

UNIVERSITI TEKNOLOGI MARA

**EFFECT OF THERMOTHERAPY AND
CONTRAST THERAPY ON PAIN
SCALE AND HIP RANGE OF MOTION
AMONG LOW BACK PAIN PATIENTS**

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AUTHOR'S DECLARATION

I declare that the work in this thesis/dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and the result is fully on my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Under Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Studies that compare the effect of thermotherapy and contrast therapy on pain scale and hip range of motion were lack and not clearly discussed in the previous literature. The purpose of this study was to compare the effects of thermotherapy and contrast therapy on pain scale and hip range of motion among low back pain patients. There were 12 participants and they were divided into two groups Thermotherapy (n = 6) and contrast therapy (n = 6). Participants were involved in 6 week treatment duration to determine the effect between two therapies. For thermotherapy groups, the participants will be treat using heating pad treatment (40°C) within 20 minutes while contrast therapy group, the participants will exposed 20 minutes of contrast therapy which is 5 minutes of heat (40°C) with heating pad followed by 5minutes of cold (15°C) with icepack, repeated twice. The participant pain scale and hip range of motion were recorded at three time's periods which were week 1, week 3 and week 6 of treatment. The results were determined by using repeated measure ANOVA to shows the main effects which the results showed significant effect ($P=0.000$) on pain scale. The difference effect between the therapy were determined by using mixed between ANOVA and showed the results were not significant ($P=0.340$) for the hip range of motion, the main effect value showed that both flexion and extension was statistically significant ($P=0.000$). However, the difference effect were not significant which is ($P=0.507$) of RF ($P=0.585$) of LF. Meanwhile, ($P=0.661$) of RE and ($P=0.460$) of LE. The mean value showed that thermotherapy has highest value compare to contrast therapy for both PS and Hip range of motion so it can be proposed that thermotherapy has better effect than contrast therapy. The null hypotheses were rejected because there were significant effect of thermotherapy and contrast therapy on both PS and hip range of motion. However, the null hypotheses of different effect for both PS and hip range of motion were failed to reject because there is no significant different effect between contrast therapy and thermotherapy.

Key word: Thermotherapy, Contrast Therapy, Pain Scale, Hip Range of Motion, Low Back Pain

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