

Jul 09, 2025

Comparing Core Strengthening and Pilates Exercises for People with Low Back Pain

DOI

<https://dx.doi.org/10.17504/protocols.io.5qpvodnk7g4o/v1>

Mohammad Ramiz Uddin¹, Dr. Md. Feroz Kabir¹

¹Department of Physiotherapy and Rehabilitation, Jashore University of Science and Technology



Mohammad Ramiz Uddin

Department of Physiotherapy and Rehabilitation, Jashore Univ...

Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account

OPEN  ACCESS



DOI: <https://dx.doi.org/10.17504/protocols.io.5qpvodnk7g4o/v1>

Protocol Citation: Mohammad Ramiz Uddin, Dr. Md. Feroz Kabir 2025. Comparing Core Strengthening and Pilates Exercises for People with Low Back Pain. protocols.io <https://dx.doi.org/10.17504/protocols.io.5qpvodnk7g4o/v1>

License: This is an open access protocol distributed under the terms of the **Creative Commons Attribution License**, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Protocol status: Working

We use this protocol and it's working

Created: July 08, 2025

Last Modified: July 09, 2025

Protocol Integer ID: 221940

Keywords: Mechanical Low Back Pain, Core Strengthening, Pilates Exercise, A randomized Clinical trial., low back pain this randomized clinical trial, mechanical low back pain, pilates exercises for people, low back pain, pilates exercise, reducing pain, comparing core strengthening, strengthening exercise, core strengthening, core strength, efficacy of core, pain, core

Funders Acknowledgements:

Department of Physiotherapy and Rehabilitation, Jashore University of Science and Technology

Abstract

This randomized clinical trial aims to compare the efficacy of core strengthening exercises and Pilates exercises in reducing pain and improving function in individuals with mechanical low back pain. We expect both interventions to be effective, with potential differences in outcomes related to core strength, disability, and quality of life.

Attachments



[Protocol Summary.doc...](#)

20KB



[Intervention Plan.do...](#)

50KB

Materials

Primary Outcome:

1. Core Muscle Strength: Pressure Biofeedback

Secondary Outcome:

1. Pain (VAS)
2. Functional Disability (ODI)
3. Quality of Life (SF-36)

Protocol references

- Kim, B., & Yim, J. (2020). Core Stability and Hip Exercises Improve Physical Function and Activity in Patients with Non-Specific Low Back Pain: A Randomized Controlled Trial. *TheTohoku Journal of Experimental Medicine*, 251(3), 193–206. <https://doi.org/10.1620/tjem.251.193>
- Bhadauria, E. A., & Gurudut, P. (2017b). Comparative effectiveness of lumbar stabilization, dynamic strengthening, and Pilates on chronic low back pain: randomized clinical trial. *Journal of Exercise Rehabilitation*, 13(4), 477–485. <https://doi.org/10.12965/jer.1734972.486>
- 03.Kavcic, N., Grenier, S., & McGill, S. M. (2004d). Quantifying tissue loads and spine stability while performing commonly prescribed low back stabilization exercises. *Spine*, 29(20), 2319–2329. <https://doi.org/10.1097/01.brs.0000142222.62203.67>
- 04. Hyun, J., Hwangbo, K., & Lee, C. (2014). The effects of pilates mat exercise on the balance ability of elderly females. *Journal of Physical Therapy Science*, 26(2), 291–293. <https://doi.org/10.1589/jpts.26.291>
- 05. Pollard, C. D., Sigward, S. M., & Powers, C. M. (2009b). Limited hip and knee flexion during landing is associated with increased frontal plane knee motion and moments. *Clinical Biomechanics*, 25(2), 142–146. <https://doi.org/10.1016/j.clinbiomech.2009.10.005>

Acknowledgements

We would like to express our sincere gratitude to the Department of Physiotherapy and Rehabilitation at Jashore University of Science and Technology (JUST) for partially funding this study. We also thank the faculty members, clinical staff, and all participants whose support and cooperation were essential to the successful execution of this research.