

# ANALYSIS OF FOREARMS PASSING BASIC MOVEMENTS IN VOLLEYBALL BY USING RESISTANCE BAND TOOLS

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Journal info

## Jurnal Pendidikan Glasser

p-ISSN : 2579-5082

e-ISSN : 2598-2818

DOI : [10.32529/glasser.v7i2.2414](https://doi.org/10.32529/glasser.v7i2.2414)

Volume : 7

Nomor : 2

Month : 2023

**Keywords:** *The forearms passing movement, resistance band*

## Abstract.

Passing down is very important to earn points, passing movement is done when receiving services and smashes from the enemy, passing that is not effective can result in defeat the team team. The purpose of this research is to improve the basic movement of passing under the volleyball game. This study used a quantitative method experimentally with a one-group pre test and post test design. In conclusion, the average results of the analysis of the downward passing motion using the resistance band tools, the pretest results get an average value of 16.75 and the posttest results get an average value of 26.33. The average value of the posttest is higher than the average value of the pretest, meaning that there is a contribution by the resistance band tool to the basic movement of passing down.



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## A. INTRODUCTION

Sport is a systematic activity to foster and develop physical, spiritual and social potential(Linggau, n.d.). Psychomotor development is obtained from volleyball movements which require physical strength, cognitive development is obtained from the tactics used in order to win, and affective development is obtained from the ability to control selfish traits in order to prioritize cooperation in the team.(Yusmar, 2017). One of the goals of sports coaching is achievement, the growth and development of sports achievements in a province starts with club coaching and district coaching which is carried out continuously in advancing sports achievements, the potential that exists in the regions and districts must be well developed so

that the game of volleyball is increasingly increasing in every circle(Kko et al., 2017). The supporting factors for achieving maximum sports achievement are the coaching and development of the sport itself(Irmansyah et al., 2017). This study will discuss the analysis of the basic movement of passing down, meaning that it is a sport that is carried out as part of a regular and continuous implementation process to gain knowledge, abilities and physical fitness.(Astuti, 2017).

Volleyball is a sport that is played by passing the ball over the net, with the intent and purpose of the ball dropping into the opponent's field and looking for victory in playing.(Hanggara et al., 2018). Volleyball is a game played by two team teams, each team consisting of six people and assisted by

reserves(Pranopic, 2017). The basic movement skills needed in this volleyball game is forearms passing(Suaidah et al., 2020). Volleyball game contains elements of strength, speed, flexibility(Asnaldi, 2020).

*Forearms passing* is very important to generate points, the movement of forearms passing is done when receiving services and smashes from the opposite team, ineffective passing can result in defeat on the team(Saputra & Gusniar, 2019). The elements contained in performing forearms passing in volleyball include: foot stance, parallel hands, encouragement, feet and hands moving simultaneously(Syaleh, 2017). One of the effective efforts to withstand attacks is to use forearms passing, a problem that often occurs in volleyball games is the lack of students' ability to perform forearms passing.

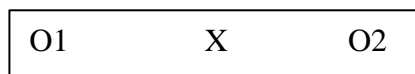
Based on the observation's result made on students of the Muhammadiyah University of Palopo in class A1 third semester of the volleyball learning subject for the basic movement of forearms passing from observations there is still a lack of mastery of the basic movements in volleyball games, especially in the basic movements of forearms passing, when carrying out practical processes in the field there are still many mistakes made by students. Based on the background above, the researcher conducted research with the title "Analysis of forearms passing basic movement in volleyball by using the Resistance Band tool".

*Resistance Band* is a sports tool used to train arm strength which is elastic and made of

rubber of varying lengths, this rubber is fitted with a handle at each end of a rope made of foam or plastic(Sinta et al., 2022). This resistance band is an efficient fitness sport tool when practicing volleyball especially forearms passing(Naufal, 2019). Resistance band is also a tool that will help the basic movement of forearms passing in volleyball to make it more effective. The purpose of this study is to improve the learning outcomes of the basic motions of playing volleyball for UM Palopo's students(Suasa, 2021).

## B. RESEARCH METHOD

The method used in this study is a quantitative research method using an experimental approach. The data analysis used is a one-group pretest-posttest design, a pre-test was conducted to determine initial abilities, then be given treatment in the form of resistance band exercises, a post-test was carried out to measure final abilities(Sugiyono, 2018; 110). Using a pretest and posttest design has the advantage of knowing the contribution of the results of the treatment given. The population in this study are UM Palopo's students with a total sample of 12 students. The instrument used in this study was the forearms passing test with 60 seconds as a measuring tool.



Source:(Sugiyono, 2018:111).

O1 = pretest value before being given treatment

X = resistance band exercise

O2 = posttest value after being given treatment

The data analysis technique in this study uses the following formula.

a. Data description. The formula that was used in processing the data is as follows. Mean or arithmetic average is the number obtained by dividing the total values by the number of individuals. The mean is used to find the average of test results data conducted by UM Palopo's students. The statistical test in this study is included in parametric statistics. Parametric statistics are statistical tests that require certain conditional tests, while the conditional tests in this study are as follows:

a. Normality test

Testing the normality of data in research in order to be analyzed further. This test is carried out depending on the variables to be processed. Data normality test using Kolmogorov Smirnov with the help of SPSS 25

b. Hypothesis testing

Hypothesis testing uses the t-test with the help of SPSS 25, by comparing the mean. If the calculated t value is less than t table, then Ha is rejected, if t count is greater than t table then Ha is accepted. Test the research hypothesis using SPSS 25.

c. Homogeneity test

The test uses the SPSS25 program, which is an application for analyzing data, with homogeneous test criteria, if the significance is below 0.05 it means that the data being tested is not homogeneous

and vice versa if the significance is above 0.05 it means the data being tested is homogeneous.

### C. RESULTS AND DISCUSSION

The results of the pretest and posttest research on the basic movement of forearms passing in volleyball using the resistance band training method are as follows:

**Table 1. Statistical descriptive analysis of the movement of forearms passing.**

Statistics	Pretest	posttest
N	12	12
Means	16.75	26,33
SD	1,545	1,557
Minimum	15	23
Maximum	19	28

The data from the table above is the data on test results and measurements of forearms passing before and after being given treatment. It is known that the lowest (minimum) pretest value = 15, the highest (maximum) value = 19, average (mean) = 16.75 standard deviation value (std. Devianton) = 1.545, while the lowest posttest value (minimum) = 23 , highest value (maximum) = 28, average (mean) = 26.33 standard deviation value (std. Devianton) = 1.557. the difference from the mean value indicates that there is an increase in the forarms passing motion after being given treatment.

**Table 2. Normality test of forearms passing motion analysis.**

Statistics	Pretest	Posttest
N	12	12
Kolmogorov Simirnov	186	191
Significance	,200	,200
A	0.05	0.05
Information	Normal	Normal

Table 2. The above shows that the results of the data normality test obtained from the dependent variable passing under normal distribution pretest obtained a Kolmogorov Smirnov (KS) value of .186 with a significance value of  $0.200 > 0.05$  and the posttest obtained a Kolmogorov Smirnov (KS) value of, 191 with a significance value of  $0.200 > 0.05$ . So it can be concluded that the data is normally distributed.

**Table 3. Homogeneity test** forearms passing motion analysis.

Test of Homogeneity					
		Levene Statistics	Df 1	df 2	Sig.
posttest	Based on Means	2,872	3	8	,104
	Based on Median	,792	3	8	,532
	Based on Median and with adjusted df	,792	3	4,923	,549
	Based on trimmed mean	2,672	3	8	,118

Based on the table above, it can be seen that the results of the forearms passing motion with a statistical level value of 2.872, and a significance value of  $104 > 0.05$ , it can be seen that the data is homogeneous. So it can be concluded that testing the forearms passing motion using resistance band exercises has the same or homogeneous variance.

**Table 4. T test** of forearms passing motion analysis.

Statistics	Pretest- posttest
Means	-9.58333
std. Deviation	,99620
std. Error Means	,28758
Lower	-10.21629
Upper	-8.95037
Q	-33,324
Df	11
Sig (2-tailed)	,000

Based on the data in the table above, it can be seen that the probability number of sig is  $0.000 < 0.05$ . Which means that  $H_0$  is rejected. Thus it can be concluded that there is a significant influence on resistance band training on the basic movement analysis of passing down. From the results of research, analysis, and data studies that have been done before, it can be seen that the average value of resistance band exercises is 16.75 for the pre-test and 26.33 for the post-test.

Referring to these results, it can be stated that there is an increase from the results of the pre-test to the post-test. There is a significant effect on passing under the results of the paired sample t-test.

This study aims to find out about the analysis of the basic movement of passing down. Judging from the students' initial ability to pass under the average student's ability was 16.75 before being given treatment, whereas after being given treatment, namely resistance band exercises, the final test of ability to pass under the average was 26.3. Resistance band is a type of exercise that utilizes rubber band students as a muscle propulsion to generate power in the legs(enlinopita & stiana, 2021). Resistance bands are exercises that use rubber media to increase muscle strength. Resistance band is a sports tool that is made of rubber and is easy to carry anywhere(Practice et al., 2021).

Learning aids are tools used by teachers in learning and preventing verbalism in students. The use of media or tools is very necessary in learning in today's modern era. (Honest Umami Kaltsum, 2017).

As where the principles of practice should increase and vary. To find out the meaning of the contribution of the use of the resistance band tool for the basic movement of forearms passing volleyball in class A1 students in semester 3 of volleyball, the researcher used the gain score on the pretest and posttest for the basic movement of forearms passing volleyball, obtained an average gain score of 26.33 at a high level in the process exercise using a resistance band.

#### D. CONCLUSION

The average results of the analysis of the forearms passing motion using the resistance band tool, the pretest results get an average value of 16.75 and the posttest results get an average value of 26.33. The average value of the posttest is higher than the average value of the pretest, meaning that there is a contribution by the resistance band tool to the basic movement of forearms passing.

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