafouri Jassim, in 2009, under the title "The Relationship of the Kinetic Flexibility of Some knuckles of the Body and Some Relative Lengths with Accurate Soccer Scoring", the study aimed to find a relationship between the flexibility of some knuckles of the body with the accuracy of soccer scoring, as well as finding the relationship between some precise relative lengths Scoring in football, the researcher used the descriptive approach in his survey style, the sample consisted of 16 players and tests were used to measure the flexibility of some joints of the body (shoulder, thigh, spine) as well as relative lengths (length of the torso, arm, leg) in addition to the scoring test to measure accuracy, and from The most important results obtained by the researcher are that the accuracy of hitting the target is significantly related to the flexibility of some knuckles of the body, such as the flexibility of the shoulder knuckle in front, the flexibility of the thigh joint in front, side and back, and the flexibility of the spine in front, side and back, and the study showed that the accuracy of the target injury is significantly related to some physical measurements such as the length of The relative length of the arm and the relative length of the man and the length of the body.

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Fourth study: Prepared by Iman Suleiman Taha, in 1998, under the title "The Relationship of Excess Flexibility of Some knuckles with the Absolute and Relative Strength Associated with the Performance of Some Slips in Gymnastics" This study aims to identify the relationship between the relative excess flexibility of some knuckles with absolute and relative strength associated with the performance of some somersault skills in gymnastics, represented in (side somersault on the hands on the device, ground movements and side somersaults at the end of the balance beam, and side somersaults from the interrupted standing on the hands on the crossbar device of different heights), the researcher used in his study the descriptive approach, the sample consisted of 40 female students, and a test of measurements was used for each of (the extent of joint movement, the maximum strength of some general muscles on the selected joints, length and weight, the equation for measuring the excess of relative flexibility), as well as evaluating the skill performance of the selected movements. One of the most important findings of the researcher is that there is a relationship between the excess flexibility of some knuckles with absolute strength and the level of skill performance for some of the somersault skills in gymnastics.

Comment on studies:

Using previous studies by dividing them, summarized researcher A number of observations: The agreement of previous studies in at least one of the variables with their difference in formulation, their difference in terms of objectives, but most of them agree with our study in the development of physical abilities, the use of muscle lengthening and the improvement of some basic skills, as well as the agreement of previous studies in terms of the approach used to achieve their goals, which is the approach Experimental and its samples differed from all groups. Flexibility exercises varied in research and the use of the same study tools, which are flexibility tests and the training program. All these researches indicate the importance of developing the trait of flexibility and its impact on skill performance.

Application side

1- Research Methodology:

"And knows the method is "a set of processes and steps that the researcher follows in order to achieve his research" (Rasheed Zerwati, 2002, p. Scientific research, because



it is the path that the researcher envisages in order to reach scientific results in the study of a particular subject” (Muhammad Shafiq, 1985, p. **In our study we followed the experimental method**, this is due to its suitability and the nature of the study, to derive its implications from defining the research problem, setting hypotheses, then selecting the research sample, methods of collecting and preparing information and data, and setting rules for classifying them, then analyzing and interpreting them in clear specific terms.

1-1- Determining the search variables:

The independent variable: It is the variable that affects the occurrence of a specific situation, and in our research, this is represented by "Suggesting a training program for the development of flexibility through muscle lengthening and its impact on the skill of shooting from the center for handball players less than 10 years old.

The independent variable is "**muscular length**".

variable Affiliate: It is the variable that occurs as a result of the influence of the independent variable, or it is what follows in the occurrence of the independent variable, and the dependent factor is called the resultant factor. Thus, the dependent variable in our study is the "**center shooting skill**".

2- The exploratory study:

The exploratory studies are one of the most important research procedures carried out by the researcher so that he does not fall into errors, difficulties or problems during the main experiment (Haider Abdel-Razzaq Kazem Al-Abadi, 2015, p. 128), as it is a practical way to discover the obstacles that may face the two researchers During the main experiment, a prior preparation of the requirements of the experiment in terms of time, cost, auxiliary personnel, equipment validity and others.

has done researcher with the exploratory study on a sample of the sports team Jaafar Suleiman CHERAGA on December 15, 2021 in Cheraga hall, we explained the tests, their application and recording the results, and then a few days later under the same conditions and following the same steps we repeated the tests on the same sample.

2-1- The objectives of the survey:

The most important objectives that can be drawn from the survey:



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- Preparing and testing research tools and determining their characteristics and ability to measure research variables.
- Preparing the assistant staff.
- Adjust the sample.
- Knowing the average time taken to implement the research tools and finding out the best conditions for conducting the baseline study.
- Practice how to record cases in the form.
- Identifying research obstacles to get rid of them in the basic study.

3-3- Sample Survey Study:

A sample of 3 players was taken from the study community represented by the sports team **Jaafar Suleiman CHERAGA for handball**, and it was chosen in an intentional non-probability way. The tests were applied to it, and we repeated the tests on the same sample.

3-4- Tools of the survey:

- Flexibility tests :

➤ upper limbs: Flexibility test – raising hands to the top of the rug. (Brian Mackenzie, 2005, p85,)

The aim of this test is to monitor the athletes' development in shoulder flexibility.

➤ Lower extremities: sitting and reaching test (Brian Mackenzie, 2005,p74)

The goal of this test is to monitor the development of the lower back and the flexibility of the hamstrings.

- **Note card:** Relying on previous and similar studies and everything related to the theoretical balance that spoke about the skill of shooting from the focus and the kinetic analysis of the stages of this skill, we designed a note card to evaluate this skill, and the note card was presented to the arbitrators to measure the credibility of the tool, where it was agreed on 95% of the statements placed in the card, where modifications were made by adding and deleting some phrases.

3-5- Results of the survey study:

After conducting the survey, we conclude the following:

- Know the problems that we may encounter in the basic study.
- Make some adjustments



- Discover errors in the registration card.

4- Basic study:

Determine the original population of the study:

It is a procedure that aims to represent the original community with a share or a limited amount of vocabulary through which measurements or data related to the study or research are taken, and so with the purpose of generalizing the results obtained from the sample to the original community drawn from the sample (Mohammed Nasr El-Din Radwan, 2003, p. 20).

Table No.01 represents the research community.

S.C. Ecalptus	U.S. Belcourt	M.C.W. Fayet	USDS
E.S. Boumerdes	S.C. Algiers	Youth Qubba team	Civic Olympic
S.A.B.M. Rais	S.C. Sidi Moussa	Athlete's generation	I.R.B.E. Bier
C.H. Algiers	W.R.B. Ain Benian	O.C. A. Taya	G.S. Petrolien
Sports Club Belcourt	Nahd		

4-1-sample Study and how to choose it:

The sample is one of the most important axes used by the researchers during his research, The sample is the small unit that represents a real representation of the research community for the researcher to downen by conducting a comprehensive study on it (Abdul Latif Hamza, 1978, p 161), selecting the sample (20 players USDS Club) well and appropriately helps to reach results with high credibility and reliable efficiency, as it is considered representative of the original community.

➤ The characteristics of the study sample:

Weight (kg)	length (cm)	age (year)	The number of sample members	
30.50	133	10	20	Mediator
33.42	132.57	9.42		SMA
8.01	7.024	1.34		standard deviation

Table No.02: represents the characteristics of the study sample

4-2- Means of collecting information and devices used:

- 1- Flexibility tests
- 2- Computers,
- 3- Game CDs.
- 4- Power of note, training program

❖ **Flexibility Tests:** The tests were applied after they were presented to a group of arbitrators and agreed to be consistent with the subject and objectives of the study. The results of these tests were recorded by the assistant staff and this is to avoid bias by the student researcher.

➤ the shoulder: Flexibility test Raise your hands to the top of the rug. (Brian Mackenzie, 2005, p85,)

The aim of this test is to monitor the athletes' development in shoulder flexibility.

➤ Lower extremities: sitting and reaching test (, Brian Mackenzie, 2005,p74,)

The goal of this test is to monitor the development of the lower back and the flexibility of the hamstrings.

❖ **Note card:**

➤ **Define note card vocabulary concepts:**

Kinetic path of aiming skill: Focus shooting is classified as a single-movement skill that goes through three stages of movement. In order for focus shooting to be effective, performance must be fast. This shot is performed as soon as the ball is received and controlled. The ballistic shooting is above the shoulder level. It goes through three stages that describe the skill and mechanical performance of the shooting as well as the work of muscles and joints.

Preliminary stage: The preliminary stage begins as soon as the player receives the ball with both hands and then pulls it back and up to become the ball in one hand to prepare the arm for the shooting process either by swinging the side, i.e. by pulling the arm or by rotating the arm around the shoulder joint, and the throwing hand must be completely behind the ball while holding it with the fingers without pressing it and bending it Elbow at an angle of 90 or more through the action of the deltoid muscle that works to raise the humerus at an angle of 90 or more away from the trunk by fixing

the plate bone, and at the end of the lifting stage, the forearm is at an appropriate angle (for shooting) with the humerus.

Main stage: It is the stage in which the player who shoots the ball gains the amount of movement in a path and speed determined and drawn by the player's arm before the ball leaves the thrower's hand and the increase in the ball's flight speed and thus its ability to reach the shortest distance. actual performance.

the final level: After the ball comes out of the hand, the aiming arm completes its movement to the left side of the player's body, and the work of the triceps brachii muscle decreases, and there is a strong acceleration in the effect of the biceps muscle and the humerus in succession, and these muscles increase the good coordination and produce the speed of throwing, and the right leg is moved forward to stop The body with the help of drape the upper part of the torso lightly flexing in the final stage. Keep looking at the ball.

❖ **Determining the scientific bases of the muscle lengthening program:**

With regard to the training program, the theoretical data and previous studies were reviewed. We developed a muscular stretching program, which represented in allocating 20 minutes of fixed muscular stretching in each training session, while maintaining the training program approved by the sports team. The duration of the program lasted 8 weeks, at a rate of two sessions per week. for arbitration.

5- areas studying:

the field spatial: Cheraga Hall.

the field human: represented by a player Sports Club Jaafar Suleiman less than 10 Year.

the field timeline: Have Our study took a period of: 15th/11/2020 up to 10/05/21.

6- Statistical tools:

The researcher used at all stages of statistical analysis Statistical processor SPSS-IBM 19.

7- Presenting the analysis and discussion of the results: Flexibility tests

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Table No.03: represents the arithmetic mean and standard deviation of the pre and post tests for each of the flexibility tests.

sample size "n"	Repetition	percentage	standard deviation	SMA	Statistical coefficients Flexibility tests	
20	222	%44.76	8,33	17,5	tribal	Flexibility test Raise the arms off the surface of the rug to the top
20	274	%55.24	10,35	22	dimens ional	
20	383	46.14%	7.31	28	tribal	Flexibility test sitting and access
20	412	53.86%	8.26	31.66	dimens ional	

From the above table, it is clear that the arithmetic mean of the elasticity test is Raise the arms off the surface of the rug to the top tribal who reached $(17,5 \pm 8,33)$ represents the ratio **(44,76%)**, from the total research sample (n = 20), while the arithmetic mean of the post-test was $(25 \pm 10,35)$, represents the ratio (54.18), and the arithmetic mean of the sitting and access test was $(28 \pm 7,31)$, and represents the ratio **(46,14%)**, from the total research sample (n = 20), while the arithmetic mean of the post-test was $(31.66 \pm 8,26)$, with standard deviation (9.04) and represents the ratio **(53.86%)**.

Table.04: Represents the differences between the pre-test and the post-test for each of the flexibility tests

Indication level	The level of significance calculated between the two tests	Z scheduled	Z calculated	Sample volume	Statistical coefficients Flexibility tests
0.05	0.001	21	3.320-	20	The differences between the flexibility test the surface of the rug to the top
0.05	0.015	21	-2.436	20	The differences between the sitting test and pre and post access



can be seen through **Erreur ! Source du renvoi introuvable**. That all the calculated "g" values are smaller than the tabular value (21) and therefore we reject the null hypothesis which states that there are no differences between the pre-test and the post-test, and we accept the alternative hypothesis, and from it there are differences between the pre-test and the post-test for each of the flexibility test the surface of the rug to the top And the sitting and reaching test for Club Jaafar Suleiman players, which is also noticeable through the calculated significance level, which is less than 0.05.

Shooting tests: the researcher tried to Know the differences between the results of the motor path test for the skill of shooting from the focus in all its stages: general shooting, the preliminary stage, the main stage, the final stage, and this is in both the pre and post-tests.

Table No.05: represents the arithmetic mean and standard deviation of the pre and post tests for all stages of correction and general correction.

sample size "n"	Repetition	percentage	standard deviation	SMA	Statistical coefficients	
					Flexibility tests	
20	17	28,81%	0.59	1.29	tribal	Preliminary stage test
20	42	71,19%	0.53	2.85	dimensional	
20	13	27,66%	0.76	0.93	tribal	Main stage test
20	34	72,34%	0.65	2.61	dimensional	
20	19	42,22%	0.79	1.77	tribal	Final exam
20	26	%57,78	0.93	2.23	dimensional	
20	33	35,87%	1.17	4.37	tribal	general correction test
20	59	64,13%	1.68	9.78	dimensional	

From the above table, it is clear that the arithmetic mean of the preparatory tribal test, which amounted to $(1,29 \pm 0.59)$, represents the ratio (28,81%), from the total research sample ($n = 20$), while the arithmetic mean of the post-test was $(2,85 \pm 0.53)$, represents the ratio (71,19%), and the arithmetic mean of the pre-test of the main stage was (0.93 ± 0.76) , represents a percentage (27,66%), from the total research sample ($n = 20$), while the arithmetic mean of the post-test was $(2,61 \pm 0.65)$, represents a percentage (72,34%), it is also clear that the arithmetic mean of the pre-final stage test, which amounted to $(1,77 \pm 0,79)$, represents a percentage (42,22%), from the total research sample ($n = 20$) The arithmetic mean of the post-test reached $(2,23 \pm 0.93)$, represents a percentage (57,78%), while the arithmetic mean of

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the tribal general correction test was $(4,37 \pm 1,17)$, It represents a ratio (35,87%), from the total research sample (n =20The arithmetic mean of the post-test was $9,78 \pm 1,68$), represents a percentage (64,13%).

Table No.06: Represents the differences between the pre-test and the post-test for all stages of correction and general correction

Indication level	The level of significance calculated between the two tests	g scheduled	g calculated	Sample volume	Statistical coefficients Aiming test
0.05	0.001	21	3.448-	20	The differences between the pre-test and the post-test
0.05	0.001	21	-3.272	20	The differences between the pre-test and the post-test, the main stage
0.05	0.190	21	-1.311	20	Differences between pre-test and post-test for the final stage
0.05	0.001	21	-3.311	20	The differences between the pre and post-test for general correction

Table No. shows that all of the calculated “g” values are smaller than the tabular value (21) and therefore we reject the null hypothesis which states that there are no differences between the pre-test and the post-test, and we accept the alternative hypothesis, and from it there are differences between the pre-test and post-test for the preliminary stage, the main stage, the final stage and the correction general Players Club Soliman Jafari Cheraga

The relationship between flexibility tests and the motor path of the skill of shooting from the center: first student Knowing the relationship between each of the flexibility tests and each stage of the motor path of the skill of shooting from the fulcrum.

Table No.07: Represents the relationship between elasticity test Hands raised on the surface of the rug The general correction test and its stages



Indication level	"t" calculated	degree of freedom	Sample volume	Statistical coefficients Variables
0.05	*0.835	18	20	Sit and reach test
				general shooting test
0.05	** 0,878	18	20	Sit and reach test
				Preliminary shooting test
0.05	*0.710	18	20	Sit and reach test
				Shooting test in the main stage
0.05	**0.880	18	20	Sit and reach test
				Shooting test in the final stage

It can be seen from the above table that the results of the correlation coefficient between the test are elastic Hands raised on the surface of the rug And the general correction test and the correction test for the preliminary stage, the main stage, and the final stage test is a statistically average correlation, and this is what makes us reject the null hypothesis which states that there is no correlation between the elasticity test Hands raised on the surface of the rug The test is the general correction, and from it we accept the alternative hypothesis, which states that there is a correlation between the two tests.

Table No.08: Represents the relationship between the sitting and reaching test and the general correction test and its stages

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Indication level	"t" calculated	degree of freedom	Sample volume	Statistical coefficients Variables
0.05	*0.597	18	20	Exam Hands raised on the surface of the rug
				general shooting test
0.05	*0,654	18	20	Exam Hands raised on the surface of the rug
				Preliminary shooting test
0.05	*0,680	18	20	Exam Hands raised on the surface of the rug
				Shooting test in the main stage
0.05	*0.523	18	20	Exam Hands raised on the surface of the rug
				Shooting test in the final stage

It is evident from the above table that the results of the correlation coefficient between the sitting and reaching test and the general correction test and the correction test in the preliminary and final stage is a statistically strong direct correlation, as well as the results of the correlation coefficient between the sitting and access test and the main stage is a direct, medium, and this is what makes us reject the null hypothesis Which states that there is no correlation between the sitting and access test and the general correction test, and from it we accept the alternative hypothesis, which states that there is a correlation between the two tests.

General conclusion:

From what was presented, we concluded the following:

- A noticeable development in flexibility between the pre-test and the post-test Refer to the effectiveness of the muscular stretching program that was used and from which muscular stretching developed the quality of flexibility.
- The noticeable development in the motor path of the skill of shooting from the focus between the pre and post-test Refer to the development of flexibility, which led to the development of the results of the motor path of the skill of shooting from the fulcrum.
- Correlation between elasticity test Raise your hands to the top of the rug and the motor path of the skill center shooting the in all its stages indicates that the flexibility of the shoulder and wrist affects the motor path of the skill of shooting from the center.
- The correlation between the sitting and reaching test and the motor path of the shooting skill in all its stages indicates that



the flexibility of the lower back and the flexibility of the hamstrings affect the motor path of the skill of shooting from the center.

It is noticeable through these conclusions that they fall into the mold of the general hypothesis which talks about the development of the characteristic of flexibility using muscle lengthening and its impact on the skill of shooting for a player handball less than 10 A year, so that there is a direct relationship between each of the trait of flexibility and the skill of shooting, the greater the trait of flexibility of the player, that is, the better the skill of shooting (from the aesthetic side), and this is what calls for attention to this trait in this particular age group.

Discuss the results: According to the established assumptions:

The first hypothesis states: There are statistically significant differences between the pre-test and the post-test for flexibility tests.

After presenting and analyzing the results obtained from the comparison between the tribal and post-tests of flexibility, which indicated that there were statistically significant differences between the pre-test and the post-test for each of the flexibility test. Raise your hands to the top of the rug and test Flexibility sitting out of reach All of them are in favor of the post tests. This confirmed the existence of differences between the pre and post tests for flexibility tests, including the realization of the first partial hypothesis, and this indicates that muscle lengthening developed from the characteristic of flexibility, as Muhammad Abdul Rahim Ismail stated that the significant increase in flexibility occurs between the ages of 7-12 years. Thabet Muhammad also mentioned that the importance of flexibility for the handball player is crystallized in its contribution to the speed of learning to master the player's skill performance and the development of his movement performance, and from it can be said that the first hypothesis is correct.

The second hypothesis states: There are statistically significant differences between the pre-test and the post-test of the skill of aiming from the center.

After presenting and analyzing the results obtained from the comparison between the tribal tests and the post tests, which indicated that there were statistically significant differences in favor of the post test, and this is in both the general correction before and after, the preparatory stage, before and after, the main stage, as well as the final stage, all in favor of the post test, This was confirmed by the study of Suli

Hamza 2015-2016, which reached the efficacy and success of



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the proposed program based on flexibility exercises in order to improve the skill of shooting. For the youngest as recommended by coaches on necessity Attention to the development and development of flexibility among young groups. Abul-Ela Abdel-Fattah also confirmed that the inefficiency of the athlete's flexibility leads to an increase in the difficulty and slowness of motor skills, and he recommended the development of flexibility, and from it it can be said that the second partial hypothesis is correct.

The third hypothesis states: There is a relationship between the motor performance of the shooting skill (the aesthetics of movement) and the quality of flexibility after being developed using muscle lengthening.

After displaying and analyzing the results obtained from studying the correlation between each of the flexibility tests and the stages of the motor path of the skill of shooting from the focus of the player Sports Club Jaafar Suleiman less than 10 Year, The researchers found that There is a medium correlation between flexibility Raise your hands to the top of the rug And the general correction and the preliminary stage and the main stage and the final stage, while in the study of the relationship between the sitting test and access and the skill of shooting from the center, we found a strong direct correlation between the flexibility of the lower back, hamstrings and general correction as well as in the primary stage and the final stage, while the relationship was moderate with the main stage.

And from it, after reaching these results, which all lead to the fact that there is a direct correlation between flexibility and the skill of shooting from the center, that is, the greater the degree of flexibility, the greater the aesthetic movement of the skill of correction, and this was confirmed by discussing the first and second hypotheses, meaning that flexibility has an important role in the skill performance, which is What was agreed by Arab Qadour and others, who found a positive effect of flexibility on shooting through the presence of a strong correlation, and that the greater the degree of flexibility, the greater the mastery of the skill of shooting, but there are people who do not have acceptable flexibility, but they have accurate correction and this may be due to focus and other factors related to the basics The principles of shooting and the majority that have flexibility have the ability to shoot well and correctly, and shooting skill remains linked to other factors related to conditional qualities such as strength, accuracy, technical skills, level of



learning as well as talent, and all other aspects controlling the shooting skill that we recommend to address in future research and from it we can say that the hypothesis the third part is correct.

1- What this study raises of future problems:

Through conducting the current study and the difficulties we encountered in it, we can extract some problems that need further research and in-depth, and this is what we suggest as future problems:

- Touch on a larger sample.
- Addressing this study with many age groups.
- Addressing all types of muscle lengthening.
- The use of kinetic analysis to study the kinetic path of the skill of shooting from the center.
- An in-depth study of the associated variables and their relationship to the motor course of shooting.

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