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Review article

Feldenkrais method on neck and low back pain to the type of exercises and outcome measurement tools: A systematic review

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ABSTRACT

Introduction: Feldenkrais method (FM) has been applied on a large number of people as an educational method to create awareness of themselves and of their own body postures. Despite several existing FM studies, there has not yet been a review of FM in the context of musculoskeletal disorders.

Aim: This review aimed at determining the effect, type of exercises, duration and the outcome measure utilized in assessing the FM among individuals with neck and low back pain (LBP).

Material and methods: Four databases were searched for eligible studies, which were published in the years 1999–2015. Two authors individually assessed selected studies. From a total of 165 articles, 3 articles were selected and another 1 article from other resources with a total of 4 articles.

Results and discussion: The number of participants in all of the four included studies were 65.5 ± 30.1 (mean ± SD). The quality of the studies that was assessed using Physiotherapy Evidence Databases (PEDro) scale revealed the score of at least 5/10. Evidence exists that FM may be used for treating musculoskeletal disorders. However, the studies were not enough to make a decision because of different selections of FM lessons, duration and outcome measures. The review also determined type of exercises and outcome utilized in assessing the benefit of FM.

Conclusions: Overall, judging from the increasing number of articles in recent years related to FM, this review reports sufficient evidence that FM is increasingly being used in the management of neck pain and LBP.

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1. Introduction

An art of movement that is learned through the self-realization method with minimal effort and maximal efficiency is referred as Feldenkrais method (FM), commonly known as 'Feldenkrais'.[1–3] The instructional methods and its learning process are consequently labeled as a pedagogical method.[4] This method, which was founded by Moshe Feldenkrais, basically applied self-realization technique for his own injury through the observation of how children learn to walk.[2] Hence, it can be alleged that this method of lessons is based on developmental movements.[1] In addition, the lessons are also based on functional activities, and abstract exploration of joint, muscle and postural relationships.[1]

One of the core principles of FM is to develop the people's proprioceptive and kinesthetic awareness through a guided session by a teacher, thereby exploring an appropriate way of moving the body or correcting abnormal habitual posture.[2] The FM includes two modes of instruction, in which the first technique is referred as awareness through movement (ATM) and the second technique is referred as functional integration (FI).[1,2,5] Each session of the self-awareness method is termed as 'lesson', which optimally could last for about 35–45 min.[1,2] ATM lessons are taught as group lessons whereas individual lessons are termed as FI.[1,2]

The FM lessons were taught to inspect reduction in pain, promote balance, mobility, gait and reducing anxiety levels, which were carried on healthy adult populations, elderly, and those with neurological, respiratory and musculoskeletal disorders.[6–9] These available evidences seem to suggest that the FM lessons can be applied to a wide range of populations to acquire the desirable benefit. A recent systematic review by Hillier and Worley has concluded that there is promising evidence that the FM may be effective for a varied population interested in improving balance measures.[10] In addition, an earlier systematic review published by Ernst and Canter also concluded that there was favorable evidence but the credibility of the studies was lowered by less number of studies.[11] The above two systematic reviews specifically looked into the effectiveness, the nature and order of magnitude of beneficial effects following FM collectively on the elderly, and those with neurological and musculoskeletal disorders. One of the greatest challenges of these reviews is that they do not focus on a particular population and that could be the reason definite conclusive results were not produced. Hence, there is a need to focus on particular disorders to know the effectiveness of FM.

In this context, musculoskeletal disorders such as neck and low back pain (LBP) were considered to be one of the most commonly encountered clinical conditions among working people such as health care professionals, academicians and agricultural workers.[12–14] Hence, appropriate management strategies are necessary to manage musculoskeletal disorders within wide range of populations. Even though a variety of treatment options are available to manage musculoskeletal disorders, no particular treatment option is superior to the others apart from exercise therapy in the care of neck and back pain.[15–17] Therefore, it is often challenging to achieve justifiable management effects with one particular treatment. In this perspective, FM lessons, which are gaining popularity, are suggested to be an alternative therapy in musculoskeletal rehabilitation for correcting the movement pattern.[18]

To our knowledge, in the past two decades, two systematic reviews have been seeking to determine the effect of Feldenkrais.[10,11] However, none of the reviews focused specifically on musculoskeletal disorders and FM. Hence, it is appropriate to systematically review on the evidence on FM on these special populations. In addition, there is very little scientific understanding on types of approaches, whether ATM or FI to be selected as a mode of lessons for FM education. To date, this component has received scant attention in the research literature. A search of the literature revealed only few studies have been carried out on musculoskeletal disorders and FM which also shows inadequacies in the outcome measure used. The present systematic review, attempts to review the research in the field of musculoskeletal disorders and its effectiveness to FM.

2. Aim

The specific objective of this systematic review was to identify which types of approaches were commonly being used in FM educational program and to identify a range of outcome measures used among those who performed FM education program with musculoskeletal disorders.

3. Materials and methods

3.1. *Search strategies for identification of articles*

We comprehensively searched through the electronic online databases such as SCOPUS, PubMed, Science Direct, Taylor and Francis from 1st January 1999 to 22nd December 2015. A range of keywords for our search were: #1 (Feldenkrais) OR #2 (feldenkrais) AND #3 (musculoskeletal disorders) OR #4 (neck pain) OR #5 (low back pain). To complement the systematic search, hand search was executed by reviewing the reference lists of all the included studies. The systematic search strategy was restrained to literatures written in English.

3.2. *Type of studies*

Two reviewers (VM and AP) independently selected the eligible studies based on the inclusion and exclusion criteria as set by the study protocol. All quantitative studies that investigated FM in patients with musculoskeletal disorders were considered for inclusion in this review process in order to explore the effect and the type of FM and to identify the outcome measures used in the studies. Articles such as systematic review, semi-systematic review, commentaries, letter to editor, conference abstracts and animal studies were excluded from this systematic review process.

3.3. *Type of participants and outcomes*

All studies had to be carried on either the neck or LBP meaning that studies that used other than neck and low back problems

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