The Effect of Arm Muscle Strength, Eye-Hand Coordination, Fat Thickness and Self-Confidence on Learning of Batting Cricket Skills

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ABSTRACT

Purpose: The purpose this learning was to determine the direct effect Strength, hand-eye coordination, fat thickness and self-confidence towards batting skills in cricke*t.*   .

Design/methodology/approach: Research method this learning used quantitative research with technique analysis path analysis approaches.

Findings: The population and (total sampling) this learning as 36 athletes regional and national championships PCI (Cricket Association) DKI Jakarta, Indonesia

Research limitations/implications: Results of this research: (1) Arm muscle strength has a direct effect on learning y batting cricket athlete PCI DKI Jakarta, coefficient as 0.235 (2) Hand-eye coordination has a direct effect on learning batting cricket athlete PCI DKI Jakarta, coefficient as 0.530. (3) Fat thickness has a direct effect on learning batting Cricket athlete PCI DKI Jakarta, coefficient as 0.029. (4) Self-confident has a direct effect on learning batting Cricket athlete PCI DKI Jakarta, coefficient as 0,259. (5) Arm muscle strength has a direct effect on Self-confident athlete PCI DKI Jakarta, coefficient as 0,280. (6) Hand-eye coordination has a direct effect on Self-confident athlete PCI DKI Jakarta, coefficient as 0,317. (7) Fat thickness has a direct effect on Self-confident athlete PCI DKI Jakarta, coefficient as 0,262.

Paper type: This paper can be categorized as a Technical paper

Keyword: Arm muscle strength, hand-eye coordination, fat thickness, self-confidence, Learning of batting cricket skills.

I. INTRODUCTION

Quality humans are people who have a high level of physical health and freshness, both physical and psychological. For this reason, physical and psychological growth and development must be in line. Because someone who has growth and development between physical and psychological is in line then a person has a good level of thinking and health and physical fitness, for that one is to exercise. Besides all that, the need to improve sportsman nursery efforts, coaching trainers, providing sports facilities and infrastructure, developing a good sports system, so that what has been outlined can be realized. To achieve these objectives concrete steps need to be taken towards the pattern of sports coaching in the country. Sports coaching is

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carried out in an integrated manner, involving various related disciplines such as: anatomy, physiology, psychology, biomechanics, nutrition science and others. By involving various fields of knowledge needed, the training efforts carried out are expected to increase achievement even better. The needs of physical and physical elements in each sport vary. This is directly related to the characteristics or needs of the sport itself. In coaching achievements to reach the golden age (golden age) or the peak achievement to be achieved by athletes who are of concern to coaches and coaches in sports so that it is carried out well.

One of the branches of achievement sports that develops in Indonesia is cricket which is expected to bring the name of the nation and state to international events. Therefore, in improving and achieving better achievements is certainly not an easy thing, it takes a struggle and a very high sacrifice in training and competing on the battlefield. This certainly can be achieved if a cricket athlete has good and correct knowledge and mastery of cricket skills. Cricket is now a dynamic sport that requires years of training, and requires a keen eye, an open mind and a healthy body in this sport. For that reason, in mastering cricket skills, it is necessary to do exercises routinely and repeatedly so that they will get good automation movements and make it easier for players to master cricket techniques during practice and in matches. Because the peak performance (Peak Performance) in sports coaching requires a planned preparation process that is gradual, directed, systematic, and sustainable. In addition, technique skills batting in cricket sports are also determined by the facilities and infrastructure available, whether it is adequate or not. The most basic thing is how the field condition is owned, then the required infrastructure such as bat, head protection helmet, training clothes, shin guards, cricket ball and other tools. With minimal facilities and infrastructure, it will hamper the training process so that the objectives of the exercise are not achieved optimally.

Bio motor factors also have a very important role in determining the mastery of techniques and tactics such as basic bio motor abilities and physical elements namely strength endurance, arm muscle strength, eye-hand coordination, reaction speed, accuracy, aerobic and anaerobic endurance, for example when performing movements do batting or hitting the ball as far as possible and ran toward milestones back to the base to create a point. Strength of arm muscle is the ability bio motoric which is one aspect of capability that is required, in the sport of cricket power hit the ball firmly so that the ball flew away and make it difficult for the opponent to catch a direct movements performed by a cricketer me do Batting/ hitting the ball correctly and strongly to get points or values.

Eye-hand coordination also plays a role in cricket technical skills, eye-hand coordination is the result of combining reaction from eye speed and continued by precise and strong hand stroke so that the ball thrown tightly can be hit properly and strongly. So eye-hand coordination is a coordinated movement with the speed of reaction between the eye and the hand so that the right stroke occurs in the direction of the cricket ball. With good and good eye-hand coordination, it will be easier for players to do batting/ fast punches and get energy that has perfect strength (arm muscle strength) in carrying out attacks and good speed (speed) when doing batting. Good technique batting cricket athlete 'sin playing is influenced by many factors, one of them is bio motoric components such as strength (explosive power) of arm muscles, speed (endurance), endurance, coordination of eye-hand coordination, accuracy (accuracy), as well as an athlete's kinaesthetic perception and health elements of nutritional status, fat thickness and psychological self-confidence and motivation, as well as DKI Jakarta cricket athletes.

Based on observations made by researchers and interviews with trainers on several DKI Jakarta cricket athletes, the basic technical skills in playing cricket are relatively low and far from expected. This can be seen by the lack of achievements that have been successfully achieved by the DKI Jakarta cricket team in national sports week or other national championships. This is suspected because when batting the player does not hit the right target on batting, arm muscle strength when making punches or batting is lacking, so that the ball does not fly away and is easily caught by opponents who are guarding on the field, and imperfect eye coordination hands when doing batting so that the ball is not right at the hit, in addition, the influence of the thickness of the fat also has its influence in performing skills batting in cricket sports games. According to Santoso & Zamroni (2017) in his research results that the less fat a person eats, the lighter the body is in exercising. So therefore the thickness of the fat greatly affects the movement to do batting, the less fat thickness of a cricket athlete, the easier it is to improve skills batting in this cricket sports game.

Furthermore, besides that, the influence of psychiatric or self-confidence is also very needed in performing skills batting in cricket sports games in a high technical quality. The aspect of technical mastery is very closely related to one's feelings in controlling the nervous system. Some of one's self-control will be more confident for an athlete in performing skills batting in a cricket sports game. Based on the many factors and prolongations that affects kills batting in cricket sports, therefore, in order not to expand the subject matter so that this learning is more specific and directed, researchers are interested in conducting research on "Effects of Arm Muscle Strength, Eye-Hand Coordination, Fat Thickness and Confidence in Learning Skills in Batting PCI (Indonesian Cricket Association) Pengprov DKI Jakarta".

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II. METHODOLOGY

The research method used in this learning is approach quantitative, a survey method with test and measurement techniques. While the analysis technique uses the path analysis approach (path analysis) ie research that will learning or which will analyze the interrelationship between research variables by measuring the direct effect between endogenous variables (dependent variable) is Y with exogenous variables (independent) are X1, X2, X3 and X4.

Sampling is done using the Total Sampling technique. The shape of the sample is the entire object or pupil is made into a sample. Therefore, in order to truly obtain the value obtained as a result of the research so that it can be generalized to the existing population, various observations that might affect the results of the learning must be observed before the research sample must have the same (homogeneous) characteristics, namely:

a. Athlete PCI (Indonesian Cricket Association) Pengprov DKI Jakarta.
b. Mastering basic techniques in cricket sports.
c. All athletes studied have participated in various regional and national championships.

Thus based on the criteria and results of observations in the field it can be concluded that the sample for the learning was the Athlete PCI (Indonesian Cricket Association) of DKI Jakarta Pengprov who actively practiced with a total of 36 athletes.

This learning involved four independent variables (exogenous) and one dependent variable (endogenous), an exogenous variable consisting of: arm muscle strength, eye-hand coordination, fat thickness and self-confidence. Endogenous variables, namely At Athlete PCI (Indonesian Cricket Association) Pengprov DKI Jakarta. The interrelation patterns between variables are shown in the following figure:
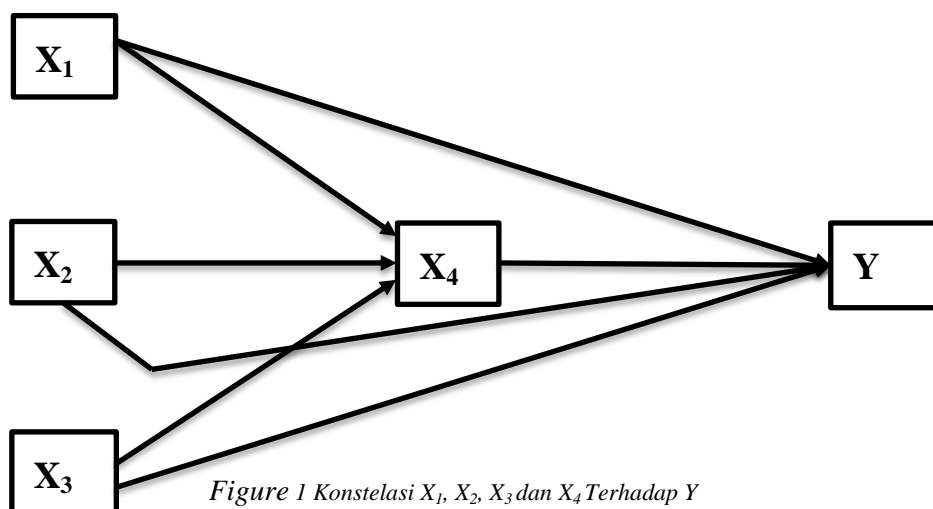

Figure 1 Konstelasi X_1, X_2, X_3 dan X_4 Terhadap Y

Sources: Ridwan dan Engkos Kuncoro. Cara Menggunakan dan Memakai Path Analisis. (Bandung:Alfabeta, 2014), h. 129

Note:
X1: Arm muscle strength
X2: Eye-Hand Coordination
X3: Fat Thickness
X3: Confidence
Y: Learning Skills Batting Cricket Sports

According to Riduwan & Kuncoro (2012)To collect data research used research instruments. The research instrument was pursued in a number of ways, namely (a) compiling indicators of the research variables, (b) arranging the instrument lattice, (c) testing the instrument, (d) testing the validity and reliability of the instrument.

In accordance with the types of variables involved in the learning , to get the data processed in this learning , the instruments used were (1) the Skill Instrument Batting Cricket Sports(Y) with the Skill Instrument Batting by the researcher. (2) Arm muscle strength instruments (X1) using a vertical jump test, (3)

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Eye-Hand Coordination (X2) using atest ball throwing by researchers. and (4) confidence instrument (X3) using a confidence statement questionnaire with a scale Likert.

III. RESULTS AND DISCUSSION

A. RESULTS

The results in this learning will be described in accordance with the objectives of the hypothesis proposed earlier. In this chapter, a description of the results of the research will be presented, Path Analysis which is the result of measurements of all research samples. The data from the results of this learning are aimed at providing a general description of the distribution of good data in the form of frequency distributions. The values are presented after being processed from raw data using descriptive statistical methods in other words the maximum value, minimum value, range, average, standard deviation and variance. The summary of the statistical calculation results can be seen in the following:

Table 2. Summary of research results

No	Variable	Total Sample	Total Result Test	Average	Standard Deviation	Variant	Score Max	Score Min	Range
1	Arm muscle strength (X_1)	36	1976,40	54,90	4,40	19,39	65,41	48,86	16,55
2	Eye-Hand Coordination (X_2)	36	3257	90,47	10,04	100,88	107,00	65,00	42,00
3	Fat Thickness (X_3)	36	2820	78,33	10,56	111,43	100,00	60,00	40,00
4	Confidence (X_4)	36	8160	226,67	15,05	226,51	245,00	188,00	57,00
5	Learning Skills Batting Cricket Sports (Y)	36	1800	50,00	9,71	94,31	67,08	28,50	38,58

Note:
X1: Arm muscle strength
X2: Eye-Hand Coordination
X3: Fat Thickness
X3: Confidence
Y: Learning Skills Batting Cricket Sports

B. PATH ANALYSIS RESULTS

Based on the results of the structural path analysis calculations, it provides information on model-1 and model-2 by referring to the path coefficient value, while the form of the path coefficient value is explained as follows:

a. Coefficient Results Model-1 and Model-2

To see the results of the value of the coefficient values of several direct and total influences on the influence of arm muscle strength (X1), eye-hand coordination (X2), fat thickness (X3) and self-confidence (X4) on the results of Skills Batting on Cricket (Y) can be seen in the following table:

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95,0% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
1(Constant)	-64,892	6,749		-9,616	,000	-78,656	-51,128			

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Arm muscle strength	,518	,176	**,235**	2,938	,006	,158	,878	,905	,467	,099
Hand-Eyes Coordination	,513	,085	**,530**	6,015	,000	,339	,687	,961	,734	,203
fat thickness	,027	,048	**,029**	,554	,583	-,072	,125	,703	,099	,019
Self-confidence	,167	,040	**,259**	4,167	,000	,085	,249	,857	,599	,140

a. Dependent Variable: *Batting* Cricket Skills

To see more clearly the value of the coefficient in the Model -1 path can be seen in the constellation path analysis below:
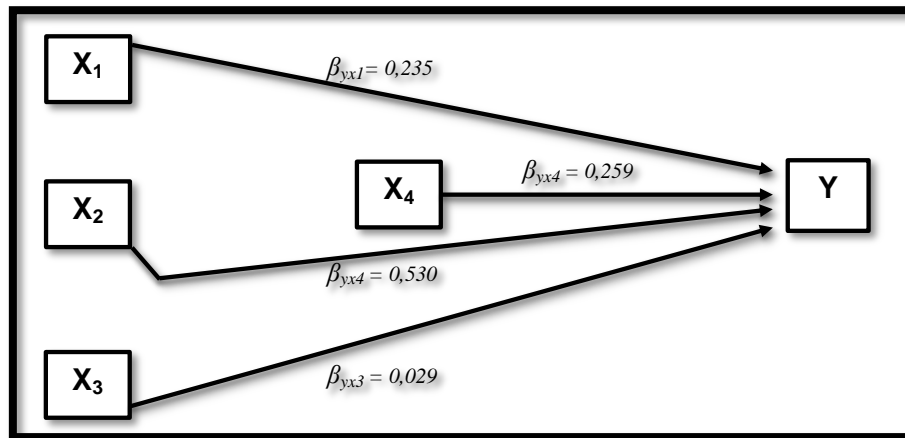

Figure 2. The results of the coefficient value on the Model -1 path Source : Research Results on Cricket Athletes in 2020
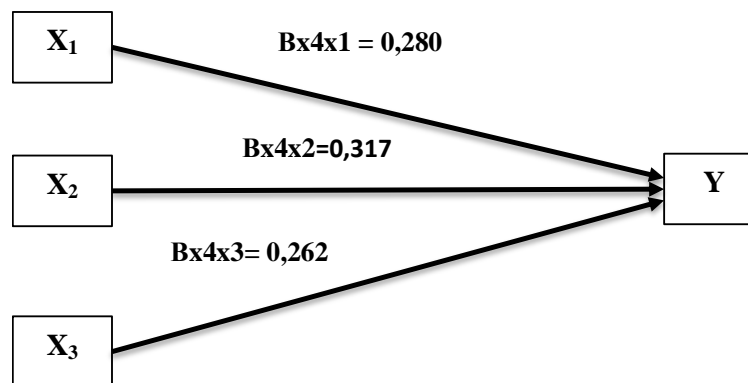
Furthermore, to find out the results of the structure coefficient value Model-2 direct influence and total effect on the influence of arm muscle strength (X1),Coordination Hand-Eye(X2), Fat thickness (X3) on Belief yourself (X4)can be seen in the following table:

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95,0% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	128,105	19,210		6,669	,000	88,976	167,234			
Arm muscle strength	-,958	,758	-,280	-1,264	,215	-2,502	,586	,687	-,218	-,121
Hand-Eyes Coordination	1,156	,315	,771	3,674	,001	,515	1,796	,783	,545	,351
fat thickness	,595	,185	,417	3,217	,003	,218	,971	,710	,494	,308

a. Dependent Variable: Self-confidence

for more details see the value -1 Model coefficient on line can be seen in the constellation path analysis below:

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b. Indirect Effects on Model-1 and Model-2

After knowing the coefficient of all variable paths in model-1 and model-2, the next step is to find out how much the indirect effect between model 1 and model 2. To look for the indirect effect between model- 1 and mode 2, the researcher summarizes the results of the values of all proposed path variables. The summary of all path coefficients X1, X2, X3 and X4 to Y.

1) The indirect effectvariable of arm muscle Strength (X1) on the results of Skills Batting on Cricket (Y) through the variable confidence (X4): $\beta yx1 + \beta x4x1 \times \beta yx4) = 0,235 + -0,280 \times 0,259 = 0,16248$ Then the total effect given by X1 to Y is the direct effectindirect plus theeffect $0,235 + 0,16248 = 0,39748$. Based on the calculation results it is known that the direct effect of 0.235 and the indirect effect of 0.16248. Indirect influence> value of direct influence. This shows that indirectly X indirect 1 through X4 has a significant influence on Y.

2) Theeffect of Hand Eye Coordination (X2) on the Results of Skills Batting on Cricket (Y) through the variable confidence (X4): $\beta yx2 + \beta x4x2 \times \beta yx4 = 0,530 + 0,771 \times 0,259 = 0,199689$ Then the total effect given by X2 on Y is the direct effectindirect plus theeffect $0.530 + 0.199689 = 0.729689$. Based on the calculation results it is known that the direct effect of 0.530 and the indirect effect of 0.199689. Indirect influence> value of direct influence. This shows that indirectly X2 through X4 has a significant effect on Y.

3) The indirect effect of fat thickness (X3) on the results of Skills Batting on Cricket (Y) through the variable confidence (X4): $\beta yx3 + \beta x4x3 \times \beta yx4 = 0.029 + 0.417 \times 0.259 = 0.137003$ So the total effectgiven x3 on Yis a direct influence coupled with the indirect influence $0,029 + 0.137003 = 0.166003$. Based on the calculation results it is known that the direct effect of 0.029 and the indirect effect of 0.137003. Indirect influence <value of direct influence. This shows that indirectly X2 through X4 has no significant effect on Y.

C. DISCUSSION

a. Arm muscle strength directly influences on the results of skills in batting DKI Jakarta Jakarta Cricket Athletes.

Strength is an element of physical condition in a particular movement activity as well as a main element in the effort to achieve perfect movement techniques, especially in the Cricket game. According to Syafruddin (2012) physiologically strength is the ability of a group of muscles to overcome a load or exercise, whereas physically a strength is the result of a struggle where between time and acceleration ". Tangkudung (2012) is power, also called elastic strength, which is a type of strength that is indispensable where the muscles can move quickly to a resistance and a combination of contraction speed and movement speed. Researchers concluded that arm muscle strength is the ability of muscles to overcome the load on the arm muscles which is very important in every activity in the Cricket when performing basic batting blows.

From the results of research that has been done on the variable arm muscle strength in the results of technique stroke skills Batting exercise Cricket, found that there is a direct effect of the arm muscle strength (X1)to the results of skills batting (Y) of 0.818. This can be seen in the Table Coefficient which shows the value of sig. 0,000. It turns out that the value of sig. 0,000 is smaller than the probability value of 0.05 or the value of 0.05> 0,000, then the alternative hypothesis Ha is accepted and the null hypothesis Ho is rejected. Means that the coefficient of path analysis between the arm muscle strength (X1) to the punch skills batting

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in Cricket (Y) is giving out a very significant effect. So it can be concluded that the strength of the arm muscles directly affects the skill Batting on Cricket.

The magnitude of the influence of the strength of arm muscle strength was also stated by Donatelli et al., (2000) that: This learning provides the clinician with a comprehensive profile of range of motion and muscle arm strength measurements in the pitching and non-pitching arms of professional baseball pitchers. Furthermore, the author not only looks at the relationship and contribution of the findings of this learning , but continues on the influence of each variable of the basic technique for batting holding the bat and so forth. According to Donatelli et al. (2000) states that: Proper Swing technique encompasses proper hand placement and body movement, optimal bat acceleration, and example power to hit the ball and is of utmost importance in playing Such sports as baseball.

In discussing the effect of this arm muscle strength variable on this skill batting based on a theoretical learning , theoretical framework and hypotheses proposed in this learning , it is concluded that this research can be empirically accepted. Arm muscle strength possessed by the athlete which is also one component of physical ability that is indispensable in hitting skills batting. Thus in accordance with the hypothesis proposed that there is a direct effect of arm muscles on skills batting in DKI Jakarta Cricket Cricket Athletes.

b. Eye-Hand Coordination Directly Influences the Result of Skills in Batting Jakarta DKI Cricket Athletes

Coordination is one's ability to integrate different movement skills into an effective single movement pattern. So that coordination is the body's ability to assemble or combine several elements of movement into an effective and harmonious movement in accordance with the desired goals. this was revealed by Tangkudung (2012)Coordination is the ability to make movements with varying degrees of difficulty quickly and efficiently and with full accuracy. So if analyzed the magnitude of the influence and support of the theory, it is true that the coordination of the technique is batting Cricket largely determined by eye and hand coordination. Meanwhile according to Widiastuti (2015) coordination is the ability to carry out movements or work appropriately and efficiently.

From the results of research that has been done on the variable eye-hand coordination and the results of skills Batting in athletes, it was found that there is a very large direct influence between eye-hand coordination (X2) on the results of the punch skill Batting (Y). The results of the value found were 0.923 or 92.30% if tested individually. This can be seen in the Coefficient Table which shows the significance value. 0,000. It turns out that the significance value. 0,000 smaller (<) than a probability value of 0.05 or a value of 0.05> 0,000, then the Alternative Hypothesis (Ha) is accepted and Ho is rejected, meaning that the path analysis coefficient between eye-hand coordination and punch skills batting is significant. So it can be ascertained that hand-eye coordination variable influences punch skills Batting.

The results of this learning were also revealed in another learning , Renshaw, Oldham, Davids, Golds (2007) states that: Results showed significant adaptation of coordination and timing under the different practice task constraints. For example, the initiation of the backswing was later against a bowler and downswing was faster with a different ratio of backswing-downswing when batting in the BM condition (47%: 53%) compared to B (54%: 46%). The results found show that hand-eye coordination is an element of physical condition that is very dominant and has a significant influence on the punch skills Batting on Cricket. If seen from the influence of eye-hand coordination with the results of Skills Batting that is found a strong influence that is equal to 0.923 or 92.30%.

In the learning and training system, eye hand coordination is very necessary and must always be trained from an early age. Because without programmed training it is impossible to coordinate vision movements with desired movements. This refers to the statement of Čillík & Willwéber (2018)which says that: General training programs often do not include enough coordination focused exercises. The share of coordination focused exercises should be at least 50% compared to fitness-oriented exercises. Locomotor games and competitions are favored. Determining the level of coordination is another issue. The lower the age, the harder it is to determine the coordination abilities of children.

Based on these findings the hypothesis proposed in this learning proved to be empirically acceptable. So it can also be interpreted that without good eye-hand coordination, it is impossible for an athlete to practice correct and good movements in achieving skills batting maximum on Cricket. Thus the researcher can answer from the hypothesis proposed that there is indeed a direct influence of hand-eye coordination on the results ofskills in Batting DKI Jakarta PCI athletes.

c. Fat Thickness Directly Influences the Results of Skills in Batting DKI Jakarta Jakarta Cricket Athletes.

Based on the measurement results on the fat thickness variable, it is proven that thickness (X3) gives a significant effect on the Skill of Batting Cricket Athletes (Y). The value of the path (R Square) that was

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tested individually between the variables of the thickness of the fat on the Skills of the Batting Cricket Athlete was 0.494 or 49.40%. One component of health that supports in Batting on Cricket is the fat thickness of an athlete. This can be seen in the Coefficient Table which shows the significance value. 0,000. It turns out that the significance value. 0.000 (<) on a probability value of 0.05 or 0.05 value> 0.000, then the alternative hypothesis (Ha) is accepted and Ho is rejected it means the path analysis coefficient between fat thickness of the blow skills batting is a significant

So is the case in the execution of the game batting in cricket, nutrition in the fat category can also be used as a source of energy reserves. Energy reserves are meant if the main energy such as glucose and protein is running low or depleted then the body will respond and force the fat to be absorbed and used as a source of energy in the human body. Therefore body fat as an energy reserve must also be considered in implementing performance sports, especially in cricket. This statement is also similarly conveyed by Forbes (2000)that, body fat content must be taken into account in evaluating body composition changes induced by nutrition and exercise. In the international journal Nutrition & Food Science written by Papadopoulou, Papadopoulou, Rosemann, Knechtle, & Nikolaidis (2019) states: Nutritional education should focus on female athletes with low fat levels, so as to promote a balanced diet that provides them all nutrients in adequate amounts. It can be interpreted that: Nutrition education must focus on female athletes with low fat content, thus promoting a balanced diet that gives them all the nutrients in very sufficient quantities.

In the implementation of punches Batting on Cricket also requires energy to swing optimally, if too much fat is folded in the skin it will affect the quality and quantity when carrying outpunches batting. In other words, the more fat that accumulates around biceps, triceps, subscapular and disubrailaca will affect movement, requiring stronger strength. therefore the thickness of the fat is also quite influential on the punch skills Batting on Cricket. According to Penaforte, Calhau, Mota, & Chiarello (2015) said the results of the present learning demonstrate that short-term water aerobics programs not associated with nutritional monitoring have a modest impact on body weight and composition, with better results being obtained with a program with aerobic characteristics. It can be interpreted that the results of this learning indicate that the short-term aerobic STW program is not directly related to nutritional monitoring which has a modest impact on body weight and body composition, with better results obtained with programs with aerobic characteristics. Based on the results of the research and discussion put forward in the third hypothesis can mean that it is true proven that the fat thickness variable has a significant influence on skills batting on Cricket. Thus, it can be concluded that fat thickness has a direct effect on the results of the skill batting DKI Jakarta Cricket PCI chest.

d.   Confidence Directly Influences Skills Batting on Athletes DKI Jakarta Jakarta Cricket.

From the research that has been done on the variable-confidence and results Skills, Batting in athletes Cricket found that there is a direct effect of Confidence (X4)the results of skills Batting the Cricket Volleyball (Y) of 0.291. This can be seen in the Coefficient Table which shows the value of sig. .001. It turns out that the value of sig. 0.005 is smaller than the probability value of 0.05 or a value of 0.05> 0,000, then the Alternative Hypothesis is accepted and the Zero Hypothesis is rejected, meaning the path analysis coefficient is significant. So Confidence directly influences skills Batting on Cricket.

The results of this learning indicate that self-confidence is a very important psychological element and has a relationship and influence on skills Batting on Cricket. If seen from the relationship and the contribution of balance with the results of Skills, a Batting relationship of R Square 0.734 or 73.4% was found when tested individually. The results of this learning were also found in an international journal by (Gencer & Öztü, 2018) which stated that: Sport-confidence and wrestlers' relationship with their coaches are related to each other. Sport-confidence is an important factor that affects wrestlers' relationship with their coaches. Which means that confidence in sports has a relationship between wrestler athletes and interrelated coaches. Self-confidence in sports is a very important factor in influencing the relationship between a wrestler and his coach. Mwangi, Rintaugu, Mwangi, & Toriola (2018) that, Sport confidence is a critical mental attribute that influences sport performance. This can be interpreted as confidence in sports is a critical mental attribute that affects sports performance.

Based on a theoretical learning on the discussion of the effect of self-confidence variables on skills batting at Cricket, the truth is empirically accepted. The relationship between the variables of confidence has the relationship, contribution and influence of the skills Batting on Cricket. In other words without good confidence variables, it is impossible for an athlete to realizes kills batting maximum. Thus the hypothesis proposed in this learning can be accepted empirically so that researchers conclude that self-confidence has a direct effect on skills Batting in DKI Jakarta Cricket PCI athletes.

e.   Arm muscle strength Directly Influences Confidence in Athletes PCI Jakarta Cricket

From the results of research that has been done on the variable arm muscle strength on self-confidence in individual Cricket athletes, it is found that there is a direct effect on arm muscle variable (X)1) variable-

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confidence(X4)equal to 0.472. This can be seen in the coffee table which shows the value of sig. 0,000. It turns out that the value of sig. 0,000 is smaller than a probability value of 0.05 or a value of 0.05> 0,000, then Ha is accepted and Ho is rejected, which means that the path analysis coefficient is significant. so the arm muscle strength variable has a direct effect on the confidence variable in Cricket athletes.

In getting skills batting maximum, an athlete must have great power. Arm muscle strength is useful as a driving force when swinging in hitting the ball in the technique batting Cricket. Arm muscle strength is influenced by muscle strength, the speed of muscle contraction so that all factors affecting both of these things will affect muscle power. So muscle power is a quality that allows a muscle or group of muscles to do physical work quickly according to Raj & Sudheer (2018) variable arm. Arm muscle strength was significantly improved due to arm muscle strength training. Which means that variable arm strength increases significantly due to strength training.

Good arm muscle strength will affect the psychological quality of the athlete in the implementation of the batting . This relates to self-confidence in participating in and carrying out sports training activities and in matches. Good arm muscle strength will lead to self-confidence, high self-confidence and other positive psychological factors that have implications for the high quality of skills batting on crickets. The statement of the association of arm muscle strength with the psychology of self-confidence is also found in international journals by Sajjan & Jange (2018) which states that There is a positive and significant relationship between Physical fitness, Psychological factors and playing ability performances. Furthermore the results of the learning showed that self-confidence and arm power had a significant correlation Prabowo & Sofyan (2019) On the subject of the influence of arm muscle strength variables on the variable confidence based on theoretical studies, theoretical frameworks and hypotheses proposed in this learning concluded that the results of this learning can be empirically accepted. Arm muscle strength possessed by athletes is also one component of physical ability that is very necessary in obtaining good self-confidence. Thus, arm muscle strength has a direct effect on confidence in DKI Jakarta Cricket athletes

f. Eye-Hand Coordination Directly Influences Confidence in Athlete Cricket PCI DKI Jakarta athletes

have been tested individually on eye-hand coordination variables and confidence variables in athletes, found the sense that there is a direct effect of hand-eye coordination (X2)to variable-confidence (X4)equal to 0.612. This can be seen in the Coefficient Table which shows the value of sig. 0,000. It turns out that the value of sig. 0,000 is smaller than the probability value of 0.05 or the value of 0.05> 0,000, then Ha is accepted and Ho is rejected, meaning the path analysis coefficient is significant. So the hand-eye coordination variable influences the confidence variable.

This shows that eye-hand coordination is a dominant element of physical ability and has a significant influence on skills batting on Cricket. If seen from the effect of eye-hand coordination with the results of skills batting that is found a strong influence that is equal to R square 0.612 or 61.20% when tested individually. Seeing eye-hand coordination is part of an athlete's motor skills. The eye-hand coordination in sports is an integration between the eye as the holder of the main function and the hand as the holder of the function of performing a particular sports movement. Besides eye-hand coordination is also one part of a physical condition that is very important in an appearance of motion, especially regarding the capacity of confidence in the Cricket game. This statement was also stated by Pardilla et al. (2019) Good motor skills and high self-confidence will affect triple jump skills. It can be interpreted that good motor skills and high self-confidence will affect movement skills.

From the results of the learning the results of the learning of eye-hand coordination variables on the variable of confidence can be interpreted that without good eye-hand coordination will increase confidence in achieving skills results batting maximum. The relationship of performance, especially the coordination of the eyes of the athlete's hand is largely determined by the confidence of an athlete. This was similarly expressed by Feltz, n.d.)Confidence is an important factor that distinguishes successful athletes from unsuccessful ones in terms of both their mental states as well as their performances. Can be interpreted that confidence is an important factor that determines the success or failure of athletes, this is based on their mental and appearance. Furthermore, a deeper discussion, the hand-eye coordination variable functions to perceive the object being targeted and when the ball arrives will be hit, while the hand based on information from the eye will do a blow by estimating the power used with a very fast reaction. Athletes who have good eye-hand coordination will generate solid confidence in implementing basic techniques batting during the match. This was similarly expressed by Tangkudung & Asmawi (2019) that the Positive and significant effect of referees' eye-hand coordination ability on the level of their confidence level in carrying out their duties in leading a match. It can be interpreted that a positive and significant effect on referees' eye-hand coordination ability on their level of confidence. Furthermore, the relationship between international journals Poulsen, Ziviani, & Cuskelly (2008)also states that "The peer relations self-concept was identified as a significant mechanism

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mediating the relationship between physical coordination abilities and low energy expenditure". It can be interpreted that the self-concept of peer relations is identified as a significant mechanism that mediates the relationship between coordination ability and low energy expenditure.

Eye-hand coordination in skills is Batting needed to further optimize confidence in cricket games. In addition, Eye-Hand Coordination is also very influential in increasing Confidence. The eye-hand coordination possessed by athletes is also one component of physical abilities that is indispensable in obtaining good self-confidence. Thus eye-hand coordination has a direct effect on confidence in DKI Jakarta Cricket PCI athletes.

g. Fat Thickness Directly Influences Confidence inAthletes PCI DKI Jakarta Cricket

On the results of individual measurements of fat thickness variables, it is proven that fat thickness (X3) gives a significant effect on Confidence (X4) on cricket athletes. The value of the path (R square) tested individually between the variable thickness of fat on confidence in cricket athletes is 0.505 or 50.50% tested individually. One component of health that supports in Batting on Cricket is the fat thickness of an athlete. This can be seen in the Coefficient Table which shows the significance value. 0,000. It turns out that the significance value. 0,000 smaller (<) than a probability value of 0.05 or a value of 0.05> 0,000, then the Alternative Hypothesis (Ha) is accepted and Ho is rejected, meaning that the path analysis coefficient between fat thickness and confidence is significant

Fat thickness is a sufficient factor affecting Cricket sports especially in implementing thetechnique batting. Fat is a source of energy reserves for the body. fat is also very helpful for athletes so that athletes are awake from fatigue during training or competing or in times of lack of energy. This statement was also stated by Nawawi (2014) that: When excess carbohydrate in the diet is not needed by the body, then it is converted by the body into fat and stored as a backup energy which can be used at any time when needed by the body. Can be interpreted that, when excess carbohydrates in food are not needed by the body, then it is converted by the body into fat and stored as energy reserves that can be used anytime when needed by the body. Furthermore According to Pasad Sahu (2015) in international journals also states that body composition also affect performance in sports. The longer the power arm of the lever, the greater the amount of force, the shorten the power arm in relation to the length of the weight arm, the smaller is the movement of force, but the more immediate in action.

The statement above means, the longer the arm strength of the lever, the greater the amount of strength, the shorter the arm strength in relation to the length of the load arm (weight), the smaller the force of movement, but the faster the action. Furthermore Joseph Balogun (1987) in international journals stated that: The results of the multiple regression analysis revealed that self-esteem of adult females can be attributed to factors other than physical fitness. The correlation between body-image and global selft-esteem was statistically significant. Which means that, the results of multiple regression analysis revealed that adult female self-esteem can be associated with factors other than physical fitness. The correlation between body image and global self-esteem is statistically significant. In line with the above statement, another learning also states that there is a positive influence between fat thickness and self-confidence (Pardilla, 2017). From the results of the research and discussion presented in the seventh hypothesis, it can be interpreted that it is true that the fat thickness variable has a significant influence on self-confidence on DKICricket PCI athletes Jakarta Jakarta. Thus, it can be concluded that fat thickness has a direct effect on the confidence of DKI Jakarta Cricket PCI athletes. Based on the results of individual testing of all hypothetical discussions that have been carried out, then the next test together is testing on Model-1 and testing on Model-2. The ppembahasan know testing model 1 and model-2 discussed as follows :

1) Testing Model 1 (Effect of X1,X2,X3 and X4 Against Y)

From the results of research conducted on the Model X-1 shows the effect of1, X2, X3 and X4 to Y are very large. Invariable the muscle strength arm, skills are batting strongly influenced by this arm muscle strength. This proved to be significant and was also found in the results of Journal of Sports Sciences which stated that: It could be hypothesized that superior power and endurance fitness should be required to cope with the repeated eccentric muscle contractions required in turning in bowling which might account for fatigue and risk of injury in cricket (Noakes & Durandt, 2000)

This means that it can be hypothesized that superior strength and endurance fitness are needed to overcome the repetitive eccentric muscle contractions needed to reverse a bowling ball that might cause fatigue and the risk of injury to the cricket. Furthermore, in the variable eye-hand coordination on skills batting in Cricket is very significant. This research is also supported by other studies, which state that: Exercise-bouts performed at a set level will increase the visual awareness and motor coordination of cricket players .; and a carbohydrate drink further improves the speed of recovery after bouts of exercise and

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improves performance in subsequent sports vision tests that require a high level of visual awareness and motor co-ordination.(Du Toit et al., 2006)

Furthermore, in the discussion of the influence of body composition variables related to fat thickness and self-confidence significantly influence the activity batting Cricket. The same thing was also expressed in an international journal by Baştuğ, Özdemir, Tanır, & Salim (2016) reads In conclusion, there are significant differences in body weight, BMI, self-esteem and appearance esteem values before and after weight loss. It can be interpreted that In conclusion, there are significant differences in body weight, BMI, self-esteem and the value of appearance prices before and after weight loss.

The variables of arm muscle strength, eye-hand coordination, fat thickness and self-confidence have a very significant influence together (Model-1) so that the hypothesis proposed in this learning can be accepted empirically (real). Thus it is in accordance with the hypothesis proposed that there is an influence of eye-hand coordination, fat thickness and self-confidence onpunch skills batting in DKI Jakarta Cricket Athletes Cricket athletes.

2) Testing Model 2 (Effect of X1,X2,X3 Against X4)

From the research that has been done on the variable Strength arm muscles, eye-hand coordination, fat thickness of the confidence found that there is a direct effect of the arm muscle strength (X1), eye-hand coordination (X2), Fat thickness (X3) to confidence (X4) of 0.708. This can be seen in the Table Coefficient which shows the value of sig. 0,000. It turns out that the value of sig. 0,000 is smaller than the probability value of 0.05 or the value of 0.05> 0,000, then the alternative hypothesis Ha is accepted and the null hypothesis Ho is rejected. It can be interpreted that the coefficient of analysis of the path between arm muscle strength (X1), eye-hand coordination (X2), fat thickness (X3) gives a significant influence on self confidence (X4). So it can be concluded that the strength of arm muscles, eye-hand coordination, fat thickness directly and jointly influence on self-confidence.

From the test results show that strength or more specifically arm muscle strength, eye-hand coordination, fat thickness is a dominant variable factor and has a very significant influence on self-confidence. If seen from the magnitude of the effect of arm muscle strength, eye-hand coordination, fat thickness and confidence in skills batting of 0.708 or 70.80% when tested together. Furthermore, to look at the structural equation model-1, it can be calculated Model -2 $x4 = 0,000X1\ 0,000X2 +000X3 + 0,035\varepsilon1$ (Effect of Total), then to find a formula: py $\varepsilon1 = 1 – R$ square $= 1 - 0.708 = 0.292$ (influence of external variables). It can be concluded that the total effect of the Model-1 (X1,X2,X3 to X4)amounted to 70.80% and the influence of external variables in addition to the variables of 29.20%. Thus in the model-2 it can be concluded that arm muscle strength, eye-hand coordination and fat thickness influence jointly on the confidence of athletes. Cricket PCI DKI Jakarta

IV. CONCLUSION

Based on data analysis in the statistical calculations described in the previous chapter IV and discussion of results research conducted on skills batting in Cricket athletes, then in this chapter the conclusions, implications and suggestions are presented. The conclusions found in answering the formulation of the problem and the hypotheses outlined in the previous chapter are as follows:

1. The first hypothesis is proven that arm muscle strength (X1) directly affects theskills batting (Y) in athletes PCI (Indonesian Cricket Association) Pengprov DKI Jakarta.
2. The second hypothesis is proved that hand-eye coordination (X2)directly influencetheskills batting (Y) in athletes PCI (Cricket Association of Indonesia) Jakarta Pengprov
3. The third hypothesis is proved that the thickness of the fat(X3)directly influencetheskills batting (Y) in athletes PCI (Cricket Association of Indonesia) Jakarta Pengprov
4. the fourth hypothesis is proven that confident (X4)directly influence onskills batting (Y) in athletes PCI (Cricket Association of Indonesia) Jakarta Pengprov
5. the fifth hypothesis it is proven that arm muscle strength (X1) directly influences self-confidence (X4) onskills batting in PCI (Association of Indonesian Cricket) DKI Jakarta Pengprov.
6. The sixth hypothesis proved that hand-eye coordination (X2)influence directly confidence (X4)in theskills of batting athletes PCI Association of (CricketIndonesia) Pengprov Jakarta.
7. The third hypothesis is proven that fat thickness (x3) has a direct effect on self confidence (x4) on theskills of batting athletes PCI (Indonesian Cricket Association) in DKI Jakarta Pengprov

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