

INFLUENCE OF MUSCLE SLEEVE STRENGTH, TOGOK FORMATION, EYE COORDINATION AND SELF-CONFIDENCE IN SERVICE SKILLSTENNIS COURT

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Abstract

This study aims to analysis the direct and indirect effect of hand strength, trunk flexibility, hand eye coordination and self confidence to the tennis service skills. The research was conducted on tennis athletes in Jambi City at outdoor tennis court Jambi University Telanai Pura Jambi City Jambi Province. The research method used in this research is the type of quantitative research with correlation study approach. Analytical technique using path analysis. The results of this study indicate that: 1) Hand strength has a direct effect to the self confidence of tennis athletes of Jambi in the amount of 23.52%; 2) The trunk flexibility has a direct effect to the self confidence of tennis athletes of Jambi in the amount of 8.24%; 3) Hand eye coordination has no direct effect to the self confidence of tennis athletes of Jambi with magnitude of influence only 2.86%; 4) Hand strength has a direct influence on service skills of tennis athletes of Jambi in the amount of 10.56%; 5) The trunk flexibility has a direct influence on service skills of tennis athletes of Jambi in the amount of 14.82%; 6) Hand eye coordination does not have a direct impact on service skills of tennis athletes of Jambi with magnitude of influence only 0.04%; 7) Confidence has a direct influence on service skills of tennis athletes of Jambi in the amount of 7.95%; 8) Hand strength has an indirect effect on the service skills of tennis athletes of Jambi through self confidence in the amount of 4.45%; 9) The trunk flexibility has an indirect influence on service skills of tennis athletes of Jambi through self-confidence in the amount of 3.12%; and 10) Hand eye coordination does not have an indirect effect on the service skills of Jambi's tennis athletes through self confidence with magnitude of influence only 0.09%.

Keywords: *Service skills, hand strength, trunk flexibility, hand eye coordination, and self confidence*

Exercise is something that is important in life, because sport plays an important role for now and the future and is one of the necessities of life that must be met. In modern life today human beings can not be separated from sports

activities either as a necessity of life or as a lifestyle in order to keep the body in order to stay fit and healthy as well as the arena of achievement, It is seen that many who love sports tennis field that can be played by various circles, from various walks of life both children, adolescents, and also parents. The goals of the sport of tennis itself for some people, among others, exist for health, recreation, and for achievement.

Tennis sport is one form of effort to improve the quality of human resources, tennis is one branch of sports achievement that can realize the quality improvement of human resources both for individuals and nation and this must be done with hard work by doing planning and coaching mature. To achieve and gain high achievement in the field of sport required a multi-disciplinary approach with the study of science and related technological progress as a medium to realize sporting achievements. Achievement can be achieved if there is support, good cooperation between all the factors supporting the development of sports.

Physical, technical, tactical and mental factors are very important in achieving the desired achievement. If one element is not owned and mastered, then the achievement will be difficult to achieve. Irawadi said that the achievement or appearance of a tennis player depends on his readiness. Preparedness is meant among others is the readiness of technical, physical, tactical, and mental. This means that if a player has a good punch technique, has a prime physical condition, mastering tactics, and have good mental maturity automatically the player will succeed.

Paul Roetert and Mark Kovacs argue that tennis should be supported with excellent physical condition. Tennis sports require strength, flexibility, strength, endurance, and speed and each of these components requires a well-trained muscle system. The above physical condition is a basic need that the athlete must possess and be perfectly mastered to perform all the punch techniques on the field tennis field.

Tennis is a sport of achievement that requires physical, technical, strategy and mental well. Therefore the tennis player must prepare himself so that in doing the game tennis is not experiencing shortcomings. Similarly, the purpose of sports achievement is to stimulate the development of tennis achievement and measure how far the success of coaching tennis achievement where the yardstick is the success of players in meeting the targets in accordance with the program that run and follow the game both at regional and international level.

In a game of tennis the activities carried out take a long time with a high tempo and move quickly in a punch, for that a player is required to have good physical condition and mastery of the technique. According to the researcher's observation during the field tennis sport that the service is the victory capital of a player, the dominant physical condition required by a tennis player for services such as arm muscle strength, togok formation, hand eye coordination, and psychological aspect is confident, tennis court service.

The predominant physical condition element required for a field tennis athlete is very influential on the result of a skillful blow to the shield. If hand eye coordination and self-confidence are also good, then the resulting service blow will be better too. Because it can increase the rotation during the service.

The expected service in the field tennis game is a fairly effective service in an effort to produce a number with the ball difficult to take the opponent's opponent, so that it can add numbers. The service is done of course with a blow hard enough, quickly and leads to a difficult field of goals taken opponent. For that, in serving not only the element of the dominant physical conditions are required, but athletes also must have a good formation, especially the formation of togok. In serving the movement of the blow and the ball toss direction should be able to be combined in such a way as to become a unity of good and harmonious, resulting in good results as well. This is where the role of togok kelentukan in determining the blow and direction toss ball to serve well and efficiently.

Liter is defined as the maximum possible motion that a joint can take. In tennis, movements that require maximum work from the joint are very common. For example, when performing a service to reach a distant ball or rotate the body and make sufficient prefix when about to make a punch because it is very necessary. So an athlete who has the strength of arm muscles and good togok formation, will be able to produce the right service blows and able to lead the ball in and put the ball into a difficult area and far from the opponent's reach.

In addition to physical factors, psychological factors are also factors that affect skills in sports games. Most athletes and top coaches believe that psychological factors play a very important role as physical attributes and skills that must be mastered in the preparation of champions. When the physical skills are balanced with each other, as the sport tends to be competitive, competitors with greater control over their minds will usually emerge victorious. Mental strength will not be able to cover the lack of mastery of skills and techniques, but in a competitive competition contest can make the difference between winning and losing.

Psychological aspects that often affect the athlete in achieving the achievement is a factor of confidence. Confidence is someone capable and able to achieve certain achievements, if the achievement is high then the individual concerned will be more confident. If an athlete's self-confidence has grown, the athlete will give a value (value) to the self-image that the athlete has felt. The pricing of his abilities lies on the belief in his ability to accomplish certain tasks. Furthermore, this value or self-esteem will reinforce the image of physical and spiritual values (mental) that refers to the athlete itself.

Based on data from the results of service tests in 2014, the results of porprov achievements and observations conducted by researchers both experience as players and coaches and teachers, as well as interviews with several coaches Jambi said success skills skills athletes tennis tennis Jambi enter the category less

successful or low. this can be seen from the results of service tests and the results of championship game age group, porprov, failure in PON selection and tests ever done.

By looking at the results of the game and test the skill of Jambi athletes service that is still less then need to be repaired as early as possible through improving physical condition of athletes and mentally / confident coaching. The increase in physical condition that will be used in the service skills such as arm muscle strength, elasticity, hand eye coordination and in terms of psychology is confident. To examine the effect of physical and psychological conditions on the mastery of the service skills, the researcher focused on: "Influence of Muscle Arm Strength, Togok Formation, Speech Coordination and Self Confidence in Field Service Skills (Study of Path Analysis at Tennis Athletes of Jambi City) ".

The formulation of this research problem are:

1. How does the direct influence of hand muscle power to confident athlete tennis Jambi City?
2. How is the direct influence of togok's formation on self-confidence athlete tennis Jambi City?
3. How is the direct influence of hand eye coordination to confident athlete tennis Jambi City?
4. How does the direct influence of arm muscle strength on the service skills of tennis athletes of Jambi City?
5. How is the direct influence of togok's formation on the service skills of tennis athletes in Jambi City?
6. How is the direct influence of hand eye coordination on the service skills of tennis athletes of Jambi City?
7. How do you directly believe in the skills of Jambi tennis athletes?
8. How is the indirect influence of hand muscle power on the service skills of tennis athletes of Jambi City through confidence?
9. How is the indirect influence of togok formation on the service skills of tennis athletes in Jambi through confidence?
10. What is the indirect effect of hand eye coordination on the service skills of tennis athletes of Jambi through confidence?

Theoretical Studies

Field Tennis Service Skills

According to Widiastuti skills are movements that follow a certain pattern or shape that requires coordination and control of part or whole body that can be done through the learning process. Harsuki suggests skills involving understanding and proficiency in a particular activity, especially involving methods, processes, procedures, and techniques.

The service is an early blow to start a game of tennis, with no one serving for it is certain there will not be a game of tennis in a game or at a championship. Service in the field tennis is the only technique that is not hit by the opponent and where the opponent can not speed up when a player hits the ball and the opponent also can not slow it down when the service is done.

According to Advendi Kristiyandanu and Anung Priombodo, technical implementation steps start from grip rack (grip), ready position, backswing and toss, impact / contact point, and final stage (follow through). The explanation as follows:

a. The technique of holding a racket (grip)

How to hold a racket with a continental grip technique that starts with an eastern grip handle and leads a bit clockwise. The position of the base of the finger is placed at the top of the corner 1. The "V" letter formed by the thumb and finger is located on the right edge of the racket handle. The finger is spread a bit, so the thumb is located on the side of the racket and the bottom index finger lies just above the racket.

b. Ready position (ready position)

The ready-to-serve position stands with both knees slightly bent near the centerline with the left-footed position in front and right leg at the back with parallel toe with the baseline. The position stands parallel to the baseline, the left leg with a 45° diagonal angle with the net so that you are facing one end of the net. The hand holds the racket in front of the body with relaxation and the other hand holds the ball to be hit where the right hand holds the racket, the left hand holds the ball (for the right hand) and vice versa (for the left hand). A forward view leads to the opponent's service area. ie learn the opponent's position then focus on the ball when it starts service.

c. Rear swing and throw (backswing and toss)

The ball is thrown straight up from the left hand, approximately 20 - 30 cm. Along with the ball rolling, the hand holding the racket is swung backward in the palm position facing down where the hand position is swung upward to reach the thrown ball. After the ball is thrown high enough, the body begins to rotate forward, the weight slowly turns to the forefoot and the racket is dropped in a circular swing behind the back and then swung for contact.

d. Perenaan between ball and racket (point of contact)

The acquisition between the ball and the racket is good when the ball is at its highest point, in order to hit the ball just as the ball is about to fall. The position of the racket should stretch upward to coincide with the moment of

impact with the ball. It was also revealed The racket was dropped in a circular swing behind his back then swung to hit the ball in the center of the strings. Contact point should be made slightly to the right and in front of the shoulder, clockwise (precisely at 1 o'clock) so as to form a straight line from the tip of the racket to the heel of the left foot.

e. Final stage (follow through)

Follow-up swings are movements made after perenaan between the ball and the racket of the head (point of contact), I swing the arms against the racket forwarded to the left side of the body (for the right-handed tennis player) so that the balance can be well preserved to be able to do the next blow if the service performed can not directly get the numbers.

The follow-through attitude must be done properly so that the service performed can produce good results, and can be better prepared for the next move as well as the safety of the tennis player against injury from service can be minimized. According to Paul Douglas, the final attitude is that after racket-to-ball contact point, the racket sweeps over the left side of the body and the eyes on the ball as it sways.

Muscle Sleeve Strength

Chech and Martin reveal that power refers to at what level an activity is accomplished. With respect to, power is the rate at which muscles can develop tension and produce force, and move the body through various motions. The strength of the hand muscle is needed when swinging the racket or at the time of the ball with the racket (impact), if the hand muscle, the grip is less strong when swinging the racket with the ball, then the ball will not be able to enter the desired target (in the service box). Often it is necessary to use strong hands and grip when hitting an object, with a tool so that the movement of the body can actually be transferred to the object.

Thus based on the theory above that in doing muscle movement can not stand alone. If you want to achieve a maximum result of movement in the service must also pay attention to the muscles that support when doing the movement. So what is meant in this study the strength of the hand muscles is the effort of the muscles on the hand in the swing, grab or hold the racket while performing servicing movement.

Togok Formation

According to Tudor Bomba and Carrera mentioned that the formation refers to the space around the joints. The success of performing many movements and skills depends on the range of motion of the joints, in which the abilities are indispensable for successful exercise skills. For example to hit the ball in tennis, players have to raise their hands as high as possible, so they must be flexible

enough to go beyond those levels. If they do not have that flexibility, they will not be able to learn and perfect the various movements required in the sport game. Where the quality level of one's flexibility will affect the other biomotor components.

The definition of the formation according to Jonath or Krempel in Syafruddin is the body's ability to perform exercises with large or extensive amplitude of movement. Basically, if the kelentukan seen from the angle of the needs of a sport branch can be distinguished on the formation of general and special. When viewed from the form of its implementation then the kelentukan can be grouped into active kelasif and passive formation and the formation of static and dynamic

According to Nicholas A Ratamess mentions that the abnormality is a measure of the range of motion of the joint without injury and is an important component of related fitness. Static flexibility describes actively connected movement of the joints or passive movement, while dynamic flexibility (functional flexibility) describes the spatial stretch of movement during motion. Another type of dynamic versatility, ballistic flexibility, has been defined as the range of motion achieved during an explosive (bouncing) motion.

Hand-eye Coordination

Syafruddin said that coordination is the ability to accomplish motor tasks quickly and directed determined by the process of control and regulation of movement and cooperation of central nervous system. Meanwhile, according to Chech and Martin mentioned that coordination is mentioned as the cooperation of various muscles to produce a smooth and efficient movement. The right muscle must be activated in the correct sequence of motion and at the right time, with the right intensity for smooth, accurate, and efficient movement.

Tennis is a game that uses tools, namely balls, racquets, net, and lines as a field barrier. The presence of lines and net result in hitting the ball does not use the power completely so the ball into the playing field. For that, when hit the ball needed strength, swing speed, and the ability to control the ball well. By using the racket as an extension of the arm, then in the hitting is also required coordination between the eye-arm-leg.

Confidence

According to Vealey and Chase in Moe Machida, Rose Marie Ward and Robin S. Vealey, mentioned that self-confidence is often identified as an important mental condition for athletes either by the coach or the athlete itself. Self-confidence or self-confidence is an athlete's ultimate capital for advancement, because high achievement and the athlete's record-breaking must begin by believing that he or she can and can surpass the achievements he or she has achieved. Without having full confidence, athletes will not be able to achieve

achievement, because there is a mutual relationship between achievement and self-confidence motives.

Confidence is the ability to think rationally. These are beliefs, ideas, and thought processes that do not contain the element of necessity that demands an individual. So when faced with problems or problems, we are able to think, judge, weigh, analyze, decide, and do. Self-esteem is a comprehensive evaluative dimension of the self. Confidence is also referred to as self-esteem or self-image.

There are two main conceptual approaches in self-efficacy theory (Bandura) and The Sport-Confidence Model (Vealey). Self-efficacy is defined as "a belief in one's ability to organize and carry out the actions required to produce a given achievement". Meanwhile, The Sport Confidence Model is defined as a belief in the individual's ability to succeed in sport. Both theories suggest that the sources of information athletes use to assess their ability are important factors in developing and maintaining stable confidence levels. To increase the athlete's confidence in an optimal level, it is very important for sports psychology practitioners and trainers to know based on what information their trust base is based on.

Based on the sport-confidence model he developed, Vealey and Knight identified three dimensions in sport-confidence:

- a. *Physical skills and training, is the level of belief or athlete's confidence that he has the skills and physical skills needed to achieve success.*
- b. *Cognitive Efficiency (Cognitive Efficiency), is the level of belief or athlete's confidence that he is able to focus, able to maintain concentration and make decisions to achieve success.*
- c. *Resilience, is the level of confidence or athlete's confidence that he is able to focus again after making mistakes, able to immediately rise after a bad performance, able to overcome doubts and decline to achieve success.*

Based on the formulation of the problem, the description of the theory and framework of thinking, then the hypothesis proposed is:

1. Muscle strength of the arm has a direct positive effect on confidence in Jambi tennis athletes.
2. The formation of togok has a direct positive effect on confidence in Jambi tennis athletes.
3. Hand eye coordination directly affects positive to confident in tennis athletes Jambi City.
4. Muscular strength of the arms directly affects positively to field tennis service skills at tennis athletes Jambi City.
5. The formation of togok has a positive direct effect on the field tennis service skill at tennis athlete of Jambi City.
6. Hand eye coordination has a positive direct effect on field tennis service skills on Jambi tennis athletes.

7. Confidence directly positive effect on field tennis service skills at tennis athletes Jambi City.
8. Muscular strength of the arm indirectly affect the service skills through self-confidence in tennis athletes Jambi City.
9. The formation of togok indirectly affect the service skills through self-confidence at tennis athletes Jambi City.
10. Hand eye coordination indirectly affect the service skills through self-confidence at tennis athletes Jambi City.

METHOD

The research method used in this research is the type of quantitative research with correlational study approach. Analytical technique using path analysis approach between the variables studied is independent variable (exogenous) to dependent variable (endogen).

The data collection in this research is done by test and pengukuran to all the variables studied. By first doing the instrument test to get the validity and reliabelitas. The instruments used are (1) Test service skills using the instrument made by the researchers themselves who have been approved by experts. (2) Muscle strength test of the arm by using pull and push dynamometer (3) Tests togok test using togok extension test. (4) The hand eye coordination test uses the Throw Test of the ball. (5) The self-confidence test using questionnaires and questionnaires before being used in advance is validated and realibilized by linguists and sports experts.

This study uses path analysis which is the development of multiple regression analysis to see the effect of arm muscle strength (X1), togok (X2), and hand eye coordination (X3) on field tennis (Y) self (X4) as intervening variable. Based on the path analysis model described above, the regression equation in this research is as follows:

$$X_4 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e_1$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e_2$$

Description :

Y: Field tennis service skills

X₁: Arm muscle strength

X₂: Togetherness

X₃: Confidence

$\beta_1 \beta_2 \beta_3 \beta_4$: Path coefficient (standarized coefficient)

e: Standardized residuals

Hypothesis testing is done by using t test. Test t is done with a significance level of 5%, then the test criteria are as follows:

- 1) If the significance value $t < \text{significance level } (\alpha) = 0.05$, then H₀ rejected and H_a accepted, meaning there is a significant influence between one independent variable to the dependent variable.

- 2) If the significance value $t >$ significance level (α) = 0.05, then H_0 is accepted and H_a is rejected, meaning there is no significant influence between one independent variable to the dependent variable.

Research result

The results of the analysis of the effect of arm muscle strength, togok formation, and hand eye coordination to self-confidence are described in the following table:

Table1
Structural Equation Analysis Results I
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	41,111	7,460		5,511	0,000
	X1	1,056	0,271	0,485	3,896	0,000
	X2	0,634	0,294	0,287	2,152	0,038
	X3	0,291	0,204	0,169	1,430	0,169

a. Dependent Variable: X4

The results of path analysis on the effect of arm muscle strength, togok formation, hand eye coordination, and confidence in field tennis service skills are described in the following table:

Table2
Structural Equation Analysis Results II
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12,044	5,205		2,314	0,026
	X1	0,471	0,167	0,325	2,823	0,008
	X2	0,565	0,162	0,385	3,485	0,001
	X3	0,022	0,109	0,019	0,199	0,843
	X4	0,187	0,084	0,282	2,220	0,033

a. Dependent Variable: Y

The results of path analysis on the influence of arm muscle strength, togok formation, hand eye coordination, and confidence in the service skill formed the structural equation I and II as follows:

$$X_4 = \alpha + 0,485 X_1 + 0,287 X_2 + 0,169 X_3 + 0,596 \epsilon_1$$

$$Y = 0,325X_1 + 0,385X_2 + 0,019X_3 + 0,282X_4 + 0,459\epsilon_i$$

From the structural equation I and the structural equation II, a causal relationship between X1, X2, X3, and X4 can be made to Y as follows

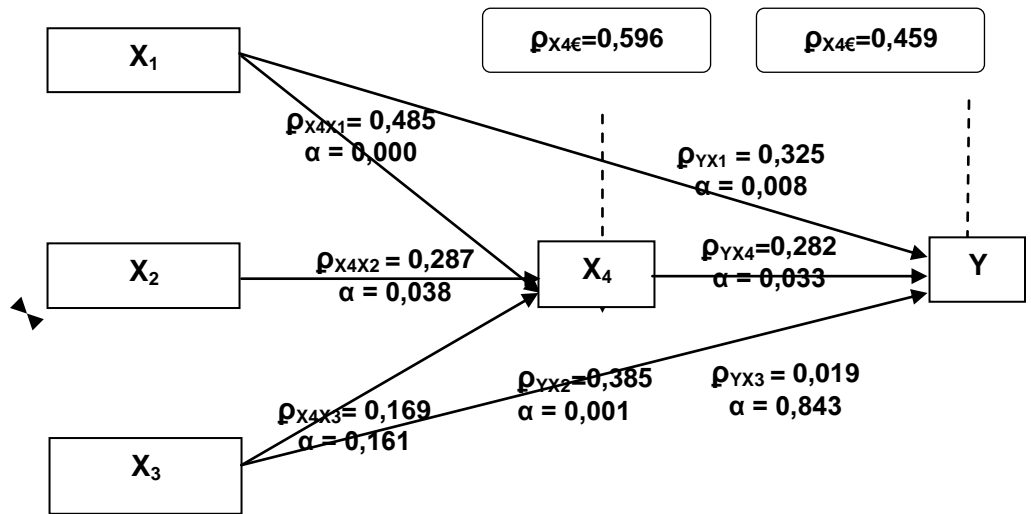


Figure 1
Scheme of Structural Performance Path I and II

The magnitude of direct influence and indirect influence are as follows:

1. The amount of direct influence (direct effect) arm muscle strength to confidence is as follows:

$$\begin{aligned} DE_{X1 \Rightarrow X4} &= (\rho_{X4X1})^2 \times 100\% \\ &= (0,485)^2 \times 100\% \\ &= 23,52\% \end{aligned}$$

So it is known that the contribution of arm muscle strength that directly affects the confidence is 23.52%.

2. The amount of direct influence (direct effect) togok kelentukan to confidence is as follows:

$$\begin{aligned} DE_{X2 \Rightarrow X4} &= (\rho_{X4X2})^2 \times 100\% \\ &= (0,287)^2 \times 100\% \\ &= 8,24\% \end{aligned}$$

So it is known that the contribution of togok formation that directly affects the confidence is 8.24%.

3. The amount of direct influence (direct effect) hand eye coordination of confidence is as follows:

$$\begin{aligned} DE_{X3 \Rightarrow X4} &= (\rho_{X4X3})^2 \times 100\% \\ &= (0,169)^2 \times 100\% \\ &= 2,86\% \end{aligned}$$

So it is known that the contribution of hand eye coordination that directly affects the confidence is 2.86%.

4. The major direct effect of arm muscle strength on field tennis service skills are as follows:

$$\begin{aligned} DE_{X1 \Rightarrow Y} &= (\rho_{YX1})^2 \times 100\% \\ &= (0,325)^2 \times 100\% \\ &= 10,56\% \end{aligned}$$

So it is known that the contribution of arm muscle strength that directly affects field tennis service skills is 10.56%.

5. The major effect of direct the formation of togok on field tennis service skills are as follows:

$$\begin{aligned} DE_{X2 \Rightarrow Y} &= (\rho_{YX2})^2 \times 100\% \\ &= (0,385)^2 \times 100\% \\ &= 14,82\% \end{aligned}$$

So it is known that the contribution of togok formation that directly affect the field service tennis skill is 14.82%.

6. The major effect of hand eye coordination on field service tennis skill is as follows:

$$\begin{aligned} DE_{X3 \Rightarrow Y} &= (\rho_{YX3})^2 \times 100\% \\ &= (0,019)^2 \times 100\% \\ &= 0,04\% \end{aligned}$$

So it is known that the contribution of hand eye coordination that directly affects field service tennis skills is 0.04%.

7. The major direct effect of confidence in field service tennis skill is as follows:

$$\begin{aligned} DE_{X4 \Rightarrow Y} &= (\rho_{YX4})^2 \times 100\% \\ &= (0,282)^2 \times 100\% \\ &= 7,95\% \end{aligned}$$

So it is known that the magnitude of the direct influence of confidence in field service tennis skill is 7.95%.

8. The amount of indirect effect of arm muscle strength on field tennis service skill through confidence is as follows:

$$\begin{aligned} IE_{X1 \Rightarrow Y(\text{via}X4)} &= (\rho_{YX1})(\rho_{X4X1})(\rho_{YX4}) \times 100\% \\ &= (0,325) \times (0,485) \times (0,282) \times 100\% \\ &= 4,45\% \end{aligned}$$

Thus, the indirect effect of arm muscle strength on field tennis service skills through confidence is 4.45 percent

9. The amount of indirect effect (indirect effect) togok gamut to the skills of tennis court service through confidence that is as follows:

$$\begin{aligned} IE_{X2 \Rightarrow Y(\text{via}X4)} &= (\rho_{YX2})(\rho_{X4X2})(\rho_{YX4}) \times 100\% \\ &= (0,385) \times (0,287) \times (0,282) \times 100\% \\ &= 3,12\% \end{aligned}$$

Thus, it is known that the indirect effect of togok on the skill of the field tennis service through confidence is 3.12 percent

10. The amount of indirect effect of hand eye coordination on field tennis service skills through confidence is as follows:

$$\begin{aligned} IE_{X3 \Rightarrow Y(\text{via} X4)} &= (\rho_{YX3})(\rho_{X4X3})(\rho_{YX4}) \times 100\% \\ &= (0,019) \times (0,169) \times (0,282) \times 100\% \\ &= 0,09\% \end{aligned}$$

Thus it is known that the indirect effect of hand eye coordination on field service tennis skill through self-confidence is 0,09 percent

Pathway coefficient testing is performed to see the significance of the effect of arm muscle strength, togok formation, hand eye coordination, and confidence directly to field tennis service skills and indirect influence of arm muscle strength, togok formation, and hand eye coordination indirectly to service skills tennis court through confidence. Results of hypothesis testing simultaneously and partially as follows:

- 1) Testing the direct influence of arm muscle strength (X1) on confidence (X4)
The probability value of 0.000 is smaller than the 0.05 significance level, it means that H0 is rejected and Ha is accepted. Thus, arm muscle strength significantly affects self-confidence.
- 2) Testing the direct influence of togok (X2) to confidence (X4)
The probability value of 0.038 is smaller than the 0.05 significance level, it means that H0 is rejected and Ha is accepted. Thus, togok kelautan have a significant influence on confidence..
- 3) Examination of direct influence of eye coordination (X3) on confidence (X4)
The probability value of 0.161 is greater than the 0.05 significance level, it means that H0 is accepted and Ha is rejected. Thus, hand eye coordination has no significant effect on confidence.
- 4) Testing the direct effect of arm muscle strength (X1) on field tennis service skill (Y)
The probability value of 0.008 is smaller than the 0.05 significance level, it means that H0 is rejected and Ha is accepted. Thus, arm muscle strength significantly affects field tennis service skills.
- 5) Testing the direct influence of togok (X2) to the field tennis service skills (Y)
The probability value of 0.001 is smaller than the 0.05 significance level, it means that H0 is rejected and Ha is accepted. Thus, the togok gait has a significant influence on field tennis service skills.
- 6) Examination of direct influence of hand eye coordination (X3) on field tennis service skills (Y)
The probability value of 0.843 is greater than the 0.05 significance level, it means that H0 is accepted and Ha is rejected. Thus, hand eye coordination has no significant effect on field tennis service skills.
- 7) Testing direct confident influence (X4) on field tennis service skills (Y)

The probability value of 0.033 is smaller than the 0.05 significance level, it means that H_0 is rejected and H_a is accepted. Thus, confidence significantly affects field tennis service skills.

- 8) Testing the indirect effect of arm muscle strength (X1) on field tennis service skill (Y) through self-confidence (X4)

The probability value of arm muscle strength to confidence is 0.000 smaller than 0.05 significance level, while probability value of confidence influence to field tennis service skill is 0,033 smaller than significance level 0,05 meaning H_0 is rejected and H_a accepted. Thus, arm muscle strength indirectly affects field tennis service skills through self-confidence.

- 9) Testing the indirect effect of togok (X2) on the field tennis service (Y) skills through confidence (X4)

The value of probability influence togok to confidence of 0.038 is smaller than the significance level of 0.05, while the probability value of confidence influence on field service tennis skill is 0,033 smaller than significance level 0,05 meaning H_0 refused and H_a accepted. Thus, the formation of togok indirectly affects field tennis service skills through self-confidence.

- 10) Testing the indirect effect of hand eye coordination (X3) on field tennis service skills (Y) through confidence (X4)

The probability value of the hand eye coordination effect on the confidence of 0.161 is greater than the 0.05 significance level, while the probability value of the confidence effect on the field tennis service skill is 0,033 smaller than the 0.05 significance level which means H_0 is accepted and H_a is rejected. Thus, hand eye coordination does not have an indirect effect on field tennis service skills through self-confidence.

CONCLUSION

The conclusion will be presented in this study with what has been done at the time of research as follows:

1. Muscular strength of the arm has a direct influence on confidence in Jambi field tennis athletes with a direct magnitude of 23.52%.
2. Togetherness has a direct influence on confidence in Jambi field tennis athletes with the magnitude of direct influence of 8.24%.
3. Hand eye coordination does not have a direct influence on confidence in Jambi field tennis athletes with a direct magnitude of 2.86%.
4. Muscular strength of the arms has a direct influence on service skills on Jambi tennis field tennis athletes with a direct magnitude of 10.56%.
5. The formation of togok has a direct influence on the service skill at Jambi tennis athlete with the influence of 14.82%.
6. Hand eye coordination has no direct effect on service skills on Jambi field tennis athletes with a direct magnitude of only 0.04%.

7. Confidence has a direct influence on service skills at Jambi field tennis athletes with a direct magnitude of 7.95%.
8. Muscular strength of the arm has an indirect effect on the service skills of Jambi's tennis athletes through confidence with an indirect effect of 4.45%.
9. The formation of togok has an indirect influence on service skill at Jambi field tennis athlete through confidence with the magnitude of indirect influence of 3.12%.
10. Hand eye coordination does not have an indirect effect on the service skills of Jambi's tennis athletes through confidence by the magnitude of the indirect effect of only 0.09%.

Of the ten hypotheses proposed, there are three rejected hypotheses, among others, the hypothesis that states: 1) the direct influence of hand eye coordination on confidence; 2) direct influence of hand eye coordination on field tennis service skills; and the indirect influence of hand eye coordination on field tennis service skills through self-confidence. The three rejected hypotheses involved coordination factors used as exogenous variables of confident variables and field tennis service skills.

Implications

Overall the results of this study convey that the physical and psychological factors affect skills in doing sports techniques, especially tennis courts. Physical condition, especially the strength factor of arm muscle and togok formation, affect the service skill directly or through the improvement of the tennis player confidence in doing the service. Good arm muscle strength and adequate togok formation make players have confidence that he is able to serve well. The confidence that arises due to the existence of maximum physical skills make the movement of sports techniques become more effective.

On the other hand, the data of muscle strength of the arms and the elasticity of the athletes of the Jambi City tennis field tennis field are still far from the norms that must be fulfilled so as to be able to support the technical skills in the field tennis game. This is certainly worth the attention of coaches and athletes so should be more active in doing physical exercises, especially to improve the strength of arm muscle and togok kelentukan which proved a significant factor affecting confidence and skills servis tennis field.

The results of this study also show the great role of confidence in the successful implementation of the service in the game of tennis. The growing confidence of the player's physical support and the encouragement of achievers' motivation in the players is an important factor that positively affects the field's tennis service skills. Therefore, the increase in self-confidence becomes an absolute effort by both the coach and the players themselves, thereby fostering a belief in self-ability in achievement in the field of tennis. Increased confidence according to the results of this study must be implemented through the improvement of physical

skills through physical exercise and psychological aspects of development, especially by growing the achievement motivation in the players.

Suggestion

Based on the limitations, conclusions and implications of the results of this study as described above, the researchers contributed the following suggestions:

1. For the trainer to periodically perform physical fitness tests and technical skills in the field tennis sport so that the physical condition and technical ability of the athlete become observed so that any deficiency in the ability of players in performing sports tennis techniques can be overcome.
2. For the coach to do mental coaching, especially in order to improve self-confidence in the athlete, so there is a belief in self-ability to excel in the field of sports tennis.
3. For trainers to increase the intensity of physical exercise, especially exercises to improve arm muscle strength and togetherness formation that proved to affect the increase in confidence and field service tennis skills.
4. For players are expected to be more diligent to train themselves both in bantuk physical exercise and techniques that will support the ability of playing the whole field tennis.
5. For the player is expected to grow in personal respective encouragement for achievement which is expected to affect the confidence level of players in playing field tennis.
6. For subsequent researchers to use different populations with a larger number of subjects that will affect the significance of research results.
7. For subsequent researchers to use other variables that can affect the ability of field tennis services such as motivation, agility, teaching methods, muscle explosive power, and so forth.
8. For subsequent researchers to add an interview instrument to reduce the bias effect due to the use of questionnaires as a confidence data collection tool of confident variables.

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