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The impact of tactital small-sided games training on dribbling skills in young soccer players
El impacto del entrenamiento táctil en juegos reducidos en las habilidades de regate en jóvenes futbolistas

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Abstract. This study aims to evaluate the effect of Small-Sided Game (SSG) training on the dribbling skills of young soccer players at Soccer Academy PSG Situjuah Gadang, Situjuah Limo Nagari District. This research method is experimental with pre-test and post-test control group design. The experimental group engaged in SSG training that focused on developing dribbling skills, while the control group received no additional training intervention. The sample of this study consisted of 20 youth soccer players from a Soccer Academy who were randomly selected into two groups. Data was collected using dribbling tests before and after the training intervention. Data analysis was conducted using an independent t-test to compare the differences between the two groups. The results showed that the group involved in SSG training showed significant improvement in dribbling skills compared to the control group ($p<0.05$). This finding indicates that SSG training can effectively improve the dribbling skills of youth soccer players by obtaining the "t" test coefficient which is t_{table} 1,729 < t_{count} 4,60. The practical implication of this finding is the importance of paying attention to the use of SSG training in the development of technical skills of young soccer players. Small-sided games training on dribbling is an important part of developing athletes' skills and abilities in ball games that require responsiveness, speed, accuracy, teamwork, and adaptability to opponent pressure. The need for coaches to form interesting, challenging, increasing, and structured small-sided games training so that players can improve their skills in soccer. For players, the importance of serious training with the small-sided games method to develop soccer skills.
Keywords: Small-Side Games, Dribbling Skills

Resumen. El objetivo de este estudio es evaluar el efecto del entrenamiento de juego reducido (SSG) en las habilidades de regate de los jóvenes jugadores de fútbol en la Academia de Fútbol PSG Situjuah Gadang, Situjuah Limo Nagari District. Este método de investigación es experimental con un diseño de grupo de control pre-test y post-test. El grupo experimental participó en el entrenamiento SSG que se centró en el desarrollo de habilidades de regate, mientras que el grupo de control no recibió ninguna intervención de entrenamiento adicional. La muestra de este estudio consistió en 20 jugadores de fútbol juvenil de una Academia de Fútbol que fueron seleccionados aleatoriamente en dos grupos. Los datos se recogieron mediante pruebas de regate antes y después de la intervención de entrenamiento. El análisis de los datos se realizó mediante una prueba t independiente para comparar las diferencias entre los dos grupos. Los resultados mostraron que el grupo implicado en el entrenamiento SSG mostró una mejora significativa en las habilidades de regate en comparación con el grupo de control ($p<0,05$). Este hallazgo indica que el entrenamiento SSG puede mejorar eficazmente las habilidades de regate de los jugadores de fútbol juvenil al obtener el coeficiente de la prueba «t» que es ttable 1,729 < tcount 4,60. La implicación práctica de este hallazgo es la importancia de prestar atención al uso del entrenamiento SSG en el desarrollo de las habilidades técnicas de los jóvenes jugadores de fútbol. El entrenamiento en juegos reducidos sobre el regate es una parte importante del desarrollo de las destrezas y habilidades de los deportistas en los juegos con balón que requieren capacidad de reacción, velocidad, precisión, trabajo en equipo y adaptabilidad a la presión del adversario. La necesidad de que los entrenadores formen entrenamientos de juegos reducidos interesantes, estimulantes, crecientes y estructurados para que los jugadores puedan mejorar sus habilidades en el fútbol. Para los jugadores, la importancia de un entrenamiento serio con el método de los partidos reducidos para desarrollar sus habilidades futbolísticas.
Palabras clave: Pequeños juegos laterales, habilidades de regate

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Introduction

Soccer is one of the most popular and popular sports around the world (Alex et al., 2024) (Atradinal et al., 2023). Besides being a fun recreational activity, soccer also has a significant impact in shaping the character, physical health, and social skills of its players (Erikstad, Johansen, Johnsen, Haugen, & Côté, 2021) (Satyawan, Lasmawan, Artanayasa, Swadesi, & Yoda, 2023) (Ceruso, Esposito, & D'elia, 2019). To achieve a high level of success in soccer, it is important for players to have good technical skills, including effective dribbling ability (Aquino, Puggina, Alves, & Garganta, 2017).

Dribbling is one aspect of technical skills in soccer that allows players to overcome pressure from opponents, keep the ball, and create attacking opportunities (Clemente et al. 2020). Good dribbling skills require good coordination between the eyes, feet, and brain (Armando et al. 2020), as well as the ability to understand game situations and make the right decisions quickly. Therefore, the development of dribbling skills is an important part of soccer player training, especially at the beginner level (Tarigan, et al. 2021).

Proper training is essential to support youth soccer skills. (Esposito, Ceruso, & D'isanto, 2019). Through structured and fun exercises, children can develop their motor coordination as well as a tactical understanding of the game, which helps them develop into soccer players. (Pompilio, 2019). Supported by adequate training from an early age, children can explore their full potential and enjoy their journey in building solid football skills. In an effort to

improve the dribbling skills of youth soccer players, various training methods and approaches have been developed by coaches and academics. One method that is gaining popularity is the use of Small-Sided Games (SSG) (Karahan, 2020) (Fernández et al. 2020) (Poureghbali, Arede, Rehfeld, Schöllhorn, & Leite, 2020). Small Sided Games are a form of training that involves a modified soccer game with fewer players and a smaller playing space compared to a traditional soccer match (F. M. Clemente et al. 2021). Small-Sided Games training emphasizes higher interaction between players, quick decisions, and technical skill development in game situations that are more similar to real match situations (Giménez, Jiménez-Linares, Leicht, & Gómez, 2020). In Small-Sided Games training requires a small space, with limited space and pressure from the opponent, players must make quick decisions about when to dribble, when to pass, or when to shoot. This helps improve critical decision-making abilities in real games.

The dribbling technique is a basic but very essential skill in the game of soccer. It aids in game mastery, organizes attacks, and provides tactical as well as psychological advantages for players and teams. One of them is in difficult situations or when under pressure, the ability to dribble well allows players to protect the ball and avoid losing possession. This is crucial in maintaining the momentum of the game and avoiding counterattacks from opponents

Although many studies have been conducted to examine the effectiveness of Small Sided Games training in the development of various technical skills in soccer, research that focuses on the effect of Small Sided Games training on the dribbling skills of youth soccer players is still limited, especially in a club or Soccer Academy environment in rural areas. Therefore, this study aims to fill this knowledge gap by evaluating the effect of Small Sided Games training on the dribbling skills of youth soccer players in Situjuah Limo Nagari Sub-district. By understanding the impact of Small Sided Games training on dribbling skills, it is hoped that this study can provide valuable insights for coaches, Soccer Academy managers, and youth soccer players in the development of effective training programs.

This research will provide a better understanding of the benefits of SSG training in the development of young soccer players' dribbling skills in an Soccer Academy environment in rural areas. In addition, the findings of this study may also contribute to the scientific literature on sports education and sports training by expanding the understanding of effective training approaches in the development of technical skills in soccer.

Material & Methods

This study used an experimental design with a pre-test and post-test control group design. The experimental group was involved in Small-Sided Game (SSG) training which focused on developing dribbling skills. Small-sided games are a valuable methodological resource for teaching technical-tactical aspects of team sports at young ages, due to their ability to integrate physical fitness, technique, and tactical behavior stimuli in similar conditions to the real game (Fernández-Espínola et al., 2020). The use of SSG in football training has increased significantly in recent years (Karim et al., 2024). Small-sided games improve athlete performance in football players by improving sprint, repeated sprint ability, and change of direction, as well as muscular and physiological adaptations (Bujalance-Moreno, Latorre-Román, & García-Pinillos, 2019). The research subjects consisted of 20 youth soccer players who are members of Soccer Academy PSG Situjuah Gadang, Situjuah Limo Nagari District. Age group of the sample in the U-15 category study. The treatment was given 16 times in 40 days. In the meeting, the duration of the practice was 120 minutes. This study used a one group pre-test-post-test design. That is, one experimental group is measured for variables (pretest), then given a stimulus (treatment) and measured again after treatment (post-test). The research design is as follows:

Figure 1. Research Design

The main instrument used in this research is a dribbling test to measure the dribbling skills of soccer players. This test will be carried out on the PSG Situjuah Gadang Soccer Academy field and will be supervised by trained researchers or trainers. PSG Situjuah Gadang is one of the football clubs that is programmed and active in match competitions. The time during the study was calculated using a stopwatch. The research results were analyzed using the T-test by comparing the initial results of the research with the final results of the research.

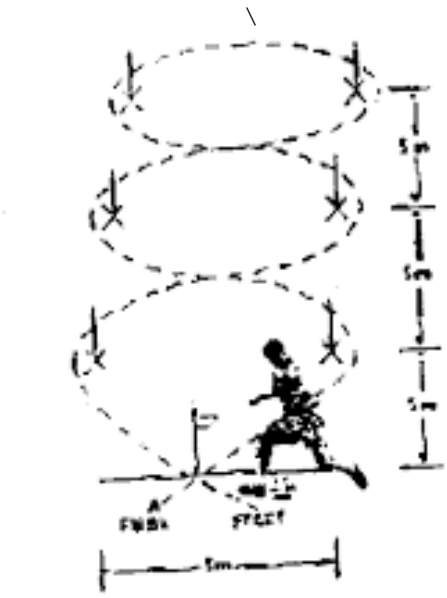

Figure 2. Dribling Test Instrument

Table 1.
Dribbling Test Norms

Value (seconds)	Kategory
≤ 10,24	Very Good
10,25 - 14,60	Good
14,61 - 18,40	Medium
≥ 18,41	Less

Result

Based on the data that has been obtained and collected, in this section the author describes the data that the author obtained following the research results that the author obtained:

Table 2.
Pre-Test and Post Test data distribution

Data	Sample	Data on Dribbling Skills of SSB PSG Situjuah Gadang Players			
		Average	SD	Max	Min
Pre-Test	20	12,56	0,45	11,57	13,16
Post-Test	20	12,19	0,39	11,26	12,78

Initial Data (Pre Test) Dribbling Skills of Soccer Academy PSG Situjuah Gadang Players, Situjuah Limo Nagari District

In the initial test of 20 samples, the highest value was 11.57 seconds, and the lowest value was 13.16 seconds, with an average value of 12.56 seconds and a median and standard deviation of 0.45. To see the distribution of pre-test data on dribbling skills of Soccer Academy PSG Situjuah Gadang players, Situjuah Limo Nagari District which has been adjusted to the norms for assessing dribbling skills on page 47, can be seen in the following table:

Table 3.
Data Distribution of Dribbling Skills from Samples Before Being Treated with Small Side Games Training Forms

Value (seconds)	Kategory	Frequency	
		Absolute	Relative
≤ 10,24	Very Good	0	0
10,25 - 14,60	Good	20	100
14,61 - 18,40	Medium	0	0
≥ 18,41	Less	0	0
Total		20	100

Based on the distribution table of dribbling skills above for pre-test data, the results obtained from 20 samples, at a value of 10.25 - 14.60 there were 5 people (100%) with good categories and none in the categories of less, moderate, and excellent.

Final Data (Post-Test) Dribling Skills of Soccer Academy PSG Situjuah Gadang Players, Situjuah Limo Nagari District

In the final test, 20 samples obtained the highest value of 11.26 seconds, the lowest value was 12.78 seconds, with an average value of 12.19 seconds, a median of 12.21 seconds, and a standard deviation of 0.39. The distribution of post-test data on dribbling skills of Soccer Academy PSG Situjuah Gadang players in Situjuah Limo Nagari District which has been adjusted to the norms for assessing dribbling skills on page 47, can be seen in the following table:

Table 4.
Data Distribution of Dribbling Skills of the Sample After Being Treated with Small Side Games Training Forms

Value (Seconds)	Category	Frequency	
		Absolut	Relative (%)
≤ 10,24	Very Good	0	0
10,25 - 14,60	Good	20	100
14,61 - 18,40	Medium	0	0
≥ 18,41	Less	0	0
Total		20	100

Based on the distribution table of dribbling skills above for post-test data, the results obtained from 20 samples, at a value of 10.25 - 14.60 were 20 people (100%) with good categories and none in the categories of less, moderate, and excellent.

Analysis Requirements Testing

Normality Test

Before testing the proposed hypothesis, the data analysis requirements test is first carried out, namely the normality test. The data normality test is carried out using the Lilliefors test. For a clearer description of the analysis of the data analysis requirements test, it can be seen in the following explanation:

Table 5.
Summary of Normality Test of Data Distribution

Variable	N	Lo	Ltable	Distribution
Pre test	20	0,093	0,190	Normal
Post test	20	0,166	0,190	Normal

The table above shows that from the results of normality testing for the sample group pre-test data before being given the treatment of small side games training form obtained a score of Lo = 0.093 with n = 20, and Ltab at a significant testing level $\alpha = 0.05$ obtained 0.190 which is greater than Lo. In other words, 0.166 < 0.190 or Lo < Lt. If Lo < Lt, it can be said that the data is normally distributed. So it can be concluded that the dribbling skill data from the pree-test results before being given the treatment of small side games training form comes from a normally distributed population.

Next, from the results of normality testing for the post-test data of the sample given the treatment of small side games training form, the score Lo = 0.166 with n = 20, and L-table at a significant testing level $\alpha = 0.05$ obtained 0.190 which is greater than Lo. Or in other words 0.166 < 0.190 or Lo < Lt. If Lo < Lt, it can be said that the data is normally distributed. So, it can be concluded that the dribbling skill data from the post-test results after being given the small side games training form comes from a normally distributed population.

Homogenety Test

The homogeneity test is carried out on variables using the Variance test with a significance level of $\alpha = 0.05$, the test criterion is that H_0 is rejected if F_0 obtained from the observation data exceeds F_t and vice versa H_0 is accepted if F_t is greater than F_0. The complete calculation results of the

normality test can be seen in the appendix, as a summary can be seen in the following table:

Table 6.
Summary of Research Data Homogeneity Test Results

Variable	Variance Value	F_{Count}	F_{table}	Description
Before being given the small side games training form	0,20	1,35	3,49	Homogen
After being given the small side games training form	0,15			

Description :
$F_c = F_{count}$ Value
$F_t = F_{table}$ Value

Based on the results of the calculation of the homogeneity test of the research variables above, it was found that the F_{count} price obtained was smaller than the F_{table} price at the $\alpha = 0.05$ significance level. Thus it can be concluded that all data groups in this study were taken from a homogeneous population.

Hypothesis Testing

Based on the frequency distribution table with N 20 and degrees of freedom (dk) n-1 = 19 using a significance level of 0.05, the t-table is 1.729 < T-count 4.60 so it can be concluded that there is an influence of Tactical Small-Sided Games Training (SSG) On the Dribbling Skills of Young Football Players at the PSG Situjuah Gadang Academy, Situjuah Limo Nagari District. It can be concluded that playing small-sided games (SSG) in the rain can improve the dribbling abilities of soccer players. For more details, see table 7 below:

Table 7.
Summary Of Results (Test T)

t_{count}	t_{table} $\alpha = 0,05$	Conclusion
4,60	1,729	There is influence

Description :
$\mathbf{t_c}$ = difference test coefficient of mean
$\mathbf{t_{tab}}$ = difference test coefficient of mean table

Discussion

The results of this study indicate that small-sided game training has a significant positive effect on the dribbling skills of young soccer players. This finding is consistent with previous studies which suggest that small-sided game training can be effective in developing technical skills in soccer. In the context of dribbling skills, small-sided game training provides an opportunity for players to engage in game situations that are more similar to real matches, which allows them to practice and improve their dribbling skills under higher pressure and in a more limited space.

This high intensity of interaction allows players to be in a position to practice and improve their dribbling skills more often. In addition, players often get the opportunity to play and try out their technical skills, including dribbling, because of the longer time to play and less time wasted in queues or waiting for their turn to play. This increased frequency of play provides more opportunities for players to practice and improve their dribbling skills. (Wu et al., 2024) (Kuncoro & Santosa, 2021) (Vencúrik et al., 2021).

Small-sided games create game situations that are more similar to real matches than traditional training. (Mandorino, Tessitore, Coustou, Riboli, & Lacome, 2024) (Nagy et al. 2020). Smaller pitches and fewer players force players to make quick decisions and implement their dribbling skills under higher pressure. (Brink et al., 2023) . This helps in preparing players for actual game situations, where they have to use dribbling to overcome pressure from opponents. In addition, the focus is often on individual player skill development. This means that each player has the opportunity to practice dribbling more individually in smaller, more focused game situations. (García Angulo et al. 2020). This allows players to gain more experience in applying dribbling techniques in a more dynamic game context (Murugavel Professor, Giridharaprasath, Murugavel, & Giridhara Prasath, 2020).

Small-Sided Games require high mental engagement from players due to faster and more dynamic game situations. (Soylu, Ramazanoglu, Arslan, & Clemente, 2022) (Trecroci, Boccolini, Duca, Formenti, & Alberti, 2020) (Gok, Suel, & Soylu, 2023). Players have to think fast, make the right decisions, and adjust their play according to changing game situations. This helps in the development of cognitive aspects of dribbling skills, such as decision-making, tactical understanding, and anticipation skills.

Small Sided Game practice encourages intense social interaction between players, allowing them to learn from each other and better understand game patterns (Guard, McMillan, & MacFarlane, 2022). This can help develop players' tactical understanding and the ability to read game situations and make the right decisions. Small Sided Game Drills can be integrated into a regular training program as an effective method to improve dribbling skills (Formenti et al., 2021). It is important to pay attention to variations in Small-Sided game practices, including field size, number of players, game rules, and practice objectives, according to the players' needs and level of development.

Several forms of exercise can be applied. First, the game [4(+4)] vs 2 starts from the middle zone. 4 red against 2 blue. Red is required to play a certain number of passes and blue must block them. If blue cuts the pass and the ball is still in the field, red does *gegenpressing* to grab it. If the ball goes out of the field or red succeeds in completing the pass according to the provisions, the two blues immediately move to the edge zone accompanied by red 2, 7, 5, and 11 entering each edge zone. In both edge zones, 3 reds face 1 blue. For example, 2, 3, and 7 are red against 10 blue. Just like in the middle zone, both sides must complete the same obligations.

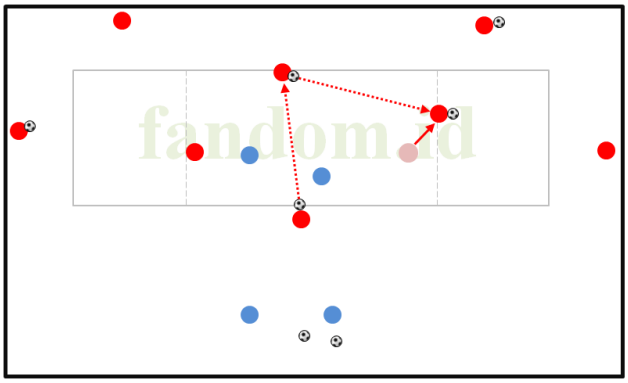

Figure 3. *[4(+4) vs 2*

After both edge zones complete the play, blue completes the first rep. Then, both blues return to the middle zone to start the second rep. After 2 repetitions, another two blue players replace the first blue duo. Each blue duo completes 4 reps.

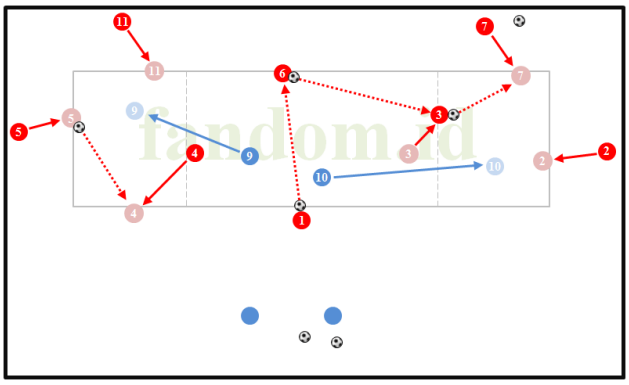

Figure 4. The game moves to the edge zone

The numbering of players in the picture is an example of the use of players adapted to the game model. The red numbering is based on the basic 4-3-3 pattern while the blue numbering is an example of front line pressing using 2 attackers in the basic 4-4-2 pattern. The blue players are the players with the highest work intensity because the training is aimed at training the blue's pressing ability and anaerobic abilities. However, this does not mean that training "does not touch" the red team. Having to do gegenpressing makes red play with a certain intensity while maintaining possession of the ball.

As an alternative practice, the coach can change the number of players involved. For example, after the game in the side zone has finished playing, 2 additional players for the blue team are allowed to enter the field and the match is played in an 8 versus 4 situation. Both teams must compete for control of the ball and complete a certain number of passes.

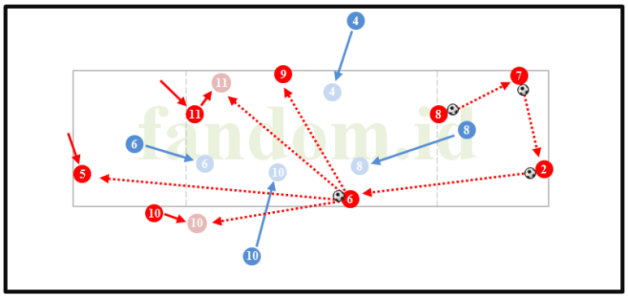

Figure 5. 8 vs 4

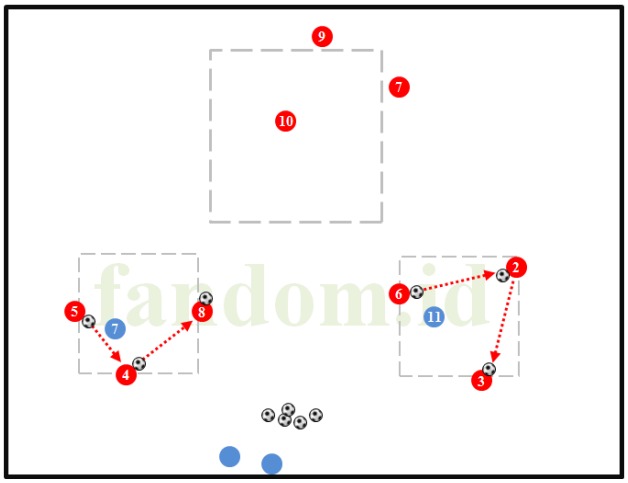

Figure 6. 3vs1 practice in small zones

Next 3 vs 1 practice game in a small zone. The game starts from two small zones between 3 red against 1 blue. The red player must complete the pass according to the provisions and then move the ball to the big zone. Since only one ball can be played in a large zone, the red players from both zones need to communicate properly before moving the ball.

After the ball moves to the large zone, the two blues enter the large zone accompanied by one red each from the two small zones moving to the large zone. The game then switches to the 5 versus 2 form.

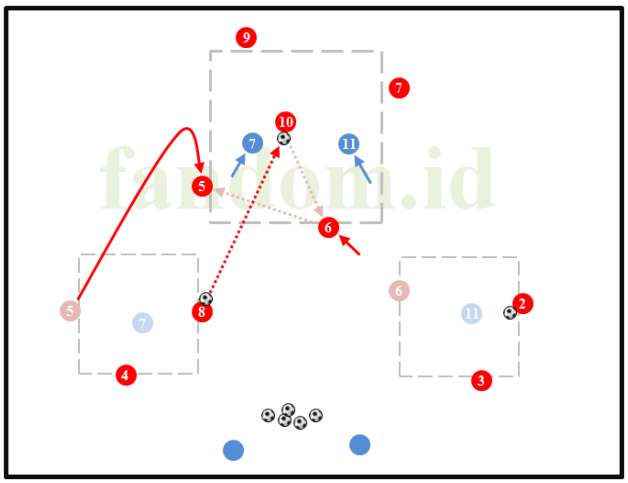

Figure 7. Form 5 vs.2 in big zone

For blue, the game's target is to practice doing intense pressing, practice doing backward pressing, and training anaerobic abilities. Apart from shifting pressing zones, blue is also faced with dynamic differences, namely from individual pressing practices in small zones to collective pressing in large zones. Backward pressing is carried out by players from the front line to help the line(s) behind them in pushing on the opponent.

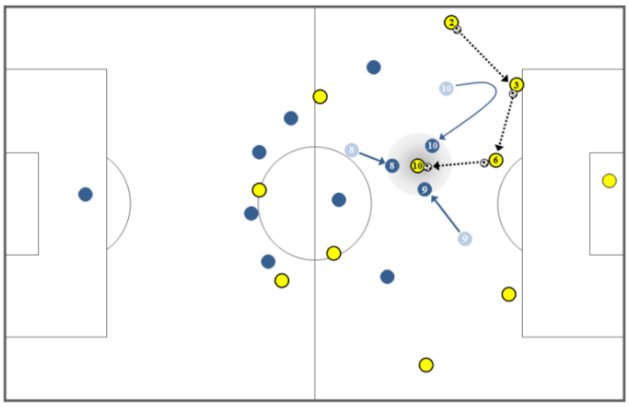

Figure 8. Example pressing towards the back by 9 and 10 blue to 10 yellow

Apart from having to continue to press intensely, the two blues in the big zone must monitor all passing lanes, understand how to use cover shadow to block the middle lane and coordinate to create the right staggering pressing.

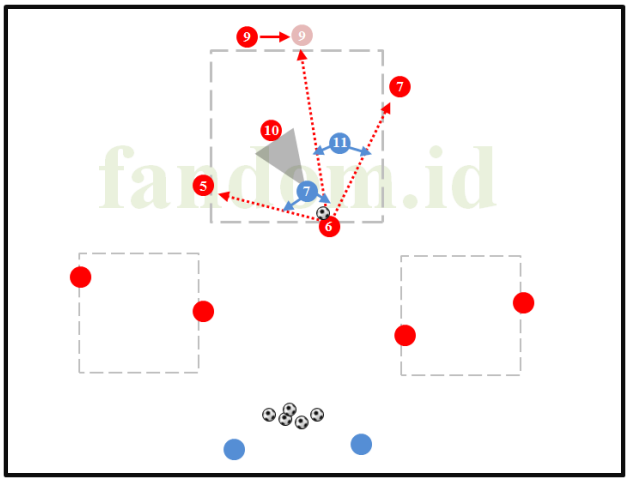

Figure 9. Anticipation, cover shadow, and staggering in blue pressing

The second positioning of blue is a manifestation of the staggering mentioned above. Staggering can be interpreted as a non-static positioning where the players spread out in more than 1 location or line to block as much of the opponent's access as possible.

As seen in the image, the blue seven uses a cover shadow (dark triangle) to block access to the centre and the blue 11 protects the blue 7's blind side. Blue's 7 and 11 positioning guards all three passing lanes that Red might access. Blue trains pressing skills while red practices positional play, composure, ability to gather information, and passing accuracy in tight spaces.

Although this study provides valuable insight into the effect of Small-Sided Games training on the dribbling skills of youth soccer players, there are some limitations that need to be noted. One of these is the relatively small sample size, which may limit the generalizability of the findings. In addition, this study was conducted in the context of SSBs in a particular area, so the results may not be directly applicable to other contexts, such as professional soccer clubs or academies.

For future research, it is recommended to involve a larger sample and sample from various contexts, including professional football clubs and academies, to expand the generalizability of the findings. In addition, future research could examine the effectiveness of different variations of SSG training in the development of dribbling skills, as well as consider the influence of factors such as age, level of experience, and playing position in training outcomes.

Conclusions

This study produces significant findings about the effect of Small-Sided Game training on the development of dribbling skills of young soccer players at Soccer Academy PSG Situjuah Gadang, Situjuah Limo Nagari District. The results of this study indicate that Small-Sided Game training has a positive and significant influence on the development of dribbling skills of young soccer players. Participation in Small-Sided Game training consistently improved the players' dribbling ability, suggesting that this training method is effective in the context of developing technical skills in soccer.

Small-sided game drills provide an opportunity for players to practice their dribbling skills in game situations that are more similar to real matches. This allows players to practice and hone their skills under higher pressure and in a more confined space, thus preparing them better for actual game situations.

The findings have important practical implications for coaches, SSB managers, and youth football players in designing effective training programs. Small-sided game drills can be made an integral part of routine training programs for dribbling skill development. By taking into account the characteristics of Small-Sided Game drills that support the development of technical skills, coaches can design drills that are more focused and relevant for players.

Although this study provides valuable insight into the effect of Small-Sided Game training on the dribbling skills of youth soccer players, there is still room for further research. Future research could involve a larger and more diverse sample and consider other variables such as age, experience level and playing position. In addition, future research could examine the effectiveness of different variations of Small-Sided Game training in the development of dribbling skills, as well as investigate the long-term implications of Small-Sided Game training on players' performance in real matches.

This study makes a valuable contribution to the scientific

literature on sports education and sports training by highlighting the important role of small-sided game training in the development of young soccer players' dribbling skills. With a better understanding of the benefits of small-sided game training, it is hoped that it can assist in improving the effectiveness of training programs and the potential development of youth football players in the future.

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