

Effectiveness of Low-Level Laser Therapy for Nonspecific Chronic Low Back Pain

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Pain in the lumbo-sacral area, commonly known as the low back pain, has lately reached the epidemic proportions in its incidence. This common musculoskeletal disorder affects 70% - 85% of world population at some point in their lifetime. Low level laser therapy (LLLT) is suggested as an effective method to relieve pain in patients with non-specific chronic low back pain (NSCLBP) and widely utilized, therapeutic outcomes of LLLT in NSCLBP are varied and conflicting. However, there is still lack of evidence regarding its effectiveness on functional outcomes. Therefore, this single blinded randomized controlled study was aimed to identify the effectiveness and therapeutic efficiency of LLLT in treating NSCLBP. In this current study, 58 participants (patients from nearby hospitals) were included as 32 in experimental (mean age = 47.75, SD = 12.81 years) and 26 in control (mean age = 48.15, SD = 11.03 years) groups where they received LASER + Exercises (Arm 1) and Heat Therapy + Exercises (Arm 2) respectively for consecutive three weeks, two sessions per week. Assessments were conducted for pain and AROM (forward flexion, extension, right and left side-flexion of lower back) at the baseline and at the end of the intervention. The data were analyzed with the time; baseline, and end of intervention and between two groups using two-way repeated measure MANOVA with significance at 5% significant level with 95% CI. According to the analysis, it was found that there is no statistical significance between the groups except for back extension at baseline. There is a significant improvement ($P \leq .005$) in all the variables in both the groups separately and experimental group have higher improvement than the control group. Therefore, it can conclude that the LLLT is an effective treatment modality for treating NSCLBP.

Keywords: Low level LASER therapy, Exercises, Low back pain, Non-specific, Chronic

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