



Differences influence of drill, small sided games, and combination methods of two method skills on football players on beginners

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Abstract

The aim of this study was to determine and test whether or not there were differences in the effect of the drill method, small sided games, and the combination of the two methods on soccer playing skills of young athletes.

Material and methods. This research method used in the form of experimental research with a quantitative approach method in which researchers will work with numbers as a manifestation of the observed symptoms. In this study, researchers used treatment with the application of drill methods, small sided games and a combination of two methods. So this experimental research design uses a 3 x 2 factorial design. Factorial experiments are experiments that almost or all levels of a factor are combined or crossed with all the levels of each of the other factors that are in the experiment. The research design used in this study is "Two Groups Pretest-Posttest Design". The population in this study were students of PSB Bonansa UNS Surakarta, amounting to 95 people. Sampling uses a purposive sampling technique that is included in the probability sampling. Data collection techniques in this study by making research designs, conducting research, making research reports Data analysis techniques used in this study using SPSS 24, namely two-way Variant Analysis (ANOVA) at a significance level = 0.05.

Results. The results of this study are that there are differences in the effect of the drill method, small sided games, and the combination of the two methods on soccer playing skills in the beginner athlete PSB Bonansa UNS Surakarta. Research subjects who did exercises before and after using drill methods, small sided games, and combinations had improved soccer playing skills.

Conclusions. In the 9-10 years age group, drill increased by 0.39, small sided games increased by 0.13, and for combination there was an increase of 0.58. In the 11-12 year age group there was an increase of 0.43 (drill), 0.65 (small sided games) and 0.94 in the combination method.

Keywords: Drill; Small Sided Games; Combination Method; Football

Анотація

Мета цього дослідження полягала в тому, щоб виявити відмінності впливу методу повторних вправ, невеликих ігор на стороні і комбінації цих двох методів на навички гри в футбол юних спортсменів.

Матеріал і методи. Було проведено експериментальне дослідження з методом кількісного підходу, при якому проводиться робота з числами як проявом спостережуваних симптомів. Були використані метод повторного вправи, метод невеликих односторонніх ігор та комбінації цих двох методів. Таким чином, був застосований факторний дизайн 3 x 2. Факторні експерименти - це експерименти, в яких майже або всі рівні фактора комбінуються або перетинаються з усіма рівнями кожного з інших чинників, які знаходяться в експерименті. Дизайн, використаний в цьому дослідженні, - «Дизайн двох груп до і після тестування». Випробуваними в цьому дослідженні були студенти PSB Bonansa UNS Surakarta (95 осіб). Був застосований цілеспрямований метод вибірки, який був включений в вірогідну вибірку. Методи збору даних застосовувалися шляхом розробки проектів досліджень, проведення досліджень, складання звітів про дослідження. Статистичний аналіз даних проводився за допомогою програми SPSS 24, а саме - двосторонній аналіз варіантів (ANOVA) на рівні значущості 0,05.

Результати. Було виявлено, що існують відмінності впливу методу повторних вправ, методу невеликих ігор на стороні і комбінації цих двох методів на навички гри в футбол у спортсменів - початківців PSB Bonansa UNS Surakarta. Випробувані, які виконували вправи до і після використання методу повторних вправ, методу невеликих ігор на стороні і комбінації цих двох методів, поліпшили навички гри в футбол.

Висновки. У віковій групі 9-10 років навички гри в футбол збільшилися на 0,39, ефективність малих односторонніх ігор збільшилися на 0,13, а навички гри в футбол в поєднанні з ефективністю малих ігор збільшилися на 0,58. У віковій групі 11-12 років навички гри в футбол збільшилися на 0,43, ефективність малих односторонніх ігор збільшилися 0,65 і навички гри в футбол в поєднанні з ефективністю малих ігор збільшилися на 0,94.

Ключові слова: дриблінг; малі односторонні гри; метод комбінунання; футбол

Анотация

Цель этого исследования состояла в том, чтобы выявить различия влияния метода повторных упражнений, небольших игр на стороне, и комбинации этих двух методов на навыки игры в футбол юных спортсменов.

Материал и методы. Было проведено экспериментальное исследование с методом количественного подхода, при котором проводится работа с числами как проявлением наблюдаемых симптомов. Были использованы метод повторного упражнения, метод небольших односторонних игр и комбинации этих двух методов. Таким образом, был применен факторный дизайн 3 x 2. Факторные эксперименты - это эксперименты, в которых почти или все уровни фактора комбинируются или пересекаются со всеми уровнями каждого из других факторов, которые находятся в эксперименте. Дизайн, использованный в этом исследовании, - «Дизайн двух групп до и после тестирования». Испытуемыми в этом исследовании были студенты PSB Bonansa UNS Surakarta (95 человек). Был применен целенаправленный метод выборки, который включен в вероятностную выборку. Методы сбора данных применялись путем разработки проектов исследований, проведения исследований, составления отчетов об исследованиях. Статистический анализ данных проводился с помощью программы SPSS 24, а именно - двусторонний анализ вариантов (ANOVA) на уровне значимости 0,05.

Результаты. Было выявлено, что существуют различия влияния метода повторных упражнений, метода небольших игр на стороне и комбинации эт-их двух методов на навыки игры в футбол у начинающих спортсменов PSB Bonansa UNS Surakarta. Испытуемые, которые выполняли упражнения до и после использования метода повторных упражнений, метода небольших игр на стороне и комбинации этих двух методов, улучшили навыки игры в футбол.

Выводы. В возрастной группе 9-10 лет навыки игры в футбол увеличились на 0,39, эффективность малых односторонних игр увеличились на 0,13, а навыки игры в футбол в сочетании с эффективностью малых игр увеличились на 0,58. В возрастной группе 11-12 лет навыки игры в футбол увеличились на 0,43, эффективность малых односторонних игр увеличились 0,65 и навыки игры в футбол в сочетании с эффективностью малых игр увеличились на 0,94.

Ключевые слова: дриблинг; малые односторонние игры; метод комбинирования; футбол



Introduction

Football is one of the most well-known sports in the world [1], and this sport has developed rapidly in Asia and Europe. This sport is played by two teams, each team has 11 players. The main purpose of this sport is to put as many balls as possible into the opponent's goal, so that the team can win the match. In principle, aspects that must be trained and improved in soccer include sports (e.g. physical, technical, tactics, competitive maturity, coaches, training programs, evaluations), medical aspects, and psychological aspects. Viewed from the aspect of sports, coaching and training in the basic techniques of playing soccer is one of the important factors so that soccer players have the basic technical skills of playing football. The performance of a soccer player is strongly influenced by the level of mastery of the basic technical skills of playing soccer players [2]. In addition, it is also influenced by the ability of players to work with teammates in a match. Therefore, special training in soccer is usually provided such as drill, SSG and combination methods.

The drill method is a way of teaching movements where students are instructed to make certain movements repeatedly based on instructions given by the teacher or coach [3]. The teacher strictly controls so that the movements are actually carried out by students in accordance with the instructions given. Students must really pay attention to the form of movement and the procedures for its implementation instructed by the teacher. The drill method has the advantage of being able to increase player motivation, be more efficient, improve tactics, optimize training time and physical load, and reduce the risk of injury. But the drill method also has the disadvantage of increasing the risk of contact injury, difficult to measure the optimal training structure, and the right intensity of training is difficult to control [4]. The drill method has been widely used by football teams to improve the endurance and fitness of players. The drill method is very effective for training soccer groups to have good endurance, consistent intensity and get optimal results [5]. The findings of previous studies aimed that the drill method towards improving learning outcomes in soccer passing skills [6]. Based on the understanding of the drill method it can be concluded that, the drill method is an activity of doing the same thing or repetitively in order to strengthen an association or perfect a skill to become permanent. In motion education or training, drill methods are used to master automatic movements.

Small side game (SSG), is a training system by involving a smaller number of players, such as

from 11 vs 11 to 3vs 3 [7], some are implementing 4 vs 4 [8]. and smaller field sizes [9] with modified rules [10], then in the modified SSG the field is usually 32 x 23 m [11] and there are also studies that modify the duration of the game to be shorter [12], with a field of the size more narrow makes the player must be faster in making decisions in the game [13]. The small sided games method is a training method that develops, by presenting a game situation that gives players a mastery of technical, tactic, and physical aspects. Small side games are a very popular form of training among senior and junior soccer players, because in training sessions the number of players and the size becomes smaller. The SSG training system really requires good technical skills, such as dribbling, passing, shooting and running skills without the ball and teamwork [14].

Small sided games exercises are more directly applying physical exercises, techniques, and tactics in a game, which means players are required to deal with situations of pressure as if in a real game situation. The application of small sided games exercises in the process of skill training is seen as being able to increase effective mastery of training, because using training boxes that are small in size, and carried out by several players will be easily monitored by the coach. Small sided games are also a fun exercise for sports games with the use of physical and technical training in the form of games with reduced size and limited number of players at that size. [15] small sided games are one of the tasks used during soccer training and competition conditions to win in competition and have benefits during the soccer conditioning process.

Small-sided games are a form of exercise that is able to effectively improve abilities by modifying the shape of the field size and is easy to supervise by a trainer. Small-sided games are a fun exercise for sports games by utilizing physical and technical training in the form of games that are reduced in size with a limited number of players [16]. The results of previous studies have shown that SSG can improve the tactical behavior of young footballers [17]. Other findings report that SSG is one of the important exercises and is given to players, because it facilitates increased technical and tactical abilities, also achieves increased physical capacity [18]. Furthermore, other studies have reported changes in technical aspects like the number of passes, dribbles, shots or interceptions [19]. SSG has become a very effective training strategy for training and increasing technical and tactical skills simultaneously for soccer players [20]. Although in previous studies, there have been many studies on SSG, but it has not been found in previous studies



that tried to examine the three methods of training between drill, SSG and combinations in soccer.

While combination training is a training system by combining drill and SSG in soccer training. In the training system, players will continuously conduct training with a small field size and a small number of players repeatedly. In coaching football at PSB Bonansa UNS Surakarta, there are many factors that must be improved, including dribbling, passing, and shooting. Without mastering the basic techniques and skills of playing football properly, players will not be able to apply the principles of playing, can not do a variety of game systems, can not do the game patterns, and can not develop modern tactics. Based on the Description of the Research Issues Above, the Researcher Wants to Conduct a Research Entitled Differences in the Effects of the Drill, Small Sided Games Method, and the Combination of Two Methods Against the Skill of Playing PSB Bonansa UNS Surakarta.

The aim of this study was to determine and test whether or not there were differences in the effect of the drill method, small sided games, and the combination of the two methods on soccer playing skills of young athletes.

Material and methods

This research method used in the form of experimental research with a quantitative approach method in which researchers will work with numbers as a manifestation of the observed symptoms. In this study, researchers used treatment with the application of drill methods, small sided games and a

combination of two methods. So this experimental research design uses a 3 x 2 factorial design. Factorial experiments are experiments that almost or all levels of a factor are combined or crossed with all the levels of each of the other factors that are in the experiment. The research design used in this study is "Two Groups Pretest-Posttest Design". The population in this study were students of PSB Bonansa UNS Surakarta, amounting to 95 people. Sampling uses a purposive sampling technique that is included in the probability sampling. Data collection techniques in this study by making research designs, conducting research, making research reports Data analysis techniques used in this study using SPSS 24, namely two-way Variant Analysis (ANAVA) at a significance level = 0.05.

The data analysis technique used is the two lane variance (anava) analysis technique at $\alpha = 5\%$. If the F value obtained (F_o) is significant the analysis continues with the hewman-keuls range test. To meet the assumptions in the anava technique, a normality test (lilliefors test) and a variance homogeneity test (with Bartlett test).

Results

1. Test Prerequisite Analysis

a. Data Normality Test

Normality test uses the liliefors test which is performed parametrically using an average estimator from the standard deviation. The sample to be tested has a null hypothesis and comes from a normally distributed population against a hypothesis that has an abnormal distribution.

Table 1

| Liliforce Normality Test Results | | | | | | | |
|----------------------------------|-----------------|---------------------------------|----|------|--------------|----|------|
| Tests of Normality | | | | | | | |
| | Age group | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | | Statistic | Df | Sig. | Statistic | Df | Sig. |
| Drill | 9-10 years old | ,292 | 48 | ,806 | ,747 | 48 | ,954 |
| | 11-12 years old | ,320 | 48 | ,299 | ,731 | 48 | ,927 |
| SSG | 9-10 years old | ,370 | 48 | ,908 | ,710 | 48 | ,069 |
| | 11-12 years old | ,338 | 48 | ,212 | ,731 | 48 | ,878 |
| Combination | 9-10 years old | ,360 | 48 | ,958 | ,698 | 48 | ,203 |
| | 11-12 years old | ,366 | 48 | ,186 | ,726 | 48 | ,890 |

a. Lilliefors Significance Correction



The results of the analysis of normality in Shapiro-Wilk (Liliefors) showed a significant value greater than 0.05, so that all data used in this study were normally distributed, so that the analysis could be performed on a hypothesis test.

b. Homogeneity Test

Homogeneity test is done by the Barlet test, this test is carried out to estimate the average difference and test the similarity or difference of the two averages. It should be emphasized that the two groups have the same variance so that the assessment and testing activities can take place.

Table 2

Barlet Homogeneity Test

| Levene's Test of Equality of Error Variances ^a | | | |
|---|-----|-----|------|
| Dependent Variable: Dribbling | | | |
| F | df1 | df2 | Sig. |
| ,901 | 5 | 42 | ,489 |

a. Design: Intercept + Perlakuan + Metode + Perlakuan * Metode

The significance value shown shows the value of 0.489 (before treatment) and 0.901 (after football playing skills) where both values are > 0.05, so the data used is homogeneous data or the data has the same variant. The results of the analysis prerequisite test, both the normality test and the homogeneity test show that the assumptions of the analysis

prerequisite are that the data must be normally distributed and the data have variants fulfilled, so that the analysis can proceed with the hypothesis test.

2. Hypothesis Test Age 9-10 years

a. Dribble Test

Table 3

Comparison Analysis Results of Playing Football Skills

| Tests of Between-Subjects Effects | | | | | |
|-----------------------------------|-------------------------|----|-------------|----------|------|
| Dependent Variable: Dribbling | | | | | |
| Source | Type III Sum of Squares | Df | Mean Square | F | Sig. |
| Corrected Model | 257,567 ^a | 5 | 51,513 | 3,632 | ,008 |
| Intercept | 39182,041 | 1 | 39182,041 | 2762,410 | ,000 |
| Treatment | 83,899 | 1 | 83,899 | 5,915 | ,019 |
| Method | 173,167 | 2 | 86,584 | 6,104 | ,005 |
| Treatment * Method | ,500 | 2 | ,250 | ,018 | ,003 |
| Error | 595,728 | 42 | 14,184 | | |
| Amount | 40035,336 | 48 | | | |
| Corrected Total | 853,295 | 47 | | | |

a. R Squared = ,802 (Adjusted R Squared = ,819)

Table 4

Posttest Test Results with Turkey Test

| Multiple Comparisons | | | | | | |
|-------------------------------|-------------|-----------------------|------------|------|-------------------------|-------------|
| Dependent Variable: Dribbling | | | | | | |
| Tukey HSD | | | | | | |
| (I) Method | (J) Method | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
| | | | | | Lower Bound | Upper Bound |
| Drill | SSG | -2,3156 | 1,33154 | ,203 | -5,5506 | ,9193 |
| | Combination | -4,6525* | 1,33154 | ,003 | -7,8875 | -1,4175 |
| SSG | Drill | 2,3156 | 1,33154 | ,203 | -,9193 | 5,5506 |
| | Combination | -2,3369 | 1,33154 | ,197 | -5,5718 | ,8981 |
| Combination | Drill | 4,6525* | 1,33154 | ,003 | 1,4175 | 7,8875 |
| | SSG | 2,3369 | 1,33154 | ,197 | -,8981 | 5,5718 |



Based on observed means.

The error term is Mean Square(Error) = 14,184.

*. The mean difference is significant at the ,05 level.

b. Passing Test To Goal

Table 5

Comparison Analysis Results of Playing Football Skills

| Tests of Between-Subjects Effects | | | | | |
|-----------------------------------|-------------------------|----|-------------|---------|------|
| Dependent Variable: Passing | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Corrected Model | 10,750 ^a | 5 | 2,150 | 1,605 | ,002 |
| Intercept | 363,000 | 1 | 363,000 | 271,040 | ,000 |
| Treatment | 1,333 | 1 | 1,333 | ,996 | ,032 |
| Method | 9,125 | 2 | 4,563 | 3,407 | ,043 |
| Treatment * Method | ,292 | 2 | ,146 | ,109 | ,003 |
| Error | 56,250 | 42 | 1,339 | | |
| Amount | 430,000 | 48 | | | |
| Corrected Total | 67,000 | 47 | | | |

a. R Squared = ,760 (Adjusted R Squared = ,761)

Table 6

Posttest Test Results with Turkey Test

| Multiple Comparisons | | | | | | |
|-----------------------------|-------------|-----------------------|------------|------|-------------------------|-------------|
| Dependent Variable: Passing | | | | | | |
| Tukey HSD | | | | | | |
| (I) Method | (J) Method | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
| | | | | | Lower Bound | Upper Bound |
| Drill | SSG | ,4375 | ,40916 | ,538 | -,5565 | 1,4315 |
| | Combination | 1,0625* | ,40916 | ,034 | ,0685 | 2,0565 |
| SSG | Drill | -,4375 | ,40916 | ,538 | -1,4315 | ,5565 |
| | Combination | ,6250 | ,40916 | ,289 | -,3690 | 1,6190 |
| Combination | Drill | -1,0625* | ,40916 | ,034 | -2,0565 | -,0685 |
| | SSG | -,6250 | ,40916 | ,289 | -1,6190 | ,3690 |

Based on observed means.

The error term is Mean Square(Error) = 1,339.

*. The mean difference is significant at the ,05 level.

c. Shoot The Ball

Table 7

Comparison Analysis Results of Playing Football Skills

| Tests of Between-Subjects Effects | | | | | |
|-----------------------------------|-------------------------|----|-------------|---------|------|
| Dependent Variable: Shooting | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Corrected Model | 32,667 ^a | 5 | 6,533 | 2,822 | ,028 |
| Intercept | 574,083 | 1 | 574,083 | 247,933 | ,000 |
| Treatment | 4,083 | 1 | 4,083 | 1,763 | ,002 |
| Method | 28,292 | 2 | 14,146 | 6,109 | ,005 |
| Treatment * Method | ,292 | 2 | ,146 | ,063 | ,004 |
| Error | 97,250 | 42 | 2,315 | | |
| Amount | 704,000 | 48 | | | |
| Corrected Total | 129,917 | 47 | | | |

a. R Squared = ,851 (Adjusted R Squared = ,862)



Table 8

| Posttest Test Results with Turkey Test | | | | | | |
|--|-------------|-----------------------|------------|------|-------------------------|-------------|
| Multiple Comparisons | | | | | | |
| Dependent Variable: Shooting | | | | | | |
| Tukey HSD | | | | | | |
| (I) Method | (J) Method | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
| | | | | | Lower Bound | Upper Bound |
| Drill | SSG | 1,0625 | ,53799 | ,131 | -,2445 | 2,3695 |
| | Combination | 2,8750* | ,53799 | ,003 | ,5680 | 3,1820 |
| SSG | Drill | -1,0625 | ,53799 | ,131 | -2,3695 | ,2445 |
| | Combination | ,8125 | ,53799 | ,296 | -,4945 | 2,1195 |
| Combination | Drill | 1,8750* | ,53799 | ,003 | -3,1820 | -,5680 |
| | SSG | -,8125 | ,53799 | ,296 | -2,1195 | ,4945 |

Based on observed means.

The error term is Mean Square(Error) = 2,315.

*. The mean difference is significant at the ,05 level.

3. Uji Hipotesis Umur 11-12 tahun

a. Dribble Test

Table 9

| Comparison Analysis Results of Playing Football Skills | | | | | | |
|--|-------------------------|----|-------------|----------|------|--|
| Tests of Between-Subjects Effects | | | | | | |
| Dependent Variable: Dribbling | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | |
| Corrected Model | 224,958 ^a | 5 | 44,992 | 6,644 | ,000 | |
| Intercept | 27151,053 | 1 | 27151,053 | 4009,447 | ,000 | |
| Treatment | 88,400 | 1 | 88,400 | 13,054 | ,001 | |
| Method | 136,199 | 2 | 68,100 | 10,056 | ,000 | |
| Treatment * Method | ,358 | 2 | ,179 | ,026 | ,002 | |
| Error | 284,414 | 42 | 6,772 | | | |
| Amount | 27660,426 | 48 | | | | |
| Corrected Total | 509,373 | 47 | | | | |

a. R Squared = ,742 (Adjusted R Squared = ,675)

Table 10

| Posttest Test Results with Turkey Test | | | | | | |
|--|-------------|-----------------------|------------|------|-------------------------|-------------|
| Multiple Comparisons | | | | | | |
| Dependent Variable: Dribbling | | | | | | |
| Tukey HSD | | | | | | |
| (I) Method | (J) Method | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
| | | | | | Lower Bound | Upper Bound |
| Drill | SSG | -2,8713* | ,92004 | ,009 | -5,1065 | -,6360 |
| | Combination | 1,1306 | ,92004 | ,443 | -1,1046 | 3,3659 |
| SSG | Drill | 2,8713* | ,92004 | ,009 | ,6360 | 5,1065 |
| | Combination | 4,0019* | ,92004 | ,000 | 1,7666 | 6,2371 |
| Combination | Drill | -1,1306 | ,92004 | ,443 | -3,3659 | 1,1046 |
| | SSG | -4,0019* | ,92004 | ,000 | -6,2371 | -1,7666 |

Based on observed means.

The error term is Mean Square(Error) = 6,772.

*. The mean difference is significant at the ,05 level.

b. Passing Test To Goal



Table 11

Results of Comparison Analysis of Playing Football Skills

| Tests of Between-Subjects Effects | | | | | | |
|-----------------------------------|-------------------------|----|-------------|---------|------|--|
| Dependent Variable: Passing | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | |
| Corrected Model | 17,167 ^a | 5 | 3,433 | 3,539 | ,009 | |
| Intercept | 574,083 | 1 | 574,083 | 591,693 | ,000 | |
| Treatment | 4,083 | 1 | 4,083 | 4,209 | ,046 | |
| Method | 12,542 | 2 | 6,271 | 6,463 | ,004 | |
| Treatment * Method | ,542 | 2 | ,271 | ,279 | ,005 | |
| Error | 40,750 | 42 | ,970 | | | |
| Amount | 632,000 | 48 | | | | |
| Corrected Total | 57,917 | 47 | | | | |

a. R Squared = ,896 (Adjusted R Squared = ,813)

Table 12

Posttest Test Results with the Turkey Test

| Multiple Comparisons | | | | | | |
|-----------------------------|-------------|-----------------|------------|------|-------------------------|-------------|
| Dependent Variable: Passing | | | | | | |
| Tukey HSD | | | | | | |
| (I) Method | (J) Method | Mean Difference | | | 95% Confidence Interval | |
| | | (I-J) | Std. Error | Sig. | Lower Bound | Upper Bound |
| Drill | SSG | ,5625 | ,34825 | ,251 | -,2836 | 1,4086 |
| | Combination | -1,2500* | ,34825 | ,002 | ,4039 | 2,0961 |
| SSG | Drill | -,5625 | ,34825 | ,251 | -1,4086 | ,2836 |
| | Combination | ,6875 | ,34825 | ,131 | -,1586 | 1,5336 |
| Combination | Drill | 1,2500* | ,34825 | ,002 | -2,0961 | -,4039 |
| | SSG | -,6875 | ,34825 | ,131 | -1,5336 | ,1586 |

Based on observed means.
The error term is Mean Square(Error) = ,970.
*. The mean difference is significant at the ,05 level.

c. Shoot The Ball

Table 13

Results of Comparison Analysis of Football Playing Skills

| Tests of Between-Subjects Effects | | | | | | |
|-----------------------------------|-------------------------|----|-------------|---------|------|--|
| Dependent Variable: Shooting | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | |
| Corrected Model | 22,854 ^a | 5 | 4,571 | 2,994 | ,021 | |
| Intercept | 760,021 | 1 | 760,021 | 497,791 | ,000 | |
| Treatment | 6,021 | 1 | 6,021 | 3,943 | ,044 | |
| Method | 16,167 | 2 | 8,083 | 5,294 | ,005 | |
| Treatment * Method | ,667 | 2 | ,333 | ,218 | ,005 | |
| Error | 64,125 | 42 | 1,527 | | | |
| Amount | 847,000 | 48 | | | | |
| Corrected Total | 86,979 | 47 | | | | |

a. R Squared = ,763 (Adjusted R Squared = ,675)



Table 14

Posttest Test Results with Turkey Test

Multiple Comparisons

Dependent Variable: Shooting

Tukey HSD

| (I) Method | (J) Method | Mean Difference | | | 95% Confidence Interval | |
|-------------|-------------|-----------------|------------|------|-------------------------|-------------|
| | | (I-J) | Std. Error | Sig. | Lower Bound | Upper Bound |
| Drill | SSG | -1,3750* | ,43686 | ,008 | ,3136 | 2,4364 |
| | Combination | ,3750 | ,43686 | ,669 | -,6864 | 1,4364 |
| SSG | Drill | -1,3750* | ,43686 | ,008 | -2,4364 | -,3136 |
| | Combination | -1,0000 | ,43686 | ,068 | -2,0614 | ,0614 |
| Combination | Drill | -,3750 | ,43686 | ,669 | -1,4364 | ,6864 |
| | SSG | 1,0000 | ,43686 | ,068 | -,0614 | 2,0614 |

Based on observed means.
The error term is Mean Square(Error) = 1,527.
*. The mean difference is significant at the ,05 level.

Table 15

Research Result Data of Football Playing Skills by Age Group Using the Drill, Small Sided Games, and Combination Methods

| Method | Age group | Statistics | Results | | Enhancement |
|-------------------------|-----------------|------------|---------|----------|-------------|
| | | | Pretest | Posttest | |
| Drill | 9-10 years | Amount | 476,97 | 267,73 | 209,24 |
| | | Average | 11,47 | 11,08 | 0,39 |
| | | SD | 1,82 | 1,97 | -0,15 |
| | 11-12 years old | Amount | 433,25 | 248,75 | 184,50 |
| | | Average | 10,69 | 10,26 | 0,43 |
| | | SD | 1,20 | 1,34 | -0,14 |
| Small Sided Games (SSG) | 9-10 years | Amount | 502,02 | 271,22 | 230,80 |
| | | Average | 11,70 | 11,57 | 0,13 |
| | | SD | 1,72 | 1,72 | 0,00 |
| | 11-12 years old | Amount | 467,19 | 256,42 | 210,77 |
| | | Average | 10,94 | 10,29 | 0,65 |
| | | SD | 1,86 | 2,17 | -0,31 |
| Combination | 9-10 years | Amount | 530,41 | 278,04 | 252,37 |
| | | Average | 12,12 | 11,54 | 0,58 |
| | | SD | 2,15 | 1,93 | 0,22 |
| | 11-12 years old | Amount | 404,16 | 225,69 | 178,47 |
| | | Average | 10,46 | 9,52 | 0,940 |
| | | SD | 0,90 | 0,88 | 0,02 |

Data on the skills of playing pretest and posttest based on the method used can be seen in the histogram below (Fig. 1):

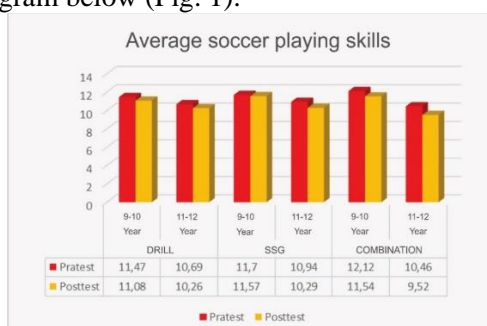


Fig. 1. Research Results of Football Playing Skills by Age Group Using the Drill, Small Sided Games Method, and Combinations Based on Average Values

The average increase in the treatment group if presented in the form of a histogram is as follows (Fig. 2):

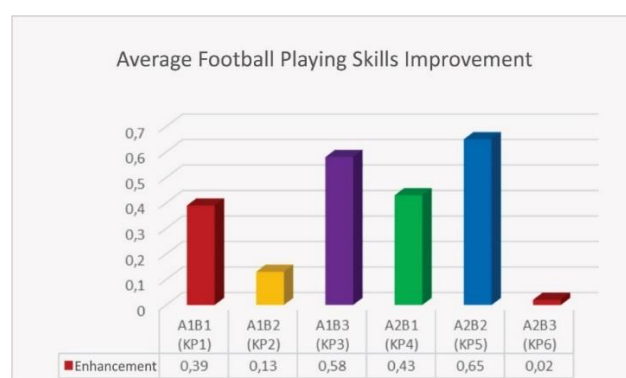


Fig. 2. Average Histogram of Improvement of Football Playing Skills by Treatment Group:

A1: Drill Method; A2: Small Sided Games (SSG) Method; A3: Combination Method; B1: Age Group 9-10 years; B2: Age Group 11-12 years



Discussion

Differences in the Effects of the Drill Method, Small Sided Games, and the Combination of Two Methods Against Soccer Playing Skills in the Beginner Athlete PSB Bonansa UNS Surakarta.

The results of the analysis prove that there are differences in the influence of the drill method, small sided games, and the combination of the two methods on soccer playing skills in the beginner athletes of PSB Bonansa UNS Surakarta, before and after using the drill method, small sided games so that hypothesis 1 states that there are differences in influence drill method, small sided games, and a combination of two methods on soccer playing skills in beginner athletes PSB Bonansa UNS Surakarta is supported, the difference between soccer playing skills produced is significantly different. The results of this study are in line with research conducted by Farid and Imam in 2016, where the results of the study concluded that the drill method can improve the basic techniques of dribbling in the Putra Zodiac soccer school students in Bojonegoro Regency.

Research subjects who did exercises before and after using drill methods, small sided games, and combinations had improved soccer playing skills. In the 9-10 years age group, drill increased by 0.39, small sided games increased by 0.13, and for combination there was an increase of 0.58. In the 11-12 years age group there was an increase of 0.43 (drill), 0.65 (small sided games) and 0.94 in the combination method.

Differences in the Effects of the Drill Method, Small Sided Games, and the Combination of Two Methods with Age Groups Against Soccer Skills in the Beginner Athlete PSB Bonansa UNS Surakarta.

The results of the analysis prove that there are differences in the effect of the drill method, small sided games, and the combination of the two methods with age groups on soccer playing skills in the beginner athletes of PSB Bonansa UNS Surakarta, so that hypothesis 2 which states that there are drills, small sided games supported, differences in playing skills the resulting football is significantly different. The results of this study are in line with research conducted by Farid and Imam in 2016, where the results of the study concluded that the drill method can improve the basic techniques of dribbling in the Putra Zodiac soccer school students in Bojonegoro Regency.

Research subjects who did exercises before and after using drill methods, small sided games, and combinations had improved soccer playing skills. In the 9-10 year age group with the drill method increased by 0.58, the small sided games method

increased by 0.13, and using the combination method increased by 0.39. In the age group 11-12 years after using the drill method, small sided games, a number of increases occurred (0.43; 0.65 and 0.94).

The Influence of Interaction Between Training Methods and Age Group Against Soccer Playing Skills in Beginner Athlete PSB Bonansa UNS Surakarta.

The results of the analysis prove that there is a statistical difference in the effect of the interaction between the training methods with the age group on soccer playing skills in beginner athletes at PSB Bonansa UNS Surakarta, so hypothesis 3 states that there are differences in the effect of the interaction between the training methods with the age group on soccer playing skills in athletes Beginner PSB Bonansa UNS Surakarta is supported, the difference in soccer playing skills produced is significantly different. The results of this study are in line with research conducted by Farid and Imam in 2016, where the results of the study concluded that the drill method can improve the basic techniques of dribbling in the Putra Zodiac soccer school students in Bojonegoro Regency.

Research subjects who did exercises using the drill method, small sided games, and combinations in the 9-10 year age group showed more improvement in the best dribbling ability in the combination method by 4,652, passing ability in the drill method by 1,062, and in shooting skills by 2,875 in drill method. So that the average increase in soccer playing skills at the age of 9-10 years is done by the drill method. In the 11-12 years age group, there was an increase in dribbling ability of 4,002 using the small sided games method, 1,250 passing ability using a combination method and increasing shooting ability by 1,000 using a combination method. So that the best increase in ability for ages 11-12 years is obtained by using a combination method ...

The results of the analysis show that for the 9-10 year age group the use of the drill method is more able to provide an increase compared to the small sided games method, and combination, whereas in the 11-12 year age group the use of the method that gives a significant increase is the combination method.

Conclusions

Based on the research that has been taken, this study provides the conclusion that there are differences in the effect of the drill method, small sided games, and the combination of the two methods on soccer playing skills in beginner athletes at PSB Bonansa UNS Surakarta. Research subjects who did exercises before and after using drill methods, small



sided games, and combinations had improved soccer playing skills. In the 9-10 years age group, drill increased by 0.39, small sided games increased by 0.13, and for combination there was an increase of 0.58. In the 11-12 year age group there was an increase of 0.43 (drill), 0.65 (small sided games) and 0.94 in the combination method.

Conflict of interest

Authors state that there is no conflict of interest.

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