**Article Full Title**

Does adding hip strengthening exercises to manual therapy and segmental stabilization improve outcomes in patients with nonspecific low back pain? A randomized controlled trial

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**Paper Abstract**

Background**:** The literature is unclear on the need for hip strengthening in persons with low back pain (LBP).

Objectives: To investigate the effectiveness of hip strengthening exercises when added to manual therapy and lumbar segmental stabilization in patients with chronic nonspecific LBP.

Methods**:** Seventy patients with chronic nonspecific LBP were randomly assigned to either the manual therapy and lumbar segmental stabilization group or the manual therapy and lumbar segmental stabilization plus specific hip strengthening group. A 10 cm [visual analogue scale](https://www.sciencedirect.com/topics/nursing-and-health-professions/visual-analog-scale) and the Rolland-Morris Questionnaire were the primary clinical outcome measures at baseline, at the end of treatment (posttreatment), and 6- and 12-months posttreatment. Hip strength and kinematics were measured as secondary outcomes .

Results**:** While within-group improvements in pain, disability, and hip extensors strength occurred in both groups, there were no significant between-group differences at posttreatment or follow-ups. Mean difference in changes in pain level between groups at posttreatment and at 6- and 12-month follow-up were 0.5 points (95% confidence interval [CI]: -0.5, 1.5), 0.3 points (95% CI: -0.9, 1.5), and 0.0 points (95% CI: -1.1, 1.1), respectively. The mean differences in changes in disability were 0.8 points (95% CI: -1.3, 2.7), 0.0 points (95% CI: -2.4, 2.4), and 0.4 points (95% CI: -2.0, 2.8), respectively. Finally, we did not observe any between-group differences for any of the other outcomes at any timepoint.

Conclusion**:** The addition of specific hip strengthening does not appear to result in improved clinical outcomes for patients with nonspecific LBP.

**NIH Risk of Bias Score:** 12/14

**Key Findings of the Study:**

1. Specific hip strengthening exercises, in addition to manual therapy and lumbar segmental stabilization, did not provide additional benfits in pain and function for individuals with nonspecific low back pain.
2. Both groups (manual therapy and lumbar segmental stabilization and specific hip strengthening plus manual therapy and lumber segmnatal stabilization) showed imporvements in pain, disability, and hip extensor strength compared to baseline.

**Reviewer Summary:**

This study compared the effects of specific hip strengthening exercises when combined with manual therapy and lumbar segmental stabilization to manual therapy and lumber segmental stabilization alone, for individuals with nonspecific low back pain. Although participants in both experimental groups experienced improvements in pain, disability, and hip extensor strength, there was no significant difference between groups in these outcomes. One limitation of this study includes the lack of a home exercise program, as participants were instructed not to perform exercises at home and were seen in physical therapy twice a week. Further, this study did not consider biopsychosocial factors that may be contributing to the individual’s experience of nonspecific low back pain.

**Please provide your clinical interpretation of this paper. Include how this study may impact clinical practice and how the results can be implemented.**

 This study reported that specific hip strengthening exercises did not add any additional benefit to manual therapy and lumbar segmental stabilization for patients with nonspecific low back pain. Since there was improvement in pain, disability, and hip strength overall, these interventions could be used together for positive therapeutic effect. Further, the treatment did not incorporate a home exercise plan or assess biopsychosocial factors, and these components may be beneficial to implement when treating individuals with chronic pain.