



## DETERMINATION OF THE AGILITY CONTRIBUTION IN THE ACCURACY OF THE OVERWHELMING RATIONAL SHOOTING OF THE VOLLEYBALL YOUNGSTERS<sup>i</sup>

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### Abstract:

The study aimed to determine the Agility contribution ratio in the accuracy of the Overwhelming shooting of the volleyball youngsters, where the researchers used the descriptive approach in its two methods associative and analytical approach center regional Algiers. The research sample has included 24 players from the second national department Center regional Algiers randomly chosen from the original group of (120) players percentage of 20%. The researcher used the Agility Test and the Overwhelming rational shooting Skill Test. The SPSS statistical package program was also used to analyze the results of the study and in the end, the following has been reached:

- there is a statistically significant correlation between the Agility and the Overwhelming rational shooting of the volleyball youngsters
- the proportion of the contribution of Agility in Overwhelming rational shooting was good, which confirms the effectiveness of this capacity in the performance of the skill.
- draw an equation from which we can accurately predict the results in Overwhelming rational shooting in indication of the volleyball youngsters Agility.

Accordingly, the researcher recommended the need to pay more attention to overwhelming rational shooting for players during the training sessions, rely on the

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<sup>i</sup> A field study on the clubs of the second national division "Center regional" Algiers.

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predictive equivalent resulting from this study, and make studies on the contribution of other physical and kinetic abilities in various offensive and defensive skills in volleyball.

**Keywords:** agility, overwhelming rational shooting, volleyball youngsters

## 1. Introduction

The research dedicated on the mathematical preparation of the various games are one of the studies that take into account the measurement of the physical characteristics of each game in order to provide the trainer and the player with information about these qualities and to indicate their importance and role in the quality of this game and its relation with the play method and the application of its basic skills. Many researchers in the sports training has investigated the factors and elements that have an active role in the training process in order to know the extent of their impact in the field of learning skills properly as these factors do play an important role in the learning process.

Volleyball is one of the team games that require skills with special specifications of technical and accurate performance. The physical and kinetic side has an important role in many matches, especially when the level is convergent between the players in the tactical and skill aspects through continuous training exercises, which is similar to play cases, taking into account the gradient in order to ensure its intake by players in a good way, and ensure consistency of The level of physical preparation skill and training to withstand fatigue and speed of performance In the circumstances and situations that require this, while retaining the players' mental abilities and abilities to intake. As well as knowing of the strengths and weaknesses of the opponent and his ability to quickly act in the changing positions and during fatigue, the player analyzes the positions and responses expected from the opponent and chooses the most appropriate time for the required performance, then modifies it depending on the situation as fast as possible.

We have dynamic abilities such as agility which create the integration of the image of shooting player in volleyball; the shooting force and field intelligence are the safety valves for the success of combined attacks.

Where offensive skills are one of the most important necessities of volleyball, and this is what Wajih Mahjoub referred: "*Volleyball game is one of the games that have specificity and popularity which involves a large amount of skills that work to upgrade the volleyball player and thus the team as a whole to compete at high levels which is evident in the current world championships.*" (Louay Ghanim Al-Sumaidaie, 1997, p 91)

Conducting studies on the ratios of contribution of physical or kinetic abilities gives a clear picture for trainers about the potential of their teams and the appropriate means to raise their level of achievement.

## **2. Research problem**

Overwhelming rational shooting is considered as one of the volleyball offensive skills which plays an important role in resolving the point and on the success of the attack and make achievement in the game. The application of this skill requires the player to be physically, functional and psychologically integrated, and the physical aspect has the largest proportion of this integration. This aspect requires that the general and special physical qualities are at the highest level in order to allow the player to have the right opportunity to do the right action. By implementing the skill in its appropriate artistic form, especially Agility, the researchers indicated that there is a weakness in the overwhelming rational shooting which may be due to a weakness of the kinetic abilities of this game. Therefore, the researchers decided to study the contribution proportion of Agility in the accuracy of Overwhelming rational shooting for volleyball youngsters.

For what's been mentioned before,, the main question was raised as follows: *“Is it possible to arrive at an equation to determine the contribution percentage of the agility in overwhelming rational shooting for volleyball youngsters?”*

## **3. Research objectives**

The main objective of this research is to identify and determine the contribution percentage of the agility in overwhelming rational shooting for volleyball youngsters through:

- Understanding the nature of the relationship between the agility of agility and Overwhelming rational shooting for volleyball youngsters.
- Trying to find an equation to predict the accuracy of Overwhelming rational shooting in indication of agility for volleyball youngsters.

## **4. Research hypotheses**

- There is a correlation between Agility and the Overwhelming rational shooting for volleyball youngsters.
- An equation can be found to predict the accuracy of the Overwhelming rational shooting in the indication of agility for volleyball youngsters.

## 5. Research methodology and field procedures

### 5.1 Research methodology

A descriptive approach in its analytical style to suit the nature of the study.

### 5.2 Research group and sample

The search group is represented by players in the second national division (central region) Algiers volleyball youngsters, where the statistical group included 120 players, the sample was selected in a randomly of a 24 players out of 120 players meaning 20 %.

### 5.3 Devices and tools

Devices and tools used in the search:

- scientific sources and references;
- test and measurement;
- depository methods.

### 5.4 Tests used

1. Zigzag running test to measure agility (Muwafaq Majid al-Mawli, 1999, p. 86).
2. Test the accuracy of Overwhelming rational shooting (rational direction). (Mohamed Subhi Hassanein, Hamdi Abdel Moneim, 1997, p 69).

### 5.5 Scientific basis for the tests

**Table 1:** The scientific basics of the research tests

Test	Measuring unit	Stability of the test	Self-honesty	Objectivity
Agility test	second	0.76	0.87	0.89
Overwhelming shooting test	degree	0.73	0.85	0.88

The value of the correlation coefficient "t" is equal to (0.71) with freedom degree (6) and the level of significance (0.05).

### 5.6 Statistical methods used in the research

The researcher used the program (SPSS) Version 25 to analyze the study results.

## 6. Results

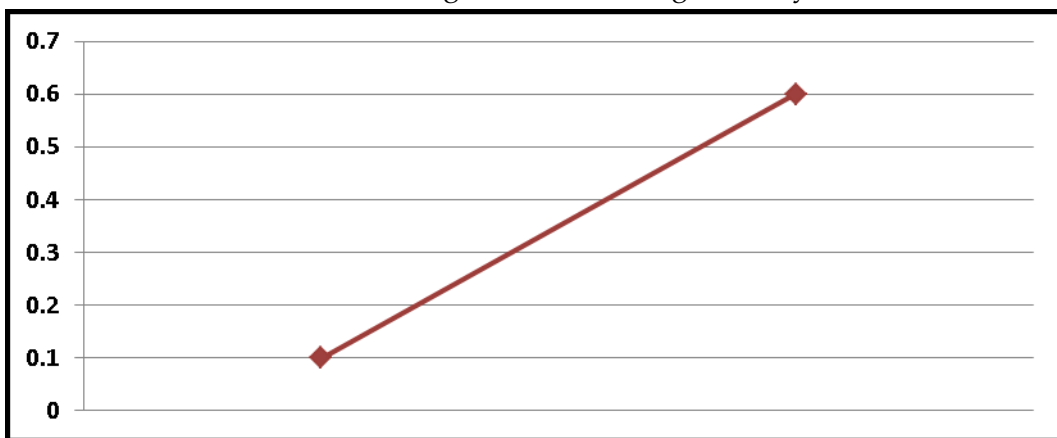
### 6.1 View and analyze the results of agility relation with the accuracy of the Overwhelming rational shooting

**Table 2:** The correlation between the agility characteristics and the accuracy of overwhelming rational shooting

Variables	X	S	Coefficient of correlation	R	Link nature	Level of significance	Sig	Statistical significance
Agility	8.98	0.47	0.60	0.4	simple	0.05	0.003	moral
Overwhelming shooting accuracy	20	3.41						

It can be seen through the results table above that the arithmetic average of the agility degrees was 8.98 with a standard deviation of 0.47 while the arithmetic average of the overwhelming rational shooting accuracy reached 20 with a standard deviation of 3.14, while the value of the correlation coefficient between the two variables (agility, overwhelming rational shooting accuracy), reached (0.60) which is greater than the value of the link Tabulated, which reached (0.40) with a freedom degree of 22 and at a significance level of 0.05, which confirms the statistical significance of the link and its truth between the two variables in the search, and confirming this the value Sig which reached 0.003 which is less than 5%.

**Figure 1:** Graphical representation of the relation between Agility and the Overwhelming rational shooting accuracy



## 7.2 Extraction of linear regression equation model indicators

**Table 3:** The quality indicators of linear regression equation model

Variables		Contribution Ratio (Explanation Factor)	Estimation Standard Error	Values (F)	Sig
Independent	Dependent				
Agility	Overwhelming shooting accuracy	0.35	0.39	8.20	0.021

The table 3 shows that the value of Explanation Factor (contribution ratio) reached (0.35) which means that independent variable (agility) explains 35 % , From the dependent variable variance (the overwhelming rational shooting accuracy) which is a statistical significant, and we note that the value of F Is equal to (8.20) with probability (0.021), which is less than 0.05, so the regression is statistically significant and not equal to zero therefore, there is a relation between the Independent variable and the dependent variable, which means that the high contribution of the variables indicates that the common variance between the independent variable and the dependent variable was very big, This is evident through the level of significance Which shows a probability with the rate of (2.1%), And this shows a significant linear regression simple model, Thus the model represents the relationship between the variables under search in best representative way.

## 6.3. Extract regression coefficients

**Table 4:** Shows the values for regression coefficients and the significance of the form parameters

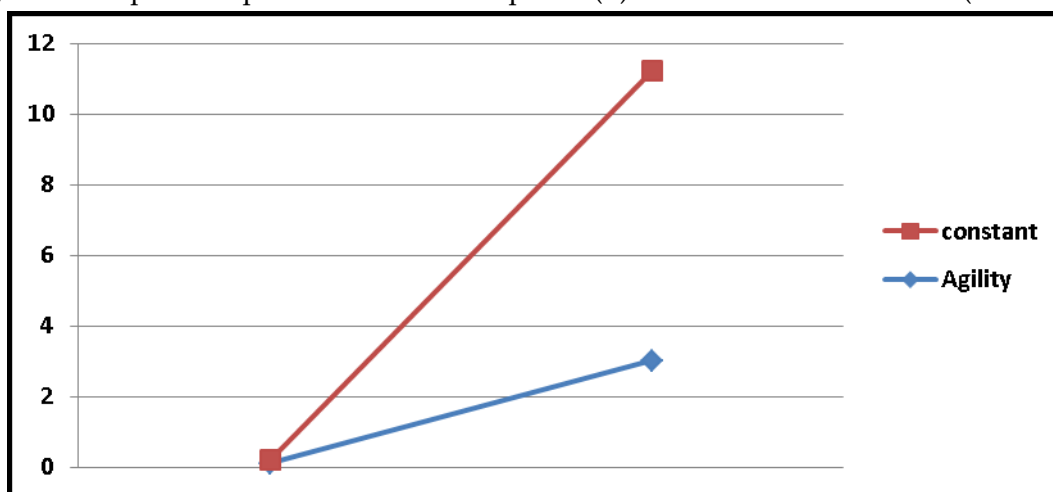
Transactions		Linking	Standard error	Values t Calculated	Level of significance	Sig	Statistical significance
Nature of the Factor	Values of the Factor						
Fixed amount (constant)	11	0.60	0.48	11.60	0.05	0.004	S.significant
The agility X	0.9		0.05	3.01		0.000	S.significant
Predictive equation	<b>the overwhelming rational shooting accuracy = 0.9 x agility + 11</b>						
<b><math>Y = 0.9 \times \text{Agility} + 11</math></b>							

The table shows that the values of T, calculated for the cross coefficient (fixed amount), and the regression coefficient (X), were (11.60, 3.01), while the value of Sig was (0.004,

0.000) that is less than 0.05 which Indicating the significance of the two factors (constant. (X) for the simple linear regression model, meaning that the equation of the regression model does not pass the point of origin, and the regression coefficient value is not zero.

Thus, the predictive equation (for overwhelming rational shooting accuracy) can be developed, in terms of (agility).

**Figure 2:** Graphical representation of the Special (T) values of the two factors (constant X)



## 7. Discussing results

The researchers concluded that the performance of the Overwhelming rational shooting skill requires the availability of agility, which is one of the basic physical and kinetic requirements to achieve success in the skill performance and this gives an indication of the need for physical and kinetic capabilities of the overwhelming rational shooting, which must be integrated with the volleyball players, and the performance depends on the applications of explosive movements in order to be able to win it, agility is one of the important qualities that must be in a modern volleyball player, where its installation includes the nerve – muscular compatibility, strength, speed and flexibility. It also plays a critical role through the rapid ability to understand the new movement and the ease of carrying out tactical operations. Mufti Ibrahim referred to it as "*the ability of the player to change his body positions or speed or directions on the ground or in the air with accuracy, smoothness and correct timing.*" (Mufti Ibrahim Hammad, 2001, p 55)

Baro conformed from Mohamed Hassan Allawi and Mohamed Nasreddine Radwan "*...the correlation between kinetic speed and strength, which means agility is a necessary requirements in the application of movements and basic skills*" (Baro quoted by Mohamed Hassan Allawi and Mohamed Nasr al-Din Radwan, 1994, p 78), and this is

what we observed through the contribution proportion of this attribute in the accuracy of overwhelming rational shooting in the sample members.

Therefore, agility is one of the basic kinetic abilities in the overwhelming shooting play and any imbalance in the integration of skilled performance requires - according to researchers - that the physical preparation covers all the necessary qualities that play an active role in the implementation of the technical performance and mobility of skill, Therefore, the emphasis is very necessary to pay more attention to agility, that researchers see as the real key to integrating the performance of basic volleyball skills.

## 8. Conclusions

- There is a statistically significant correlation between agility and the accuracy of the overwhelming rational shooting for volleyball youngsters.
- Contribution percentage of fitness in the accuracy of the overwhelming rational shooting was good, which confirms the effectiveness of this capacity in the skill performance.
- An equation was drawn to predict the accuracy of the overwhelming shooting In indication of agility for volleyball youngsters.

## 9. Recommendations

- paying more attention to agility and overwhelming shooting for players during the training sessions;
- needing to adopt fitness in the selection of volleyball players;
- relying on the predictive equation that resulted from this study;
- conducting studies on the contribution of physical and kinetic abilities in the other various skills in volleyball, whether defensive or offensive.

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