**Article Full Title**

Effects of manual therapy and exercise targeting the hips in patients with low‐back pain—A randomized controlled trial

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**Paper Abstract**

Rationale: The benefits of providing manual therapy and exercise targeting the hips in individuals with mechanical low‐back pain (LBP) are not well established. Objectives: The objective in this study is to determine whether a formal prescriptive treatment protocol for the hips improves outcomes in patients with a primary complaint of mechanical LBP. Methods: Eighty‐four (84) subjects (50 males, 46.1 ± 16.2 years) were randomized to 1 of 2 groups: pragmatic treatment of the lumbar spine only (LBP) (n = 39) or pragmatic treatment of the lumbar spine and prescriptive treatment of bilateral hips (LBP + HIP) (n = 45). Pragmatic treatment of the lumbar spine was based upon published clinical guidelines. Prescriptive treatment of the hips involved the use of 3 hip exercises targeting the gluteal musculature and 3 mobilization techniques targeting the hips. Subjects were assessed at baseline, 2 weeks, and at discharge with the following measures: Modified Oswestry Disability Index, Numeric Pain Rating Scale, a global rating of change (GRoC) score, the patient acceptable symptom state (PASS), and patient satisfaction. Results: At 2 weeks, significant differences between groups differences were found in GRoC and patient satisfaction (P &lt; .05) favoring the LBP + HIP group. At discharge, there were significant differences on the Modified Oswestry Disability Index, numeric pain rating scale, GRoC, and patient satisfaction favoring the LBP + HIP group (P &lt; .05). Effect sizes were small to medium. Conclusion: Our findings suggest that a prescriptive treatment of the hips may be of clinical value to individuals presenting with the primary complaint of mechanical LBP.

**NIH Risk of Bias Tool**

Quality Assessment of Controlled Intervention Studies

1. **Was the study described as randomized, a randomized trial, a randomized clinical trial, or an RCT**

Yes

1. **Was the method of randomization adequate (i.e., use of randomly generated assignment)?**

Yes

1. **Was the treatment allocation concealed (so that assignments could not be predicted)?**

Yes

1. **Were study participants and providers blinded to treatment group assignment?**

No

1. **Were the people assessing the outcomes blinded to the participants' group assignments?**

No

1. **Were the groups similar at baseline on important characteristics that could affect outcomes (e.g., demographics, risk factors, co-morbid conditions)?**

Yes

1. **Was the overall drop-out rate from the study at endpoint 20% or lower of the number allocated to treatment?**

Yes

1. **Was the differential drop-out rate (between treatment groups) at endpoint 15 percentage points or lower?**

Yes

1. **Was there high adherence to the intervention protocols for each treatment group?**

Yes

1. **Were other interventions avoided or similar in the groups (e.g., similar background treatments)?**

Yes

1. **Were outcomes assessed using valid and reliable measures, implemented consistently across all study participants?**

Yes

1. **Did the authors report that the sample size was sufficiently large to be able to detect a difference in the main outcome between groups with at least 80% power?**

Yes

1. **Were outcomes reported or subgroups analyzed prespecified (i.e., identified before analyses were conducted)?**

Yes

1. **Were all randomized participants analyzed in the group to which they were originally assigned, i.e., did they use an intention-to-treat analysis?**

Yes

**Key Finding #1**

The addition of hip strengthening exercises and manual therapy showed a significant difference between groups for the ODI, GRoC, and patient satisfaction.

**Key Finding #2**

Outcomes were more favorable in the LBP + Hip group.

**Please provide your summary of the paper**

The study aimed to investigate whether a hip treatment protocol consisting of exercise and manual therapy would improve outcomes in patients with low back pain. Patients were randomly assigned to one of two groups: LBP treatment alone or LBP treatment + hip treatment. The isolated LBP treatment group was not allowed to perform isolated hip strengthening exercises or provide hip manual therapy. Both groups received a LBP oriented home exercise program and the hip group also received hip exercises for their HEP. The primary outcome measure of the study was the ODI which was collected at baseline, two weeks in, and upon discharge. They also utilized the PASS, NPRS, and GRoC. At two weeks, there was no significant difference in ODI and NRPS between the two groups but patient satisfaction and GRoC favored the hip group. At discharge, there was a significant difference between the groups for all outcome measures except the PASS, favoring the hip group.

**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 provides good direction for clinical management of patients with low back pain. Future research could look into whether there was a difference between hip exercises and manual therapy in affecting low back pain. This could be done by replicating this study with more experimental groups consisting of LBP treatment, hip manual + exercise, hip manual, hip exercise, and a sham manual group. Adding in a sham treatment group could also help blind the patients of results, counteracting any placebo effect that may have occurred in this study. Another interesting area to investigate is the long term effects of these treatments, as low back pain tends to be a chronic issue. Overall, this was a high quality study showing that including treatment of the hip while treating LBP can result in beneficial outcomes.