

# **INTERNATIONAL CONFERENCE SPORT SCIENCE**

**Surabaya, JUNE 1st 2016**

**CURRENT ISSUES AND NEW IDEAS IN  
SPORT SCIENCE TO PROMOTE SPORT FOR ALL**

**ISBN 978-602-74679-0-3**

**PROGRAM STUDI MAGISTER PENDIDIKAN OLAHRAGA  
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## Preface

Praise be to Allah the merciful and grateful, we have finished the Proceeding book of International Conference of Sport Science. This book was a draft of an international seminar which is the final project of seminar subjects.

This activity is expected to be a learning tool in particular, as well as a platform to introduce the state university of Surabaya to the academic community. Thus, the future State University of Surabaya can be more open, and more advanced in the application of information and technology as well as the latest sport science.

We are thanks to the lecturer as well Kaprodi of Postgraduate Sports Unesa, Dr. Edy Mintarto, M.Kes. and Dr. Nining Widya Kusnanik, M.Appl.Sc for their support and guidance during we started the process of this conference.

Thanks also to all friends who have worked hard to succeed whole process of international conference. Hopefully in the future, everything we do today can be useful and be equipped very useful in sport studies and other activities of postgraduate of Sport Education of Unesa.

Surabaya, May 27th, 2016

# EFFECT OF COMBINATION THERAPY WITH THERAPEUTIC EXERCISE MASSAGE *FRIRAGE* INTERRUPTION OF ROM AND PAIN ON INJURY SOCCER ATHLETES ANKLE

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## **Abstract**

Sports injuries, especially an ankle injury case is pretty much experienced by football athletes, but to overcome limited and relatively long healing. Sought proper treatment in order to cure quickly recover. Injuries that occur in soccer athletes on the limbs such as bone, muscle, tendon or ligament. Injuries that occur will interfere comprehensive joint motion *range of motion* and pain arise.

The purpose of this study to analyze the influence the result of a combination of massage therapy *frirage* with exercise therapy on the ankle injury that footballers are marked changes in ROM and a decrease in the degree of pain.

The research method used *Quasy* experimental research, design and *pretest posttest*. Samples taken from a population of patients who went for treatment to the *Physical Therapy Clinic* of the Faculty of Sport Science, Yogyakarta State University (UNY), r uari month February - March, 2015 amounted to 120 patients. Engineering samples using *purposive sampling* and obtained a sample of 15 patients in accordance with the criteria.

The results showed the effect of massage therapy combined with exercise therapy *frirage* there is an increasing *range of motion* improvements and reduction in pain intensity ankle injury.

Conclusion of research, massage therapy *frirage* combination with exercise therapy can improve the degree of ROM and reduce the degree of pain in ankle-degree-1 soccer athletes ages 9-21 years.

## **PRELIMINARY**

Science and technology in the field of sports as a benchmark for improvement of the athlete's ability to achieve high performance. The sports science and technology should be implemented at an early age in terprogra m, effective and sustainable.

Results of the study revealed Nunley Saluta and in North America (2010: 1) relating to the treatment to the injured athlete Sports multispecialty clinic are from 19 different sports. Athletes who suffered the injury as much as 12 681 injured leg and ankle. The athlete's injury led to the opportunity to participate in the championship lost some 20% -35%. Also according to the study Postle *et al* (2012: 1) in the United Kingdom, the number of athletes ankle injury most often encountered by a therapist. The sports that are frequently injured athletes sports basketball, volleyball and football.

There are various types of massage, namely: *frirage* massage therapy, *thai* massage, and others. But until now unknown to efectivity *frirage* massage therapy to treatment-first degree *sprain* and *strain* degree-1 in athletes, especially those who suffered an injury to the ankle. Injuries that occur in the ankle joint will cause interference *range of motion* (ROM) in the joints and the resulting pain.

This study is the subject of research is that footballers aged 9-21 years who suffered an injury degrees-one in the ankle by a combination of massage therapy *frirage* with exercise therapy. As an indicator of injury healing using the parameter ROM improvement and a decrease in the degree of pain, with the aim to find out whether there is an increase in the degree of rom and a decrease in the degree of pain.

Based on the description of the background and perma mistakes and the objectives of this study, conducted research on: "effect of combination therapy with therapeutic exercise massage *frirage* interruption of rom and pain on injury soccer athletes ankle "

## METHOD

### 1. Research design

This research was *Quasy Experimental* design the initial test and final test (*Pretest-Posttest Design*).



**Figure 3.1.** Design Research

Information:

K1 : Initial test or *pretest* in the treatment group were given a combination of massage therapy with exercise therapy *frirage*

K2 : The final test or *posttest* in the experimental group who were given combination therapy with exercise therapy massage *frirage*

X1 : *Frirage* massage therapy combination treatment with exercise therapy

### 2. Population and Sample

Sample by *purposive sampling* and got as many as 16 people (Hasan, 2008). The research sample numbering 15 tel ah meet the criteria for inclusion. Further samples are grouped using *ordinal pairing*. (Sugiyono, 2007: 90)

### 3. Research Instruments

The research instrument was a tool or facility used by researchers to collect data (Arikunto S., 2005: 101). The instrument used was a *goniometer* for measure ROM and Scala Rating to determine the degree of pain.

### 4. Data collection technique

Measurements were performed before and after treatment by a combination of massage therapy *frirage* with exercise therapy. Data found in the tabulation, shown descriptively and subsequent analysis.

### 5. Data analysis technique

Analysis research iproses with SPSS v.20 .0. with the following steps:

#### a. Test normality by the *Shapiro-Wilk*

The data found do test *Shapiro-Wilk* normality ( $p > 0.05$ )

#### b. Test Homogeneity

The data found do u ji homogeneity with *Levene* test ( $p > 0.05$ ).

#### c. The t-test (Paired Sample t Test)

A nova test ( $p < 0.05$ ) to determine whether there is difference in effectiveness massage therapy treatment *frirage* combination therapy with exercise therapy to changing circumstances ROM dorsiflexion and plantar ankle and knee as well as the degree of pain.

## RESULTS AND DISCUSSION

The results showed there are differences in effectiveness in the handling of the ankle injury which is characterized by an increase in ROM and a decrease in the degree of pain after being given a *massage* therapy combined with exercise therapy *frirage* on football athletes ages 9-21 years.

**Table 1.1.** Paired Samples Correlations

	N	correlation	Sig.
pair 1 pre_dorsifleksi & post_dorsifleksi	15	.895	.000
pair 2 pre_plantarfleksi & post_plantarfleksi	15	.818	.000
pair 3 nyeri_pre_dorsifleksi & nyeri_post_dorsifleksi	15	.866	.000
pair 4 nyeri_pre_plantarfleksi & nyeri_post_plantarfleksi	15	.726	.002

10	<b>Bambang Priyonoadi</b>	Effectiveness Of Different Sports Massage, Massage Circulo And Massage Frirage Modulation Levels Of Immunoglobulin Enzyme A (Iga)
11	<b>Deddy Whinata Kardiyanto, S.Or., M.Pd</b>	Potential And International Level Performance Achievements Actualization Coach And Athlete Sports Paralympic Indonesia And Development Model System Coaching
12	<b>Desak Wiwin Try Swandewi</b>	The Influence Of Massed Practice And Distributed Practice Method Toward The Increasing Of Forehand And Backhand Skills To The Male Students Of Satya Bhuwana Tennis School Gianyar Year 2014
13	<b>Dr. Adi Sucipto, M.Kes , Prof. Toho Cholik Mutohir, Ma. Ph.D</b>	The Development Of Instrument For Evaluating Coaching Competency (Iecc) Of Football Schools
14	<b>Dr. Albertus Fenanlampir, M.Pd</b>	Leadership And Conflict The Organization Sport Viewed From Cultural Perspective Maluku
15	<b>Dr. Ali Satia Graha, M.Kes Aifo</b>	Effect Of Combination Therapy With Therapeutic Exercise Massage Frirage Interruption Of Rom And Pain On Injury Soccer Athletes Ankle
16	<b>Dr. Marzuki, M.Si</b>	The Effect Of Exercise Drill Ladder Single, Double Punch Drill Ladder, Ladder Speed Run, Run Ladder Stride, Chest Press, Press Shoulder, Leg Press, Leg Extension Of The Explosive Power Muscle, Strength, And Speed
17	<b>Dra. Endang Rini Sukamti, M.S</b>	The Development Of The Model For Artistic Gymnastics Talent Scouting On Early Childhood
18	<b>Fahrur Rozi, Yanus Setyowati</b>	Indicator Swimming Skills Test And Anthropometric Measurements Were Used To Identify Athletes Seeds Talented Swimming Sports

Can be seen in Table 1.1 obtained both variables showed correlation values  $> 0.05$ , it can be said that both these variables have a real relationship.

**Table 1.2.** Test Paired Sample t Test

		paired Differences					t	df	Sig. (2-tailed)
		mean	Std. deviation	Std. error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
pair 1	pre_dorsifleksi - post_dorsifleksi	-25.133	.990	.256	-25.682	-24.585	-98.281	14	.000
pair 2	pre_plantarfleksi - post_plantarfleksi	-12.600	1,121	.289	-13.221	-11.979	-43.524	14	.000
pair 3	nyeri_pre_dorsifleksi - nyeri_post_dorsifleksi	5.467	.516	.133	5,181	5753	41,000	14	.000
pair 4	nyeri_pre_plantarfleksi - nyeri_post_plantarfleksi	5.000	.655	.169	4.637	5.363	29.580	14	.000

H0: there is no increase in ROM and pain relief

H1: there is an increased ROM and decrease pain.

Seen that t is .. with a value of  $p = 0.000$  by as  $p < 0.05$ , then H0 is rejected, which means pre and post test frirage massage therapy combined with exercise therapy is not the same or significantly different, which means that there is an influence on the increase in degrees ROM and decrease pain.

**Conclusions.**

- a. *Frirage* massage therapy combination with exercise therapy can improve the degree of dorsiflexion ROM on an ankle injury degree-1 football athlete.
- b. *Frirage* massage therapy combination with exercise therapy can improve the degree of plantar ROM on an ankle injury degree-1 football athlete.
- c. *Frirage* massage therapy combination with exercise therapy can reduce the degree of pain in the ankle plantar degree-1 football athlete.
- d. *Frirage* massage therapy combination with exercise therapy can reduce the degree of pain in the ankle plantar degree-1 football athlete.

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