

The Effects of Increased Inspiratory Muscle Strength Through Breathing Resistant Devices on Chronic Lower Back Pain in a Population of 18 - 40 Years of Age.

Todd Blanchat, Blanca Delatorre, Lisha Lamb, Jimmy Ta
Faculty: Barbara Smith
Department of Physical Therapy, College of Health Professions

INTRODUCTION: The prevalence of an individual experiencing low back pain (LBP) ranges from 70-85% during their lifetime. Low back pain impacts patients in terms of unpleasant sensory and emotional experiences, activity restrictions, social restrictions, negative career influences, and financial burdens.

PURPOSE: The therapeutic intervention involved diaphragmatic exercises by use of blowing into a balloon while maintaining a certain position to optimize both posture and stabilization to decrease pain.

METHODS: Blast emails containing a Qualtrics survey were employed. Participants were those who had LBP persisting for three months or longer, ages between 18 to 40, and ability to perform the exercises. All participants who qualified were sent a consent form, pre- and post-intervention measures of the Modified Oswestry Low Back Pain Disability Questionnaire and Brief Pain Inventory-Short Form. Protocol and group assignments were determined using a random number generator. Three groups were utilized; two experimental groups involving a “Ball and Balloon Method” in supine or 90/90 hip and knee position, and a control group.

RESULTS: Only six participants completed the study. We had expected to find improvement of LBP in the experimental group assigned to using breathing-resistant devices with the 90/90 hip and knee exercise position. Individual data will be analyzed instead.

CONCLUSION: Subsequent analysis may show decreased disability and pain through the “Ball and Balloon Method.” Further research to determine exercise interventions that are more favorable and viable for this population are warranted.