



THE EFFECT OF CIRCUIT TRAINING ON THE DRIBBLE ABILITY OF BASKETBALL KOP STUDENTS OF PGRI UNIVERSITY PALEMBANG

Surya Tair Nugraha¹, Bukman Lian², Bayu Iswana³

1,2,3University of PGRI Palembang

Corresponding Author E-mail: Suryatairnugraha@gmail.com**Abstrak**

Penelitian ini bertujuan untuk mengetahui pengaruh latihan *circuit training* terhadap kemampuan *dribble* Mahasiswa KOP Bola Basket Universitas PGRI Palembang. Metode penelitian ini menggunakan metode Eksperimen *One group pre-test – post-test design*. Populasi dalam penelitian ini berjumlah 30 mahasiswa dan sampel pada penelitian ini 20 mahasiswa putra KOP Bola Basket Universitas PGRI Palembang. Hasil penelitian ini adalah 1). Menggunakan Uji Normalitas dengan nilai signifikan *pretest* $0,301 > 0,05$ dan *posttest* $0,110 > 0,05$ yang berarti berdistribusi normal. 2). Menggunakan Uji t, berdasarkan hasil perhitungan bahwa $t_{hitung} 35,418 > t_{tabel} 2,101$. Maka dapat disimpulkan bahwa, terdapat Pengaruh yang signifikan dari latihan *Circuit Training* terhadap kemampuan *dribble* Mahasiswa KOP Bola Basket Universitas PGRI Palembang.

Kata Kunci: *Latihan Circuit Training, Kemampuan Dribble, Bola Basket.***Abstract**

This study aims to determine the effect of *circuit training* on the *dribble ability* of Basketball KOP Students of PGRI Palembang University. This research method uses the *One group pre-test – post-test design* experiment method. The population in this study is 30 students and the sample in this study is 20 male students of the Basketball KOP of PGRI Palembang University. The results of this study are 1). Using the Normality Test with a significant *pretest* value of $0.301 > 0.05$ and *posttest* $0.110 > 0.05$ which means it is normally distributed. 2). Using the t-test, based on the results of the calculation that $35.418 > 2.101$. So it can be concluded that there is a significant influence of $t_{hitung} > t_{tabel}$ *Circuit Training* on the *dribble ability* of Basketball KOP Students of PGRI Palembang University.

Keywords: *Circuit Training Exercise, Dribble Ability, Basketball.*

ARTICLE INFO

		PAGE NUMBER
Submitted	: 04-06-2025	(71-78)
Rvised	: 21-06-2025	
Accepted	: 17-07-2025	
DOI	:	

INTRODUCTION

Indonesia is one of many countries that are actively building various



sectors, including sports. The purpose of this development is to improve the quality of life of the community. People who are talented, capable, intelligent, and virtuous, athletic and physically and mentally healthy people, seek to increase empathy resources, the goal of national sports is to maintain and improve health and fitness, achievement, human qualities, moral values and noble morals, discipline, and sports, and to strengthen and appreciate sports. Unity and unity of the nation, increasing the patience of the nation, and the morality and self-esteem of the nation (1).

In an exercise program that aims to improve physical ability, physical formation is the most important component. It requires planned, regular, and programmed exercise to create and improve physical conditions permanently, effectively, and efficiently (2). *Circuit training*, intervals, *fartlek*, and others are some of the training methods that can be used to improve the physical condition of a person's endurance. The factors that affect exercise are volume, intensity, frequency, and rest time.

Circuit training is a type of fitness exercise in which a player or athlete performs exercises at a variety of specific locations to improve strength, flexibility, and cardiovascular health in a single session (3). *Circuit training* is very beneficial for coaches to train players' skills simultaneously or synchronously in a short period of time (4). In addition, *circuit training* also has advantages in terms of time efficiency, as it combines various exercises into a single training session. This is perfect for students who have a busy schedule and have little time to practice.

Based on the researcher's initial observations in this case, the problem occurred during the *sparring* between the Indonesian Railway (KAI) team and the PGRI Palembang University Basketball KOP team on October 24, 2024 at the Wisma Diponegoro field on Jl. Diponegoro No.10-12, Talang Semut, Bukit Kecil District, Palembang City, South Sumatra. The problem is that the *dribbling ability* of each individual player in the basketball game is still low, it can be seen that during the practice match, there are a lot of *turnovers* that occur due to the lack of dribble *ability to the ball, thus limiting the team's style of play and forcing the players to play with the same pattern by increasing passing* and reduce ball control that can result in *turnovers* occurring. Therefore, this study aims to apply *the circuit training* method because the *dribbling ability* possessed by the Basketball KOP team at PGRI University Palembang is included in the low category judging from the *sparring* which will be held on October 24, 2024. Based on these problems, the author is interested in conducting a research with the title "The Effect of *Circuit Training* Exercises on the *Dribble Ability* of Basketball KOP Students at PGRI Palembang University".

According to (5) that what is meant by "*circuit*" exercises are several posts in an area and must be completed within the time limit where each participant must complete one post before proceeding to the next. According to Maulana's research (6), *circuit training consists* of several items (types) of exercises that are carried out in a certain period of time.

Circuit training is carried out at a predetermined post, at least in one training *circuit* has 6 different posts with different forms of training at each post, *circuit training* is an exercise to improve the physical condition that has been determined (7).

METHOD

This study uses a quantitative research method. Quantitative research is research that uses many numbers in the process of conducting its research, starting from collecting and interpreting data to obtaining results and drawing conclusions. Quantitative research involves the presentation and interpretation of numbers, usually accompanied by photographs, tables, graphs, or other representations (8). Population is a genealogized area consisting of: objects/subjects that have certain quantities and characteristics that are determined by the researcher to be studied and then drawn conclusions (9). The polluter in this study was 30 students of the Basketball KOP of PGRI Palembang University. A sample is a part of the number and characteristics possessed by the population, (10). If the population is large and the researcher is not able to study everything in the population, for example due to limited funds, energy and time, then the researcher can use samples taken from that population. Sampling in the study used *purposive sampling techniques*. *Purposive sampling* technique for determining samples with certain considerations (9). The criteria are as follows:

- Students of the Basketball KOP of PGRI Palembang University are not from other universities.
- Students of the Basketball KOP of PGRI University of Palembang do not include coaches/supervisors and coaches.
- Students of the Basketball KOP of PGRI Palembang University with an age range of between 18-22 years, with the consideration that this age is the productive age of humans.
- Willing to take part in *circuit training* from the initial test (*pre-test*) to the final test (*post-test*).

In this case, the sample taken was only 20 students out of a total population of 30 students, because 10 of the total population did not meet the research criteria. So the number of samples to be studied is 20 Basketball KOP Students of PGRI Palembang University.

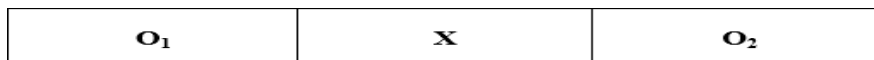


Figure 1. Treatment Plan (9)

Information:

O_1 : Initial Test (pretest) of dribbling *ability*

X : Treatment of *circuit training*

O_2 : Final Test (*posttest*) of dribble *ability*

Activities in data analysis are: grouping data based on variables and types of respondents, tabulating data based on variables from all respondents, presenting data for each variable carefully, performing calculations to answer problem formulations and performing calculations to test the hypothesis that has been proposed (9). This research was conducted with the intention of obtaining an overview of how *circuit training exercises affect basketball dribble skills* in basketball KOP Students of PGRI Palembang University. The data analysis of this study used the normality test with *Shapiro-Wilk* and the hypothesis test using the t-test.

RESEARCH RESULTS

The description of the results of the research on *pretest basketball dribble ability* data on basketball KOP students at PGRI Palembang University can be described as follows:

Table 1. Pretest Data Frequency Distribution

No	Interval Classes	Frequency	percentage
1	5-6	6	30%
2	7-8	5	25%
3	9-10	5	25%
4	11-12	3	15%
5	13-14	1	5%
sum		20	100%

(Source: Researcher Document, 2025)

Based on the table above from 20 samples. It was found that in the interval 5-6 there were 6 students (30%), in the interval 7-8 there were 5 students (25%), in the interval 9-10 there were 5 students (25%), in the interval 11-12 there were 3 students (15%) and in the interval 13-14 there were 1 student (5%). For more details, you can see the following image:

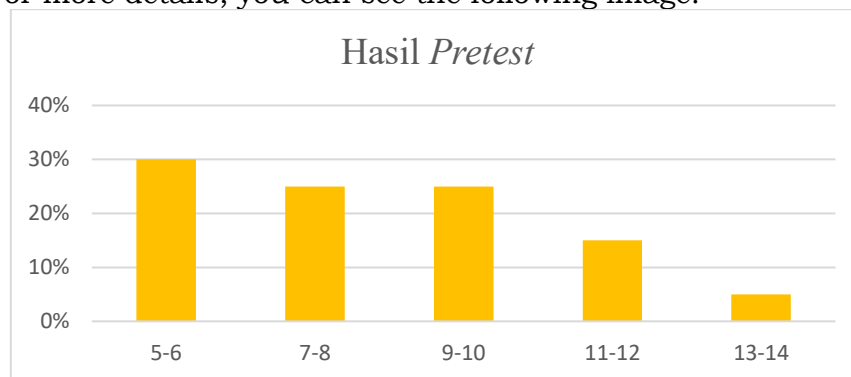


Figure 2. Pretest data result bar chart
(Source: Researcher Document, 2025)

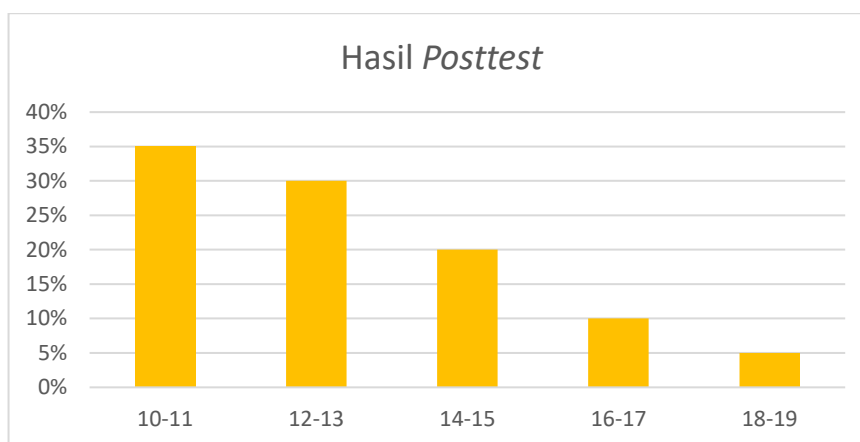
The description of the results of the research on *posttestt basketball dribble ability* data in Basketball KOP Students of PGRI Palembang University can be described as follows:

Table 2. Posttest Data Frequency Distribution

No	Interval Classes	Frequency	percentage
1	10-11	7	35%
2	12-13	6	30%
3	14-15	4	20%
4	16-17	2	10%
5	18-19	1	5%
sum		20	100%

(Source: Researcher Document, 2025)

Based on the table above from 20 samples. It was found that in the interval 10-11 there were 7 students (35%), in the interval 12-13 there were 6 students (30%), in the interval 14-15 there were 4 students (20%), in the interval 16-17 there were 2 students (10%) and in the interval 18-19 there were 1 student (5%). For more details, you can see the following image:

**Figure 3.** Posttest data result bar chart

(Source: Researcher Document, 2025)

The data normality test in this study used the Shapiro-Wilk method. Data analysis of the results of the normality test on each student used SPSS software version 30 with a significance level of 5% or 0.05. The data is said to be normally distributed if $P > 0.05$. The results of the data normality test are presented in the table as follows:

Table 3. Data from normality test results

Data	P	Sig	Information
Pretest	0,301	0,05	Usual
Posttest	0,110	0,05	Usual

(Source: Researcher Document, 2025)

Based on the analysis of statistical data with a normality test using the Shapiro-Wilk method, all pretest and *posttest data were* obtained as a result of the data normality test at a p value of $p > 0.05$ which can then be concluded that the data of *the pretest and posttest results* of the Basketball KOP Students of PGRI Palembang University are distributed normally.

Hypothesis testing was carried out to find out the results of the application of a variety of *circuit training exercises to the dribble ability* of KOP Basketball Students of PGRI University Palembang can be seen in the following table:

Table 4. Pretest and posttest t test results data

Average	<i>T-test Equality Of Mean</i>			
	Df	T_{hitung}	T_{tabel}	Sig
4,650	19	35,418	2,101	0,001

(Source: Researcher Document, 2025)

Based on the calculation of the data above, a score t_{hitung} of 35.418 > 2.101 and $P 0.001 < 0.05$ were obtained. The results show that the average calculation is 4.650 > value and significant is less than 0.05. $t_{hitung} > t_{tabel}$

DISCUSSION

Based on the implementation of research in the field, students of the Basketball KOP of PGRI Palembang University are very enthusiastic about participating in the exercise because of the high interest of students in the sport of basketball, to improve basketball *dribbling skills*, students must follow a series of exercises that have been determined by the researcher. To meet these elements, the researcher chose a *circuit training* exercise consisting of 6 posts, including *Speed dribble, Two-ball dribble, Reactionary dribble, Around the world dribble, Crossover dribble drill* and *between the legs dribble*. Each post has basic technique movements that aim to improve basketball *dribbling skills*. Based on the implementation of *circuit training*, it can increase student enthusiasm and create an active activity environment

because students are very interested in carrying out the movements in each post. It can also be seen that at the end of each training session, the students repeat the exercises that have been given by the coach for 18 treatments carried out 4 times a week. This research is carried out every Monday, Tuesday, Friday and Sunday at 15.00-17.00 WIB. The research site was carried out at the Basketball KOP Field of PGRI University Palembang which is located at Jalan PDAM No. 10, Bukit Lama, Ilir Barat I District, Palembang City, South Sumatra. The sample in this study is KOP Basketball Students of the University of Palembang with a total of 20 male students.

Based on the results of research that has been carried out on students of the Basketball KOP of PGRI University Palembang, the results of the initial test or *pretest* obtained an average score of 8 with the highest score of basketball *dribble* acquisition being 13 and the lowest score of 5, out of 20 samples. It was found that in the interval 5-6 there were 6 students (30%), in the interval 7-8 there were 5 students (25%), in the interval 9-10 there were 5 students (25%), in the interval 11-12 there were 3 students (15%) and in the interval 13-14 there were 1 student (5%). From the results of *the pretest* data, it is known that in intervals 5-6 there are 6 students (30%), from all the data shows that intervals 5-6 have the highest percentage and in intervals 13-14 there are only 1 student (5%) of all data, which means that intervals 13-14 have the lowest percentage.

Meanwhile, in the final test or *posttest*, the average score obtained was 13 after students carried out *circuit training* exercises, students obtained the highest score of 18 and the lowest score was 10 out of 20 samples. It was found that in the interval 10-11 there were 7 students (35%), in the interval 12-13 there were 6 students (30%), in the interval 14-15 there were 4 students (20%), in the interval 16-17 there were 2 students (10%) and in the interval 18-19 there were 1 student (5%). The data from the *posttest* results is known that in the interval 10-11 there are 7 students (35%), from all the data shows that the interval 10-11 has the highest percentage and in the interval 18-19 there is only 1 student from all the data, which means that the interval 18-19 has the lowest percentage.

After the initial test data (*pretest*) and final test (*posttest*) are obtained, a normality test is carried out with the aim of testing whether the bound variables and free variables have normal data or not, one of the methods used in this study is the *shapiro wilk test* with the results of the *pretest* normality test 0.301 and the *posttest* 0.110 with a p level of > 0.05 , then it can be concluded that the data is distributed normally. Furthermore, the hypothesis test obtained $35,418 > 2,101$ which means that H_0 rejected H_a was accepted with a significant value of 0.001. Significant $p < 0.05$ which means that there is a positive influence of $t_{hitung} > t_{tabel}$ *circuit training* on the *dribble* ability of KOP Basketball students at PGRI Palembang University. This is in line with the research of Permatasari & Kartiko (2019) with the results that there was an effect on the experimental group after learning *basketball dribbles* using *the circuit training method*.

Based on the above research, the results of the study on the effect of circuit training exercises on the dribble ability of Basketball KOP Students of PGRI Palembang University, show that the circuit training practice method has an effect on improving dribbling ability in line with the purpose of this study is to find out whether the training method Circuit training affects the improvement of students' dribbling skills. Dribbling basketball is one of the basic techniques of moving the ball from one point to another using the hand as quickly as possible as a form of goal to attack, pass opponents and regulate the tempo of the game. With the treatment given, it is hoped that the students can accept and understand all the treatment that has been given during 18 meetings.

CONCLUSION

Based on the results of the research that has been carried out on basketball KOP students at the University of PGRI Palembang, the average pretest result was 8 and the average post-test was 13, It can be seen from the average results that there is an increase in dribbling ability compared to before being treated and after being treated. In the hypothesis test, a Tcount value of 35.418 was obtained > Ttable 2.101 which means that H_0 was rejected and accepted, it shows that circuit training exercises have a positive impact on improving dribble ability, with a significant value of 0.001 so that it can be concluded that there is a significant influence of circuit training on the dribble ability of KOP students of PGRI Palembang University.

PLAGIARISM STATEMENT

The author states that this article has met the criteria for plagiarism

BIBLIOGRAPHY

- [1] Yoda, I. K. (2020). The role of sports in building superior human resources in the era of the industrial revolution 4.0. *IKA*, 18, 19–19.
- [2] Trecroci, A., Duca, M., Formenti, D., Alberti, G., Laia, M., & Longo, S. (2020). Short-term compound training on physical performance in young soccer players. *Sports*, 8(8), 1. <https://doi.org/10.3390/sports8080108>
- [3] Ramos-Campo, D. J., Caravaca, L. A., Martínez-Rodríguez, A., & Rubio-Arias, J. A. (2021). Effects of resistance circuit-based training on body composition, strength and cardiorespiratory fitness: A systematic review and meta-analysis. *Biology*, 10(5), 1–1. <https://doi.org/10.3390/biology10050377>

- [4] Rahmat, Haluti, A., & Nurhikmah. (2021). The effect of *circuit training exercises* on the passing skills of the diving team of Banggai reGENCY. *Journal of Sport Education*. <http://doi.org/>
- [5] Sukma, A. M. F., & Sulendro, S. (2022). The Effect of *Circuit Training* on Aerobic Endurance of SSB Perkasa Football Players Aged 12-15 Trenggalek. *Journal of Recreational Health Education*, 8(1), 109–118. <https://doi.org/10.5281/zenodo.5824947>
- [6] Maulana, R. (2022). The Effect of *Circuit Training* on Physical Fitness Improvement (Experimental Study on Extracurricular Football Participants of SMP Negeri 1 Sukaraja). Siliwangi University.
- [7] Putri, A. E., Donie, Fardi, A., & Yenes, R. (2020). The *circuit training method* in increasing the explosive power of the leg muscles and the explosiveness of the arm muscles for basketball athletes. *Patriot Journal*, 2(3), 680–683.
- [8] Machali, I. (2021). Quantitative research methods (A. Q. Habib, Ed.; 3rd ed.). Faculty of Tarbiyah and Teacher Training, State Islamic University (UIN) Sunan Kalijaga Yogyakarta.
- [9] Sugiyono. (2021). Educational Research Methods (Quantitative, Qualitative, Combination, R&D and Educational Research). ALPHABET, cv.