INTERNATIONAL CONFERENCE
SPORT SCIENCE

Surabaya, JUNE 1st 2016

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


PROGRAM STUDI MAGISTER PENDIDIKAN OLAHRAGA
PASCASARJANA UNIVERSITAS NEGERI SURABAYA
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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 terprogr am, 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 effectivity 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).

\[
\begin{array}{ccc}
K1 & X1 & K2 \\
\text{Pretest} & \text{Treatment} & \text{Posttest}
\end{array}
\]

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>
<thead>
<tr>
<th>Table 1.1. Paired Samples Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>----------------------------------------</td>
</tr>
<tr>
<td>15</td>
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<td>15</td>
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<td>15</td>
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<tr>
<td>15</td>
</tr>
<tr>
<td>No.</td>
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<td>16</td>
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<td>17</td>
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<td>18</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th></th>
<th>paired Differences</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>Std. deviation</td>
<td>Std. error Mean</td>
<td>95% Confidence Interval of the Difference</td>
</tr>
<tr>
<td>pair 1</td>
<td>pre_dorsiflexi - post_dorsiflexi</td>
<td>-25.133</td>
<td>.990</td>
<td>.256</td>
</tr>
<tr>
<td>pair 2</td>
<td>pre_plantarflexi - post_plantarflexi</td>
<td>-12.600</td>
<td>1.121</td>
<td>.289</td>
</tr>
<tr>
<td>pair 3</td>
<td>nyeris_pre_dorsiflexi - nyeris_post_dorsiflexi</td>
<td>5.467</td>
<td>.516</td>
<td>.133</td>
</tr>
<tr>
<td>pair 4</td>
<td>nyeris_pre_plantarflexi - nyeris_post_plantarflexi</td>
<td>5.000</td>
<td>.655</td>
<td>.169</td>
</tr>
</tbody>
</table>

H0: there is no increase in ROM and pain relief
H1: there is an increased ROM and decrease pain.

Seen that $t$ is $\ldots$ 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.

**Bibliography**


