

ORIGINAL RESEARCH

THE EFFECTIVENESS OF DRY NEEDLING AND STRETCHING VS. STRETCHING ALONE ON HAMSTRING FLEXIBILITY IN PATIENTS WITH KNEE PAIN: A RANDOMIZED CONTROLLED TRIAL

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ABSTRACT

Background: Recently, dry needling has emerged as a popular treatment for muscular pain and impairments. While there are numerous studies detailing the benefits of dry needling for pain, few studies exist examining the effects on soft tissue mobility.

Purpose: The purpose of this study was to determine if the addition of hamstring dry needling to a standard stretching program results in greater improvements in hamstring flexibility compared to sham dry needling and stretching in subjects with atraumatic knee pain. Additionally, squat range of motion, knee pain, and the Lower Extremity Functional Scale were compared between the two groups.

Study Design: Double blinded randomized controlled trial.

Methods: Thirty-nine subjects were randomized to receive either dry needling (n = 20) or sham (n = 19) dry needling in addition to hamstring stretching, to all detected hamstring trigger points on two visits. All dependent variables were measured at baseline, immediately post intervention, and 1, 3, and 7 days after the initial treatment. Each subject also performed hamstring stretching three times daily for one week.

Results: Significant improvements in hamstring range of motion and all other dependent variables were observed across time regardless of treatment group. However, the lack of significant time by group interactions indicated the improvements were not different between dry needling and sham dry needling groups.

Conclusions: The results of the current randomized controlled trial suggest that two sessions of dry needling did not improve hamstring range of motion or other knee pain-related impairments more than sham dry needling in a young active population with atraumatic knee pain.

Level of Evidence: Therapy, Level 2

Keywords: Flexibility, lower extremity, trigger point

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The opinions or assertions contained herein are the private views of the authors and are not to be construed as official or as reflecting the views of the United States Army or the Department of Defense.

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