The Effectiveness of Thoracic Spine Manipulation Therapy on Shoulder Pain, Range of Motion, and Muscle Strength.
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Thoracic spinal vertebra have recently been thought to be a potential cause of shoulder pain. The purpose of this study was to determine the effects of thoracic spine manipulation on shoulder pain, range of motion (ROM), and muscle strength. Measures were assessed using a visual analog scale, standard goniometer and Lafayette Manual Muscle Testing System. Participants were divided into two groups; those with and those without shoulder pain. Each group was further subdivided into either a manipulation or sham manipulation group using simple random sampling without replacement. Measurements were taken pre-manipulation, immediate post-manipulation, and one-week post manipulation. Thirty subjects (21 females, nine males) with an average age of 24.9 (+ 5.3) years participated in the study. Eleven subjects reported pain in one or both shoulders while 19 subjects reported no pain. No individuals reporting pain had pre-existing shoulder pathologies. The reduction of pain, change in ROM, and change in strength were all shown to be insignificant (p>.05) both immediately and one week following the manipulation or sham manipulation. Although the results did not statistically prove the value of a thoracic manipulation, further research is needed to determine if specific shoulder pathologies might respond to a thoracic manipulation.