

Effect of the Royal Thai Massage on Low Back Pain

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Abstract

This research was quasi-experimental that aimed to study the effect of the Royal Thai Massage (RTM) on low back pain patients, in order to compare the back pain muscles before and after at Thai Traditional Medicine Clinic, Kutchap Hospital, Udonthani Province. The volunteers was 30 patients who eat normal food which selected by purposive sampling, the treatment was 3 times a week and 45 minutes in each time. The measurement was collected by using a questionnaire, comparison of the physical examination and assess pain level by pain scores. The results showed that the effect of RTM on low back pain with the physical examination by measure heel method that was statistically significant differently ($p < 0.05$) with an average score before and after the test was 0.06 and 0.50. The method by bending the legs as number 4 was statistically significant differently ($p < 0.05$) with an average score before and after the test was 19.52 and 17.03. And the pain assessment by pain scores was statistically significant differently ($p < 0.05$) with an average score before and after the test was 6.58 and 5.77. The results showed that after RTM was decreased low back pain.

Keywords: *royal thai massage, low back pain, back pain*

1. Introduction

Low back pain is one of the most common health problems for diseases of the bones, ligaments and muscles that causes the patient to see a doctor and results in often off work. Although back pain does not require urgent treatment and is not fatal, but if deal with pain is not appropriate, the pain will remain or become repetitive, becoming chronic pain as high as 70-80 percent. There are reports that 80 percent of the total population will have back pain at least 1 time in life [5], 10% with severe and chronic pain that is a problem in work or daily life. Due to this type of patient has a lot and has a tendency to increase especially laborers [7], who have the most low back pain between the ages of 45-64 years. However, lower back pain can occur to everyone, every professional, businessman and farmers [4]. The causes of back

pain are divided into two causes which are internal causes such as from the bone, cervical, nerves, muscles which caused by the pathology of bones and joints and causes the external, such as appearance of the work, accident, sickness, overweight and frequently encountered from stress. Personal factors are also associated with the occurrence of back pain, such as age, gender, physical strength, flexibility of the back, congenital disorders and smoking [4,5]

The low back pain with signal I is a disease caused by lack of blood supply to the back muscles, stress overwork or bent-up, lifting items in the wrong manner which pressure on the lower back muscles causing tense muscles in the back and resulting in patients usually with back pain, some people are intermittent or may occur acute [9]. Treatment of modern back pain, such as rest, especially in periods of severe symptoms or acute pain, the use of NSIADs, physical therapy, and rehabilitation, using orthotics, changing posture to be hygienic, muscle exercise and surgery, etc [4,5]. Thai traditional medicine treatment massage considered as an important role that can be assigned to each client appropriately which the massage causes the muscles to relax, improved blood circulation, reducing the pain. Royal Thai Massage (RTM) uses a combination of massage methods and acupressure that able to force blood, heat, nerve energy to different parts of the body, affecting blood circulation, lymph, nervous system to work better, osteoarthritis, the muscles relax and the pain was reduced [2,6,7,10].

From the importance and reason mentioned above, the researcher is therefore interested in studying the effects of RTM on pain reduction and movement degrees, as well as the quality of life before and after the RTM of patients for low back pain with signal 1. As an alternative treatment for back pain patients which is a holistic treatment : a physical, mental, spiritual, and social treatment for patients to reduce pain medication that has side effects and complications for the body when receiving medication for a long period of time.

2. Material and method

This research was a quasi experimental research which one group pretest - posttest design was used to measure the results before and after the experiment to select purposive sampling for 30 volunteers.

2.1 Sample

The samples used in this study is the patient who comes to receive the service low back pain with signal 1 in Thai traditional medicine clinic Kut Chap Hospital, Kut Chap District, Udonthani Province. Purposive sampling and diagnosed by modern medicine and Thai traditional medical staff. In the period from 1 July 2013 to 30 November 2013.

Inclusion criteria as follows:

Age over 40 years, not limited to gender, education, occupation, work, income, no diseases, forbidden to massage, patients are welcome to join the project, have lower back pain from 4 months and up, diagnosis from modern medicine that there is pain in the lower back and have a diagnosis from Thai traditional medicine staff

Exclusion criteria as follows:

Patients with fever higher than 37.5°C degrees , patients with osteoporosis, easy fracture bones, patients with skeletal malformations, pregnant patients, cancer patients, patients who taking analgesic, patients who taking muscle relaxant drugs, patients with chronic complications such as high blood pressure, diabetes, lumbar disc herniation, etc.

.22 Tools

Tools used for collecting data consisted of the questionnaire is divided into 2 parts as follows

Part 1. patient questionnaire is a questionnaire for general information of volunteers and their history of illness, consisting of 11 items, including gender, age, and which back pain you have. What is your back pain? How long have you had back pain? What period of back pain do you have the most? How is your back pain affected by the weather? The cause of your back pain. When you have back pain, what do you do after you have back pain?

Part 2 Evaluation form and after the massage to treat back pain using the RTM method, divided into 2 parts as follows

1) The treatment evaluation form the previous examination process and after the massage by evaluating the degree of movement of the back with the method 1) Patients lie on their back with legs straight, the massage kneeling patient. Use the top hand to hold the patient's ankle close together. Use the hands below to push the toes up. And the massager measured the heel level on both sides of the heel using a tape measure the distance of the heel in centimeters, the researcher took notes before and after the 1st, 2nd and 3rd massage to compare the three differences. 2) The patient lie on back and legs straight. The massage kneeling patient and folded the legs as number 4 with the heel above the kneecap of the other leg. Then the massager uses a tape measure by measuring from the kneecap of the knee to the floor in centimeters, the researcher took notes before and after the 1st, 2nd and 3rd massage to compare the three differences.

2) A measure of the pain level before and after the RTM by using a verbal pain scale, using a straight line of 10 centimeters in length, starting from 0 to 10. The pain assessment has 4 levels of pain as follows: Level 1 feels fine with scores in the range 0 points. Level 2 has slight pain, the scores are in the 1-3 points. Level 3, the pain is moderate. The scores are in the range of 4-6 points. Level 4 the most pain is in the range of 7-10 points.

Statistics by the patient and the patient is aware of the self-assessment. And the researcher notes before and after the 1st, 2nd and 3rd massage to evaluate the three differences. The patient will assess 10 minutes after the massage.

0 1 2 3 4 5 6 7 8 9 10

Not moderate, pain, extreme pain

Explanation of pain measurement:

Feeling good with a score in the range 0 points

Minor pain, scores between 1-3 points

Moderate pain, scores between 4-6 points

The most pain has a score in the range of 7-10 points.

.23 Equipment quality

Content validity checks are as follows:

1) The researcher bring the evaluation form created to the 3 experts, including professional nurses, special specialists, Thai traditional medicine and physical therapists at Kut Chap Hospital, Kut Chap District, Udonthani Province to check content validity compliance with objectives.

2) The researcher used the pain assessment tool before and after massage. The verbal pain scale (VPS) is used to measure the length of the line by 10 centimeters that used without modification or modification

.24 Data collection

Make a letter requesting permission to the director of Kutchap hospital to conduct research in Thai traditional medicine clinics, selected 30 low back pain populations in the criteria. To explain the methods of conducting research for the Thai traditional medicine staff, guidelines patients who sign the consent form voluntarily. Assess the level of pain in the low back pain before and after the massage by using the verbal pain scale (VPS), using a straight line of 10 centimeters in length. The researcher was recorded before and after the RTM. Massage every other day for 45 minutes each time. Evaluation before and after the massage to treat low back pain. Check the degree of movement of the back. The researcher was

evaluated and recorded before and after the RTM from 1 July 2013 to 30 September 2013, the data collection period was 3 months.

3. Results

The effect of RTM on low back pain with signal 1 of patients

**Table 1 Average of the results of RTM on low back pain with signal 1 of patients
by measuring the heel**

(n=30)

Heel measurement	Mean	SD	t-test	p-value
Before massage	0.66	0.39	2.42	0.022*
After massage	0.50	0.19		

* Differences were statistically significant at the level of 0.05

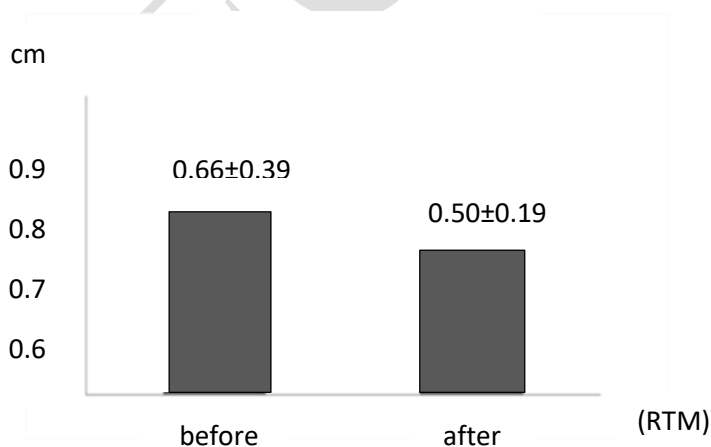


Figure 1 the heel measurement

From table 1 and figure 1, it is found that the effect of the RTM on the low back pain with signal 1 of patients by measuring the heel that is before and after massage the total number of heel measurements in each 3 times were statistically significant difference

($p < 0.05$). The average score of the heel measurements after the massage was lower than before the massage was 0.66 ± 0.39 and 0.50 ± 0.19 .

Table 2 Average of the results of the RTM on low back pain with signal 1 of patients by bending the legs as numbers 4

bending the legs	Mean	SD	t-test	p-value
Before massage	19.52	2.53	11.80	0.00*
After massage	17.03	1.83		

* Differences were statistically significant at the level of 0.05

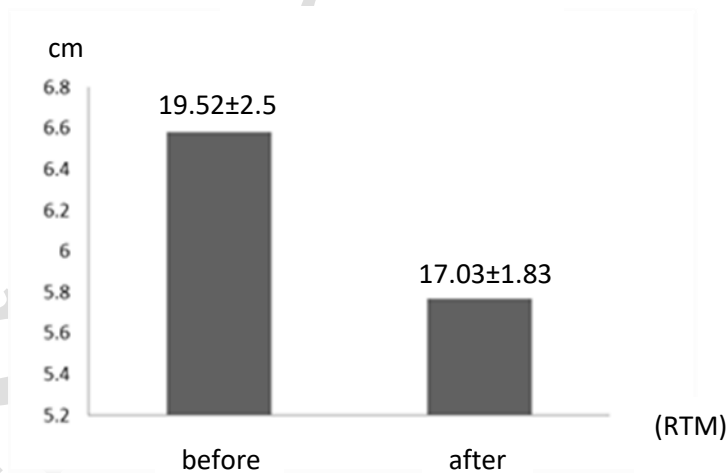


Figure 2 bending the legs as numbers 4

From table 2 and figure 2, it is found that the effect of the RTM on low back pain with signal I of patients by bending the knees as numbers 4 that are before and after massage. There were significant differences in knee fold flexion as numbers 4, statistically significant

($p < 0.05$). The average score of lower limb flexions after the RTM was $19.52 \pm 2.53\%$ that more bending than before the RTM was $17.03 \pm 1.83\%$.

Table 3 Average of the results of the RTM on low back pain with signal I of patients before

and after massage by evaluating the back pain before and after the RTM

(n = 30)

Sensation of low back pain	Mean	SD	t-test	p-value
Before massage	6.58	1.56	4.60	0.00*
After massage	5.77	1.60		

* Differences were statistically significant at the level of 0.05



Figure 3 Sensation of low back pain

From table 3 and figure 3, the study found that the comparison of mean, difference of level of back pain before and after the RTM shows the average level of back pain decreased from 6.58 ± 1.56 to 5.77 ± 1.60 . The sensation of back pain before and after the RTM was significantly different ($p < 0.05$).

4. Conclusions

The comparison of results from the RTM for every other day, measuring results before and after that shown to reduce back pain. It is reported that, a study on comparing back pain

between before and after RTM of patients coming to the Thai traditional medicine clinic in Phatthalung hospital can reduce the contraction of muscles and fascia stimulate circulation resulting in reduced pain [3], massage results can be measured using a handcrafted medical examination, namely the heel measurement by bending the legs folded as number 4, the result showed that the heel can be measured almost the same amount. The short length of the heel affects the back pain and bend the legs to be number 4, lower hand resistance, can push down to the floor. The bending of the legs is a test for the stretching of the back muscles. The results of the treatment are in line with the necklace a comparative study of the effects of the RTM on the treatment of osteoarthritis at Thai Traditional Medical Clinic Mae Taeng Hospital Chiangmai Province[8]. The study found that the evaluation results from the physical examination by measuring the length of the heel showed that the effect of the RTM on the treatment of osteoarthritis before and after the massage by the method of measuring the heel length, 1st, 2nd, 2nd time, were significantly different ($p < 0.05$)

Massage results are measured by the average level of pain in the muscles. After receiving the RTM in the 1st, 2nd, 3rd massage, there was a statistically significant difference ($p < 0.05$), which shows the results of this study supporting the hypothesis that the RTM can reduce back pain caused by the musculoskeletal system and bones work well which is consistent with the research [2], the effects of the RTM to the circulatory system both systolic and diastolic blood pressure during and after the massage were significantly lower than normal ($p < 0.05$) and systolic and diastolic blood pressure, the reported conducting studies on shoulder treatment with the RTM that focus on the basic massage and press the signal points to force heat blood into the shoulder joints move the shoulder to increase the degree of movement of the shoulder and massage [1]. And the reported study of the stuck shoulders treatment by the RTM from the hospitals in Bangkok that pressing the signal 5 to release the stuck shoulder which is maintained continuously for 10 weeks, 2 times a week with bending the shoulder joints and measuring the degree of shoulder joints like abduction and flexion. The results showed that the patient slept well, no shoulder pain, and can put on clothes by oneself [6].

The effect of the royal massage on the back pain of the RTM at Clinic Kut Chap Hospital Udon Thani Province can be summarized as follows

1. Most clients are female for 60%, aged between 40-49 years for 40%. The pain is the right waist for 80%, pain in knees for 63.3% and will have back pain less than 10 days for 36.7%, more than 10 days for 60%, more than 1 month for 40%, back pain comes from bent and tilt up to 70%, practice when having back pain will buy medication by oneself Accounting for 56.7%

2. The effect of the RTM on the back pain with a signal 1 by measuring the heel of the pain side before and after massage. The total number of heel measurements in 3 times was

statistically significant ($p < 0.05$). The average score of the heel measurements after the massage was lower than before the massage was 0.66 ± 0.39 and 0.50 ± 0.19 .

3. The effect of the RTM on the back pain with a signal 1 by bending the legs as number 4 that were statistically significant ($p < 0.05$). The average score of lower limb flexions before and after bending the legs as number 4 was $19.52 \pm 2.53\%$ and $17.03 \pm 1.83\%$.

4. The result of the RTM by evaluating the level of back pain before and after found that the comparison of the average difference of the level of back pain in 3 times was 6.58 ± 1.56 and 5.77 ± 1.60 that was significantly different ($p < 0.05$).

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