

ABSTRACT

The Role of the Lumbar Multifidus in Manual Therapy In Patients with Chronic Low Back Pain And Lumbar Segmental Instability

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Purpose

The purpose of this study was to induce an organizational structure from the large and rapidly growing body of literature on the role of the lumbar multifidus in Manual Therapy for chronic low back pain and lumbar segmental stability.

Methodology

The research design employed in this study was an Extensive Literature Review, in which the researcher conducted an exhaustive search for all the literature pertaining to the purpose of the study.

Sources and kinds of data included articles identified through a search of the MEDLINE database, plus articles appearing in the bibliographies of these MEDLINE articles, proceedings from professional meetings, and journals and books identified through the database but that were not included in the database themselves.

Analysis of the data involved three steps: First, once copies of the articles were obtained, they were divided into three groups: opinion articles, literature reviews, and experimental studies, with the experimental studies being further divided into descriptive and control. Second, within each of these three methodological groupings, the literature was organized into the smallest number of primary, secondary, and tertiary categories that encompassed all of the articles within the groups. Third, synopses were written for each of the articles in each of the three groups.

Findings

The organizational structure induced from the analysis of the data consists of five primary categories: Anatomy, Biomechanics, Proprioception/Neural Coordination, Role in Chronic Low Back Pain, and Role in Segmental Stability.

Secondary and tertiary categories within the Anatomy category included Gross Anatomy, with tertiary categories of Normal and Pathological; and Histological, with tertiary categories of Muscle Spindles and Mechanoreceptors, Metabolism and Fiber Types, and Pathological.

Secondary categories in both the Biomechanics and Proprioception/Neural Coordination categories included Normal Findings and Pathological Findings.

Secondary categories in the Role in Chronic Low Back Pain category included Exercise, Muscle Activity and Electromyographic Studies, Strength and Endurance Studies, and Case Studies; while secondary categories in the Role in Segmental Instability category included Measuring and Describing Segmental Instability and Factors Contributing to Segmental Instability.

Conclusions

The organizational structure induced through this extensive literature review can help clinicians more easily digest the vast amount of information available to them on the role of the lumbar multifidus in Manual Therapy so they can better treat patients with chronic low back pain and lumbar segmental instability. Further, with the existing literature now organized into an efficient framework, future research on this topic can be designed to improve the quantity and quality of information available. Finally, the structure can also serve as a framework to facilitate the allocation of literature that becomes available in the future.