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Improving Dribbling Skills Through a Combination of Ladder Drills and Ball Feeling Exercises for Futsal Athletes

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Abstract

The purpose of this study was to analyze the extent to which dribbling skills can be improved through a combination of ladder drill and ball feeling exercises in futsal players. This study used an experimental method with a one-group pretest posttest control design. The population of DNA FC Bandung futsal athletes was 14 and the sampling technique used total sampling. The results of the independent t-test had a t-value of -4.524 with a Sig. (2-tailed) value of .001. Because the Sig. (2-tailed) value <0.05, Ho was rejected. It was concluded that the combination of ladder drill and ball feeling exercises had a significant effect on improving dribbling skills in futsal athletes. It is recommended for futsal coaches and athletes to interpret the combination of these exercises into a routine training program, it is hoped that players' dribbling skills can be further developed so that players can be more proficient and confident on the field.

How to Cite

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INTRODUCTION

Futsal is a large ball game played by two teams, each team consisting of five players, with rules that modify the game of soccer with a reduced field size (Primary, 2021). This can be observed through the numerous facilities provided and tournaments held in Indonesia, covering various levels, from school level, the general public, students, to the professional level (Juliansyah et al., 2023). Futsal involves fast-paced, fluid movements, as the ball can move quickly from foot to foot, requiring players to master basic techniques (Sudirman & Kamaruddin, 2022).

Dribbling is a fundamental aspect of futsal and must be mastered by every player. Dribbling helps maintain control of the ball while also getting past opponents, creating opportunities to score (Zaenul Ansori et al., 2023). As one of the basic skills, every futsal player is required to be able to control the ball both when moving and when making a pass or kick (Prime Son, 2023). Dribbling the ball requires good skills and the help of healthy physical conditions, such as speed and agility, which can make a person move more agile (Wanda Guna Putra et al., 2023). Every player has a different ability to control the ball while dribbling. Poor dribbling skills make the ball easy for opponents to steal. Most beginner futsal players still tend to dribble using the tips of their feet and with too much distance between their feet and the ball, which hinders their effectiveness when attacking.

Ball feel training is a practical method because it directly uses a ball. It can be implemented through simple drills and utilizes a relatively small training grid. This goal requires good physical condition and sufficient energy, as futsal is characterized by speed (Saputra et al., 2021). Ball feel training is a method for developing ball control by involving the entire body except the hands. This training can be done through various variations, such as juggling, dribbling, and other methods (Bobby et al., 2023). Ball feel training is a way of training individual skills that players do with their feet so they can control, manipulate, and feel the sensation of the ball (Mudhofar et al., 2022).

Ladder drills are a form of training used to hone SAQ (speed, endurance, and quick response) skills. This drill uses a gradual training method aimed at improving athletes' abilities to move quickly and precisely (Pandarwidi S et al., 2020). Ladder drill is a fun and effective way to teach development skills (Slimani et al., 2016). Agility plays an important role because it helps players change direction quickly and precisely while moving, without losing balance (Mochamad Zakky Mubarok, 2016). Ladder drills also improve the nerves in connection with the foot movements that mimic the quick thinking a player must do when hitting or throwing the ball (KV & Raj, 2019). In addition to providing benefits for the body, practicing ladder drills continuously can also help improve nervous system function, endurance, and leg muscle strength (Pramukti & Junaidi, 2014).

Previous research shows that agility training has an impact on the dribbling ability of SSB Seroja Jambu Air Bukittinggi players (Arwandi & Firdaus, 2021). In addition, a number of relevant studies have also found a significant impact of ladder drills and ball feel training on the dribbling abilities of futsal athletes (Kovacikova & Zemková, 2021), And (Widodo et al., 2021). The novelty in this research lies in the application of a combination of agility ladder drills with ball feel as an effort to improve the dribbling ability of futsal players.

Therefore, the purpose of this study is to determine and analyze the effect of combining ladder drill and ball feel exercises on improving dribbling skills in futsal athletes. This study is expected to provide empirical evidence and practical implications for coaches and players in developing more effective futsal training methods to enhance players' technical performance.

METHODS

The method used in this research is an experimental method. The experimental research method is a research method used to find the effect of a particular treatment (Daniel & Harland, 2017). With the use of One group pre-test-post-test control design research design: this design has two groups that are selected directly (Yunita et al., 2018).

The population in this study were 14 athletes who were members of the DNA FC Bandung Futsal Club, with the characteristics of active students aged 17-18 years.The sampling method used in this study was total sampling. Furthermore, the sample was divided using the ordinal pairing method with the ABBA pattern. The ordinal pairing method itself is a technique for dividing a group into two parts with the aim of equalizing the sample's abilities in each group (Hilary et al., 2025),

The experimental treatment in this study consisted of a combination of ladder drill and ball feel training designed to improve the

dribbling ability of futsal players. The treatment was implemented over several training sessions, emphasizing the development of players' speed, agility, coordination, and ball control. Each session included progressive exercises that gradually increased in intensity and complexity to enhance players' dribbling performance during gameplay.

The instrument used in this study was the Zig-zag Dribbling Test. Based on the results of the analysis, this instrument has demonstrated strong reliability, indicating that the data obtained are valid and consistent (Dewi & Pakpahan, 2018).

The research data was processed using the SPSS 26 statistical program. Statistical tests included normality tests, homogeneity tests, and independent t-tests on the research data, with the aim of determining whether the data were normally distributed (Fadluloh et al., 2024). The Shapiro-Wilk test was used to test for normality and homogeneity because the total sample size was less than 50 (Sahir, 2022).

RESULTS AND DISCUSSION

This study aims to analyze the improvement of dribbling ability through the application of a combination of ladder drill and ball feel training in futsal athletes. The research data were obtained from the results of the initial (pretest) and final (posttest) tests involving two groups: an experimental group and a control group. The experimental group was given a treatment consisting of a combination of ladder drill and ball feel training, while the control group received only ladder drill training.

In this study, the data collected from the pre-test and post-test were processed using a statistical approach. Data analysis was carried out with the help of a statistical application, namely SPSS version 26.

The initial score of the zigzag dribbling test in the experimental group showed an average of 16.8743 with a standard deviation of 1.31940, the fastest time was 14.45 seconds, and the slowest time was 18.62 seconds. After the treatment was given, the average post-test result decreased to 14.5114 with a standard deviation of 0.89949, the fastest time was 13.32 seconds, and the slowest time was 15.45 seconds. Next, a homogeneity test was conducted to obtain a clearer picture before drawing final conclusions from the hypothesis.

Based on the data **Figure 1 & Figure 2**, it can be seen that the highest score from the experimental group was obtained by an athlete with the initials A who achieved a time of 14.45 seconds. Meanwhile, the lowest score in the pre-test was achieved by an athlete with the initials G who achieved a time of 20.22 seconds. Furthermore, in the post-test results of the experimental group, there was a significant change. The fastest travel time after treatment was obtained by two athletes with the initials B and A with a time of 13.32 and 13.40 seconds. Which shows a significant increase from the previous travel time. In the control group also showed an increase from the previous travel time but not too significant.

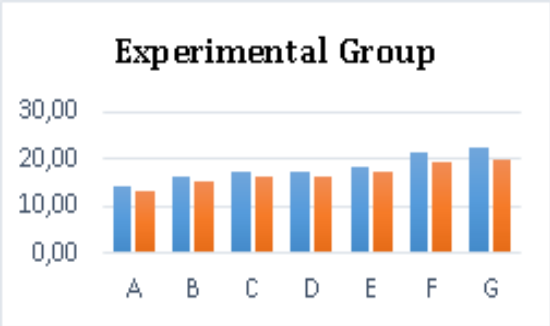

Figure 1. Experimental Group Results

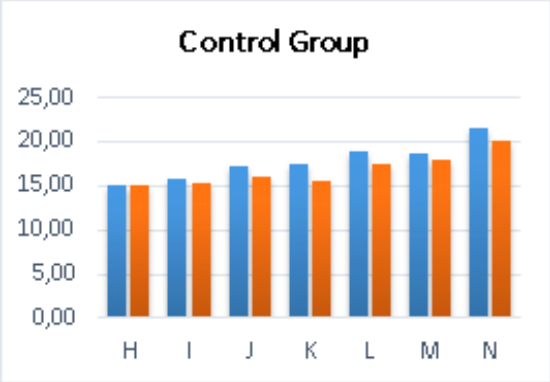

Figure 2. Control Group Results

Before conducting a hypothesis test using an independent t-test, researchers perform a homogeneity test to ensure that both groups have the same data variation or are not significantly different. This homogeneity test is essential to ensure that the basic assumptions in hypothesis testing, such as the independent t-test, are met.

This study used the Levene test, and the results showed that the average value in both groups had a p-value of 0.170. Because the p-value is greater than the significance level > 0.05, it can be concluded that the data variance in the two groups is not significantly different, or it can be said that the data from both groups is homogeneous.

The hypothesis test in this study used an independent t-test to analyze the improvement of dribbling skills through a combination of ladder

drill and ball feeling training in DNA FC futsal athletes from Bandung Regency.

Based on the image above in the Equal variances assumed section table, the sig. (2-tailed) value is 0.001, which means <0.05, so it can be concluded that H0 is rejected and Ha is accepted. In addition to the sig. (2-tailed) value, a t-value of -4.524 is also obtained, which indicates the level of difference seen between the two groups. This value is accompanied by a degree of freedom or (df) of 12 which is used to interpret the significance of the test results. In general, these results support that the combination of ladder drill and ball feeling training has a significant influence on improving the dribbling skills of futsal athletes.

The descriptive test results showed an increase in dribbling ability scores, as measured by the zig-zag dribbling test, from the initial condition before treatment to after treatment was completed. Furthermore, the results of the normality and homogeneity tests showed that the data met the statistical assumptions, so that the use of an independent t-test could be validly conducted. Based on the statistical analysis obtained, it can be concluded that the combination of ladder drill and ball feel training has a significant impact on dribbling ability in futsal athletes.

The results of this study align with several previous studies that also found a significant impact of ladder drills and ball feel on the dribbling ability of futsal athletes. The study, titled "The Impact of Agility Training Toward Dribbling Ability of Futsal Beginners," was published in the journal Nature (Setiawan et al., 2017) concluded that ladder drills can improve dribbling skills, especially for beginner futsal players. Similar findings were also obtained from other research (Widodo et al., 2021) with the title "The Effect of Ball Feeling and Ladder Drill Training on Dribbling Ability of Brotherhood Futsal Club Players" which shows that the combination of ball feeling and ladder drill training has a significant impact on the dribbling ability of futsal players at the Brotherhood club.

Successful skill development is also supported by the contribution of each form of training. Agility plays a crucial role because it allows players to change direction quickly and accurately without losing balance (Mochamad Zakky Mubarok, 2016). Ladder drills are flexible and can be adapted to individual abilities and needs, making them frequently used in routine training programs to optimize overall athlete performance.

Ball feeling training is a form of individual skill development carried out by players using their feet as the main tool to control, process and feel the movement of the ball (Mudhofar et al., 2022). Improving ball feel requires consistent training and a focus on technical aspects relevant to the sport being played. To avoid boredom and maintain player motivation, the program in this study was designed with a more diverse and non-monotonous variety of ball training exercises.

The integrated application of these two types of training not only allows athletes to master basic dribbling techniques but also to better understand game situations on the field. This is evident in the significant improvement in scores after the treatment. In other words, the combination of continuous training—ladder drills, which emphasize speed and coordination, and ball feel, which focuses on ball control and possession—has been proven to optimally improve athletes' dribbling skills.

In this study, treatment was administered 13 times using the circuit training method. The researchers created three different training programs to maximize the range of movements and prevent athletes from becoming bored or tired each time the treatment was administered, as each session used a different program. The athletes demonstrated high enthusiasm, extraordinary passion, and a commitment to following every instruction. This positive attitude directly impacted their performance in training and competitions.

CONCLUSION

This study aimed to analyze the effect impact of a combination of ladder drills and ball feel on the dribbling ability of futsal athletes. The results of this study indicate that the combination of ladder drills and ball feel has a effectively enhances impact on improving the dribbling ability of futsal athletes. Based on these results, it is recommended that futsal coaches and athletes interpret this combination of exercises into a routine training program, hopefully, the players' dribbling ability can be further developed so that players can be more proficient and confident on the field.

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