

ABSTRACT

LIA NATA. 2025. *The Effect of Plyometric Training on Increasing Arm Muscle Power and Its Implications for the Smash Ability of Extracurricular Volleyball Athletes at SMAN 1 Cikatomas*. Department of Physical Education, Faculty of Teacher Training and Education, Siliwangi University, Tasikmalaya."

This study aimed to examine the effect of plyometric training on the smash ability of volleyball athletes in the extracurricular program at SMAN 1 Cikatomas. The research used a quantitative method with an experimental approach and applied a one group pretest–posttest design. The population consisted of 28 volleyball athletes, and all participants were selected as the sample using total sampling. The research instruments were the Arm Muscle Power test and the smash test which were carried out before and after implementing a structured plyometric training program. The data were analyzed using statistical methods to compare the results before and after the treatment. The findings showed that the average pretest score of smash ability was 101.25, which increased to 109.12 in the posttest. The normality test using the Liliefors method indicated that the pretest data had an L value of 0.092, which was lower than the L table value of 0.161, while the posttest data had an L value of 0.106, which was also lower than the L table value of 0.161. These results indicate that both data sets were normally distributed. The homogeneity test showed that the F value was 1.05, which was lower than the F table value of 4.32, meaning that the data were homogeneous. Furthermore, the hypothesis testing using the t-test obtained a t value of 15, which was higher than the t table value of 1.706 at the 0.05 significance level. Based on these results, it can be concluded that plyometric training has a significant effect on increasing arm muscle power and this has implications for the smash ability of volleyball athletes.

Keywords: *arm muscle power, plyometric training, smash, volleyball*