

**The Effect Of Zig-Zag Run And Shuttle Run Exercises On Dribbling Skills In  
Futsal Games At Senior High School 3 Palopo****Supriadi<sup>1</sup>, Irsan Kahar<sup>2</sup>, Syahrir<sup>3</sup>, Andi Alif Tunru<sup>4</sup>**

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**Keywords:**

Zig-Zag Run ; Shuttle Run; Futsal Game; Ball Dribbling.

**Abstract**

The purpose of this study is to examine the effect of Zig-Zag Run and Shuttle Run exercises on dribbling skills in the futsal game at senior high school 3 Palopo. Experimental research is a research conducted to ensure a causal relationship between variables. This research approach is a type of quantitative research that uses secondary data. The population in this study is all futsal athletes at senior high school 3 palopo. The sample is the extracurricular futsal of senior high school 3 palopo as the object studied. The sampling technique used random sampling, which was carried out randomly, Thus the sample in this study is the extracurricular futsal of senior high school 3 palopo totalling 16 students. The sample was divided into two groups by ordinary matched pairing so that the sample is homogeneous. Data processing uses SPSS Version 21 software, multiple linear regression models were used to analyze the data. (1) Zig-Zag Run practice has an effect on dribbling skills in futsal games; (2) Shuttle Run affects dribbling skills in futsal games The results of the study also concluded that both zig-zag and shuttle run exercises were significantly different. The zig-zag exercise is more effective in increasing agility than the shuttle run exercise.

**How to Cite**

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## INTRODUCTION

Today's modern era reminds people about the importance of sports (Wigunawangsa et al., 2022). Sport is an activity to train a person's physical and spiritual fitness, which is also one of the routine needs in daily or weekly activities, so that human health is always maintained in optimal conditions, especially for a person's physique. , by exercising regularly it can keep our body fit, for example simple exercise, we can do exercise every day in 15 minutes once that can be done by running in the morning, and will not feel sore if we do physical activity every day or every week, and not feeling weak easily and always optimal in carrying out daily activities.

Sport is an activity that is needed by the body that can be done anywhere and anytime, but it would be better if sports activities were carried out by utilizing the appropriate and readily available facilities.(Al'ahsan & Muldan, 2021). In an effort to improve sports performance, especially in the sport of futsal, each individual has chosen sport as his profession. Must try as hard as possible to solve problems that are obstacles to the realization of the development and improvement of sports achievements(Friday, 2020). The lack of open fields is what lies behind futsal as an alternative to channeling hobbies to exercise. Sport is a culture of physical activity carried out by humans which is carried out by muscles and controlled by the humans themselves(Rahman et al., 2021). Sport is an aspect of activity that must be developed in efforts to build the nation, so that sport is expected to become a necessity of life for all Indonesians, this means that the opportunity for people to excel in sports is also very open and knows no class, especially for young people (Bagustiadi, 2013).

Sport is an activity that involves physical body and also gives the nature of the game to the nature of wanting to try and compete with others (Son, 2022). Futsal is a relatively complex sport that requires all body movements to support the game. All people can play futsal in places that are easy to reach or can be found other than certain places, even with small field conditions. Futsal also doesn't need a long time period compared to soccer games (Prasetyo & Rohman, 2019). Futsal games can be played on a narrower area and with more flexible time because futsal games can be played indoors. If the body is in good health, it will be able to carry out optimal activities. Therefore sport is one of the recommended activities in everyday life (Mahanani & Indriarsa, 2021). In recent years the development of this sport of fut-

sal has greatly increased so that it has become the spotlight of many people and has even become a spectacle for connoisseurs directly or through television media.(Rosita et al., 2019). Futsal is a complex sport, this is due to the need for special techniques and tactics so that players are required to have basic futsal technical skills. Futsal is one of the many games that are loved by people in all parts of the world.

There is a special excitement that is felt by those who play this type of big ball sport. Besides being able to create an atmosphere of togetherness between individuals(Adhi et al., 2021). Futsal is a ball game played by two teams, each team consisting of five people with the aim of putting the ball into the opponent's goal, by manipulating the ball and feet.(Sumpena & Amalia, 2018). Futsal is a variation of soccer with a ball that is used smaller and heavier and futsal requires good preparation for physical training in order to achieve maximum performance.(Rismawati et al., 2018). Futsal is a sports activity involving the ball as a playing medium (Bagustiadi, 2013). Futsal is one of the sports games that are very popular with the public besides football. Futsal games can be categorized as recreational sports and achievement sports (Hartanto & Purnama, 2018). Futsal is a ball game played by two teams, each consisting of five people (Hidayat & Riswanto, 2021). Futsal games can be played on a narrower area and with more flexible time because futsal games can be played indoors. If the body is in good health, it will be able to carry out optimal activities. In recent years the development of this sport of futsal has greatly increased so that it has become the spotlight of many people and has even become a spectacle for connoisseurs directly or through television media.(Rosita et al., 2019).

In the game of futsal players are required to have good physical condition. The condition of a player's body greatly influences his ability to complete his training program(Imron & Wimanadi, 2022)as well as exercises that are carried out systematically and continuously. Through physical exercise, the athlete's physical fitness will increase so that it can support the achievement of optimal performance(Nur et al., 2017). A player does not have good physical condition, so it will be difficult for the player to perform basic futsal technique movements (Litardiansyah & Hariyanto, 2022). Besides that, a player in doing futsal sports activities will require a lot of energy in this case it will make the body tire quickly. The physical conditions needed by futsal players are strength, endurance, muscle power, speed and flexibility.(Setiawan et al., 2014). Athletes in achie-

ving sports achievements are influenced by several factors such as physical condition, technique, tactics and mentality. There are several determining factors for the achievement of an athlete, namely physical condition, skill and technique and environment (Jud et al., 2022).

It is necessary to know before playing futsal, players must warm up first, where the purpose of the warm-up itself is to reduce the risk of injury while playing, besides warming up players must also train their foot agility to prepare themselves for matches and to perform dribbling skills. A good and perfect ball in futsal games requires good and proper training, namely using the zig-zag run and shuttle run training methods. Agility is the ability of an athlete to overcome resistance with a high speed of contraction (Wora, 2017). Zig-zag running is an agility exercise that involves the use of stakes and stakes (Hidayat et al., 2021). Zig zag run is used to indicate a short distance running sport at a point that is the target, quickly changing direction to another point (Malasari, 2019).

The zig-zag run method is a high-intensity exercise, namely by running across obstacles or obstacles with the concept of turning left and right. To achieve maximum agility in futsal games, it is necessary to carry out physical exercises such as the zig-zag run method regularly. One of the basic training to improve futsal players, especially to improve dribbling skills using the zig-zag run method. The shuttle run exercise aims to change the direction of straight body motion and measure agility. The shape of the shuttle run is to run as fast as possible, starting from one point to another, covering a certain distance. The elements of motion in the shuttle run exercise are running by changing the direction and position of the body, speed, balance are components of agility so that this exercise can be used to increase agility (Wora, 2017).

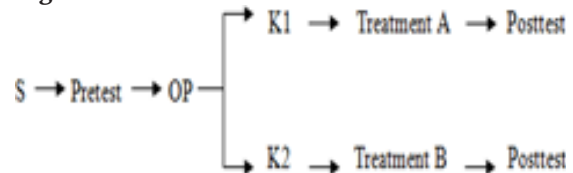
Skills in dribbling are needed to master the game and initiate the team in carrying out attacks (Festist, 2020). The skill of dribbling is basically dribbling the ball with the feet. Many soccer and futsal players have good dribbling skills and it is much easier to get past opponents. Based on the researcher's direct observation of the players who took part in the Futsal Extracurricular at one of the high schools, senior high school 3 palopo where there were several players who took part in futsal training experienced a decrease in agility. Futsal players feel tired with training methods that do too much warming up so that when the players are playing they experience a decrease in agility when dribbling the ball.

Previous researchers (Arwandi, John, 2018), based on the results of the research, it shows that the application of zig-zag run exercises and shuttle run exercises can improve dribbling skills, where zig-zag run exercises show better results in improving dribbling skills. Then according to (Hidayat et al., 2021), indicating that there is a significant effect of shuttle run training with  $t \text{ count} = 20,904 > t \text{ table} = 1,812$  and  $p \text{ value} = 0.000 < 0.05$ . Zig-zag run exercise with  $t \text{ count} = 26,826 > t \text{ table} = 1,812$  and  $p \text{ value} = 0.000 < 0.05$ . The difference in the effect of the shuttle run exercise with an average value of 17.55 and the zig-zag run exercise is 15.61 and a  $p \text{ value} = 0.000 < 0.05$ . The zig-zag run exercise is more effective in improving dribbling skills. Meanwhile according to (Udam, 2017), there is an effect of using the Shuttle-run and zig zag run training methods on students' dribbling abilities. Exercise with the Zig-zag method is more effective in improving students' dribbling ball skills. This means that the use of the zig zag run method is very effective for improving dribbling skills.

Therefore, based on this background or problem, the researcher is interested in researching or understanding the "The Effect Of Zig-Zag Run And Shuttle Run Exercises On Dribbling Skills In Futsal Games At senior high school 3 Palopo.

## METHODS

Experimental research is a research conducted to ensure a causal relationship between variables. The treatment given to research subjects or objects is one of the main aspects of experimental research (Alvin Kurnain, 2020). The approach used in this research is a quantitative approach (Pinkkan Ektyara, 2022). The purpose of this study was to reveal the effect of zig zag run and shuttle run exercises on dribbling skills. With the design of the research design as follows **Figure 1.**



**Figure 1.** Research Design

Before the treatment (treatment) was carried out, a pretest was given to dribbling skills to obtain initial data. Then given treatment for the zig zag run and shuttle run training groups for 12 meetings according to the details 3 times a week.

Held in the field senior high school 3 palopo city. Final test (posttest) to reveal the effect after being given treatment. The pretest and posttest were carried out in the outdoor field of senior high school 3 palopo city.

The population in this study is all futsal athletes at senior high school 3 palopo. The sample is the extracurricular futsal senior high school 3 palopo city as the object studied. The sampling technique used random sampling, which was carried out randomly, so the sample in this study is the extracurricular futsal of senior high school 3 palopo totalling 16 students. The sample is divided into two groups by ordinary matched pairing so that the sample is homogeneous.

The data collection technique in this study is a ball dribbling skill test. To obtain the data, tests and measurements were carried out on all samples with a dribbling test. With the aim of being able to know dribbling skills by rapid changes. The research data were analyzed using the requirements test, the normality test and homogeneity test according to the significance level  $\alpha = 0.05$ . Then analyzed using the t-test.

## RESULTS AND DISCUSSION

The descriptive analysis of the data is in accordance with the general description of the pretest and posttest research data on dribbling skills. Descriptive analysis includes mean, range, minimum and maximum.

**Table 1.** The results of the pretest and posttest descriptive analysis of dribbling skills

Variable	N	Range	Min	Max	Means
Pretest Shuttle run	8	1,12	16.04	17,16	16,61
Posttest Shuttle run	8	1.90	14.58	16,48	15.53
Pretest zig-zag run	8	4,40	18,17	22.57	21.07
Posttest zig-zag run	8	4,40	16,17	20.57	19.07

The results **Table 1** of the descriptive analysis show that the pretest value of the shuttle run with sample (N) is 8 it is known that the average value is 16.61, the range is 1.12, the minimum value is 16.05 and the maximum value is 17.16. The posttest shuttle run value with sample (N) 8 is known to have an average value of 15.53, a range of 1.90, a minimum value of 14.58 and a maximum value of 16.48. While the value of the pretest zigzag run with sample (N) 8 is known to

have an average value of 21.07, a range of 4.40, a minimum value of 18.17 and a maximum value of 22.57. The zig-zag run posttest value with sample (N) 8 is known to have an average value of 19.07, a range of 4.40, a minimum value of 16.17 and a maximum value of 20.57.

The results of the normality test, the significance value is known the pretest shuttle run was  $0.035 > 0.05$  and the posttest shuttle run was  $0.959 > 0.05$ . While the significance value of the pretest zig-zag run is  $0.198 > 0.05$  and the posttest zig-zag run is  $0.198 > 0.05$ . The conclusion is that the data is normally distributed.

The results of the data homogeneity test, the skill to dribble the lavane test was 4,398 with a significant value of 0,055. the conclusion that the data is homogeneous.

The t count is greater than the t table, so it can be concluded that there is a significant difference in the results of dribbling skills between before and after the experiment is carried out.

### Dribbling Skills Through Shuttle Run Practice

Ability to dribble through the Shuttle Run Exercise Based on the results of the analysis, it appears that the t test on dribbling skills in the Futsal Game at SMA 3 Palopo using the Shuttle-run training method has a t count of 8.120 and a t table value with  $df = 7$  at a significance level of 5% of 1,895. The value of t count  $>$  t table, and the Probability (P) value of 0.000 ( $< 0.05$ ), it can be concluded that  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is an effect of training using the Shuttle-run training method in improving dribbling skills in Futsal Games at SMA 3 Palopo. The purpose of the Shuttle Run is to practice changing the body's motion in a straight direction.

Agility training with the shuttle run method which is done by running and covering short distances. So that when practicing futsal, players don't have a stable speed in covering the distance for each repetition in one set. The form of shuttle run training also causes boredom in the players and in shuttle run training there are no obstacles in front of the players, there is only a barrier between the distances that will be traversed or traveled. In the real game, dribbling the ball does not only lead in one direction, it also functions as a distraction for opponents that will block our rate of dribbling. In shuttle run practice, players are only used to aiming in one direction so that the possibility of controlling the ball when changing to another direction will experience a few obstacles, be it the risk of losing the ball or other things. In accordance with the theory according

to(Wora, 2017)who said that the elements of motion in the shuttle run exercise, namely running by changing the direction and position of the body, speed, balance are components of agility so that this exercise can be used to increase agility.

### **Dribbling Skills Through Zig-Zag Run Practice**

Ability to dribble through Zig-Zag Run Exercise Based on the results of the analysis, it can be seen that the t test on dribbling skills in the Futsal Game at SMA 3 Palopo using the Zig-Zag Run training method has a tcount of 16.627 and a ttable value with  $df = 7$  at level 5% significance of 1,895. The value of tcount > ttable, and the Probability (P) value of 0.000 (<0.05), it can be concluded that  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is an effect of training using the Zig-Zag Run training method in improving dribbling skills in games Futsal senior high school 3 Palopo City Students.

The form of zig-zag training is very supportive in playing futsal to develop individual skill abilities. This can be proven by the form of zig-zag training activities which are widely applied in futsal games, for example turning, twisting and turning movements so that it makes it easier for players who dribble to control the ball from the opponent's obstacles. Agility is needed by every player in the game of futsal to deal with situations and conditions on the field both when controlling the ball or when defending, it also minimizes collisions between players which can result in the risk of injury.

In a match, fast and explosive movements are often needed in playing futsal, for example: dodging movements, changing direction, jogging and so on. Students of senior high school 3 Palopo really like this form of zig-zag exercise when they take part in the zig-zag exercise because the zig-zag exercise varies and can reduce boredom in students while practicing. In addition, Students can also make variations when doing dribbling exercises through the obstacles that have been provided by the researchers, either by circling the ball or by using other styles so that the imagination of the trainees develops even more when facing real opponent obstacles. . In accordance with the theory according to(Hidayat et al., 2021) who say that zig-zag running is an agility exercise involving the use of stakes and stakes. Zig zag run is used to indicate a short distance running sport at a point that is the target, quickly changing direction to another point(Malasari, 2019).

The results of the study also concluded that both zig-zag and shuttle run exercises were significantly different. The zig-zag exercise is

more effective in increasing agility than the shuttle run exercise. The results of this study are in accordance with the researchearlier (Arwandi, John, 2018), based on the results of his research, it shows that the application of zig-zag run exercises and shuttle run exercises can improve dribbling skills, where zig-zag run exercises show better results in improving dribbling skills. Then according (Hidayat et al., 2021), indicating that there is a significant effect of shuttle run training with  $t \text{ count} = 20,904 > t \text{ table} = 1,812$  and  $p \text{ value} = 0.000 < 0.05$ . Zig-zag run exercise with  $t \text{ count} = 26,826 > t \text{ table} = 1,812$  and  $p \text{ value} 0.000 < 0.05$ . The difference in the effect of the shuttle run exercise with an average value of 17.55 and the zig-zag run exercise is 15.61 and a  $p \text{ value of } 0.000 < 0.05$ . The zig-zag run exercise is more effective in improving dribbling skills. Meanwhile according to(Udam, 2017),there is an effect of using the Shuttle-run and zig zag run training methods on students' dribbling abilities. Exercise with the Zig-zag method is more effective in improving students' dribbling ball skills. This means that the use of the zig zag run method is very effective for improving dribbling skills.

### **CONCLUSION**

From the results of the above research it can be concluded that(1) Zig-Zag Run exercise has an effect on dribbling skills in futsal games; (2) Shuttle Run affects dribbling skills in futsal games; (3) Zig-Zag Run and Shuttle Run exercises affect dribbling skills in futsal games. The results of this study are supported by the results of previous studies.

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