Further processed according to journal proceduresThe Effect of Providing Sports Massage on Physical Fitness in Karate Martial Arts Athletes of SMA 2 Praya

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Abstract

Karate is one of the martial arts in Indonesia that is competed internationally. One of the kicking techniques in karate is the mawashi geri kick. In martial arts, the frequency of this kick is very important. This technique, if it hits the target quickly and accurately, will result in 3 points in one mawashi geri kick. This study aims to prove the provision of sport massage for karate athletes in order to improve fitness and accuracy in mawashi geri kicks in karate athletes at Dojo SMAN 2 Praya. Muscle tension is part of the symptoms of Delayed Onset Muscle Soreness (DOMS), and is usually complained of by athletes after 12-24 hours of high-intensity training. Muscle tension can be overcome with various methods, one of which is using the sport massage method to relax muscle tension that occurs in karate athletes at Dojo SMA 2 Praya. This study is experimental with a pre-test and post-test control group design, conducted at SMA 2 Praya. The research subjects were 16 people where the researcher will conduct a test before and after being given a sports massage to determine the extent of the effect of giving sports massage on the physical fitness of karate dojo athletes at Sma 2 Praya. Hypothesis testing was carried out using the t-test (independent samples test). In accordance with the hypothesis testing, if t count> t table then H0 is rejected and Ha is accepted. Likewise, if t count <t table then H0 is accepted and Ha is rejected.

Keywords: Sport Massage1; Physical Fitness 2; Mawashi Geri; Karate Athletes3

INTRODUCTION

Karate is one of the many sports that are competed nationally and internationally, one of the karate martial arts kick techniques is mawashi geri. This kick if it hits the right target will produce 3 points in 1 match determined by the World kaiten Karate Federation, 2015. When doing training, a karate athlete often experiences muscle fatigue caused by training with excessive weights, especially

on the dominant muscles used, namely in the lower extremity muscles or the left and right legs which are often used for kicking. This is because the training movements of karate athletes prioritize solid and balanced horse stance movements to get good punches and kicks. So that the provision of training with excessive loads is given mostly to the lower extremity muscles (Manullang, 2018). Karate is a martial art that uses bare hands with a combination of punches and kicks. Karate is a martial art that involves all parts of the body as punching, kicking, blocking and horse stance techniques, especially in the lower extremities (Fariska, 2019). When doing training, a karate athlete often experiences muscle fatigue caused by training with excessive loads, especially in the dominant muscles used, namely in the lower extremity muscles. This is because the training movements of karate athletes prioritize solid horse stance movements to get good punches and kicks. So that the provision of training with excessive loads is given mostly to the lower extremity muscles (Manullang, 2018). Karate martial arts are physical activities that can maintain health and increase muscle strength in the body. This sport has become a necessity in everyday human life, because with sports it can make humans healthy and strong and besides that this martial art also functions to protect oneself, and this sport is also good both physically and spiritually. In addition, sports can also be used as an achievement. Every competitive sport certainly expects to achieve peak performance (Winarko, 2023). Sports have become an essential need in everyday life, because through physical activity it can improve health and strength, both physically and mentally (Sigit Putra, 2024). In addition, sports have the potential as a means of achieving achievements. An athlete must display a prime physical condition to achieve optimal achievement (Ardiyanto, 2023). Because the success of athletes in achieving optimal achievements is the result of

the talent and hard work they give (Hercules Sianipar, 2024). The efforts made to get a prime body are that an athlete needs training to improve physical and technical abilities. Because doing exercises can provide regular, systematic, and continuous physical stress in such a way that it can improve physical abilities and techniques and improve physical fitness so that the body becomes prime (Imam Haromain, 2024). Handling muscle tension after exercise can be done in various ways, one of which is by using massage therapy. The benefits of massage therapy are to reduce pain which is a symptom of muscle tension (Graha, 2019). There are various massage therapy techniques that are often used by athletes, including sports massage. sports massage functions to stimulate and help the process of relaxing muscles after exercise (Samsudin, 2017).

Sports massage aims to relax and increase the mobility of the deepest muscle tissue, relieve pain and tension, lengthen shortened muscles and increase blood flow to the muscles (Anna Srokowska, 2019). Although both have differences in manipulation and pressure, both have the same benefits, namely reducing muscle tension and reducing pain. Therefore, massage therapy is an effective choice in helping the recovery process after high-intensity training (Subhan, 2018). Massage in various studies is believed to reduce muscle tension and improve blood circulation (Arif Setiawan, 2024). So it can be concluded that routine high-intensity training can cause muscle tension that interferes with the athlete's training program and performance. Therefore, it is important to do proper recovery, one of which is by using massage therapy, so that the goals of the training program can be achieved in order to improve optimal performance. Likewise, the post-exercise recovery method must be applied by the athletes of the Dojo Sma 2 Praya Karate Club. Club karate Dojo Sma 2 Praya is a high-achieving sports club located in Central Lombok which is also a place for beginners from kindergarten to college level to improve their achievements both at national and international levels.

In the Karate Dojo Sma 2 Praya club when athletes have done high intensity training which is to support the physical components that must be possessed by athletes to improve their performance, many of the athletes complain of pain and tension in the muscles obtained after doing the training. This pain and tension in the muscles can be felt by athletes with varying times, namely for 2-3 days which is obtained after doing the training. Therefore, based on observations of researchers in the field, so far there has been no special treatment to carry out the recovery process for athletes. Thus, this study aims to reduce the tension of the Karate Dojo Sma 2 Praya martial arts club after training and after competing.

RESEARCH METHOD

This study uses a pre-experimental design research method with a one-group Pretest-posttest design model. In this study, the subjects of the study were the athletes of the Dojo Sma 2 Praya Karate Club. The sampling of the study used the purposive sampling technique with the following criteria: (1) Karate athletes of the Dojo Sma 2 Praya Club, (2) Actively practicing, (3) Age 14-18 years, (4) Not sick, (5) Willing to participate in the study, and (6) the number of samples obtained was 16 people. This study was conducted at the Dojo Sma 2 Praya Karate Club located on Jalan Sudirman Praya Tengah, Central Lombok Regency, NTB. The time of the study was carried out on January 1-February 28, 2025. In this research design, two tests were carried out, namely before being given a combination of sports massage treatment for 60 minutes called the pre-test and after being given a combination of sports massage and massage treatment for 60 minutes called the post-test. The data sample taken is the athlete of Club Karate Dojo Sma 2 Praya after doing high intensity training, the next day after 1 day after the training, the athlete of Club Karate dojo Sma 2 Praya will have their Physical Fitness level measured by running back and forth and mawashi geri kick test that hits the target and continued with giving sports massage massage for 60 minutes. The data that has been obtained is in the form of raw data from the measurement results, then processed

using the SPSS 2023 application and Microsoft Excel. The hypothesis test in this study uses the paired t test. This paired t test was conducted to determine whether or not there is an effect of sports massage and deep tissue massage on the physical fitness of karate dojo athletes of Sma 2 Praya so that karate kicks can improve.

RESULTS AND DISCUSSION

The sport massage approach for karate athletes can be used to improve performance, reduce the risk of injury, and speed up recovery. Sports massage focuses on areas that are prone to injury or stress from karate training, such as the shoulders, back, and legs. Deep tissue massage can be used to address deeper, chronic muscle tension, such as after intense training. The Sport Massage Approach: Improves Performance: Sports massage helps improve flexibility, fluidity, and range of motion, allowing athletes to perform karate techniques more effectively. Reduces Risk of Injury: By increasing flexibility and muscle strength, sports massage can reduce the risk of injury from overly vigorous movements or impacts. Relieves Muscle Soreness: This massage helps reduce muscle soreness after training, allowing athletes to return to training comfortably and effectively. Improves Blood Circulation: Sports massage increases blood flow to the muscles, which helps remove metabolic waste and brings essential nutrients for muscle recovery. The Sport Massage Approach: Addresses Chronic Muscle Tension: Sports massage can address deeper, chronic muscle tension, which may be caused by intense karate training or improper body position. Accelerates Recovery: This massage helps speed up muscle recovery after training, allowing athletes to return to training more quickly. Relieves Pain: Sports massage can help relieve pain from strained or injured muscles. Promotes Relaxation: Massage also helps release mental and emotional tension, which can impact an athlete's performance.

The data generated through pre-test and post-test data of a combination of sport massage and deep tissue massage. The results of the pre-test and post-test data are in the form of numbers obtained from the research sample of the Effect of Sport Massage on the Physical Fitness of Karate Dojo Athletes at Sma 2 Praya. Here is the complete data:

Table 1. Pre-test and Post-test Data on Karate Athletes' Physical Fitness Levels

Information	Mark	
	Pre test	Post test
Mean	8.3	2.6
Medium	8	3
Modus	8	3
Minimum	8	2
Maximum	9	3
Std.deviation	0.49	0.5
N	15	15

Source: Data processing results

The results of the statistical description of the post-test data with a sample size of 16 people obtained an average value of (mean) 2.6 with a median value of 3 and a mode of 3. Then the standard deviation value is 0.51 and the minimum value is 2 and the maximum value is 3. To determine the decision of the formulation of the problem proposed, the hypothesis test used is by using the paired samples t-test. The paired samples t-test was conducted to determine the effect of sports massage on the physical fitness of karate athletes. The results of the paired t-test can be seen in table 2 below.

To determine the decision of the proposed problem formulation, the hypothesis test used is by using the paired samples t-test. The paired samples t-test was conducted to determine the effect of sports massage on physical fitness in

karate dojo athletes at Sma 2 Praya. The results of the paired t-test can be seen in table 2 below.

Table 2. Summary of Paired t-test Results of the Effect of Sports Massage towards physical fitness

Data	Mean	Standard deviation	t-count	Say.
pre-test and post-test	**5.7**	**0.7**	**31.6**	**0.0**

From Table 2. it is known that the t-value for the Effect of sports massage on sports physical fitness is 31.6. It is also known that the standard deviation value is 0.7; the mean value is 5.7 and the derivative value of Sig. from for the Effect of sports massage on sports physical fitness is 0.00. Based on the results of the data processing, it can be concluded that the Effect of sports massage has an effect on physical fitness in Karate Dojo Sma 2 Praya athletes with the results of the paired samples t-test, it is known that the t-value is 31.6 and the mean value is 5.7 and the value (P value

CONCLUSION

Based on the results of the research and discussion presented in the previous chapter, it can be concluded that the effect of providing sports massage has an effect on physical fitness in Dojo Sma 2 Praya athletes with the results of the paired samples t-test, which is known (P value <0.05). This study has a significant effect on the effect of sports massage on the physical fitness of karate athletes Dojo Sma 2 Praya.

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