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The Effectiveness of Small-Sided Game Practice on Improving Basic Futsal Skills

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Abstract

The purpose of this study was to empirically determine the provision of small-sided games 4vs2, 4vs3, and 4vs4 exercises on futsal athlete basic skills. This research is included in the experimental research. Participants of the study were 30 male teenage futsal athletes in Banyumas Regency. The data retrieval technique of this study used passing-controlling tests. The analysis used the normality test, homogeneity test, paired t-test, and independent t-test with a significance level of 0.05. This study showed that the implementation of SSG 4vs2, 4vs3, 4vs4 exercises significantly influenced the futsal athlete's basic skill improvement. The SSG 4vs4 group achieved the highest increase with an average of ± 13.63 . The one-way Anova test results showed differences among 4vs2, 4vs3, and 4vs4 exercises. The increase might occur because the SSG 4vs4 exercise suits the actual futsal game; thus, it encourages athletes to perform as many passing movements as possible. Therefore, SSG 4vs4 training is more effective in improving the futsal athlete's basic skills. It is crucial for practitioners because it allows the exercises provided simultaneously so that the training stimulus becomes more efficient.

INTRODUCTION

Futsal has different rules from other sports. Futsal is a team game with five opposing players using a relatively smaller field to create goals against opponents (Naser, Ali, and Macadam 2017). Therefore, Futsal has its characteristics that are different from other sports, especially football. Quick and spontaneous position changes with a high playing intensity (Beato et al. 2017), and prioritizing each technical ability to support the success of playing Futsal are the hallmarks of this sport (Reis et al. 2019). Therefore, special exercises are required, primarily related to the game situation through a smaller number of players and smaller-sized field dimensions currently known as small-sided games.

The application of small-sided game exercises is related to the goals to be achieved. Regarding the characteristics of the futsal game, which is included in high-intensity sports, the athlete running performance to change position becomes an aspect affecting the match outcome (Sánchez et al. 2018). Good physical ability without balanced techniques will not provide maximum results because the proper technique or trick has a vital role in achieving futsal game goals. Therefore, the futsal game applies dominant techniques, including passing, dribbling, controlling, and shooting (Festiawan 2020), to achieve a high technical mastery level as a support for the successful application of game tactics (Morgan, Fletcher, and Sarkar 2013).

The technique is an essential part of every sport. In Futsal, the basic skills possessed by each player have a crucial role in achieving the goal of the game. Passing is the most preferred technique in Futsal (Corrêa et al. 2014) used to master the game and form attack patterns quickly and efficiently (de Pinho et al. 2020). This is related to the relatively smaller futsal field dimensions and the limited number of players; hence it is impossible to continuously use physical abilities to play because Futsal requires quick decision-making (Milanovic et al., 2011). Therefore, the passing skills of each player play a role in creating success in achieving goals of the game (Gómez, Moral, and Lago-Peñas 2015) and becoming the basis for testing the small-sided game effectiveness on player performance, primarily related to the game technical mastery.

Literature shows that practicing using a ball can improve the player's dribbling and passing ability (Caglayan et al., 2018). Practice is an activity needed

by every individual for enhancing their capabilities through a systematically planned program (Suganda 2017). Applying an appropriate and effective practice can improve abilities progressively while using an inapposite practice program will impair their abilities. For this reason, the provision of proper training variations is essential for the athlete's adapting process. It aims to avoid vulnerability, gain long-term potential, and maximize individual abilities for satisfying work results (Pérez-Castilla et al., 2018). In addition, the provision of game training can stimulate athletes to harmonize their abilities to arrange good coordination patterns in certain situations (Oppici et al., 2018).

The effectiveness of Small-Sided Games is viewed from various points of view depending on the coach's goal. SSG is an appropriate training to increase the game technical mastery for tactical maturity (Chaouachi et al., 2014). Practice with a smaller field could reduce the number of players, set goals to be achieved, and give the players more contact with the ball and an actual match situation (Bujalance-Moreno, Latorre-Román, and García-Pinillos 2019). Thus, SSG becomes an essential part of supporting physical, technical, and tactical improvement. Due to the spontaneous activity, where the situation in the game is not determined by the coach but by the players themselves (Fanchini et al. 2011), several models such as 4vs2, 4vs3, and 4vs4 can be effective (Sarmiento et al. 2018).

Previous literature (Susanto 2015) shows that presenting passing and playing practices affects the player passing learning outcomes. Furthermore (Hamzah and Hadiana 2018) show that providing a problem-based learning model can improve the player's basic futsal passing skills. It is in line with (Oppici et al. 2019), explaining that passing is the basis for forming an effective game pattern. Therefore, programmed training is necessary for improvement. Another finding showed that SSG exercises affected better decision-making with different opposition levels (Práxedes et al., 2018). Based on these researches, it is necessary to have small-sided games practices to improve the athlete passing skills in actual game situations.

A varied result was obtained from observations on the youth futsal team in Banyumas Regency. There was only a 43.3% player success rate in passing. The athletes also made mistakes, such as an unintended passing direction, easily cut by opponents, poor ball control,

and uncontrollable ball speed. Consequently, the game was hard to develop and affected the game outcome. Some of these problems, of course, turn back to the theory stating that passing is an essential aspect of the futsal game (Barron, Collins, and Carling 2020). Thus it must be improved in depth through an appropriate training program.

Based on the literature review and existing problems, an in-depth study on small-sided games to improve the passing skills of youth futsal athletes in Banyumas Regency is necessary to introduce successful training for improving futsal athlete basic skills. For this reason, the study aimed to examine the effectiveness of small-sided games on each futsal player's passing skills. Furthermore, the researchers hoped this research could be a reference in planning futsal sport training programs to achieve maximum performance.

METHODS

Participants

This study involved youth futsal athletes in Banyumas Regency aged 15-17 years. The consideration was based on the age range of people in increasing training, special training, and the number of running competitions (Wijayanti and Kushartanti 2014) (N=30, Age \pm IMT= 16,1 \pm 19,4).

The participants involved in this study were the youth futsal team members of the Banyumas Regency. The research was conducted in groups and adapted to the planned practice program implementation. Therefore, the sampling technique used was the total sampling technique, where the whole participants became the research subjects.

Materials and Apparatus

The data collection instrument used was a passing-controlling test (Narlan et al. 2017) by counting the number of passing in 30-second duration. The test was carried out twice, including pre-test and post-test.

Procedure

The research is experimental. Experimental research is research to identify the treatment effect on the subject (Sugiyono 2016). The design used was a pre-test and post-test group design.

The treatments given were Small-Sided Game

4vs2, 4vs3, and 4vs4 given to youth futsal athletes in Banyumas Regency. Before the treatment, a pre-test was conducted to determine the initial skills of the athletes. Then, the practice was carried out 16 times (Komarudin 2013), followed by a post-test to determine the effect on the athlete's basic futsal skills.

Data Analysis

The data analysis used the SPSS version 25 application. The analysis implemented in this research included Shapiro-Wilk test to test the data normality with a significance level of 0.05, Mauchly's test to test the data homogeneity with a significance level of 0.05, Paired Sample T-Test to test the hypotheses with a significance level of 0.05, and ANOVA Mixed Design test to test the difference of each group with a significance level of 0.05.

RESULT

The results of the descriptive analysis in Table 1. showed that each treatment could improve the athlete passing skills, where the 4vs4 group experienced a progressive increase compared to other groups as seen from the mean difference of ± 3.06 , followed by the 4vs2 group with an increase of ± 0.6 and 4vs3 with an increase of ± 1.06 . These results indicate that 4vs4 SSG training is more effective in improving the athlete's basic futsal skills.

Table 1. Descriptive Results

No	Variable	Mean		Mean Difference
		Pre-test	Posttest	
1	4vs2		11,17	0,6
2	4vs3	10,57	11,63	1,06
3	4vs4		13,63	3,06

Table 1. Paired Sample T-Test

Variable	Paired T-Test		P-Value
	Pre-test	Posttest	
	M \pm SD	M \pm SD	
4vs2		11.17 \pm 1.51	0.004
4vs3	10.57 \pm 1.51	11.63 \pm 1.56	0.000
4vs4		13.63 \pm 1.75	0.000

Paired sample t-test was conducted to answer the hypotheses of this study. In addition, the tests were conducted to determine the effect of giving a treatment cal-

culated from the test results before and after the treatment, as shown in Table 2.

Based on the previous test mean value analysis results and subsequent test data in Table 2, the average of the highest post-test results were achieved by the 4vs4 group (13.63) with a standard deviation of 1.75, indicating a very good category. Furthermore, the results of the t-test for the entire group showed a significance value of <0.05 , meaning that SSG training, including 4vs2, 4vs3, and 4vs4, significantly affected the basic skills of youth futsal athletes in Banyumas Regency.

The effectiveness of exercise needs to be examined to find out the appropriate and effective exercises for the athlete's skill improvement. Therefore, the ANOVA Mixed Design test was conducted to test the differences among the three groups. The results can be seen in Table 3.

Table 3. Result of Within-Subject Effect Tests

Variable		P-Value	Description
4vs2	4vs3	0.000	Significant
	4vs4		
4vs3	4vs2		
	4vs4		
4vs4	4vs2		
	4vs3		

Based on the Tests of Within-Subject Effect output in Table 3, the Greenhouse Geisser Sig value is $0.000 < 0.005$. The result showed a difference in average passing skills of each different intervention on the athletes. Thus, the small-sided game 4vs2, 4vs3, and 4vs4 interventions are reliable to improve the athlete's passing skills.

DISCUSSION

Based on the process and data analysis carried out in this study, the results showed that the provision of SSG 4vs2, 4vs3, and 4vs4 training (sig. $0.000 < 0.005$) had a significant effect on improving the passing skills of youth futsal athletes in Banyumas Regency. Furthermore, the result showed a significant increase due to the provision of training with actual game conditions. (Amani-Shalamzari et al. 2019) Explain that SSG is a model using a smaller field, fewer players, and training involving particular movements in Futsal with different

intensities. SSG also initiates player interactions to become more intense and trains them to be in the real game or play the game, which would increase their decision making and improve their techniques, tactics, and mentality (Sparkes et al. 2018). The high interaction occurring during SSG reports might increase technical proficiency, tactical awareness, speed, and several other factors determining a victory (Lacome et al., 2017).

A futsal athlete's playing skills might be improved through appropriate training (Fanchini et al., 2011). In addition, practicing plays an essential role in mastering movement skills so that the experience gained can be applied to real game situations (Beato et al., 2017). The 4vs2, 4vs3, and 4vs4 SSG practices were proven to significantly affect the basic passing skills of youth futsal athletes in the Banyumas Regency. It could be seen from the increase in the passing skill pre-test and post-test calculations. The result certainly supports other research showing that providing training with a tactical and strategic approach can significantly affect futsal playing skills (Festiawan 2020).

The SSG 4v2, 4v3, and 4vs4 training significantly impacted the futsal athlete passing skills. However, the results of 4vs4 SSG practice gained a better improvement than 4v2 and 4vs3 SSG practices because the 4vs4 practice patterns provide the actual futsal game. Therefore, the players were more involved in intense interaction with the ball to stimulate their ability improvement. The result of the study is relevant to the statement explaining that training in the form of games might stimulate athletes to harmonize their abilities to form good coordination patterns in real match situations (Oppici et al., 2018).

The result of this study is in line with and supports other researches. (Chaouachi et al. 2014) state that small-sided game practices affect the player's agility and ability to change directions. Furthermore, the small-sided game practice affects aerobic endurance in teenage boys (Moran et al., 2019). Another study explains that the small-sided game practice affects understanding the player position and physical endurance (Coutinho et al. 2019).

Researchers conducted experiments on the effect of small-sided games 4vs2, 4v3, and 4vs4 training on basic futsal passing skills, showing that the training method significantly affected the passing skills of ado-

lescent futsal athletes in Banyumas Regency. The 4vs4 SSG practice gave a difference in effect from the other two practices. The participant age range, 15-17 years, was the limitation of this study. Therefore, it is necessary to study children aged 12-15 years until it becomes a continuous coaching process.

CONCLUSION

The provision of Small Sided Game (SSG) training was proven effective in improving the basic passing skills of youth futsal athletes in the Banyumas Regency. The result showed a positive increase in the average pre-test and post-test results. In addition, there was a significant increase in the three provided exercises. However, the SSG 4vs4 practice had a better effect than 4vs2 and 4vs3 practices and had a significant difference in the effects compared to the other two practices. The result concludes that SSG training is effective in improving futsal athlete passing skills.

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CONFLICT OF INTEREST

The authors declared no conflict of interest.

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