

EFFECT OF SMALLSIDE GAME-PLYOMETRIC SEQUENCE TRAINING ON FOOTBALL SKILLS OF 12 AND 17 YEAR OLDS

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Abstract

Study This aim For analyze effect of combination programs small side game drills - plyometric against Skills football at the ages of 12 and 17 years . Type study This is study experiment with factorial 2x2. Sample study This is player football ages 12 and 17 years as many as 40 people were taken randomly. Instrument study For measure Skills football use this instrument using The David Lee. Analysis of the data used in study This is ANOVA two track via SPSS 25. Research Results This has found there is (1) a positive effect small side game drills and small side game-plyometric circuit drills against enhancement Skills football with mark of $0.00 < 0.05$ (2) exists significant difference between small side game practice with sequence small side game practice aged 12 and 17 years , (3). there is interaction between small side game drills and small side game-plyometric series against Skills football . Keywords ; practice , small side game, plyometrics, age, skills football.

INTRODUCTION

Football is one of branch a demanding complex sport every the player own condition good physical , technical, tactical and mental skills . Technique is important factor For support success player in achievement optimal performance . **Should** Skills technique football which are owned player is Skills pass or Correct *passing* (Dahlan , 2020), skills dribbling (*Dribbling*) (Arwandi , J., & Ardianda , E., 2018) , skills kicking precisely and hard (Shooting) (Istofian , RS, & Amiq , F., 2016) , skills heading (*heading*) (Putra, AT, & Afriza , S., 2020) , skill control (Ferdiansyah , M., 2021). and skills tackle (ramadhan , r., 2024), besides That other skills are a must owned is Skills take decisions and skills technical (Casamichana, D et al 2018).

However the reality in the field based on results average observations player football in the district Fifty city , West Sumatra, Indonesia still own Engineering skills are less than optimal especially for child ages 12 and 17 years . This matter proven many still a player Not yet master basic techniques with good , for example Still often do passing errors , not yet capable do dribbling with Good as well as Still accuracy still kick Far from target . Whereas Skills is one of factor main in success achievement performance football . This matter Of course just become something must be a problem solved and searched for the solution Because For reach optimal performance then required skills that Good besides also having condition good physical , tactical and mental too. So arise question from problem on that is How solve basic engineering problems the ? .

Based on a number of study relevant past with enhancement Football Technical skills found results research : Yudi , AA (2019) who conducted it study Skills football with sample athlete aged 15 -17 years . With method experiment . Generated exists the effect of small side games on skills football . Besides the Putra, AN, Lawanis , H., &

Bahtra , R. (2022) mefekedo study the effectiveness of the Small Side Games training model on enhancement shooting ability.

Study This use procedure research quantitative with Quasi- Experiment . Sample is student School Muspan U - 12 football, numbering 80 people . Data obtained with method do test with use instrument test Skills technique basic shooting. Research result This can concluded that training model Small side games are effective increase students' shooting abilities School U- 12 Football . Beside That Priyono, RE, & Yudi, AA (2019) Objectives study see influence from plyometric exercises against far away long pass kick.

Type study This is study . Amount samples in research This totaling 22 people. For measure long pass ability is used test long pass ability . Data analysis techniques using t test formula or mean difference test. Research results: Yes influence exercise plyometric yang significant to enhancement the player's long pass ability aged 15 -17 years. Likewise Ruslan, R., Hamdiana, H., Simon, S., & Ismawan, H. (2020). Study This aim know influence Plyometric exercises against Soccer Shooting abilities. Sample number as many as 20 people. Data analysis techniques used are descriptive tests, Kolmogorov Smirnov, homogeneity, paired t- tests and independent tests. Analysis This using the t-test. Research result showing that There is influence Plyometric exercises against Soccer Shooting abilities.

Based on review results from a number of issues and articles results research the above , then researcher will modify series form of small side game and plyometric training for increase Skills football , so that one athlete football own Skills precise and strong kicking , accurate passing . agile dribbling and coordination played good ball . Objective from study This is to (1) Analyze the influence of small side games and practice small side game series - plyometric against Skills football at the ages of 12 and 17 years (2) Analyze difference ages 12 and 17 years to Skills Football (3) Analyze interaction between sequence small side game-plyometric drills against Skills football.

RESEARCH METHODS

Study this use method experiment. Study this divided become three initial stagewith do test new beginning (pretest). After that done stage second ie giving Practice method and ending with test final (posttest). Sample study taken in a way random.Amount sample of 40 athletes School Football 12 and 17 year olds in the District Fifty city, Indonesia. Instruments in research this use test namely the David Lee for measure football skills. Data analyzed use using two ANOVA tests track for see influence exercise small side game series – plyometric against Skills football using SPSS 25.

Procedure Experiment divided become two group , that is group control and group experiment . Group experiment given exercise arrange it Small side game-plyometrics are is a training program for 16 meetings with type exercise Game play includes 4 versus 4 and 5 versus 5 games especially formerly Then next plyometric exercises include Squat Trash, Running ziq zaq , Squat jump, Tuck jump, Standing broad jump. Group control Small side game training includes 4 on 4 and 5 on 5 games for 16 sessions exercise.

RESULTS

Based on the results of the literature review, a series of small side game-plyometric training programs were produced as below:

Table 1: Small Side Game Combined Training Program with Plyometrics

Wee k	Frequency	Form/type of excercise	Duration (minutes)	repetitions	sets	Rest between sets	intensity	Size of field
1	2	Small side game 4 vs 4, 5 vs 5	5 min	-	2	6 min	currently	20x30 m
		Squat thrust Ziq zaq run Squat jump Tuck jump Standing broad jump	-	6	3	6 min	currently	-
2	2	Small side game 4 vs 4, 5 vs 5	5 min	-	2	6 min	currently	20x30 m
		Squat thrust Ziq zaq run Squat jump Tuck jump Standing broad jump	-	6	3	6 min	currently	-
3	3	Small side game 4 vs 4, 5 vs 5	5 min	-	2	6 min	currently	20x30 m
		Squat thrust Ziq zaq run Squat jump Tuck jump Standing broad jump	-	6	3	6 min	currently	-
4	3	Small side game 4 vs 4, 5 vs 5	5 min	-	2	6 min	High	20x30 m
		Squat thrust Ziq zaq run Squat jump Tuck jump Standing broad jump	-	6	3	6 min	High	-
5	3	Small side game 4 vs 4, 5 vs 5	5 min	-	2	6 min	High	20x30 m
		Squat thrust Ziq zaq run Squat jump Tuck jump Standing broad jump	-	6	3	6 min	High	-
6	3	Small side game 4 vs 4, 5 vs 5	5 min	-	2	6 min	High	20x30 m
		Squat thrust Ziq zaq run Squat jump Tuck jump Standing broad jump	-	6	3	6 min	High	-

Table 2: Normality Test Small Side Game and Series Practice Small Side Game-Plyometric Drills Against Skills Football

Tests of Normality							
	Exercise	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistics	Df	Sig.	Statistics	Df	Sig.
Skills football	small side games u 12	.217	10	.198	,899	10	.215
	small side game age 17	.243	10	.097	,926	10	.409
	u12 small side game-plyometric combination	.175	10	.200 *	,890	10	.170
	u17 small side game-plyometric combination	.205	10	.200 *	,868	10	.094
*. This is a lower bound of the true significance.							
a. Lilliefors Significance Correction							

Based on results analysis normality test statistics that have been done with using the Kolmogorov Smirnov test it was found that small side game training and small side game-plyometric combinations aged 12 years and 17 years were found that all data obtained normally distributed . With each own value $0.215 > 0.05$ for small side game at the age of 12 years , $0.409 > 0.05$ for the small side game at the age of 17 years , $0.170 > 0.05$ for the small side game-plyometric combination at the age of 12 years and $0.94 > 0, 05$ in small side game-plyometric combination at age 17 because the significance level is more than the sig value is 0.05.

Table 3: Homogeneity Test Small Side Game and Series Practice Small Side Game-Plyometric Drills Against Skills Football

Test of Homogeneity of Variances					
		Levene Statistics	df1	df2	Sig.
Skills football	Based on Mean	2,673	3	36	.062
	Based on Median	1,244	3	36	.308
	Based on Median and with adjusted df	1,244	3	28,996	.312
	Based on trimmed mean	2,584	3	36	.068

Based on statistical analysis of homogeneity tests which have been carried out using the Levene Test. It was found that both small side game training and small side game-plyometric combinations aged 12 years and 17 years , significance amounting to $0.062 > 0.05$. so can concluded that Good small side game drills and small side game-plyometric combinations are in nature homogeneous . Due level significance more big from 0.05.

Table 4: Anova Test Small Side Game and Series Practice Small Side Game-Plyometric Drills Against Skills Football

ANOVA					
Skills football					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	277,400	3	92,467	11,145	.000
Within Groups	298,687	36	8,297		
Total	576,087	39			

From the results of the Anova test output in the table above, it can be seen that there is a significant effect of small side game training and the small side game-plyometric combination on enhancement Skills football , p This seen from data with a value of $0.00 < 0.05$. With a significance value of 0.05

Table 5: Tukey Test for Small Side Game and Circuit Training Small Side Game-Plyometric Drills Against Skills Football

Multiple Comparisons						
Dependent Variable: skills football						
Tukey HSD						
(i) Practice	(J) Practice	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
small side games u 12	small side game age 17	5.30800 *	1.28817	.001	1.8387	8.7773
	u12 small side game-plyometric combination	4.66100 *	1.28817	.005	1.1917	8.1303
	u17 small side game-plyometric combination	7.14700 *	1.28817	.000	3.6777	10.6163
small side game age 17	small side games u 12	-5.30800 *	1.28817	.001	-8.7773	-1.8387
	u12 small side game-plyometric combination	-.64700	1.28817	.958	-4.1163	2.8223
	u17 small side game-plyometric combination	1.83900	1.28817	.491	-1.6303	5.3083
u12 small side game-plyometric combination	small side games u 12	-4.66100 *	1.28817	.005	-8.1303	-1.1917
	small side game age 17	.64700	1.28817	.958	-2.8223	4.1163
	u17 small side game-plyometric combination	2.48600	1.28817	.234	-.9833	5.9553
u17 small side game-plyometric combination	small side games u 12	-7.14700 *	1.28817	.000	-10.6163	-3.6777
	small side game age 17	-1.83900	1.28817	.491	-5.3083	1.6303
	u12 small side game-plyometric combination	-2.48600	1.28817	.234	-5.9553	.9833

*. The mean difference is significant at the 0.05 level.

Based on the Tukey test on on so can concluded :

- If group player train using small side games at the age of 12 years and practicing small side games at the age of 17 years seen mark significance equal to $0.01 < 0.05$, it can be concluded that there is a difference in the effect of small side game training at the age of 12 and small side game at the age of 17 years on improving football skills
- If group player train using small side games at the age of 12 years and a combination of small side game – plyometric exercises at the age of 12 years seen mark significance equal to $0.05 < 0.05$, it can be concluded that there is a difference in the effect of small side game training aged 12 years and the combination of small side game - plyometrics aged 12 years on improving football skills
- If group player train using small side games at the age of 12 years and a combination of small side game – plyometric exercises at the age of 17 years seen mark significance equal to $0.05 < 0.05$, it can be concluded that there is a difference in the effect of small side game training aged 12 years and the combination of small side game - plyometrics aged 17 years on improving football skills
- If group player train using 17 year old small side game drills and small side game drills for 12 years old seen mark significance equal to $0.01 < 0.05$, it can be concluded that there is a difference between small side games at the age of 17 years and small side games at the age of 12 years in improving football skills

- If group player train using 17 year old small side game Drills and a combination of small side game-plyometric Drills for 12 years old seen mark significance amounting to $0.958 > 0.05$, it can be concluded that there is no difference between small side games at the age of 17 years and a combination of small side game - plyometric training at the age of 12 years in improving football skills
- If group player train using 17 year old small side game Drills and a combination of small side game-plyometric Drills for 17 years old seen mark significance amounting to $0.491 > 0.05$, it can be concluded that there is no difference between small side games at the age of 17 years and a combination of small side game - plyometric training at the age of 17 years in improving football skills
- If group player train use combination of small side game training – plyometrics at the age of 12 years and small side game training for 12 years old seen mark significance equal to $0.05 < 0.05$, it can be concluded that there is a difference in the combination of small side game -plyometric training at the age of 12 years and small side game training at the age of 12 years in improving football skills
- If group player train use combination of small side game training – plyometrics at age 12 and small side game training for 17 years old seen mark significance amounting to $0.958 > 0.05$, it can be concluded that there is no difference between the combination of small side game -plyometric training at the age of 12 years and small side game training at the age of 17 years in improving football skills
- If group player train use combination Small side game – plyometric training at age 12 years and combination small side game drills – plyometrics for 17 years old seen mark significance equal to $0.234 > 0.05$, it can be concluded that there is no difference between the combination of small side game -plyometric training at the age of 12 years and small side game training at the age of 17 years in improving football skills
- If group player train use combination of small side game training – plyometrics at 17 years old and small side game training for 12 years old seen mark significance equal to $0.00 < 0.05$, it can be concluded that there is a difference in the combination of small side game -plyometric training at the age of 12 years and small side game training at the age of 12 years in improving football skills
- If group player train use combination of small side game training – plyometrics at 17 years old and small side game training for 17 years old seen mark significance amounting to $0.491 > 0.05$, it can be concluded that there is no difference between the combination of small side game -plyometric training at the age of 12 years and small side game training at the age of 17 years in improving football skills
- If group player train use combination Small side game – plyometric training at 17 years old and combination small side game drills – plyometrics for 12 years old seen mark significance amounting to $0.234 > 0.05$, it can be concluded that there is no difference between the combination of small side game -plyometric training at the age of 12 years and small side game training at the age of 17 years in improving football skills.

DISCUSSION

- 1) Based on discussion from the ANOVA test above so can concluded that small side game training and small side game-plyometric training combinations are the same. The same own influence setam can increase Engineering skills from soccer, fine Skills passing, dribbling skills as well shooting skills. With thereby so can concluded that Small side game practice and also The combination of Exercises is very effective and efficient and very suitable for improvement Skills football especially at the ages of 12 and 17 years. So with thereby coach can designing training programs using small side game exercises and small side game-plyometric combinations in his training, especially for improving Exercise Skills football.
- 2) Based on results from table of multiple comparisons tested using the Tukey test found that happen difference very significant improvement in skills football. If The same The same trained with small side game at age 12, small side game at age 17, combined small side game – plyometric training at age 12 as well as combination of small side game – plyometric training aged 17 years. Whereas If trained use a combination of small side games – plyometrics at age 12 and small side games at age 17 as well combination of small side game – plyometric training at the age of 17 years so seen from the data above so concluded No happen difference in improvement Skills football.
- 3) Based on Anova test results and Tukey test found there is exists interaction between small side game and series practice small side game-plyometric drills against enhancement Skills football, fine training at the age of 12 years or at the age of 17 years.

CONCLUSION

- 1) There is significant influence between small side game and series practice small side game-plyometric drills against enhancement Skills football
- 2) There is significant difference between small side game practice with Suite small side game-plyometric training for ages 12 and 17
- 3) There is interactive between small side game and series practice small side game-plyometric drills against Skills football

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