Correlation between Coordination, Kinesthetic and Achievement Motivation with Volley Ball Smash

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Abstract: *This research aims to recognize the relation between Coordination, Kinesthetic and motivation for achievement to result of volleyball smash at student of PKO FIK - Unimed. The research also recognize the relation between Coordination, Kinesthetic and motivation for achievement by together to result volleyball smash at student of PKO FIK - Unimed. The Results of this research are: (1) There is significant relationship between coordination with result of volleyball smash at student of PKO FIK – Unimed. (2) There is significant relationship between kinesthetic with result of volleyball smash at student of PKO FIK – Unimed. (3) There is a relation which is significant between motivation for achievement to result of volleyball smash at student of PKO FIK – Unimed. (4) There is a relation which is significant by together between coordination, kinesthetic and of motivation for achievement to result of volleyball smash of student at PKO FIK- Unimed.*

Keywords: Coordination, Kinesthetic, Motivation, Volleyball

1. Introduction

The decline in various match sports achievements in recent years in Indonesia, both in regional and international, proves that the coaching has not run in accordance with the pattern and the system of coaching that has been planned or coaching has not been running optimally. Achievement vanished in line with changes in time and even sinking swallowed the progress of the sport itself. In the multi-event arena like the SEA Games only, which always occupy the main rankings, experiencing a drastic deterioration, this condition proves that the weakness of the order of sports coaching in Indonesia.

The effort to develop volleyball sport among students and students is done in order to assist the government in preparing candidates for volleyball athletes in Indonesia to achieve in the coming year. To obtain these results the coaching is also expected to apply science and technology, research results and theories about exercise. To apply the above, a trainer should attempt to obtain data on influential and dominant factors in the achievement of volleyball playing skills.

State University of Medan (UNIMED) as one of the universities that will produce superior, professional and produce graduates, develop and disseminate science, technology / art, innovative and productive works in response to all challenges and changes that occur in the middle society. Managing seven faculties and thirty two courses, one of which is the Faculty of Sport Science (FIK). Faculty of Sport Science State University of Medan is one of the higher education institutions to produce superior and professional graduates in Physical Education, Coaching and Sport Science. Faculty of Sport Science Unimed has three departments namely Department of Physical Education Health and Recreation (PJKR), Sports Coaching Education (PKO) and Sports Science Department (IKOR). Department of Physical Education Health and Recreation has two study programs, namely: Physical Education School and Health Recreation Education.

Smash is one technique in a very important volleyball game and must be controlled by a volleyball player. This is because smash is a technique that strikes the ball used to attack and has a very big chance to get the numbers. Based on this, the researcher is interested to make an effort to make the problems and difficulties that have occurred in a process of achieving the ability to do smash in volleyball can be found the solution. Based on the background of the above problems can be identified various problems related to smash volleyball especially for students of FIK-UNIMED training majors as follows; What are the physical and psychological conditions of students in volleyball courses in FIK-UNIMED ?, What about the condition of students volleyball smash skill in FIK-UNIMED ?, What factors affect student smile volleyball in FIK-UNIMED? , Does the coordination component have anything to do with the skills of doing volleyball smashes? What psychological factors affect the smash volleyball ?, Does the motivation factors of achievement someone can affect the smash results someone ?, What physical factors that affect smash volleyball ?, Does kinesthetic factor owned affect the results of smash volleyball?

2. Method

The aim of the research is to find the scientifically accurate answer about the existence or correlation between coordination (X1), kinesthetic (X2) and achievement motivation (X3) with student FIK Unimed (Y) volleyball student volleyball either individually or collectively -same.

Table 1: Questioner Result

Statistic	Variable			
	X_1	X_2	X_3	Y
Sample (n)	55	55	55	55
Maximum	88	68	170	74,33
Minimum	48	41	129	34,67
Interval	40	27	41	39,66
Average	68,15	54,85	151,33	54,36
Median	68	55	151	53,67
Deviation Standard (s)	9,91	6,60	9,71	9,00
Variance (S^2)	98,27	43,63	94,26	80,94
Modus	73	55	150	51,33

3. Results

Table 2 below is the result of normality testing of the research data.

Table 2: Normality testing of the research data

No	Variable	N	L_{count}	L_{table}	Result
1	X_4 to X_1	55	0,086	0,119	Normal
2	X_4 to X_2	55	0,096	0,119	Normal
3	X_4 to X_3	55	0,081	0,119	Normal

In addition, the linear test is met for all test variables. In addition, the linear test is met for all test variables. Since Fcount < Ftable it can be concluded that the whole model of simple linear regression equation is linear and significant.

Based on the results of hypothesis testing, it turns out that the three hypothesis proposed showed significantly positive correlated results. The description of each hypothesis can be explained as follows:

1. Relationship between Coordination with Smash Volleyball

The results of the calculation of the hypothesis that there is a significant relationship between the coordination (X1) with the ability of smash volleyball (Y) shows a simple regression equation model = 34.930 + 0.285X. Through the analysis of variance for significance obtained Fcount = 20.53 greater Ftable = 4.02 while for linearity obtained Fcount = 1.79 smaller Ftable = 1.92 so that simple regression equation is = 34.930 + 0.285X stated very significant and linear. This means that if the coordination is increased one score then the ability of smash volleyball increased 34.930 score at 0.285 constant.

Further correlation coefficient between the coordination of X1 with the ability of smash volleyball of 0.099. Through t-test obtained Tcount amounted to 2.410 greater than Ttable of 2.006 so that the correlation coefficient (ry1) is expressed significant at the 0.05 level which means that the higher the coordination then the higher the ability of volleyball smash. Conversely, if low coordination will bring the consequences of low ability volleyball smash.

Based on the correlation coefficient (ry1) also obtained the determination value of 0.56. This means that the variation in the ability of the kick can be explained by the variation of leg muscle ligation by 56%.

The findings in this study are in line with the theoretical study presented earlier that FIK Unimed PKO students who have good coordination will have the optimal smile ball capability. Thus it can be said that the ability of smash volleyball associated with the coordination of the student PKO FIK Unimed concerned.

In addition, the results of this study also indicate that important coordination is owned and enhanced by each student PKO FIK Unimed to improve the ability of smash volleyball.

When viewed partially coordination relationship with the ability of smash volleyball by controlling kinesthetic variable obtained partial correlation coefficient (ry12) equal to 0.84. This means that the linkage has limited the involvement of relationships with other independent variables. Furthermore, controlling of these variables shows an increase in the closeness of the relationship between coordination with the ability of smash volleyball, so the partial correlation coefficient is significant. This is because Tcount (9,46) ≥ Ttable (1.68).

2. The relationship between Kinesthetic with the ability of Smash volleyball

The results of the calculation of the hypothesis that there is a significant relationship between kinesthetic (X2) with the ability of smash volleyball (Y) shows the model of simple regression equation = 17.337 + 0.675X2. Through the analysis of variance for significance obtained Fcount = 20.53 greater Ftable = 4.02 while for linearity obtained Fcount = 1.79 smaller Ftable = 1.92 so that simple regression equation is = 17.337 + 0.675X2 expressed very significant and linear. This means that if kinesthetic increased one score then the ability of smash volleyball will rise 17,337 score at 0.675 constant.

Further correlation coefficient between kinesthetic (X2) with the ability of smash volleyball equal to 0.90. Through t-test obtained Tcount amounted to 4.148 is greater than at Ttable of 2.006 so the correlation coefficient (ry2) is expressed significant at the 0.05 level which means that the higher kinesthetic the higher the ability to smash the volleyball. Conversely, if its kinesthetic low will bring low consequences also ability volleyball smash.

Based on the correlation coefficient (ry2) also obtained the value of determination 0.81. This means that the variation in the results of the smash ability of the volley can be explained by the balance variation of 81%.

The findings in this study are in line with the theoretical studies presented earlier that FIK Unimed PKO students who have good kinesthetic will have the optimal smile ball capability. Thus it can be said that the ability of smash volleyball associated with kinesthetic owned by students.

When viewed partially kinesthetic relationship with the ability of smash volleyball by controlling kinesthetic variable obtained partial correlation coefficient (ry21) of 0.83. this means that the linkage has limited the involvement of relationships with other independent variables. Furthermore, controlling these variables shows an increase in the closeness of the relationship between kinesthetic with the ability of smash volleyball, so the partial correlation coefficient is significant. This is because Tcount (9.02) ≥ Ttable (1.68).

3. Relationship between Achievement Motivation with Smash volleyball ability

The result of the calculation about hypothesis that there is a significant relationship between achievement motivation (X3) with the ability of smash volleyball (Y) shows the model of simple regression equation = -19.727 + 0.490X3. Through the analysis of variance for significance obtained Fcount = 20.53 greater Ftable = 4.02 while for linearity obtained Fcount = 1.79 smaller Ftable = 1.92 so that simple

regression equation is = -19.727 + 0.490X3, expressed very significant and linear. This means that if the achievement motivation is improved one score then the ability of smash volleyball will rise 0.490 score at the constant -19.727.

Further correlation coefficient between achievement motivation (X3) with the ability of smash volleyball equal to 0.90. Through t-test obtained Tcount of 4.148 is greater than at Ttable of 2.006 so that the correlation coefficient (ry3) is expressed significantly at the 0.05 level which means that the higher the achievement motivation the higher the ability to smash the volleyball. Conversely, if the achievement motivation is low, it will bring low consequences also ability volleyball smash.

Based on the correlation coefficient (ry3) also obtained the value of determination 0.81. This means that the variation in the results of the smash ability of the volley can be explained by the balance variation of 81%.

The findings in this study are in line with the theoretical studies presented earlier that FIK Unimed PKO students who have good kinesthetic will have the optimal smile ball capability. Thus it can be said that the ability of smash volleyball associated with kinesthetic owned by students.

If seen by partial correlation of achievement motivation with ability of smash volley by controlling kinesthetic variable obtained partial correlation coefficient (ry321) equal to 0,83. this means that the linkage has limited the involvement of relationships with other independent variables. Furthermore, controlling these variables shows an increase in the closeness of the relationship between kinesthetic with the ability of smash volleyball, so the partial correlation coefficient is significant. This is because Tcount (9.02) ≥ Ttable (1.68).

4. Relationship between Coordination and Kinesthetic Together Against Smash volleyball ability

Result of research about hypothesis that there is positive relation between coordination and kinesthetic with ability of smash volley show model of equation of double regression $\tilde{Y} = -10,7 + 1,02.X1 + 0,21.X2 + 0,49 X3$. Through the analysis of variance for significance obtained Fcount of 229.34 is greater than F table 3.25, thus the double equation is $\tilde{Y} = -10,7 + 1,02.X1 + 0,21.X2 + 0,49 X3$ declared very significant and linear. That is, if jointly coordination and kinesthetic increased one score then the ability of smash volleyball increased by 0.97 (1.02X1 + 0.21X2 + 0.49 X3) score at the constant -10.7.

Based on the multiple regression equation above shows that among the two independent variables that give the highest increase the ability of smash volleyball if both independent variables are raised one unit is coordination variable 1.02 and kinesthetic 0,21 and achievement motivation 0,49.

Furthermore, the coefficient of double correlation together between coordination and kinesthetic with the ability of smash volley ball obtained (Ry12) of 0.97. Testing of significance through F test obtained Fcount equal to 229,4 bigger than Ftable equal to 3,25 so that coefficient of double correlation (Ry12) stated significant which mean that the

higher coordination and kinesthetic together also higher the ability of volleyball smash. Conversely, the lower the coordination and kinesthetic the lower the ability of students volleyball volleyball PKO FIK Unimed.

Based on the coefficient of double correlation (Ry123), the coefficient of determination will be obtained 0.98 so that the findings in this study indicate the importance of coordination and kinesthetic variables to improve the ability of smash volleyball because together these two variables explain the variation of the ability of smash ball volleyball by 98%. This is in line with the theory of each of the independent variables described in the preceding section.

4. Conclusion

Overall, it can be concluded that a Ftable of a statistical test of empirical data that has been obtained from the field can be said that the three independent variables proposed are coordination, kinesthetic and achievement motivation correlated positively significantly with the ability of students volleyball PKO FIK Unimed.

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