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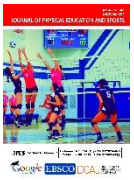

Influence of Training Method and Running Speed Toward Ball Dribbling Skill Improvement of Soccer Extracurricullar Students of The Whole 02 Cluster of JHS Students in Semarang

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Abstract

This research aimed to analyze influences of 40 – Yard sprint training method and 40 –Yard Backpedal – Forward training method to dribbling skill of soccer. The variables of this research consisted of manipulative variables: 40 yard sprint and 40 yard backpedal – forward trainings, independent – attributive variables (the controlled variables): high and low speeds. The sample consisted of whole 02 cluster of JHS soccer extracurricular students in Semarang with total 40 participants. The normality test showed sig score of pretest data 0.2335 > 0.05. Thus, the data was normally distributed. The homogeneity test showed from all indicators of test, the sig score 0.05 ≥ 5%. Thus, H_0 was accepted. Therefore, the data was homogeneous. The Two Way Anova test results on the training variables showed sig score 0.017 < 0.050. It meant that there was dribbling speed difference between first and second experimental groups. Dealing with speed as the variable, the sig score = 0.008 < 0.050. It showed that tehre was dribbling speed difference between high speed and low speed respondents. The conclusions were there was influence of 40 – yard sprint and 40 – yard backpedal forward to dribbling skill in soccer of the students, there was influence on high and low speed to dribbling skill in soccer of the students, and there was interaction between the methods to the dribbling skill of the students.

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INTRODUCTION

Sport is a systematic activity to motivate, guide, and develop physical, spiritual, and social potencies. Now, sport is not only as a meant to unite nation but also as education, vacation, health, and achievement (Apriansyah, 2017)

Soccer is a large – ball game requiring cooperation among the players to make as many goals as possible within two period of fourty five minutes (90 minutes). To play soccer well, a player must be prepared by basic technique. All types of ball game, such as soccer, beach ball, and futsal are preferred by million people for amateur, professional, and vocational purposes (Uluoz, 2016).

Soccer is famous and popular game played by two teams whose skill of technique, physic, and mental with purpose to win the game by making goals. Soccer is a very preferred game and gets a lot of attention of worldwide citizens until present days despite of age, gender, and social status. So many soccer information are broadcasted on electronic and printed media. It is a very real indication that soccer is popular. Furthermore, sport achievement is an asset to develop and popularize a certain city, place, or even a country (Gema, 2016).

During the match, soccer game has high mobility which could be characterized into acceleration, maximum speed, and agility (Erkmen, 2010). The specific difference of sport dealing with sprint can be seen on its correlation to specific training than strategic difference. Sprint conditioning of each specific sport will change the speed maintainance and the final expression of sprint speed. Running performance could be influenced by dimension and body composition, strength, and running technique (Brechue, 2010).

akhir dari kecepatan sprint. Performa berlari dapat dipengaruhi oleh dimensi dan komposisi tubuh, kekuatan/kekuatan, dan teknik berlari (Brechue, 2010).

One of appropriate communities to prepare students is soccer school extracurricular because it can be a place where students realize their talent indirectly. Dealing with achievement training, there are many factors to consider such as the clear purpose of the training, systematic training material and appropriate training method, and evaluation to measure training process success (Hidayat, 2015).

The improvement of athlete performance needs appropriate training based on his characteristics. Exercise is main daily training process to improve quality of human system organ. Therefore, it makes an athlete having perfect movement (Sukadiyanto, 2011). Sport trainings should be done in series started from multilateral until specialization. It is done to make athletes achieving maximum achievements. To achieve high achievement in sport, an athlete should be trained through a systematic, intense, programmed exercise repeatedly based on exercising principles (Ismoko, 2013).

Principally, an exercise is a better changing process, to improve physical quality, functional of limb capability, and psychological quality. In sport achievement, it will be successful when there is good cooperation between expert and eligible trainer in sport science whom really understands the field (Sukadiyanto, 2011). Exercise is a process in which an athlete is prepared to have high performance (Bompa in Kurniawan, 2016). Exercise is a conscious, systematic, and continuous sport activity with lengthy time to achieve final purpose of a performance – improving optimum achievement. Simply put, exercise can be defined as any effort to improve all physical condition by systematic and repeated process with purpose to gets more intense and frequent. An athlete exercises as an effort to achieve certain objective. Exercise is an important factor to improve achievement of an athlete or individual. The factors of exercise consists of physical, technical, experimental, and mental aspects. The ideal conditions to have exercise is basic exercise – the mental exercise with determined targets, relaxation, visualization, integration, and sparring (Hadi, 2016).

Based on the arguments, it can be concluded that exercise is a sport activity done systematically and repeatedly with more

intensities gradually in lengthy time to improve physical and psychological qualities. Exercise is a key of success for an athlete's achievement. Therefore, it must be done properly by having good planning, promotion, and evaluation for each conducted exercise.

Besides that, the composed program must be in line with exercise principles. It is done to realize the target well. When the exercise process is not appropriately done, it will hinder the purposes because the final objective of exercise is to improve sport skill. Thus, it is clear that exercise is an important matter to reach maximum achievement (Kurniawan, 2016).

Elements to foster physical freshness in dribbling ball technique are strength, power, muscular endurance, cardiovascular endurance or respiratory, speed, agility, flexibility, balance, accuracy, and coordination. To achieve successful achievement in sport, there is a need of exercising process and needs to undergo several stages, such as exercising principles, components, and factors (Aprianova, 2016).

Speed is a biomotor component needed in each sport. Each sport activity needs biomotor component. Speed is an individual's capability to do continuous movement in exactly same shapes in a very short time (Sajoto in Cahyo, 2012). Agility, acceleration, directional chances, deceleration, and fast running are assumed as important technical capabilities and main components of soccer training (Kutlu, 2012).

Speed is an important component in soccer match which has important position in exercise. Soccer management today requires quick, unpredictable, and difficult to understand players by the opponents. Sukadiyanto (2011) generally shared influential factors of speed such as: reaction time, strength (ability to overcome ballast), descendant, technique, muscular elasticity, types of muscle, concentration, and determination.

The basic technique in playing soccer must be mastered by all players. Players with good basic techniques will be able to play the game properly (Candra, 2015). The technique mastery is a very determinant requirement. From several techniques of playing soccer, among them are *kicking, stopping/controlling, dribbling, heading, throwing – in, passing,* and *catching* (for goal keepers) (Yasriuddin, 2012). The fundamental techniques such as *passing, dribbling, heading, shootin,* and *collecting* are important to be mastered by all players and should be developed (Burcak, 2015).

JHS Empu Tantular Semarang is a school which has many achievements in various soccer tournaments. The achievements were second rank of Loyola Cup in 2015, third winner of Pelita Nusantara Cup 2015, the winner among Semarang cluster in 2017, and becoming participants in POPDA. The researcher observed the school by doing *dribbling* skill test.

The extracurricular participants of the school who had many achievements – seemed did not have proper *dribbling* techniques when they were seen to improve their achievement. In fact a player should technically master the basic technique properly because it is a main requirement to be qualified player. The explanation concluded that dribbling is basic technique in soccer game. It is needed to dominate the game and to initiate attack (Ulfiansyah, 2018).

In modern soccer game, the successful team has high *dribbling* and *passing* techniques in the middle and forward areas. It will have high chance to win the game (Göral, 2014). Therefore, the researcher was interested to conduct research with purpose to provide treatment about "Influence of Training Method and Running Speed to Improve Dribbling Skill of Soccer Extracurricular Students in Whole 02 Cluster of JHSs in Semarang".

METHODS

This experimental research was purposed to find the influence of *treatment.* There are various designs of experimental research such as *pre-experiment, true experiment, factorial experiment,* and *quasi experiment.*

This research used *two factorial design.* It is also called 2 x 2 factorial research. The variables consisted of (1) manipulative variables: *40 – yard sprint* and *40 – yard backpedal – forward* methods,

(2) the independent – attributive variables: high and low speed. The dependent variable consisted of *dribbling* skill of the students.

The data analysis technique was variance analysis (ANAVA) with 2 x 2 factorial design on $\alpha = 0.05$. Then, the obtained f score was significant. Thus, the analysis was continued by Bewman – Keuls interval test (Sugiyono in Agus Hariyadi Silain, 2017). Then, to find out the assumption in *anava* technique, there was a need of normality test (*Liliefors* test) and homogeneity of variance (*Levene* test of F test). The data analysis was done before the requirement was u2i normality test (*Liliefors* test) and *homogeneity* of variance test (by *Levene's test* or F test). The normality test was to find out whether the data was normal or not which came from distributed sample. The homogeneity test was to find out whether each variant group was homogeneous or not.

RESULTS AND DISCUSSION

Dealing with *dribbling*skill, the investigated matters were the students' exercises before and after the intervention and *two way anova* hypothesis test by complete GLM with its requirement test.

Dribbling Skill Pretest

The *dribbling* skill of both groups before the treatment were different. It could be seen on the table 1.

Table 1. Description of Dribbling Skill Pretest

Exercise	Speed	Mean	SD	N
40-yard sprint	High	22.3667		
	Low	31.6750	3.31336	6
	Total	27.0208	5.45962	12
40-yard backpedal-forward	High	22.4000	1.23439	6
	Low	31.3417	2.97932	6
	Total	26.8708	5.15100	12
Total	High	22.3833	1.37102	12
	Low	31.5083	3.00918	12
	Total	26.9458	5.19145	24

Result of Normality Pretest

The normality test was done to find out whether the data was normally distributed or not. The calculation of normality test was seen on the table 2.

Table 2. Normality Test Pretest Data

N		40
Normal Parameters[a]	Mean	26.946
	Std. Deviation	5.191
Most Extreme Differences	Absolute	0.212
	Positive	0.212
	Negative	-0.091
Kolmogorov-Smirnov Z		1.036
Asymp. Sig. (2-tailed)		0.233

a. Test distribution is Normal.

Pretest Result of Homogeneity Pretest

The homogeneity test was done to find out whether the data result of each assessment indicator or sample had homogeneous variant or not.

Table 3. Homogeneity Pretest Result

F	df_1	df_2	Sig.
3.048	3	20	.052

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.
a. Design: Intercept + Exercise + Speed + Exercise * Speed

GLM Test of (two way anova) Data Pretest

The *two way anova* test of pretest data was done to find out whether *dribbling* speeds of the students were same or not. Here is the hypothesis test table.

Table 4. GLM *Pretest* Data Test

Source	Type III sum of squares	df	Mean square	F	Sig.
Corrected Model	499.930[a]	3	166.643	27.786	.000
Intercept	14925.870	1	14925.870	2.906E3	.002
Exercise	52.135	1	52.135	9.534	.017
Speed	399.594	1	399.594	63.303	.008
Exercise * Speed	28.202	1	28.202	6.034	.042
Error	119.947	20	5.997		
Total	18045.748	24			
Corrected Total	619.877	23			

a. R Squared = .779 (Adjusted R Squared = .761)

The Two Variance Average of Experimental Group 1 between Pretest and Posttest Data

This test was done for experimental group 1 between the *prettest* and *posttest* data to find out the difference between *dribbling* speed before and after being treated by 40 – *yard* sprint for the students. The result the two variance average by using *paired sample t-test* is shown below.

Table 5. Test of Hypothesis 1

Average		t_{value}	t_{table}	Sig	Criteria
Pretest experiment 1	Posttest eksperiment 2				
27.02	23.86	8.591	2.179	0.000	Different

The Two Variance Average Test of Experimental Group 2 between Pretest and Posttest Data (Hypothesis 2)

The test was done to find out the difference of *dribbling* speed before and after being treated by *40 – yard backpedal – forward* for the students.

Table 6. Test of Hypothesis 2

Average		t_{value}	t_{table}	Sig	Criteria
Pretest eksperiment 2	Posttest eksperiment 2				
26.87	23.59	9.066	2.179	0.000	Different

Dribbling Speed Posttest

The dribbling speed of both groups after being given different exercise could be seen on the table.

Table 7. Description of Dribbling Speed Posttest

Exercise	Speed	Mean	SD	N
40-yard sprint	High	20.1060	1.35615	6
	Low	27.6236	3.13580	6
	Total	23.8648	4.55178	12
40-yard backpedal-forward	High	20.1661	1.50733	6
	Low	27.0136	2.47283	6
	Total	23.5898	4.07430	12
Total	High	20.1360	1.36737	12
	Low	27.3186	2.71120	12
	Total	23.7273	4.22703	24

Result of Normality Posttest

The normality test was doen to find out whether the data was normally distributed or not. The result could be seen below.

Table 8. Result of *Posttest* Normality Data

N		24
Normal parameters[a]	Mean	23.7273
	Std. deviation	4.22703
Most extreme differences	Absolute	0.144
	Positive	0.144
	Negative	-0.102
Kolmogorov-Smirnov Z		0.705
Asymp. Sig. (2-tailed)		0.703

a. Test distribution is Normal.

Result of Posttest Homogeneity

The homogeneity test of each assessment indicator is shown below.

Table 9. Result of *Posttest* Homogeneity

F	df_1	df_2	Sig.
2.809	3	20	.066

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.
a. Design: Intercept + Exercise + Speed + Exercise * Speed

GLM Test (two way anova) Posttest Data

This test was done on *posttest* data was purposed to find out variances of *dribbling* speed after being treated differently. Here is the table showing hypothesis calculation result.

Table 10. Hasil Uji GLM Data *Posttest*

Source	Type III sum of squares	df	Mean square	F	Sig.
Corrected model	345.804[a]	3	115.268	22.985	.000
Intercept	13711.683	1	13711.683	2.734E3	.000
Exercise	41.341	1	41.341	8.244	.009
Speed	280.103	1	280.103	55.855	.000
Exercise * Speed	24.360	1	24.360	4.858	.039
Error	100.296	20	5.015		
Total	14157.784	24			
Corrected Total	446.101	23			

a. R Squared = .775 (Adjusted R Squared = .741)

The first hypothesis test proved there was significant difference between *40 – yard sprint* and 40 – *yard backpedal forward* to soccer dribbling skill of the extracurricular participants in all JHS in cluster 02, Semarang. It was proven by anova result that count= 8.244 with significant score 0.009 under significant level 0.009 < 0.05. It was found that *40 yard sprint* was better to improve *dribbling* skill. *40 – yard sprint* had average score of improvement 23.86 while the *40 – yard backpedal forward* had 23.58.

The average of *dribbling* speed of the students with *40 – yard sprint* were higher than *40 – yard backpedal forward.* They had very significant difference. Therefore, *40 – Yard sprint* was better to improve *dribbling* skill. Sukadiyanto (2011:116), speed is a muscular capability to quickly respond stimulus. Thus, *40 – yard sprint* was better since this method required individual's muscle to respond quickly.

The first hypothesis test was proven to have significant difference between *40 – Yard Sprint* and *40 – yard backpedal – forward* to dribbling skill of the soccer extracurricular participants. It was proven by anova test with F_{count}= 8.244 and significant level 0.009, significant level 0.009 <

0.05. *40 – yard sprint* was better than *40 – yard backpedal forward* in improving dribbling skill. *40 – yard sprint* had average of dribbling speed 23.86 while *40 – yard backpedal – forward* 23.58.

The average of *dribbling* speed improvement of the students treated by *40 – Yard Sprint* was higher and had significant difference. Thus, *40 – Yard Sprint* was better to improve dribbling skill. Sukadiyanto (2011), speed is muscular capability to respond quickly. Thus, *40 – Yard sprint* was better because this method required muscular agility to respond quickly.

Although various anticipations to keep the validity of the research, due to several limitations, there would be several uncontrolled factors.

1. The sample consisted of 24 players in which each group consisted of 6 players. It was a very small number to generalize wider scope.
2. Monitoring toward other variables, such as physical, attendance, and psychological were not considered.
3. The researcher did not control nutrition of the soccer extracurricular participants of whole JHS in 02 cluster, Semarang.

The third hypothesis test showed there was interaction between training method and speed toward *dribbling* skill of the soccer extracurricular students of JHS at 02 cluster, Semarang. The analysis showed that there was no interaction between training method and speed to *dribbling* skill of the students. It was proven by anova test with count= 4.858 with significant score 0.039 while the significant level 0.039 < 0.05. The soccer extracurricular students of JHS at 02 cluster, Semarang, were said significant.

This research used *40 – yard sprint* training method, a method to train agility by running to get agile reaction maximally. Meanwhile, *40 – Yard backpedal forward* method was used train agility by running backward to get agile reaction maximally.

CONCLUSION

The analysis and discussion could be concluded that: there were differences of *40 – Yard sprint* with high speed to *dribbling* skill of the soccer extracurricular students of JHS at 02 cluster, Semarang, there were influences of *40 – yard sprint* training method with low speed to *dribbling*skill of the students, there were influences of *40 – Yard Backpedal Forward* with high speed to *dribbling* skill of the students, there were influences of *40 – Yard Backpedal Forward* with low speed to *dribbling* skill of the students, there were interactions between training methods and speeds to *dribbling* skill of the students.

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