

THE VERTICAL AND HORIZONTAL DISTANCE OF THE STARTING POINT AND THE BALL AND RELATIONSHIP TO THE SPEED AND ACCURACY SKILL OF SMASH SERVE IN VOLLEYBALL

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Abstract

Volleyball game is one of the games that consist of multiple, compound and somewhat difficult skills in some of its skills, especially the overwhelming skill A stage that contains mechanical variables that differ from the previous and subsequent stage, which gives it the characteristic of difficulty in terms of reaching the mechanism in the skill performance and the motor compatibility between the parts of the body and the surrounding stimuli, because of its importance in accessing high levels in the performance of the players and providing the effort made during the numbers, where The researchers used the descriptive curriculum in the method of survey studies and correlations of its suitability for the nature of the research problem, as it works to describe the performance variables without going through their experimentation. And by (5) players, the most important conclusions were:

- 1- The vertical distance from the starting point or from the level of the starting point affects the accuracy of the Smash Serve in volleyball .
- 2- The horizontal distance of the point of retention of the ball affects the speed of the start of the ball and the accuracy of the ball when performing the Smash Serve in volleyball .

Keywords: Vertical And Horizontal Distance ; Speed And Accuracy; Smash Serve in volleyball .

1 -1 Introduction and Importance of Research:

Upgrading sports levels occurred because of the major scientific revolution in all its fields. Specialists in the sports field took advantage of these sciences in order to develop those sporting activities that have begun to occupy peoples in one way



or another and some details of performance have an important role in the development of skill performance and that biometric variables The player is placed in the right place before performing the main section of the movement, it is very important, especially if the ball is directed by the colleague or from the play itself, and this is what happens in volleyball, especially in the skill of Smash Serve e that "begins to throw the player the ball in an appropriate and correct way and what is appropriate With physical possibilities and physical measurements "(Wagner H, & J, Tilp ,M: 2014).

And that this throwing varies from one player to another and with different heights, but the rise may differ from attempt to another to the same player to the horizontal distance that the ball moves towards the team's stadium before the rise and beatings stage is one of the calculated matters and according to the performance requirements imposed by the player's capabilities and the speed of his approach and his flight, but it is important It is very that the player determines these capabilities and puts it in the account, as the point of renaissance towards the ball is a decisive point, especially in volleyball skills, and sometimes we find a weakness in the performance of the transmitting skill if this process is done as required, so the overwhelming transmission does not achieve its purpose, which is "directing the ball towards a square The opposing team is the maximum speed of the ball in order to violate the team's defenses at the very least and increase the difficulty of delivering the ball to the prepared by the future or achieving the best, which is to get a direct point of serve . (Marquez ,WQ, & ,M &Ae, M :2011) The clarification of the situation in the required form on the point of rise towards the ball and the opportunity it provides to achieve the purpose of the overwhelming send The vertical and horizontal distance to advance the ball gives a clear vision that enables the coach and the player alike to perform this skill as required. The training process is no longer as previously dependent on previous experience In improving motor performance and this is what "biometric specialists seek to provide. And that the evaluation of the technical performance by the coaches to find out the results of their training and obtain accurate information from those devices and tools used in the motor and biometric analysis "(Basman Abdel Wahab & Wehbe Alwan :2019)



1 -2 Research Objective:

- Learn about the relationship of the horizontal and vertical distance of the point of raising the ball quickly and accurately when performing the skill of the Smash Serve with volleyball.

2- Research Methodology:

The descriptive approach was used in the method of survey studies and correlations.

2 -1 Society and Sample of Research:

The research sample consisted of (5) players representing the Iraqi national volleyball team for the year 2020-2021, and the homogeneous researcher of the sample conducted some variables that could affect the final results negatively, and the difference factor has been used for that and it was found that the value of the mathematical milieu and deviation The normative length (194.50 -2.528) and with a difference of difference (1.29%), as well as the arithmetic medium and the standard deviation of the mass (86.500 -1.288) and with a difference of difference (1.48%), as well %).

2-2 Research Procedures :

The researcher relied on some Arab and foreign resources and references, a Japanese-made video photograph The research sample in the Olympic Committee hall, Basra branch, and the camera was placed at a horizontal distance (7.20 m) measuring from the vertical Muscat for the camera to the player's standing and a height of (1.30 m) measuring from the lens center to the surface of the earth and attempts were analyzed by relying on the program (Dartfish)Team Pro 5.5 It is a specialized program in analyzing sports movements.

2-3 Measures:

(4) attempts have been photographed for each player who performs the overwhelming transmission while maintaining the path of the player's movement within the camera field and a relatively fixed dimension so that the measurements do not differ at the motor analysis process. Determine the accuracy of each attempt objectively and according to what was determined by the test that took into account the accuracy areas according to the methods used in designing the



tests, as the researcher needs the accuracy of each attempt only and not the total evaluation of the test. The study variables were measured as follows:-

-The vertical distance of the ball from the relegation point: This was done by extending a straight line from the rise point to the ball hitting, and after that the vertical distance between the line was measured by the extension of the relegation point to the center of the ball the moment it was hit.

-The horizontal distance of the ball from the relegation point: This was done by extending a straight line from the football center at the moment of the beating to the ground, then the distance between the relegation point and the hometown of the vertical line descending from the center of the ball.

-The speed of the ball's start: This was done by calculating the distance that the ball moves at the start of its start and is divided into the time of its serve.

-Accuracy: It was calculated by the coach who supervised the test and determined the degree of each attempt

2-4 Statistical Analysis: was carried out using the SPSS statistical version (20) through which the mathematical medium, the standard deviation and the Pearson correlation coefficient were extracted.

After the results were tackled statistically, the following results were obtained in the two tables (1) and (2)

Table (1) Shows the values of the computational circles and the standard deviations of the study variables

variables	Mean	Std. Deviation
The vertical distance of the ball from the relegation point	2.9505	.08121
The horizontal distance of the ball from the relegation point	1.2935	.06385
Ball starting speed	23.4725	1.27372
Accuracy	2.7500	1.55174

In order to verify the hypothesis related to the connotation of the association

Table (2) Shows the values of Person's connection between study variables

variables		Ball starting speed	Accuracy
The vertical distance of the ball from the relegation point	Pearson Correlation	.145	.661**
	Sig. (2-tailed)	.541	.002
	N	20	20
The horizontal distance of the ball from the relegation point	Pearson Correlation	.506*	.652**
	Sig. (2-tailed)	.023	.002
	N	20	20

The researcher's attributes this to the fact that the high jump is an important element in achieving a high accuracy, as the high starting point provides a good vision for the stadium, which allows the player to direct the ball to the point that achieves the purpose of sending better, as hitting the ball at a high point allows the moving ball to pass The network is better. Also, the height of the beating point of the ball gives the player enough time in order to direct the ball to the area to which the ball wants to get the ball to. The good vision provided by the height provides a visual scene for the point that the ball is supposed to go to and (Hamza Fadhil Hasan & Ya'arub Abdul Baqi Daik: 2021) The visual scene has an important relationship with success and indicates (Ya'arub Abdel Baqi & Hamza Fadel 2021:) indicates that increasing height provides the opportunity to guide the most influential areas in the opponent team yard.

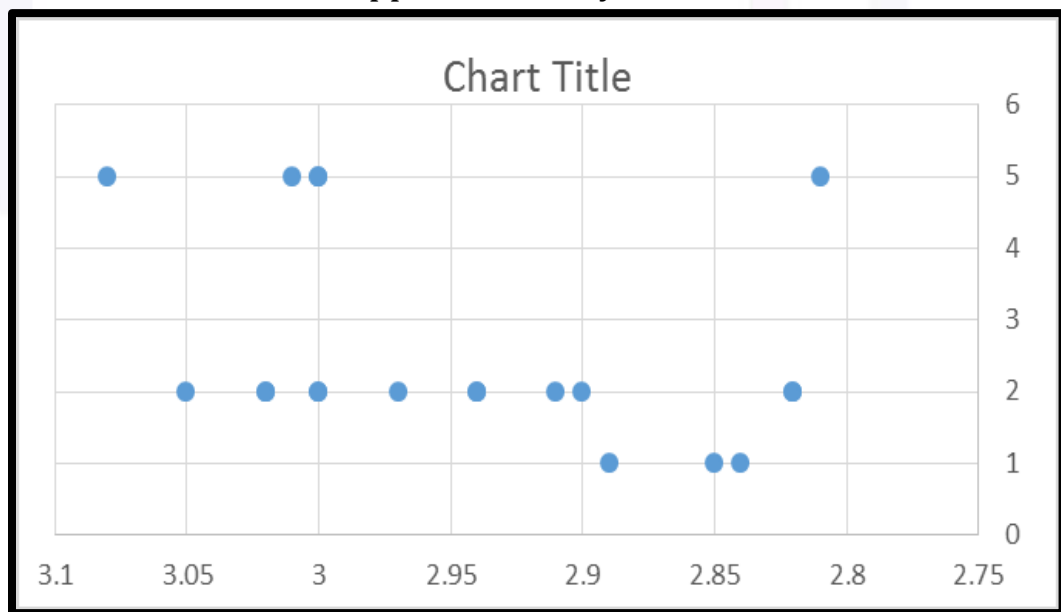


Figure (1) It Explains How the Results and Connection are Distributed Between the Point of Rise and Accuracy



It also that there is a moral correlation between the horizontal distance to advance the ball. The researcher believes that this distance to advance the ball is the one that determines the distance of the flight and that the good proportion between the distance of the rise of the ball is a decisive factor in the distance of the flight that is usually affected by the angle of the rise. The greater whenever the horizontal distance of the start and accordingly, the player must determine the extent of his capabilities in achieving a good increase in hitting the ball without neglecting that the horizontal flight distance is an important factor in achieving the process of hitting the ball appropriately, which gives it a good speed as the start is from A few points of rise, the imbalance of the body decreases and therefore the body will not acquire a good speed that provides a high starting speed for the ball, as the principle of applying vectors in this case is present in order to benefit from this rule, as flying for a short distance is almost similar to the advancement and hitting the ball without performing steps It is close, so the steps to approach such a skill earn the body speed that contributes to increasing the speed of the ball, so we find that most athletes benefit from applying one of the important foundations for Newton's first law, which is the case Body kinetic body before the impact of strength in the primary part of the movement (Samir Masli: 2010)

It also that the distance of the rise of the ball is a moral connection with the accuracy, and this is due to the fact that the long flight path allows for some time to be made for the player to determine the desired area, as prolonging the path is accompanied by prolongation in time and this gives a better opportunity to achieve a better accuracy and that the rise from a point close to The ball means that the vision will be limited, because the ball will be close to the head and thus not taking the time to see the stadium correctly About the ball affects the angle of the rise, so if this distance is short, the angle of the rise will be large and therefore may not achieve a suitable flying in the horizontal direction, which reduces the speed of flying, which is the most influential reason in achieving the maximum height. It is worth noting that the rise from an appropriate distance depends on The player's physical and motor abilities, as well as the correct timing of the process of upgrading a role in this and it is reported that" the volleyball game is one of the games that require timing and a high correctness until its skills are performed" (Kuan, Y. M., Zuhairi, &N. A.,, Manan, &F. A., Knight, V. F., & omar, R. :2018) .

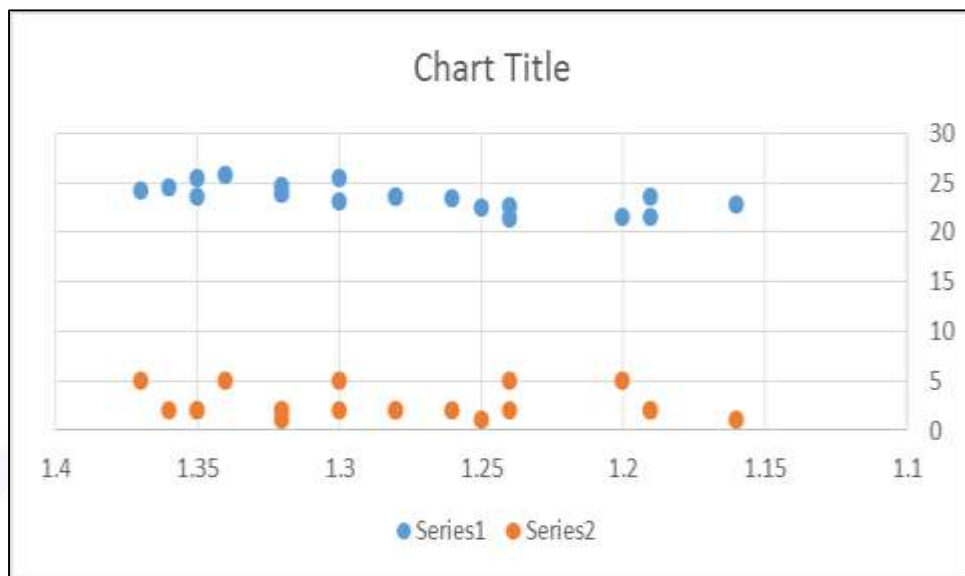


Figure (2) It Shows the link Between the Horizontal Distance of the Point of Raising the Ball Quickly and the Accuracy of the Smash Serve

Conclusions

- 1- The vertical distance from the starting point or from the level of the starting point affects the accuracy of the. Accuracy Of The Smash Serve in volleyball.
- 2- The horizontal distance of the point of retention of the ball affects the speed of the start of the ball and the accuracy of the ball when performing the Accuracy of The Smash Serve in volleyball.

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