**Article Full Title**

The effects of manual manipulation therapy on pain and dysfunction in patients with lumbar spinal stenosis

**Author Names**

Oh H, Choi S, Lee S, Lee K, Choi J

**Reviewer Name**

Rachel Plzak

**Reviewer Affiliations**

Duke University School of Medicine, Doctor of Physical Therapy Division

**Paper Abstract**

 This study investigated the effects of manual manipulation therapy on the pain and dysfunction of patients with lumbar spinal stenosis. [Participants and Methods] In this study, 30 patients with chronic back pain were evenly divided into an experimental group, who received manual traction therapy, and a control group, who received intermittent traction therapy. Both groups received therapy three times a week for eight weeks. A visual analogue scale was used to measure participants' back pain, and the Oswestry disability index (ODI) was used to check the functional impediment they experienced as a result. [Results] The intragroup comparison showed that the visual analog scale and the ODI significantly decreased in the control group and the experimental group, respectively. The intergroup comparison after treatment showed that the visual analog scale and the ODI of the experimental group were significantly lower than in the control group. [Conclusion] The results of this study suggest that manual manipulation therapy is an effective intervention for treating pain and dysfunction in patients with lumbar spinal stenosis.

**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)?**

Cannot Determine, Not Reported, or Not Applicable

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

Cannot Determine, Not Reported, or Not Applicable

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

Cannot Determine, Not Reported, or Not Applicable

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)?**

Cannot Determine, Not Reported, or Not Applicable

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?**

No

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 flexion-distraction technique combined with conservative physiotherapy significantly decreased pain levels in the experiment group measured by the Visual Analogue Scale and Oswestry Disability Index compared to the control group who only received conservative physiotherapy.

**Key Finding #2**

There are many limitations to this study due to the small sample size, short term treatment, and lack of control over external factors which could contribute to change in pain levels.

**Key Finding #3**

**Key Finding #4**

**Please provide your summary of the paper**

This study looked at the effects of manual manipulation therapy in decreasing pain levels for patients with lumbar spinal stenosis. With a small sample size of 30 patients, the study found that patients in the experimental group who received flexion distraction manual therapy in combination with conservative physiotherapy demonstrated a significant decrease in pain levels according to their VAS and ODI scores. The scores of the experimental group were also significantly lower than the control group scores. This study also demonstrated that the control group, having only received conservative physiotherapy treatment, also showed a significant decrease in pain levels as well.

**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 may lead to further exploration of the effects and benefits of manual manipulation therapy for patients with lumbar spinal stenosis. I do not believe this study provided any groundbreaking information regarding this topic due to the limitations listed above. I think this study may impact clinical practice on a smaller scale due to the limitations, however I believe clinicians could utilize the information provided to see if their patients with lumbar spinal stenosis benefit from manual therapy on an inter-session basis.