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EFFECTS OF SPINAL MANIPULATION AND/OR DRY NEEDLING/ACUPUNCTURE ON NON-SPECIFIC LOW BACK PAIN: A SYSTEMATIC REVIEW

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ABSTRACT

Background: Low back pain, especially non-specific low back pain (NSLBP) is a big challenge to healthcare professionals including physical therapists. Physical Therapists employ varying modalities including spinal manipulation when treating NSLBP. Recently, there is a huge interest and use of drying needling/acupuncture in the management of NSLBP. However, there are limited studies in the literature that examined and compared the efficacy of spinal manipulation and or dry needling/acupuncture in the management of low back pain (LBP).

Objective: The purpose of this systematic review is to examine and compare the efficacy of spinal manipulation and/or dry-needling/acupuncture for the treatment of NSLBP. **Methods**: An electronic search of Embase and Pubmed were performed to collect randomized control trials. Studies were included with the following criteria: 1) human trials, 2) published in English, 3) participants were adults eighteen years and older with NSLBP, and 4) comparisons of spinal manipulation and/or dry-needling/acupuncture. The PEDro scale was used to assess the risk of bias of each study included in this systematic review. **Results**: The electronic search resulted in 381 potential articles, five meeting the criteria. Three out of the five studies show spinal manipulation provides superior outcomes with having significant P-values for Oswestry Disability Index (p-values between 0.0004 - 0.01), Visual Analog Scale (p-values between 0.0001- 0.005), and Short Form-36 (P-values between <0.001 - 0.006). Risk of bias was assessed using the PEDro scale which determined two articles to be high-quality (≥7/10), two moderate quality (5-6/10), and one poor quality (≤4/10). **Conclusion**: Three out of the five studies showed spinal manipulation provides superior outcomes with having significant p-values when compared to DN/acupuncture. In one of the studies, both manipulation and acupuncture were equally effective in the management of LBP with no superiority of either of the interventions. It is suggested that in the management of NSLPB, spinal manipulation should be considered as first option or be considered in the arrays of other therapeutic interventions. The authors suggest that clinical trials at a larger scale to be conducted to validate a better efficacy of spinal manipulation compared to dry needling/acupuncture and whether there is any synergy between them when treating NSLBP.

Keywords: Manipulation, acupuncture, back pain, spine, dry needling

INTRODUCTON

Low back pain (LBP) affects millions of people all over the world and it is a major financial burden on the health care system [6]. The effects of low back, chronic low back pain in particular could be more devastating in economically active age groups [7]; could lead to socio-economic problems including but not limited to, long term disability and absence from work leading to reduced work force [8,9]. In the United States alone, the cost of ambulatory service for LBP is projected to be as high as $35.7 billion [10].