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## **A PRELIMINARY STUDY TO EVALUATE POSTURAL IMPROVEMENT IN SUBJECTS WITH SCOLIOSIS: ACTIVE THERAPEUTIC MOVEMENT VERSION 2 DEVICE AND HOME EXERCISES USING THE MULLIGAN'S MOBILIZATION-WITH-MOVEMENT CONCEPT**

Lewis, C., Diaz, R., Lopez, G., Marki, N. and Olivio, B., 2014. A Preliminary Study to Evaluate Postural Improvement in Subjects With Scoliosis: Active Therapeutic Movement Version 2 Device and Home Exercises Using the Mulligan's Mobilization-With-Movement Concept. *Journal of manipulative and physiological therapeutics*, 37(7), pp.502-509.

### **Setting the scene:**

In this preliminary study they aim to determine if the use of **Active Therapeutic Movement Version 2 (ATM2) device** and **home exercises** using the **Mulligan's mobilization-with-movement concept** by subjects with scoliosis would result in postural improvement and to document any changes in trunk range of motion and quality of life.

### **What did they do?**

They get **43 subjects** each of them underwent a low back evaluation along with specific measurements for their **scoliosis** then they participate in **4-week intervention, 2 times a week** consisting of treatment utilizing the ATM2 and were also given a home exercise program to mimic the specific movement(s) they performed on the ATM2, posture assessed by Photographic assessment and they use **Fear Avoidance Belief Questionnaire, Short-Form Health Survey-36, Oswestry Disability Index, and a Numeric Pain Rating Scale** as an outcome measures.

Subjects **improvement in spinal ranges of motion for all directions except for flexion and extension**. Most subjects had improved pelvic alignment after the intervention. Before and after photographs demonstrated **improved posture**. Subjective measurements of pain, disability, and quality of life improved.

**Takeaway message:**

The use of ATM2 and home exercises using the Mulligan's mobilization-with-movement concept by subjects with scoliosis improve pain, disability, quality of life, and posture.