



## *The role of the physical preparation in improving the monster volleyball spike for minims of volleyball in M'sila*

### **دور التحضير البدني في تطوير مهارة الضرب الساحق لدى أشبال الكرة الطائرة**

### **دراسة ميدانية لأندية الكرة الطائرة لولاية المسيلة**

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#### **Abstract**

This study aims to check two main objectives. First, if the physical preparation "general or specific preparation" has a role in enforcing the spike skill. Second, to know the factors those affect the performance of the volleyball players. For this purpose we used the descriptive method. The researchers chose a sample of 20 coaches from M'sila. In order to collect data the researchers used a questionnaire. the results were analysed through using SPSS 19. After the statistical treatment the researchers concluded that improving the physical characteristics contributes too much in improving the monster volleyball spike. The training schedule no matter if it is general or specific, is considered as the basic pillar in performing and mastering the different basic skills of volleyball. On this basic, the study recommended to reinforce the training on Monster spike skill.

#### **Keywords**

Physical preparation;  
Overwhelming hitting skill;  
volleyball.

#### **المخلص**

إن تعلم التقنيات والمهارات الأساسية في رياضة الكرة الطائرة يعود أساسا إلى شعور المدرب واللاعب بأهمية هذه التقنيات، فتحقيق النتائج والرفع من مستوى اللاعب ليس وليد الصدفة وإنما هو مرتبط ارتباطا وثيقا بانتهاج الطرق العلمية في التدريب والتحضير البدني في هذا البحث حاولنا من خلال تحليل نتائج الاستبيان الذي طرح على أصحاب الاختصاص في ميدان الكرة الطائرة (مدربي ولاية المسيلة) معرفة إذا كان للتحضير البدني بشقيه العام والخاص دور في تطوير مهارة الضرب الساحق وكذا معرفة العوامل التي تؤثر على أدائه، وكانت النتائج تشير إلى أن تطوير الصفات البدنية يساهم بشكل كبير في تطوير مهارة الضرب الساحق، ويعتبر البرنامج التدريبي العام والخاص الدعامة الأساسية في أداء وإتقان مختلف المهارات الأساسية في الكرة الطائرة.

#### **الكلمات المفتاحية**

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## 1. Introduction

Sports training have become more widespread in accordance to concept and importance, due to the increasing demand and scientific interest in it (Amer Amer Hussain et.al, 2020).

Volleyball is one of the team sports that was greatly affected by the development of the various sciences associated with the field of sports and the development of training and preparation methods for players, which contributed in raising the level of players physically, skillfully and planningly. This helped the players to reach the highest levels of competition. This achievement was clearly noticed in the level of performance achieved by players during the Olympic and World Championships (Aref Saleh Mohsen Al-Karamdi, 2016).

### Literature Review

In order to succeed in any sport game, especially in team games as volleyball, basic skills are considered as a fundamental basis to be relied on, otherwise neither the player nor the team can perform his duties, so during training beginners and intermediates coaches focus more on the basic skills( Mostafa Taha ALI, 1998,p293). In volleyball there are many basic skills, one of them is The Monster Spike, which is considered as the spirit and the splendor of volleyball, its main function is to slam the ball to the ball over the net into the opposing court effectively and aggressively legally, in which the opposing part fails in returning it.

Spiking slams or the spike is one of the main and the most important means in scoring points, the use of spikes is mainly within the third touch of the ball. (Saad Zaghlo MOHAMED/ Lotfi Alsayd MOHAMED, 2001, p 74). The main aim of using spiking is volleyball game is either to score points during the game or to get serves. This mission requires special skill from players, players that are characterized by speed, good behavior, self-confidence, high in height, strength of muscles, superior motor speed, agility, neuromuscular computability, high explosive

strength in jumping, hitting, precision in motor performance and striking of movements to a certain point in addition to the correct landing. (Mostafa Ali TAHA, 1998,p101). Consequently, physical preparation (physical building) is one of the main basics that must be considered especially with regard to the speed and correctness in learning and mastering the basic skills. Physical capabilities are among the most important factors that affect skill performance, as they are qualities that the player or athlete earns from the surrounding environment or already been within the player himself and it keeps developing according to the player's sensory, physical and functional abilities through practice and training (Faghoul Samir et al., 2020).

The physical preparation is the principal entry to take the player to the highest sportive levels, i.e. all the procedures and practices that the coach put and design its volume and strength besides the time of its performance within a time line, will be performed either daily or weekly. The coach works to raise the level of physical performance of the individual athlete to the maximum extent permitted by his capabilities by giving the individual physical fitness. The physical preparation represents the basic base on which mastering and accomplishing high levels of technical performance is based , it is also the main entrance to take the player to the highest optimal athletic levels by strengthening the level of the physical and functional characteristics of the player(Mostafa Wajdi FATEH/ Lotfi Alsayed MOSTAFA 2001,p122). As well as developing physical attributes that is considered as the backbones of all sporting activities (Aqnini Marwan, Missouri Rizky, 2020).

Among the most important studies that is related to the subject of the research, there is the study of SHAIMA Ali Khamis 2004, that is entitled “ the explosive power of the arms and its relationship to the performance of spike in volley ball”, the mentioned study aimed to check the relationship between the explosive power of the arms and the performance of the spike skill in volleyball. The nature and the objectives of the research are the main

elements that underline the research method, so SHAIMA Ali Khamis chose the descriptive research approach especially survey method, she took 30 students from the second stage in sport college (university of bible) as a population of the study, during the scholar year(2003/2004), the participants were randomly chosen, the researcher conducted that there is a strong relationship between the explosive power of the arms and the performance of the spike skill in volleyball, and that there is a positive relationship between the explosive power of the legs and the performance of the spike skill in volleyball. The researcher recommended the need to pay attention to the fitness of the players besides emphasizing on its components such as power during training, she emphasizes also on the need as well to rely on different training ways and strategies like bolometric training, in order to develop the characteristic of the explosive power of arms and legs.

And Ahmed Salih's 2011 study, that is entitled "The effectiveness of a proposed training program to improve the physical abilities of the spike skill among the beginners of the Salam Volleyball Club in the Gaza Strip", the study aimed to identify the effectiveness of a proposed training program to improve the physical abilities of the spike skill among the beginners of the Salam Volleyball Club In the Gazza sector and upgrading the performance level of spike skill by designing a proposed training program, where the researcher used the experimental approach for pre and post-test for each group. The researcher used an intentional sample of 12 players from the beginners "minims" ranging in age from 15 to 17 years, and the results showed that the proposed training program led to the improvement of most variables of physical abilities and there are statistically significant differences between the pre and post- test for each of the physical abilities of the spike skill in favor of the post-test. Based on all the mentioned factors and researches we are in need to ask the following questions:

- Does physical preparation contribute to develop the spike for the minims of volleyball?

This general question embodies the following sub questions :

- Does the spike skill have an influence on the psychological state of volleyball players?
- Does the success of the spike skill require the development of the mental and physical characteristics of the player?

### **The hypothesis**

#### **General hypothesis**

In order to answer the aforementioned questions the researcher put the following hypothesis:

- Physical preparation contributes in developing the skill of monster spike

#### **Secondary hypothesis**

- Spike Skill has a psychological effect on the psychology of the player.
- The success in Spike requires a development in physical and the mental characteristics of a volleyball player.

### **Importance of the study**

The study seeks to highlight the importance of physical preparation, and to insight the reasons of the success of the spike skill for volleyball minims. In addition; to identify the most important characteristics that are needed to implement the skill of monster spike. Besides; highlighting what is required and what does the player need to perform and master the spike skill?

### **Objectives of the study**

- Explain the effect of the spike skill on the psychological state of the player.
- Identify the difficulties and obstacles that face the player while performing the spike skill.
- Provide the most important solutions and suggestions for the implementation of the spike skill.
- Highlighting the importance of physical preparation and its role in developing the spike skill for volleyball minims.

## **Theoretical studies**

### **Physical preparation**

The processes that are directed to improve the player's general and specific physical abilities (Bastawisi, 1990, p. 3). It means all the procedures and exercises that are planned and developed by the coach and trained by the player to reach the peak of his physical fitness and aims to develop the physical characteristics of strength, speed, endurance ... etc., and it is divided into two general and special types (Bajawi FADLI, 2015, p. 43).

### **Spike skill**

It is a strong direction of the ball slammed by the player while he is in the air after a vertical rise along the net and his movements are consistent (Hassan ABDEL-JAWAD, 1999, p. 20). Spike skill has 3 main types: Anterior spike, lateral spike, posterior spike (Abedallah AKIL, 1987, p. 93)

### **Volley ball**

It is a team sport where two teams meet over the field, which is 18 meters long and 9 meters wide, and divided by a net into two equal parts, the net height is 2.43 meters for males and 2.33 meters for females. Above the net, the player starts playing. The aim is to try to drop the ball in the opponent's side and avoid falling in his part, and play begins by the right posterior player as he starts hitting the ball by sending it to the opposing team's area which is called serving and each team has the right to touch the ball 3 times without counting the blocking touch if it exists and the player cannot touch the ball twice in a row, and the game continues until the ball touches the ground or fails to achieve a correct serve. (the basic rules of the volleyball, 2013/2016, p 11).

Volley ball is also considered as a sport that is rich of technical skills, and we find that it includes the skills of passing, sending, crushing, blocking, receiving and defending on the stadium (Mim Mukhtar et al., 2020).

## **2. Methods**

### **Experimental method**

A research method means those procedures, rules and controls that are established in order to access and discover the facts, as it is a specific program of various ways to answer the questions and inquiries raised by the topic, or it is the path that leads to the desired goal (Sayyah Zakaria and others, 2020). The researchers relied on the descriptive approach, which is defined as a set of research procedures that integrate to describe the phenomenon based on all facts and data, classification, processing, and analysis to extract their significance and access to generalizations about the phenomenon being researched.

### **Study Scales**

**Human scale:** is represented in Volleyball coaches of M'sila.

**Time scale:** the study took place at the beginning of February 2020.

**Place scale:** the study took place at the level of the volleyball clubs in M'sila (RCM,ESM,ATLVB,NVB,NRVBOD).

### **Participants**

Study sample is known as a group of people that are taken from the original society so the study sample represents it honestly. (Zamooly Alhacen, Mokran Ismail 2020). In the selection of the study sample, the researchers relied on a selective sample, which included 20 coaches from various clubs of willaya of M'sila.

### **Materials of the research**

The researchers relied on a questionnaire, within which they tried to be comprehensive and directly related to what was mentioned in the theoretical part. While forming the

questions the researchers took into consideration the following steps:

- Formulate questions in a clear and easy way.
- Link the questions to the objectives to be obtained.

**The Scientific Basics of the Research Method**

**Validity and Reliability of the questionnaire**

Baromeck. G states that “honest exam means the extent to which the test performs its purpose for which it was intended to, and the test means the validity of the choice for measuring what was set for measuring”. (Dahmani Nawel, et.al 2020).

**Objectivity of the jury members**

The researchers took into consideration the point of view of a number of doctors, academics as well as teachers in order to give them a space to express their opinions about the suitability of the questionnaire in relation to the sample of the study as well as to the exam objectives.

**Accounting Tools**

The accounting tools are represented in the following items:

Statistical mean, standard deviation, percentage, Chi-Square test .

**Design and Procedure**

The researchers used a questionnaire in order to check the reliability of their hypotheses i.e. the questionnaire was set to provide a statistical support for the researchers to confirm the importance of the physical preparation in order to develop Physical preparation contributes in developing the skill of monster spike and whether the Spike Skill has a psychological effect on the psychology of the player. while the success in Spike requires a development in physical and the mental characteristics of a volleyball player.

**Statistical Analysis**

All data collected were analysed by using the SPSS software 19. The quantitative variables were compared using the Chi-squared test.

**3. Results**

**Table 01.** Statistical results of the participants of the first section of the questionnaire

N°	Criteria of the questionnaire according to section	Yes	Percentage	No	Parentage	Mean	Standard Deviation	Chi-Square test
01	Are you developing a physical preparation program?	19	95%	01	05%	1.050	0.223	16.200
02	Does training and developing the physical characteristics have a place in the general and specific physical preparation program?	18	90%	02	10%	0.100	0.307	12.80
03	Is training of the Monster spike skill for minims is a priority?	15	75%	05	25%	1.250	0.444	5.00
04	Does training and developing Monster spike skill depend on training and developing physical Skills?	17	85%	03	25%	1.150	0.3663	9.800
05	Does the Monster spike skill depend on a specific type of training?	16	80%	04	20%	1.200	0.410	7.200
06	Are there any types of sweeping technique?	19	95%	01	05%	1.050	0.223	16.200
07	Does achieving good mastery of Monster spike skill require training and developing of complex physical attributes?	17	85%	03	25%	1.1500	0.3663	9.800
Mean of the Section						1.135		

**Table 02.** Statistical results of the participants of the Second section of the questionnaire.

N°	Criteria of the questionnaire according to the Axis	Yes	Percentage	No	Percentage	Mean	Standard Deviation	Chi-Square test
01	Do you rely on the following skills to train and develop the hitting skill: attention, intelligence, accuracy, self-confidence?	19	95%	01	05%	1.050	0.223	16.200
02	In your opinion, does the success of the Monster Spike skill affect the psychological state of the attacking player?	19	95%	01	05%	1.050	0.223	16.200
03	In your opinion, does the success of the Monster Spike skill affect the psychological state of the defending player?	19	95%	01	05%	1.050	0.223	16.200
04	Does achieving good mastery of Monster Spike skill require training and development of mental abilities?	18	90%	02	10%	1.100	0.307	12.80
05	Does achieving good mastery of Monster Spike skill require training and development of Psychological abilities?	18	90%	02	10%	1.100	0.307	12.80
06	Are you developing a mental training program that goes with the physical preparation program?	18	90%	02	10%	1.100	0.307	12.80
07	Are you developing a psychological preparation program that goes with the physical preparation program?	18	90%	02	10%	1.100	0.307	12.80
Mean of the section						1.064		

### Table Discussion

Through table No. (01) it was found that the main ranged between (1.050 and 1.250), and the frequencies and percentages of the study sample ranged between the highest frequency of 19% by 95% percent and the lowest frequency equal to 02% by 10% percent, and the highest order came in statement 1 6 and the lowest order in phrase 5 and a general mean of the section is of 1.135, we conclude that most coaches consider that the preparation period is the main entrance to get the player to the required sportive practices.

Where trainers develop training programs for this specified period, determining the size, intensity, and time of performing exercises to train and develop physical characteristics because of their great importance in mastering, teaching and training various basic skills. This came in the first order by 95% percent, with a mean average of 1.05 and a standard deviation of 0.25 as well. That there is significance for chi- squared of 16.20.

Most of the answers obtained from table 01 confirmed that the coaches pay great attention to develop the monster spike skill as the nucleus of the game and the team maker in the game because it is one of the basic skills to focus on while training the minims, as the answers were 75% percent, and the table showed that there was a mean of 1.250 and a standard deviation equal 0.4445 while we find in it a chi -squared equals 5.

Through table (02) the results showed that the mean averages ranged between (1.050 and 1.100), while the frequencies and percentages of the study sample ranged between the highest amount of 19% by 95% and the lowest repetition equal to 01% by 5% and the highest arrangement of phrases in each of the statements 1, 2 and 3 but the lowest rank in the phrases 7,6, 5 and4, while the mean of the section 1.064.

As most of the coaches focus on mental abilities such as attention, focus, accuracy and self-confidence during their training for the

Monster spike skill and work to develop physical characteristics in addition to psychological skills and mental capabilities of minims in order to achieve a successful spike skill, and this came in the first order by 95% with a mean of 1.05 The standards deviations are: 0.223, and there is an indication of Chi-Squared at 16.200.

The psychological state of the players is affected positively and negatively upon success or failure in performing spike skill, as the 95% rate in phrases 2 and 3 confirms this, as the table showed a mean average of 0.223 with an indication of Chi- squared at 16.200.

#### 4. Discussion

Depending on The results obtained from the questionnaire the researchers reached to confirm the following:

- The coaches depend in their training on a specific type for the Monster spike skill, and they believe that there are different types of this technique, in addition, they consider that the technique of Monster spike is a main priority while training the minims.
- The development of physical characteristics help to train and develop the technique of Monster spike, as the physical characteristics have an impact on the performance of the spike skill of among volleyball minims besides other complementary skills that are agility and maintenance.
- A good general and specific physical preparatory program is the basis for the success of the training process as well as to reach the required and good level. By developing physical skills, in addition to that, the coaches unanimously agree that the success or failure of the performance of the monster spike technique affects the player's performance during the game negatively or positively.
- The psychological and mental state of the attacking player is affected according to the failure or success of the monster spike technique, which confirms the first secondary hypothesis.
- During training for the monster spike technique, the coaches focus on the following capabilities: attention - focus - accuracy - self-

confidence, which are of high importance in improving the player's performance.

- The trainers pay more attention to prepare and develop Monster spike skill because they consider it as one of the main tasks of training the minims.
- All volleyball coaches focus their attention on developing physical and mental skills in order to reach a good spiking skill, which fulfills the second secondary hypothesis.

#### 5. Conclusion

Learning basic techniques in volleyball are mainly due to the coach and the player's sense of the importance of these techniques. Achieving results and raising the level of the player is not accidental but rather is closely related to scientific methods and good physical preparations. The means and the coach have an effective role to reach such a level. Through the analysis of the results of the questionnaire that were presented to the specialists in the field of volleyball, in this research the researchers tried to check whether the specific and general physical preparation contributes in developing the Monster spike skill, as well as to know the factors that affect the latter.

#### 6. Recommendations

- Giving critical importance to both the Monster spike skill and its material requirements.
- To realize the importance of general and specific physical preparation in developing and focusing on monster spike skill.
- To introduce some videos and audios so that the player would have an idea of monster spike skill practices before the session begins.
- To depend on the basic training policy and the continuity of training for the younger generation.
- To provide the players with different tools, methods of practice and accessories that develop the physical capabilities of players.

- To focus on developing training plans and programs for Monster spike skill, while giving them high priority.

### Conflict of interest

The authors declare that there is no conflict of interest

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