

COMBINATION OF MASSAGE THERAPY AND THERAPY EXERCISE TO ACCELERATE POST-SPORTS INJURY RECOVERY

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Abstract: This study aims to evaluate the effect of a combination of sports injury massage therapy and exercise therapy on the recovery of wrist and elbow injuries in athletes. This research uses an experimental design with the Randomized Controlled Trial (RCT) method. Participants in this research were students who were members of various sports Student Activity Units. Data collection instruments include a Visual Analog Scale (VAS) to measure pain levels, as well as a Goniometer to measure Range of Motion (ROM) at the wrist and elbow. The data analysis technique was carried out using the independent t-test. The results of data analysis show that combining sports injury massage therapy and exercise therapy has a more positive impact in reducing pain in wrist and elbow injuries compared to just carrying out sports injury massage therapy. The conclusion of this study is that massage therapy for sports injuries is better than exercise therapy where the reduction in massage therapy can reduce pain significantly. However, actually combining the two therapies has a more positive effect on injury recovery than just doing one form of therapy.

Keywords: Massage Therapy, Exercise Therapy, Elbow Injuries, Wrist Injuries

INTRODUCTION

Injuries to the wrist and elbow can range from minor injuries such as muscle strains and swelling to more serious injuries such as broken bones or ligament injuries (Kovářová et al., 2024). Effective recovery from this injury is essential so that athletes can return to optimal sport and prevent re-injury in the future (Naderi et al., 2024). In an effort to speed up the recovery process for wrist and elbow injuries in athletes, there are two types of therapy that are commonly used, namely massage therapy and exercise therapy.

In cases of wrist and elbow injuries, massage therapy can help reduce inflammation and increase flexibility in the injured area (Kuna et al., 2023). So it can be interpreted that massage techniques can also help reduce the formation of scar tissue which can hinder injury recovery (Ashraf et al., 2024). Exercise therapy aims to strengthen the muscles around the wrist and elbow to help support and protect the injured area. A proper exercise program can help restore strength, agility and stability to the wrist and elbow, which are important factors in the recovery process. .

Previous research conducted (Ashraf et al., 2024; Hernández et al., 2024) have shown the benefits of massage therapy and exercise therapy in the recovery of sports injuries in general, but there have not been many studies that specifically examine the effect of both simultaneously on the recovery of wrist and elbow injuries in athletes. Therefore, further research is needed to evaluate the effectiveness of these two therapies together in cases of wrist and elbow injuries.

By understanding the positive impact of massage therapy and exercise therapy on the recovery of wrist and elbow injuries, it is hoped that athletes can recover more quickly from their injuries and return to participating in sports activities with optimal performance (Hernández-Sánchez et al., 2024; Yachsie et al., 2023). In addition, the results of this study can also provide guidance to health professionals and sports coaches in designing effective rehabilitation programs for athletes who experience wrist and elbow injuries.

METHOD

This research is included in the category of experimental research using a Randomized Controlled Trial (RCT) or Randomized Controlled Clinical Trial with Parallel Groups. In this study, the population in this study were students who were members of the Badminton, Table Tennis, Hockey and Gateball Student Activity Units which were determined using purposive sampling. Then they were divided into two different groups, namely the experimental group and the control group which were determined using ordinal pairing and then given treatment.

Table 1. Massage Therapy









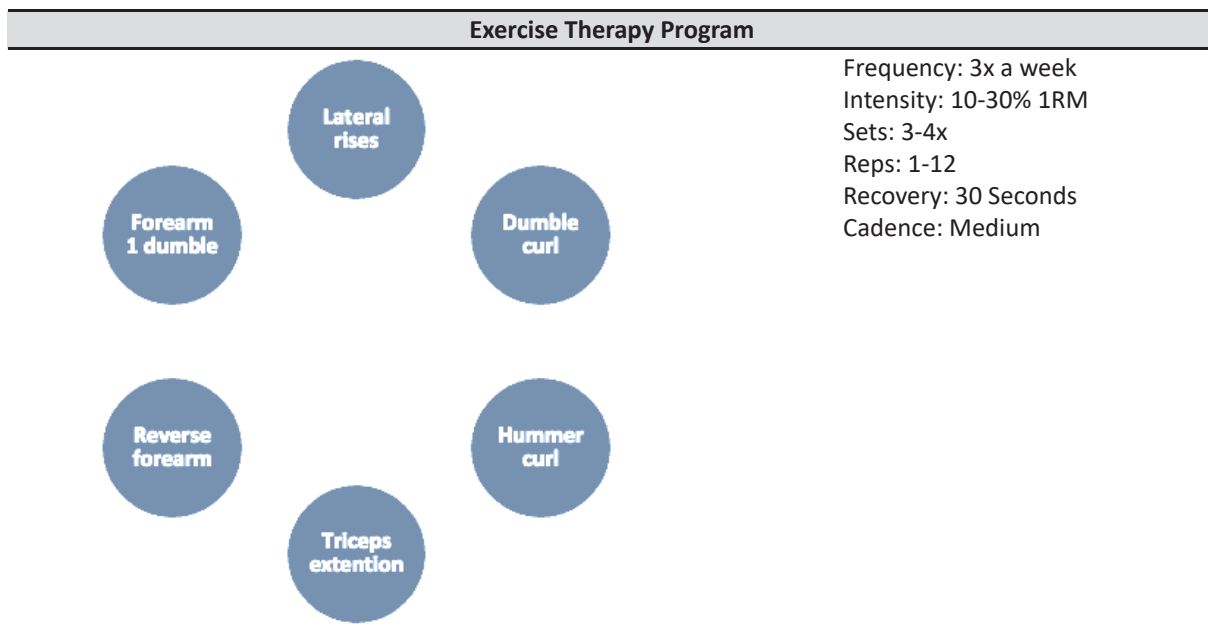
No	Wrist	Management	Elbow	Management
1		Frequency: 3x a week Intensity: Medium Time: 30 Seconds Type: Friction		Frequency: 3x a week Intensity: Medium Time: 30 Seconds Type: Friction
2				
3				
4				

Table 2. Exercise Therapy



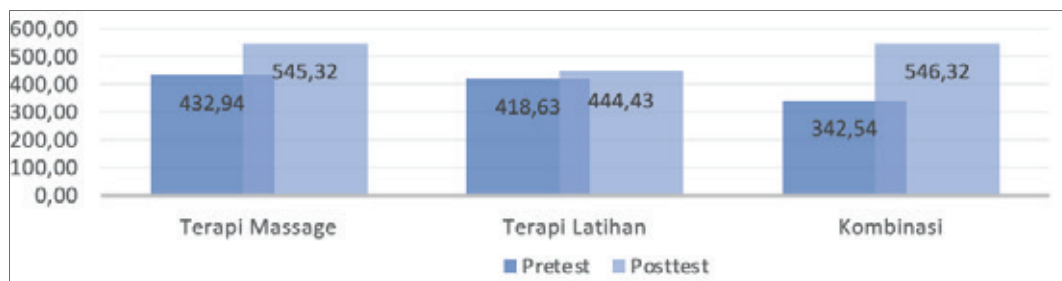
The Massage Therapy and exercise therapy program has been validated by experts and analyzed using Aiken’s with a value of (0.93). The instrument in this research uses the Visual Analog Scale (Yao et al., 2024) and Range of Motion (ROM) (Rumampuk et al., 2024). Then continued the research data analysis with the SPSS V.19.0 program.

RESULTS

This study will measure the effect of injury on pain and the degree of ROM in the elbow joint and wrist joint. Below are the results of the research.

Table 3. Results from the Pretest Posttest Massage Therapy and Exercise Therapy

	N	Minimum	Maximum	Mean	Std. Deviation
Massage Therapy Pretest	16	198	612	432.94	153.002
Massage Therapy Posttest	16	356	623	545.32	182.978
Exercise Therapy Pretest	16	233	524	418.63	113.752
Exercise Therapy Posttest	16	281	544	444.43	117.798
Pretest Combination of both therapies	16	123	234	342.54	135.543
Posttest Combination of both therapies	16	294	435	546.32	197.754



Graph 1. Descriptive Statistics

Based on The table and diagram above show that by providing this treatment. massage therapy is more dominant in reducing pain for elbow and wrist injuries with a minimum pretest score of 198. a maximum of 612. a mean of 432.94. and a standard deviation of 153.002. With a minimum posttest score of 356. a maximum of 623. a mean of 545.32. and a standard deviation of 82.978. while the pretest score from exercise therapy was a minimum of 233. a maximum of 524. a mean of 418.63. and a standard deviation of 113.752. The posttest scores are minimum 281. maximum 544. mean 444.43. and standard deviation 117.798. Thus, the results obtained were that by giving this treatment both experienced a significant reduction in pain. Meanwhile. with a combination of these two therapies. this combination will be more significant in reducing pain as indicated by the movement of the elbow and wrist not experiencing any obstacles with the maximum final value being 546.32.

DISCUSSION

If someone has an elbow injury. a doctor or medical professional can compare the range of motion in the injured elbow with the normal range of motion in the healthy elbow to identify the extent to which the injury affects the elbow’s ability to move normally. That way. they can plan appropriate treatment or rehabilitation to restore normal function to the injured elbow (Dewanti et al.. 2024).

Injury treatment can be done using sports injury therapy and exercise therapy (Sumarjo et al.. 2023). Sports injury therapy is a massage or massage technique that is carried out with the aim of restoring a person’s body part that has been injured while exercising (Đukić et al.. 2019; Graha et al.. 2023) Sports injury therapy massage only uses the following techniques. namely “friction and effleurage using the thumb. and followed by pulling (traction) to return the joint to its position (reposition) (Nazari et al.. 2015). This means that massage movements are relatively easy to understand and can be done anywhere and with this treatment it can reduce pain after an injury.

Because heavy training and lack of warm-up can cause injury (Priyonoadi et al.. 2018). With this massage injury treatment. we have provided knowledge and skills to athletes (Heiduk. 2021). So that athletes know the sciences about massage injuries (Nazari et al.. 2015). By knowing existing theories about injuries. the types and forms of treatment. it will minimize the occurrence of errors (Aliberti et al.. 2021). This means that the treatment that has been implemented has had a positive impact on all participants. starting from creating new jobs. providing additional economic opportunities. and providing opportunities for participants to dedicate the knowledge they have gained to the field and society.

Exercise therapy is an important component in the rehabilitation process after injury or chronic disease disorders (Kuna et al.. 2023). The first goal of exercise therapy is to restore physical abilities so that you can carry out daily activities (Youcef et al.. 2022). This exercise therapy has several variations which are quite easy to do and the materials/ equipment needed are easy to find (Praseryo et al.. 2022). If this exercise therapy is structured correctly according to FITT. it will have a significant impact.

According to opinion (Susanro et al., 2022) states that physical exercise can reduce body weight, improve cardiovascular and respiratory function, reduce LDL and increase HDL, thereby preventing coronary heart disease if this physical exercise is done correctly and regularly. Recommendations for exercise or physical exercise were actually nothing new before the discovery of insulin in 1921, but at that time it was not clear what physical exercise limits should be carried out, such as type of exercise, dose, frequency and intensity of exercise (Smith & Kays, 2022). Therapeutic sports training can also be done with physical movements carried out by the body's muscles and supporting systems. Physical activity is any body movement produced by skeletal muscles that requires energy expenditure (Camera, 2022). Having good and regular physical activity will help your body stay in good condition, both aerobic and anaerobic activities (Li et al., 2021; Rebelo et al., 2022; Ribeiro et al., 2022; Sarmiento et al., 2018).

It can be interpreted that providing a combination of sports injury massage therapy with exercise sessions can reduce pain and increase ROM in sufferers of elbow and wrist injuries, which is characterized by quite significant results. This sports injury massage, if combined with sports therapy, will create a new model of massage so that it can be used as a solution and develop quite good knowledge. Because athletes who are injured will be treated intensively. The treatment method is that the athlete will be given injury massage treatment first until the athlete enters the rehabilitation phase which is supported by exercise therapy, which means that both therapies will provide maximum results. This research has been carried out as closely as possible, but there are still shortcomings/limitations, one of which is the implementation of this research, namely the limitations of researchers in controlling the activities carried out by athletes.

CONCLUSION

The combination of sports injury massage therapy with exercise sessions has a more significant impact on reducing pain in elbow joint injuries, compared to just carrying out sports injury therapy massage. The combination of sports injury massage therapy with exercise sessions has a more significant impact on increasing ROM in elbow joint injuries, compared to just carrying out sports injury therapy massage. The combination of sports injury massage therapy with exercise sessions has a more significant impact on reducing pain in wrist joint injuries, compared to just carrying out sports injury therapy massage. The combination of sports injury massage therapy with exercise sessions has a more significant impact on increasing ROM in wrist joint injuries, compared to just carrying out sports injury therapy massage.

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