Jump Serve on Volleyball Survey

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Abstract: The jump serve skill is still one of the problems faced by west sumatera volleyball athletes. This is seen I the results of the pre PON game in 2015 in sumatera where 35% of athletes did jump serve and the level of failure in getting point was still 50%. There are several factors that ellegedly affects the skill of jump serve; elasticity, explosive power of arm muscle and self-confidence. The purpose of this research is to find out: causal relationship between endogenous variable, that is jump serve skill (Y), intervening variable that is self confidence (X3). And two exogenous variables, namely the elasticity (X1) and arm muscle explosive power (X2). The Method applied was survey method This research was analyzed by path analysis technigue (Path Analysis) The population was all volleyball athletes of west sumatera. Data on elasticity were collected using a bridge-up test, arm muscle explosive power was taken with overhead test of medicine ball throw,self confidence data were taken with questionnaire and jump serve skill was taken with precision test, speed and quality of jump serve (judge) technique. The results of this study conclude tht: (1) Elasticity directly affects skill serve (py1 = 0,315); (2) The arm muscle explosive power directly affects the skill of jump serve(py2 = 0,534); (3) Self confidence directly affects skill serve (py3 = 0,310); (4) The elasticity directly affects the arm muscle explosive power (Px21 = 0,288); (5) Elasticity directly affects self confidence (P31 = 0.264); (6) The arm muscle explosive power directly affects the self confidence. (P32 = 0.271). As an effort to improve the skill of jump serve, it is necessary to consider the dominant factor (the path coefficient is greater).

1 INTRODUCTION

Exercise is one means of human self-development, through sports can improve performance. Bolavoli has become a very popular sport by the world community, especially the people of Indonesia. The facts prove that the bolavoli is currently ranked second in the most popular row of sports, after football. No wonder if the game that uses this hand is played almost by all circles.

One of the most dramatic skills in modern volleyball is the spike serve, or jump serve, which provides an interesting and dynamic skill for both the player and the spectator, that the jump serve is one of the weapons to get the first number in a game of bolavoli and ultimately victory. In order to master jump serving skills, it needs to be supported by physical, technical and mental abilities.

Volleyball requires a physical element to support a player's performance. Sajoto (1995: 10) As for the physical elements in question include: strength, endurance, speed, kelentuk, agility, balance, accuracy, reaction, explosive power and coordination. According to Rusli Lutan (2001: 25) to perform a player jumping service requires coordination, where coordination is the ability to perform movements with various levels of difficulty quickly and efficiently with full precision. Coordination is required from the prefix, repulsion, while hitting to the ground. In other words by having motion coordination and supported with good reargood formation, then the jump serve that dillakukan will perfect the result as expected and the required for the effectiveness of the movement.

As for the physical capabilities that support in the success is the power of explosion (power) which is a combination of elements of speed and strength that will generate explosive power capabilities in jumps and blows, it is seen in the implementation of the jump serve, which required a high vertical upward jump of muscle power limbs so the point of reach for hitting the ball is higher and when touching the ball with the ball requires muscle power of the arm so that the hit ball falls on the opponent's field with a strong and fast as well as the ball that hit the top and produces a falling ball dive as it is hit at the highest part of the jump.

Another factor an athlete should have at a jump serve is the confidence. Sudibyo (2001: 86) states that confidence if he is able and able to achieve certain achievements; if the achievement is high then the

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individual concerned more confident. This means that the higher the level of confidence the athlete will be more confident that the athlete will do the jump serve as expected. The high self-esteem of the athlete, of course, has a tendency to be self-controlled and can place anxiety that emerges as a signal to be careful, concentrated, and try to display the best serve, ultimately with confidence and concentration. both related to confidence when doing a jump serve.

Jump serve done by West Sumatra volleyball athlete percentage is still an average of 35% in every game and 50% failure in every game. This can be seen from the implementation of the jump serve performed, where the jump serve is not in accordance with the intended direction or target, this factor is pointed to some weak points, among others: arm muscle explosive power, togok formation, hand eye coordination and confidence.

Based on the data in the Provincial Board of Volleyball Entire Indonesia West Sumatra, that it has three times the National Sports Week West Sumatra bolavoli team did not qualify and in other national games West Sumatra bolavoli team did not qualify from the pool elimination round. According to the recapitulation of the match report from the coach, the percentage of West Sumatra athletes error in the match is still big on the top serve and jump serve that is 25% from the error of other factors.

The low skill ability of jump serve at bolavoli athletes can also be known from the evaluation of the results of the match so far, where many athletes are rushing to serve so the result is not good, in doing the jump serve the bolavoli athlete is less confident in doing it, whereas in the national level jump match serve is the main weapon or main attack to get numbers. In reality this jump serve has not been used by the team of West Sumatra in the game to get points or points.

Another factor, the athletes can master the material well. Difficulties experienced by athletes in general in the movement. This is probably due to the low physical condition of an athlete determining the skill of the jump serve. This is probably due to the low level of explosive power of the arm muscles, the formation, balance and coordination of the athlete, so the athlete is not perfect in doing the jump serve. In line with research by Sirirat Hirunrat and Onwaree Ingkatecha (2015), the jump serves a powerful offensive action widely used elite players.

Based on the above description, the researcher is interested to examine the factors that influence the jump volleyball skill, ie (1) the flexibility of the joints to move the joints to the back so as to help the movement and power for service, (2) the power of arm muscle explosion focused on how strength and speed of the ball in service, and (3) confident in service at the point of faith, earnest and responsibility.

The purpose of this study is to determine the causal relationship between endogenous variables, namely skill serve (Y), intervening variable, ie self-confidence (X3). And two exogenous variables, namely the formation (X1), and arm muscle explosive power (X2), which is to obtain empirical data and answer the problems in this research and useful for building science of sports science, especially bolavoli.

2 METHODS

The method used in this research is survey method with causality or study of causal effect among the variables studied. The first variable is endogenous variable, ie skill of jump serve atlet of bolavoli (Y), the next variable is intervening variable, that is confidence (X3). Two other variables belong to the exogenous variables, namely the elasticity (X1), and arm muscle explosive power (X2). This research was analyzed by using statistic, with path analysis technique (Path Analysis). Path Analysis Model is used to analyze the relationship pattern between variables with the aim to know the direct or indirect effect of a set of independent variables (exogenous) to the dependent variable (endogen).

The population in this study is all West Java bolavoli athletes who qualify for the final of West Sumatra Nagari match in 2015 as many as 8 teams totaling 96 men athletes. Sample technique is done by Sampling Purposive is a sample determination technique based on certain considerations that athletes who can perform and often use a jump serve in the game. Together with Bridge Up (Kayang) data, arm muscle explosive power data were taken with overhead test of medicine ball trhow, confident data were taken by questionnaire and skill serve jump was tested with accuracy, speed and quality of jump serve (judge) technique.

Data analysis techniques used in this study are as follows: 1) Descriptive statistics, ie statistics assigned only to obtain description or measurements of data in hand, 2) test requirements analysis include: (a) normality test data with Liliefors test; (b) linearity test, 3) the correlation statistic is to give the values for each variable in turn correlated with the values of the complex variables, 4) path analysis to analyze the relationship pattern among the variables.

3 RESULTS AND DISCUSSION

In accordance with the results of this lane coefficient calculation there is no path of influence discarded for thitung> ttabel, as follows: (1) the results of the first hypothesis testing, the coefficient of the direct influence of togok gamut to skill serve serve 0.280 with thitung ¬ 2,125 and ttable of 1.675. Because the value of t count is greater than ttable value, then the test result decided to reject Ho hypothesis. This means that there is a positive influence of the togok formation of the jump serve skill, (2) the result of the second hypothesis testing, the direct path coefficient of arm muscle explosive power to the jump serve skill 0,534 with the thitung value 4,380 and the ttable value of 1.675. Because the value of t count is greater than ttable value, then the test result decided to reject Ho hypothesis. This means that there is a direct positive effect of arm muscle explosive power on skill serve serve, (3) result of third hypothesis testing, coefficient of direct influence of self confidence to skill serve skill 0,310 with thitung value equal 2,262 and ttable value equal to 1,675. Because the value of t count is greater than ttable value, then the test result decided to reject Ho hypothesis. This means that there is a positive influence of confidence in the skill of jump serve, (4) the result of the fourth hypothesis testing, the coefficient of the direct influence of the togok's velocity on the arm muscle explosive power of 0.288 with the thitung value of 2.176 and the ttable value of 1.675. Because the value of t count is greater than ttable value, then the test result decided to reject Ho hypothesis. This means that there is a positive influence of togok formation on the arm muscle explosive power, (5) the result of the fifth hypothesis testing, the coefficient of the direct influence of the togok to the confidence of 0.264 with the value of tcount 1.896 and the ttable value of 1.675. Because the value of t count is greater than ttable value, then the test result decided to reject Ho hypothesis. This means that there is a positive influence ongok togok to confidence, and (6) the results of testing the sixth hypothesis, the coefficient of the direct influence of arm muscle explosive power to confidence of 0.315 with the value of thitung ¬ 2.299 and ttable value of 1.675. Because the value of t count is greater than ttable value, then the test result decided to reject Ho hypothesis. This means that there is a positive influence of arm muscle explosive power to confidence.

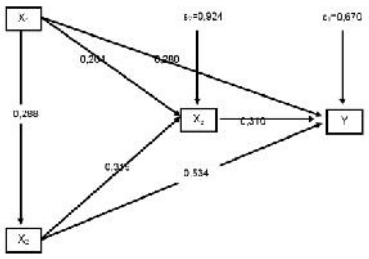

Figure 1: Complete Path Coefficient Research Model

The results of the first hypothesis testing in this study indicate that the gamut of togok has a direct influence on skill serve serve. This gives the meaning that the success of a jump serve one is determined by the formation of togok. If the formation of good athlete athletes, which is implied in the process of implementation of the jump serve then the ball will be the result of a maximum blow and difficult to accept the opponent. This condition will contribute significantly to the successful implementation of the jump serve. Instead jump serve can fail or not maximal if not supported by kelautan togok.

Based on the description it is clear that the formation is one factor that can not be ignored in increasing the speed of motion, this applies also to the jump serve movement in the game bolavoli, where to achieve the speed and coordination of optimal jump serve motion requires good formation. Elements of the required skill at the time of jump serve that is when the player is in the air in the square kicked body ball formed formally and when hitting the ball body bent forward. And the formation is an inseparable part in the improvement of motion skills, thus the ability to influence the outcomes of the jump serve skills on the game of bolavoli.

The results of the second hypothesis testing in this study indicate that the arm muscle explosive power has a direct influence on skill serve serve. This gives meaning that the success of the jump serve one is determined by the explosive power of the arm muscle. If the explosive muscle power of the athlete's arm is good, which is implied in the process of implementation of the jump serve then the ball will hit the maximum result and difficult to accept the opponent. This condition will contribute significantly to the successful implementation of the jump serve. Instead a jump serve can fail or not maximal if it is not supported by arm muscle burst power.

Muscle power factor will work optimally if the strength and speed as a supporting factor also has a good quality. In the jump serve, this explosive power is a dominant factor in the creation of good skills. This is because explosive power acts as a force factor

that forces the object, in this case is our body to move forward. Allegedly the greater force (force) is played by the explosive power, the greater the acceleration made by the body. The greater the acceleration will result in greater body speed and the time yag is quite coupled by a good body balance in the end the power of the punch will be maximal so that an athlete will be easy and flexible in doing a jump serve.

In a crucial jump serve in reaching the ball speed, further explosive power, shoulder and arm core are highly influential and the optimal function of the kinetic chain is an important element. The ability of hip joint motion and thorack vertebrae is also an important factor in the achievement of ball speed (ball velocity) M. Hayrinen et al (2011).

The results of the third hypothesis testing in this study showed that confidence has a direct influence on skill serve serve. This gives the meaning that the success of a jump serve one is determined by self-confidence. If the athlete's self-confidence, which is implied in the process of implementation of the jump serve then requires confidence, concentration, goal setting, mastery of techniques, good self-control so that the maximum results. This condition will contribute significantly to the successful implementation of the jump serve. Instead jump serve can fail or not maximal if not supported by confidence.

In doing a jump serve the self-confidence of a bolavoli athlete will have an effect. This is because if a bolavoli athlete does not have confidence in doing a jump serve then not produced a good jump serve. However, it should be accompanied by regular and ongoing exercises. An athlete who has done the preparation with the exercises to the maximum will have a higher confidence than those who exercise but less than the maximum.

Next Sudibyo (2001: 126) self-belief is very important in mental coaching athletes. Believing in yourself will create a sense of security, self-confidence is usually closely related to the "emotional security", the more confident self-esteem is also steady emotional securely, it will be seen in attitude and behavior that is not easy to hesitate, calm, firm and ……..

The results of the fourth hypothesis testing in this study showed that the togok formation has a direct influence on the explosive power of the arm muscles. This means that the formation of togok is one of the factors that determine the ability to increase the explosive power of the arm muscles.

Ability is the ability to perform a series of movements to the maximum extent possible, with a wide range of motion. This should be supported by the readiness of the parts of the body itself so it is possible to obtain maximum muscle elasticity. Formation is also very big role in the sport bolavoli, because with a high level of kelentukan will be able to streamline the movement, streamline the time and energy as in the time to serve during the game.

The results of the fifth hypothesis testing in this study indicate that the formation has a direct influence on confidence. This means that kelentukan is one of the decisive factors that increase confidence. In contrast, athletes who have a good kelentukan but do not have confidence then the result will not be maximized.

In the implementation of jump serve is strongly supported by several factors including physical conditions, techniques and tactics. Mental factors are decisive once in a match. In other words, these four factors are indispensable for the achievement of the maximum, alleged athletes who have good abilities ability, it will affect from its appearance because an athlete who is ready for physical condition will increase confidence in making decisions in a jump serve on game bolavoli.

This is in line with Tangkudung (2012: 72) that the state of good physical condition will affect psychological aspects in the form of increased work motivation, morale, confidence, thoroughness and so forth. Psychologically, the physical state seems very big influence in the environment of our activities, especially in socializing.

The results of testing the sixth hypothesis in this study indicate that the arm muscle explosive power has a direct influence on confidence. This means that the power of the arm muscle is one of the decisive factors that increase self-confidence. Conversely, athletes who have a large arm muscle explosiveness but do not have confidence then the result will not be maximal.

According to Maksum (2008: 2013) those who are actively engaged in sports activities show a higher level of confidence (self confidence) than those who are not involved and positive self-concept appears not only in the physical, but also social and more impressive dimensions its influence on intellectual development. Based on the above opinion, that active exercise means general good physical condition and relate in terms of trust cirri in acting.

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Sudibyo (2001: 71) says the successes experienced by an athlete will be able to develop self-confidence, therefore it is very important that athletes athletes have a chance to win and a defeat must not result in a loss of effort to instill self-confidence own.

In conducting a jump serve, a server must be able to think and perform moves quickly and carefully when it comes to deciding where the ball is directed by considering the opponent's defense pattern. So someone who has good coordination of motion helps once an athlete's confidence to complete the task well and in accordance with the intended target, so that jump serve can bring points or numbers.

Implementation of this research has been cultivated carefully based on the systematics and procedures of scientific work in accordance with this type of research so as to deliver results in accordance with the intended purpose. But the perfection of the results is something that is not easily realized this is due to the weaknesses and limitations in this study. Weaknesses and limitations should be presented as a consideration in interpreting and generalizing the results of this study.

4 CONCLUSIONS

Based on testing hypothesis yeng have been disclosed above and result of data analysis hence can be taken conclusion based on result of research finding. The conclusions in this study are as follows: (1) the formation of togok directly affect the skill of jump serve atlet bolavoli West Sumatra. This means that togok kelautan will affect the skill of jump serve atlet of bolavoli of West Sumatra, (2) arm muscle explosion directly influence to skill of jump serve atlet of bolavoli of West Sumatra. This means that the power of arm muscle explosion will affect the skill of jump serve atlet of bolavoli of West Sumatera, (3) confidence directly influence to skill of jump serve atlet of bolavoli of West Sumatra. This means that self-perception will affect the skill of jump serve at West Java bolavoli athletes, (4) the formation of togok has a direct effect on the explosive muscle power of the atlet arm of the bolavoli of West Sumatra. This means that togok kelautan will affect the increase of arm muscle explosive power in the achievement of skill of jump serve atlet of bolavoli of West Sumatera, (5) togok formation have a direct effect to confident atlet of bolavoli of West Sumatra. This means that the elasticity of togok will affect the confident increase of the bolavoli athletes of West Sumatra, (6) the explosive force of the arm muscle directly affect the self-confident atlet of West Sumatra bolavoli. This means that the power of arm muscle explosion will affect the confidence increase atlet of West Sumatra bolavoli. Furthermore, in order to increase skill of jump serve at bolavoli athlete, aspect of togokiness, muscular arm explosion and confidence need to be attention and can not be ignored, implication like pay attention to factors who influence it, promote appropriate training, work with local governments, bolavoli organizations, coaches, athletes, referees, the elderly and the club in terms of improving the aspects of togok formation, muscular arm power and confidence.

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