

The Feldenkrais Method and Mechanical Low Back Pain: A Narrative Review

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Abstract:

Background: Feldenkrais Method (FM) is based on learning alternative movement patterns in an active and conscious way. It has been investigated for its effects on chronic low back pain (CLBP).

Purpose: This narrative review aims to summarize the evidence regarding the effects of FM on mechanical low back pain (MLBP), from the literature. Moreover, to figure out the extent of improvement in pain, disability, quality of life, and interoceptive awareness among individuals with CLBP following FM interventions.

Methods: We used a search strategy to search for related articles in different research databases, then we performed screening and data extraction .

Conclusion: Based on the literature, the Feldenkrais Method appears to be a promising intervention for MLBP and chronic nonspecific low back pain. Particularly effective in enhancing quality of life, reducing disability, and improving interoceptive awareness. While its effect on pain intensity compared to other exercises warrants further investigation, its unique approach focusing on conscious movement and mind-body connection offers distinct benefits. FM is considered a mind-body approach; it has been suggested to have therapeutic effects comparable to other physiotherapy techniques for spine pain.

Keywords: Awareness through movement; Feldenkrais Method; Low back pain.

INTRODUCTION

Low back pain (LBP) is a prevalent and disabling condition globally [1]. A recent study found the prevalence of low back pain in Egyptian physicians is 82.5% [2]. Mechanical low back pain (MLBP) and chronic nonspecific low back pain (CNSLBP), defined as pain between the lower ribs and gluteal folds lasting three months or longer without a specific identifiable cause, represent a significant health challenge with substantial socioeconomic impact [3-5]. Psychosocial factors are recognized as important determinants in the occurrence and recurrence of LBP.

Traditional treatments like pharmacological and surgical interventions are less emphasized in current guidelines, exercise therapy is a priority, and complementary medicine approaches are recommended [6,7]. The high prevalence and disabling effects of LBP underscore the need for effective complementary treatment approaches [6]. The Feldenkrais Method (FM) is one such approach that has been explored for its potential benefits in managing chronic pain conditions, including LBP [6,8-11,13].

This narrative review was conducted by using different sources including randomized controlled trials and systematic reviews investigating interventions for mechanical and non-specific low back pain, with a specific focus on studies discussing FM. Information related to the definition of LBP, other treatment modalities, and the specific findings regarding the Feldenkrais

Method's effects on pain, disability, quality of life, and interoceptive awareness were included.

One type of teaching approach is the Feldenkrais technique. People learn on their own through sensorimotor exercises and exploratory movement techniques, enabling them to identify the most suitable and painless way to move their bodies. Correcting bad posture is the goal to lessen the pain. In the Feldenkrais technique, motor learning is accomplished by external emphasis of attention, the trainer's verbal instruction [6].

FM is a unique, multi-dimensional approach that addresses the interrelation of thinking, feeling, sensing, and doing. It is characterized as an exploratory learning process based on dynamic systems principles, where participants learn through movement exploration rather than being taught specific strategies. This emphasis on self-awareness and self-organization distinguishes it from most mainstream approaches. The method is taught through Awareness Through Movement (ATM) and Functional Integration (FI) [21].

FM is presented as a technique focused on the conscious learning of alternative movement patterns, with potential therapeutic applications [8]. It is described as a mind-body approach that may address the psychological and social dimensions of low back pain [6]. FM encourages attentional focus in motor learning and mindful movement [12]. The method may be delivered in group settings for chronic pain [21]. .

MATERIALS AND METHODS

Study design

Narrative review for the recent publications including randomized controlled trials and systematic reviews.

Search strategy

We used the following keywords to investigate the literature from 2016 to April 2025. ((“Feldenkrais method” OR “Awareness through movement” OR “FM”) AND (“back pain” OR “Low back pain” OR “LBP”)). We searched the following databases; PubMed, Cochrane library, Web of Science, PEDro, and Scopus.

Treatment procedures

Awareness through movement (Feldenkrais Method) compared to other traditional treatments.

RESULTS

After searching the literature, we screened the elicited records using abstract and full text filtration. Then, we included 4 studies in our review. Eventually, we extracted the relevant data from the included publications.

Table 1. Study design and conclusion from included papers

Author and Year	Study design	Number of participants	Population	Conclusion
Berland et al., 2022	Systematic Review and Meta-analysis	139	Chronic low back pain	Pain, quality of life, disability and interoceptive awareness were significantly improved in the Feldenkrais groups
Sivanandam et al., 2021	RCT	110	Non specific mechanical low back pain	No statistically significant difference, as both groups were equally effective.
Ahmadi et al., 2020	RCT	60	Chronic low back pain	There were statistically significant differences between groups for quality of life, interoceptive awareness, and disability in favour of

				the Feldenkrais method
Paolucci et al., 2016	RCT	53	Chronic low back pain	Both groups experienced significant changes in pain and disability.

DISCUSSION

Several sources discuss the application of FM to low back pain [6,8-11,13]. Studies on individuals with chronic low back pain (CLBP) using FM have reported improvements in various outcomes, including pain, disability, quality of life, and interoceptive awareness [6,8].

A specific randomized controlled trial evaluated the effects of FM compared to core stability exercises (CSE) in patients with CNSLBP. The FM intervention involved theoretical content training and supervised exercise sessions, while the control group received an educational program and home-based CSE. This study found statistically significant advantages for the FM group over the CSE group in improving quality of life, increasing interoceptive awareness, and decreasing the disability index. Although both groups experienced significant reductions in their McGill pain scores, the difference in pain reduction between the FM and CSE groups was not statistically significant. The study also assessed the recruitment of transverse abdominis muscle using ultrasound, but FM did not demonstrate better outcomes for abdominal musculature compared to CSE, despite the observed clinical improvements in other areas [6].

Interoceptive awareness is considered an important factor in patients with low back pain [6,8]. It has been suggested that educating patients to take responsibility for their spinal health can enhance the success rate of treatment with methods like FM [6].

A systematic review concluded that the available evidence indicates the Feldenkrais Method provides therapeutic effects comparable to other physiotherapy techniques for spine pain [8]. FM has also been referenced in systematic reviews examining various exercise types and outcome measurement tools for neck and low back pain [10-11,19].

One randomized controlled trial comparing FM to CSE in patients with CNSLBP found that FM provided greater benefits in improving quality of life, interoceptive awareness, and reducing disability index. Pain reduction was significant in both groups in this study, but there was no statistically significant difference between FM and CSE regarding pain intensity [6].

Beyond the Feldenkrais Method, other interventions for mechanical and non-specific LBP include lumbar stabilization exercises (LSEs), which are considered beneficial for CNSLBP [5,15]. Combining LSEs with Kinesio tape has shown additional benefits for reducing disability

and pain intensity [15]. Manual therapy techniques such as the Mulligan concept (SNAGS, NAGS) have demonstrated positive outcomes in terms of pain, disability, and range of motion (ROM), particularly in obese patients with MLBP [16].

Aerobic exercise is also considered an effective intervention for CNSLBP [4,6,20], as are resistance exercises [4,17]. Cognitive functional therapy, which integrates cognitive, behavioral, and physical aspects, is highly effective in improving pain and functional disability caused by CNSLBP [17]. Other interventions mentioned include the McKenzie and Back school programs [18]. Low load motor control exercises are commonly used by physical therapists to correct motor control deficiencies and retrain movement patterns. General exercises are also recognized as effective [1].

Based on the available evidence, the Feldenkrais Method demonstrates potential as a beneficial intervention for individuals with CNSLBP. This method appears particularly effective in reducing chronic pain in a different population, improving patients' quality of life, reducing their reported disability, enhancing interoceptive awareness, and improving balance [14,22,23]. While its impact on pain intensity may be comparable to other exercise interventions, the unique emphasis on conscious movement learning and the mind-body connection inherent in the Feldenkrais Method offers distinct advantages. Future research, ideally with larger sample sizes [6], is recommended to further explore these effects and potentially clarify comparative effectiveness across various outcomes.

References

1. Michaelson P, Holmberg D, Aasa B, Aasa U. High load lifting exercise and low load motor control exercises as interventions for patients with mechanical low back pain: A randomized controlled trial with 24-month follow-up. *Journal of Rehabilitation Medicine*. 2016;48(5):456–63.
2. Gouda NA, Bendary MM, Abdelrahman AI. Prevalence and Associated Factors of Low Back Pain among Physicians in Egypt. *Egyptian Journal of Hospital Medicine*. 2024;97(1):3780–7.
3. Rosenstein B, Burdick J, Roussac A, Rye M, Naghdi N, Valentin S, et al. The assessment of paraspinal muscle epimuscular fat in participants with and without low back pain: A case-control study. *Journal of Biomechanics*. 2024 Jan; 163:111928.
4. Herrero P, Val P, Lapuente-Hernández D, Cuenca-Zaldívar JN, Calvo S, Gómez-Trullén EM. Effects of Lifestyle Interventions on the Improvement of Chronic Non-Specific Low Back Pain: A Systematic Review and Network Meta-Analysis. *Healthcare*. 2024 Feb 20;12(5):505.
5. Smrcina Z, Woelfel S, Burcal C. A Systematic Review of the Effectiveness of Core Stability Exercises in Patients with Non-Specific Low Back Pain. *International Journal of Sports Physical Therapy*. 2022 Aug 1;17(5):766–74.
6. Ahmadi H, Adib H, Selk-Ghaffari M, Shafizad M, Moradi S, Madani Z, et al. Comparison of the effects of the Feldenkrais method versus core stability exercise in the management

- of chronic low back pain: a randomised control trial. *Clinical Rehabilitation*. 2020 Jul 29;34(12):1449–57.
7. Alhowimel AS, Alotaibi MA, Alenazi AM, Alqahtani BA, Alshehri MA, Alamam D, et al. Psychosocial Predictors of Pain and Disability Outcomes in People with Chronic Low Back Pain Treated Conservatively by Guideline-Based Intervention: A Systematic Review. *Journal of Multidisciplinary Healthcare*. 2021 Dec; Volume 14:3549–59.
 8. Berland R, Marques-Sule E, Marín-Mateo J, Moreno-Segura N, López-Ridaura A, Sentandreu-Mañó T. Effects of the Feldenkrais Method as a Physiotherapy Tool: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *International Journal of Environmental Research and Public Health*. 2022 Oct 22;19(21):13734.
 9. Murali S, Manogna S, Daniel P. Effectiveness of feldenkrais exercises and core stability exercises with conventional physiotherapy in non-specific mechanical low back pain among home makers -a randomised controlled trial. *International journal of creative Research Thoughts*. 2021;9(5):2320–882.
 10. Paolucci T, Zangrando F, Iosa M, De Angelis S, Marzoli C, Piccinini G, et al. Improved interoceptive awareness in chronic low back pain: a comparison of Back school versus Feldenkrais method. *Disability and Rehabilitation*. 2016 May 23;39(10):994–1001.
 11. Mohan V, Paungmali A, Sitalertpisan P, Henry LJ, Mohamad NB, Kharami NNB. Feldenkrais method on neck and low back pain to the type of exercises and outcome measurement tools: A systematic review. *Polish Annals of Medicine*. 2017 Feb;24(1):77–83.
 12. Mattes J. Attentional Focus in Motor Learning, the Feldenkrais Method, and Mindful Movement. *Perceptual and Motor Skills*. 2016 Aug;123(1):258–76.
 13. Smith AL, Kolt GS, McConville JC. The Effect Of The Feldenkrais Method On Pain And Anxiety In People Experiencing Chronic Low Back Pain [Internet]. *New Zealand Journal of Physiotherapy*; 29(1): 6-14. 2015
 14. Lundqvist LO, Zetterlund C, Richter HO. Effects of Feldenkrais Method on Chronic Neck/Scapular Pain in People With Visual Impairment: A Randomized Controlled Trial With One-Year Follow-Up. *Archives of Physical Medicine and Rehabilitation*. 2014 Sep;95(9):1656–61.
 15. Elabd AM, Elabd OM. Efficacy of kinesio tape added to lumbar stabilization exercises on adult patients with mechanical low back pain: A randomized, single-blind clinical trial. *Journal of Bodywork and Movement Therapies*. 2024 Jul; 39:218–24.
 16. Cankaya MS, Pala OO. Outcomes of Mulligan Concept Applications in Obese Individuals with Chronic Mechanical Low Back Pain: A Randomized Controlled Trial. *Life*. 2024 Jun 13;14(6):754.
 17. Khodadad B, Letafatkar A, Hadadnezhad M, Shojaedin S. Comparing the Effectiveness of Cognitive Functional Treatment and Lumbar Stabilization Treatment on Pain and Movement Control in

- Patients With Low Back Pain. *Sports Health*. 2019 Dec 16;12(3):289–95.
18. Chidozie E, Mbada. Influence of Mckenzie protocol and two modes of endurance exercises on health-related quality of life of patients with long-term mechanical low-back pain. *Pan African Medical Journal*. 2014; 17:5.
 19. Verrel J, Almagor E, Schumann F, Lindenberger U, Kühn S. Changes in neural resting state activity in primary and higher-order motor areas induced by a short sensorimotor intervention based on the Feldenkrais method. *Frontiers in Human Neuroscience*. 2015 Apr 28;9.
 20. Fernández-Rodríguez R, Álvarez-Bueno C, Cavero-Redondo I, Torres-Costoso A, Pozuelo-Carrascosa DP, Reina-Gutiérrez S, et al. Best Exercise Options for Reducing Pain and Disability in Adults with Chronic Low Back Pain: Pilates, Strength, Core-Based, and Mind-Body. a Network Meta-analysis. *Journal of Orthopaedic & Sports Physical Therapy*. 2022 Aug;52(8):505–21.
 21. Stephens J, Hillier S. Evidence for the Effectiveness of the Feldenkrais Method. *Kinesiology Review*. 2020 Aug 1;9(3):228–35.
 22. Hillier S, Worley A. The Effectiveness of the Feldenkrais Method: A Systematic Review of the Evidence. *Evidence-Based Complementary and Alternative Medicine*. 2015; 2015:1–12.
 23. Berenshteyn Y, Gibson K, Hackett GC, Trem AB, Wilhelm M. Is standing balance altered in individuals with chronic low back pain? A systematic review. *Disability and Rehabilitation*. 2018 Jan 30;41(13):1514–23.