

Effectiveness of FRIRAGE massage in the management of ankle injury in child



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Abstract The aim of this study was to determine the effectiveness of frirage massage in the management of ankle injuries in children of Kurusumange Village, Tanralili District, Maros Regency. This research is a type of preexperiment research with the one group pretest-posttest design method, the sample in this study amounted to 35 children obtained through nonprobability sampling techniques with a purposive sampling approach. Data collection was carried out using the Pre Post Questionnaire sheet with ankle injury questionnaire adapted from the Oxford ankle foot questionnaire which has been declared valid and reliable with the results of the reliability coefficient = 0.956. Then, the data were analysed using the Wilcoxon Test with a significant level of 5%. This study showed that the average value of ankle degree before and after frirage massage was 69.43% and 50.71%. This study showed a decrease in the degree of ankle disorders in children after frirage massage treatment by 18.72%, the Wilcoxon signed rank test showed a significant value of p Value of 0.000. This study can be concluded that frirage massage is effective as an ankle injury management in reducing the degree of ankle disorders in children of Kurusumange Village, Tanralili District, Maros Regency.

Keywords: ankle injury, child, frirage massage

1. Introduction

Indonesia is a developing country that has a high prevalence of injuries. The national prevalence of injury is 9.2%, with the highest prevalence in South Sulawesi (15.0%). A comparison of the 2013 and 2018 Riskesdas data shows an increasing trend in injury prevalence from 8.2% to 9.2%. The most common causes of injury were home and neighborhood (44.7%) (Amir, 2023). Injuries are common in children who are usually curious to explore something, but their ability to understand danger is not yet mature. Children tend to perform running activities, jumping, pushing each other, intersecting, and falling, so they often experience injuries, including ankle injuries. Injuries to the ankle generally result from a disruption of the joint ligaments caused by excessive torsion (Pratama, 2020).

The recovery from an injury is highly dependent on first aid management and subsequent treatment, both from the medic, therapist and athlete themselves (Jodi, 2019). Efforts can be made to reduce pain in ankle injuries by providing Frirage massage. Frirage massage is an alternative therapy for ankle injuries (Ernasari, 2021). Frirage maddage can improve the results of the average value degree of ankle flexion, and ROM handling with frirage massage therapy is carried out in a sitting/lying position. Then, friction and effleurage manipulations are performed on the muscles that bind the injured joints, and traction and repositioning are performed (Retnoningsih, 2015).

The Tanralili health center conducts supervision and coaching at the health post. According to data from the last year, the highest incidence of child injuries was recorded in Kurusumange village, with 55 cases, and thus far, frirage massage has never been used as a solution to managing ankle injuries in Kurusumange village children if there are injuries.

The aim of the research is to determine the effectiveness of FRIRAGE massage in the management of ankle injury in children and to make FRIRAGE an alternative nonpharmacological therapy.

2. Materials and Methods

The design of this study is a preexperimental study with one group pretest-posttest design. In this design, there is a pretest before treatment; thus, the results of the treatment can be known more accurately because they can be compared with the situation before treatment (Nursalam, 2020).



The population in this study was all children in Kurusumange village, Tanralili subdistrict, Maros district. Determination of the sample in this study using a purposive sampling technique. The criteria used were children with ankle injuries who visited the Tanralili health center in the Maros district (Syapitri, 2021).

Data collection was carried out by distributing questionnaires to respondents. The instrument used was a questionnaire adapted from The Oxford Ankle Foot Questionnaire. This questionnaire contains 28 questions, with the largest score achievable being 140 and the minimum score being 28. The higher the score is, the greater the severity of the ankle injury complaint (Anggreni, 2022).

This study used informed consent as a consent form for all samples.

3. Results

3.1. Characteristics Respondent

In Table 1, it is found that the characteristics of respondents are based on the gender of the respondents are dominantly male, totaling 33 people (88.0%). Judging from the level of education of children, it was found that the most educated respondents at the senior high school level were 14 people (40.0%).

Table 1 Characteristics of respondents.

Characteristics	n	%
Gender		
Male	33	88,0
Female	2	12,0
Child's education level		
Elementary school	9	25,7
Junior high school	12	34,3
Senior high school	14	40,0

Table 2 shows that the average degree of ankle injury disorder before the frirage massage was 69.43% (SD \pm 4.307), where the lowest score was 64 and the highest score was 81. Furthermore, based on the 95% interval estimation, it is found that the range of scores before giving frirage massage is in the range of 67.95 to 70.91. The average degree of impairment of ankle injury after Frirage massage was 50.71% (SD \pm 4.329), where the lowest score was 42 and the highest score was 59. Furthermore, based on the 95% interval estimation, it is found that the range of scores after giving frirage massage is 49.23 to 52.20.

Table 2 Distribution of Degree of Ankle Disorder Before and After Given Frirage Massage.

Variable	N	Mean	SD	Min–Max	95%CI
Before Frirage Massage	35	69,43%	4,307	64-81	67,95-70,91
After Frirage Massage	35	50,71%	4,329	42-59	49,23-52,20

This study showed a decrease in the degree of ankle disorders by 18.72% in children after Frirage massage treatment, and the Wilcoxon signed rank test showed a significant p value of 0.000 (Table 3).

Table 3 Effectiveness of Frirage Massage on Decreasing the Degree of Impairment Ankle Injury in Children.

Variable	n	Mean	% of Decrease	p Value
Before Frirage Massage	35	69,43	18,72	0,000
After Frirage Massage	35	50,71		

4. Discussion

Based on the results of research on the effectiveness of Frirage massage in the management of ankle injuries in children, there was a decrease in the degree of ankle disorders by 18.72% after Frirage massage treatment. The results of the Wilcoxon signed rank test analysis show a meaningful p value of 0.000, which has proven that Friarrage massage therapy can be used as a management of ankle injuries because it can alleviate the scale of ankle injuries.

The results of this study are in line with research conducted by Mulyatno, which shows the average value of the degree of ankle disorders before and after massage of 41.93 and 30.39 or a decrease of 35.56%. The study concluded that Frirage massage is effective in reducing the degree of ankle disorders in ankle injuries of FIK UNY football school students (mulyatno, 2013).

This is similar to the research conducted by Harsanti, who conducted preexperimental design research using 15 samples and then analysed the data using the t test at a significance level of 5%. Showing the results of the study, massage therapy and loading exercise therapy have a level of effectiveness in healing after ankle injury. The effectiveness of massage

therapy and free exercise after ankle injury was 91.41% in flexion observation and 89.33% in extension observation (Harsanti, 2013).

Pratama (2020) conducted a study on the effectiveness of massage therapy on sports injuries of heel pain and tibial muscle pain in SMPN 18 Bengkulu City futsal athletes. Data collection techniques are carried out using interview, observation, and documentation methods, and then the data obtained are analysed using the theory of Creswell 2014, showing the results of the study that massage therapy is very effective against sports injuries heel pain and tibialis muscle pain in SMPN 18 futsal athletes in Bengkulu city (Pratama, 2020).

Another study was also conducted by Atmojo (2020) entitled the effectiveness of a combination of cold therapy and Massage in the handling of acute ankle sprain injuries. This study used incidental sampling techniques with a sample size of 20 athletes and then analysed them using the t test. The results showed that the combination of cold therapy and massage was effective in treating acute ankle sprain injuries in martial arts athletes in Yogyakarta (Atmojo, 2019).

Subehan also conducted research on the effectiveness of massage therapy for sports injuries on heel pain and tibial muscle pain in futsal athletes of state high school 1 cities. This research used purposive sampling techniques based on inclusion and exclusion criteria so that a sample of 15 people was obtained and then tested using a paired sample t test. The results of this study indicate that massage therapy for sports injuries is effective in reducing heel pain and tibial muscle pain in high school futsal athletes 1 city (Subehan, 2019, Tauho, 2023).

Another study was also conducted by Jodi (2019), who used 20 people as research subjects. The instrument used is in the form of anamnesis and examination notes made with a modified lower extremity functional scale Binkley, which has been tested for validity and then tested using a two-group paired nonparametric Wilcoxon signed ranks test. The results of this study indicate that massage therapy, including muscle relaxation with soft tissue release and deep tissue massage coupled with motion repositioning, can reduce motion pain and improve motion function of postinjury ankle joints with the effectiveness of reducing motion pain by 70.31% and increasing motion function by 20.62%. Therefore, it can be concluded that massage treatment is effective in improving motion pain and postinjury ankle function (Jodi 2019).

Researchers suggest that future research should be more universal and that FRIRAGE could be a more alternative treatment.

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Ethical considerations

Ethical not available

Conflict of Interest

The authors declare that they have no conflicts of interest.

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