



The Effect of Balance Training on Increasing the Accuracy of Ushiro Mawashi Geri Kicks in Karate

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Abstract

The purpose of this study was to determine whether there was an effect of balance training on increasing the accuracy of the ushiro mawashi geri kick in committee athletes in the karate sport. This study was conducted in an all-experimental method. The subjects of the study were 10 from the Student Activity Unit karate upi athletes. The instrument used was the accuracy of the ushiro mawashi geri kick. Data analysis techniques used (Descriptive static, test of normality and paired sample T-test). Based on the results of the descriptive static analysis, the minimum pretest and posttest values were 5, the maximum value was 10, the average pretest value of 10 athletes was 6.70 and the standard deviation was 1,636. In the posttest there was a minimum value of 7, a maximum value of 10, the average posttest value of 10 athletes was 8.80 and the standard deviation was 1.398. For normality results If the data is normally distributed or the significance value is > 0.05 then the next step is to use the paired sample t-test , the normal pretest kick accuracy is 0.003 and the normal significance value in the posttest is 0.004. The paired sample T-test data given shows a difference in pairs (Pair Differences) of -2.600 and 1.506 with a mean (average) of 0.476, the 95% confidence interval for the difference is -5.461 to 9. The test shows a significant increase with the results (2-tailed) 0.000 ($p < 0.05$). that it can be concluded that balance training can affect the improvement of the accuracy of the ushiro mawashi geri kick.

How to Cite

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INTRODUCTION

Based on the experience of researchers and observers in every karate match, especially in the kumite category, the techniques that are often used are: Athletes, in addition to punching techniques, it turns out that kicking techniques are also widely used by athletes, especially to pursue the highest points, namely ipon (three). In addition to being able to produce large points, attacks produce greater power than punch attacks (Nakayama, 1966, p. 136). The most widely practiced kicks in karate are geri (front kick), mawashi geri (spinning kick), yoko geri (side kick), ushiro geri (back kick), ura mawashi geri (hook kick), ushiro mawashi geri (rear spinning hook kick), mae tobi geri (front kick with a stop), and mawashi tobi geri (front kick with the next), and mawashi tobi geri (spinning kick with). (Alinaghipour, Zareian, and Ardakani 2020)

According to (Fandayani and Sagittarius 2019) technique attack kick ushiro mawashi geri become technique dominant Second And in the make it clear on data Overall with a percentage of 11%. This happens because this kicking movement is more difficult, the body area is difficult to reach, but if an athlete does the Ushiro Mawashi Geri kick quickly and accurately, this kick can also produce many points because of the area it reaches. Ushiro Mawashi Geri is area Which Just the same with Mawashi Geri which is an area that produces three points. The ushiro mawashi geri kick is also one of the technique very important Which must owned And control by Athlete or karateka because this kicking technique can be used to anticipate the opponent's attack. In addition, ushiro mawashi geri is also often used to achieve points and can even forgive circumstances.

Kick ushiro Mawashi geri important in the take note The existence of balance because when kicking the body weight is only supported by one leg, kicking requires good balance if the attack is not done quickly and does not have good balance then the attack kick will be risky in the anticipation by oppose even difficult For to obtain points. (Togatorop and Dewi Endriani 2022) Of course NO only agility only Which must in the train but balance training is also needed to keep the body in balancestay balanced when performing the ushiro mawashi kick .

According to (Sinta, Ilmu, and Vol 2023) Ushiro mawashi geri is a very important technique that must be possessed and mastered by karate athletes because this kicking technique can be used to precede an attack. oppose. Besides that That Ushiro Mawashi geri Also often used

to achieve points and even be able to restore the situation. To achieve an achievement requires an effort, namely training. Training is a process that is carried out repeatedly to improve physical quality and functional abilities according to (Suryani et al. 2022) . But according to (Vidranski, Otkovic, and Tadijanov 2019) Explanation That in the kumite There is desire and objective athlete "A" Just the same with athlete "B" However in front of One Just the same other, if athlete "A" Do technique That before athlete "B" in the phase attack, And Athlete "B" who performs the technique in anticipation of an attack, where he is in a position to counterattack. The athlete's main goal in performing an attack is to realize the technique performed so that the technique hits the target of the attack and earns points.

It is suggested that if properly directed, balance and mobility exercises can improve awareness movement body in the all range movement And development This general can be the basis of sports ability in sports (Clark, Lucett, Corn, 2008). In addition, balance (static and dynamic) along with synchronization play an important role in protecting players from injury and successful tactical performance technically. Therefore, it is important for physiotherapists and coaches For Do Study objective about Characteristics Balance athlete and determine training that targets these characteristics (Yeole & Shah, 2020).

branch sport karate Still Not yet Many in the comprehensive Exercise balance to improve the ushiro mawashi geri kick but many researchers only focus on variations of ushiro mawashi geri technique training. However, observations in the field show that many athletes have difficulty in performing the ushiro mawashi geri kick because it requires good body coordination and balance. And speed body Which Good For Words accuracy ushiro mawashi geri kick. Therefore, balance training is very necessary in karate, especially for kumite athletes.

The aim of this study was to determine whether there was a significant influence of balance training on increasing the accuracy of the ushiro mawashi geri kick. karate sport?

This study has a novelty in specifically examining the effect of balance training on improving the accuracy of ushiro mawashi geri kicks in karate. Although previous studies have discussed the effect of training on kicking ability in karate, studies that specifically highlight the relationship between balance aspects and the accuracy of rotational kicks such as ushiro mawashi geri are still very limited. This study offers a more focused approach by using structured balance training

methods, such as proprioceptive training and single-leg dynamic training, which are adjusted to the characteristics of movement in back rotation kicks.

METHODS

In conducting research, a method, way or strategy is needed that must be carried out by researchers such as steps in solving problems to achieve goals. This is in accordance with the opinion of (Sugiyono 2011). The method used in this study is an experiment because it wants to provide training to kumite athletes in the karate sport to determine the increase in accuracy in ushiro mawashi geri kicks when given treatment and after being given treatment.

The instrument used to collect data is observation through observation using the ushiro mawashi geri kick test result table (Barfield 1998). Recording using kinovea analysis software and paching pad then the ushiro mawashi geri kick test is carried out.

In this study, the researcher used a population of active athletes from the Student Activity Unit. Karate Universitas Pendidikan Indonesia as many as 10 athletes. This population was chosen because athletes from the Universitas Pendidikan Indonesia Karate Student Activity Unit each year number 10 people. month follow championship in level area and also national Where athletes must prepare themselves to take part in the championship. The majority of active athletes from the Universitas Pendidikan Indonesia Karate Student Activity Unit have... own experience Compete Which And Also has a fairly good track record of achievement. This research will be conducted at the Gymnasium Building of the Indonesian Education University.

The importance of choosing a research design that is appropriate to the objectives and research questions. The right design helps researchers collect data efficiently and analyze it with valid and reliable methods. (McCombes, S. 2019). Design Study Which used in the Study This is One group pretest posttest design. This technique is a sampling process by first determining the number of samples carried out based on certain objectives as long as it does not deviate from the characteristics of the sample that have been set (Adolph 2016). In carrying out training, everything must be prepared and designed properly and systematically in order to get maximum results. In addition, the training period that is set is very important and affects whether or not the desired results are achieved. The implementation of this

experiment was set for 12 meetings. This refers to previous research (Iskandar and Rismayadi 2019) where to get results there were 12 training sessions and were carried out 3 times in 1 week.

The data collection for this study was 10 kicking trials, then from the 10 trials the best results were taken which were calculated using a blank/form to make it easier for researchers to collect data. This assessment scale or graduated scale is raw data obtained in the form of numbers which are then interpreted in a quantitative sense (Sugiyono, 2017)

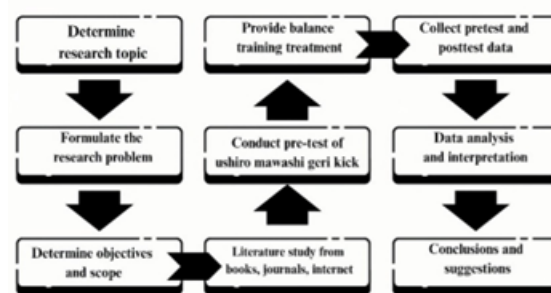


Figure 1. Research procedure (Source : processed by researcher, (Year 2025).

RESULTS AND DISCUSSION

Table 1. Pretest and posttest data results

Initials of Name	kick distance	pretest	posts	difference	percentage difference
TZ	1m	6	9	3	50%
RK	1m	7	10	3	43%
RNF	1m	8	10	2	25%
NAN	1m	5	7	2	40%
SAR	1m	5	7	2	40%
MR	1m	10	10	0	0%
MISSION	1m	6	7	1	17%
SMY	1m	8	10	2	25%
ZS	1m	5	8	3	60%
ML	1m	7	10	3	43%

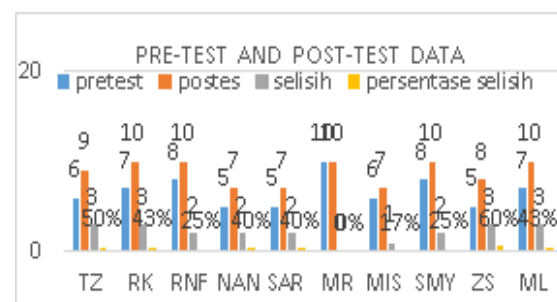


Figure 2. Graph of pretest and posttest data

Based on **Table 1** and **Figure 2**, data was

obtained from the results of the pretest and posttest in the experimental group of 10 athletes with the highest pretest score of 10 and the highest posttest score of 10, the lowest pretest score of 5 and the lowest posttest score of 10. the lowest is 7 and the lowest difference between the pretest and posttest scores is 1 and the highest difference between the pretest and posttest scores is 3.

Table 3. Statistical Description of Pretest and Posttest

	N	Min	Max	Mean	Deviation
pretest	10	5	10	6.7	1,636
posttest	10	7	10	8.8	1,398
Valid N	10				



Figure 3. Ushiro Mawashi Geri's Kick Accuracy (Kinovea software analysis tool)

Based on **Table 3** above from the data obtained when conducting the pretest and posttest, in the pretest there was a minimum value of 5, a maximum value of 10, the average value of the pretest of 10 athletes was 6.70 and a standard deviation of 1.636 in the posttest there was a minimum value of 7, a maximum value of 10, the average value of the posttest of 10 athletes was 8.80 and a standard deviation of 1.398.

From the data above, it can be seen that there is a significant effect of balance training on the speed of the ushiro mawashi geri kick in the sport of karate. After processing the descriptive data, it was continued with a hypothesis search starting with a normality test and a homogeneity test.

Based on the **Figure 3** above, it can be seen that to do the ushiro mawashi geri kick, what needs to be understood is the starting position and body movement. The player must stand with both feet shoulder-width apart and slightly bent forward. By rotating on the non-attacking foot (back foot), the player circles the attacking foot (front foot) back quickly, powerfully, and also maintains body posture so as not to fall. This movement involves dynamic body rotation, where body weight is moved from the front foot to the back foot.

Most technique used by karate athletes matches, especially kumite number, is technique punches and kicks. Attack kicks, like geri, mawashi geri, yoko Geri, Ushiro geri, ura mawashi geri, and ushiro mawashi geri, many practiced and produced more power big than attack blow. Ushiro mawashi geri is technique the second most dominant and can produce points tall. If done with fast and precise. This technique is also important for anticipate attack fight and chase points. However, the technique This need good balance Because body weight is supported by one leg when do kick.

Balance exercises are very important for karate athletes, especially in the kumite branch, to increase accuracy kick Ushiro Mawashi Geri. Balance and mobility exercises can increase awareness movement body and protect player from injury. Although Not yet Lots studied, practiced balance required for karate athlete for increase coordination, balance and speed body they. Characteristics balance athlete must studied in a way objective, and practice must target characteristics.

It is known that the U-21 and Senior karate Student Activity Unit athletes of the Indonesian Education University rely on the Ushiro Mawashi-Geri attack kick technique. This can be seen from the precision numbers of each chapter technique, that the Ushiro Mawashi-Geri kick is the technique that is least used because of its high level of difficulty. In addition to its high level of difficulty, the Ushiro Mawashi-Geri kick is also often used by elite athletes, the Ushiro Mawashi-Geri kick produces more points. This is known from the results of the overall technique preci-

sion recapitulation. Attack kick ushiro mawashi geri become technique dominant Second And in the make it clear on data Overall, with a percentage of 11%, this occurs because this kicking movement is more difficult, because the body area is difficult to reach, however, if an athlete performs the Ushiro Mawashi Geri kick quickly and accurately, this kick can produce a lot of points because of the area it covers. Ushiro Mawashi Geri is area Which Just the same with Mawashi Geri namely producing a three-point area. (Fandayani And Sagittarius 2019) Of the many kicks used and resulting in points, the percentage of kicks that do not result in points tends to be greater with a percentage of 66%. This happens because the kick used is not right in the match situation and is inaccurate or the kick does not hit the area that should result in points. There are a number of factors that affect the inaccuracy of kicks, namely: 1) distance from the opponent, 2) lack of leg muscle strength, 3) lack of leg muscle strength, and 4) lack of body balance in producing techniques and accuracy is not good.

It is necessary to realize the ignorance of the coaches about the need to train the sport they are pursuing, by understanding the science of discipline as a coach to start training with planning. Knowing the need for the sport and the need for the athlete himself will be a great driving force to help athletes achieve success. Because the training program given will be in accordance with what is the need that should be given, by understanding the need for his own sport and the needs of his athletes. So it is very important for a coach to be able to know and understand his own sport as well as his athletes.

CONCLUSION

Based on the results of the study on the effect of balance training on increasing the accuracy of ushiro mawashi geri kicks in the sport of karate , the results showed that there was an increase in the average accuracy score after being given treatment in the form of balance training. The average (mean) pretest value of 6.7 increased to 8.8 in the posttest, with a sample size of 10 karate athletes . This increase shows a positive difference in kick performance, especially in terms of accuracy.

In addition, the minimum score on the pretest was 5 , while on the posttest it increased to 7 , indicating an overall improvement in performance across all subjects. The smaller standard deviation on the posttest (1.398) compared to the pretest (1.636) also indicates that the results after

the treatment became more consistent across individuals.

Thus, it can be concluded that balance training has a significant and positive effect on increasing the accuracy of the ushiro mawashi geri kick . This result answers the purpose of the study, which is to determine whether there is a significant effect of balance training on increasing the accuracy of the kick, with the answer: yes, there is a significant effect . Balance training is recommended as an integral part of a karate kick technique training program, especially to increase the effectiveness of movements that require high body control such as ushiro mawashi geri.

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