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The Effect of Lumbar Spinal Manipulation upon Local and Remote Deep and Superficial Pain Perception – Summary for Participants

Student researcher: Sasha Dorrón

Supervisors: Dr Barrett Losco, Prof. Peter Drummond, & Assoc. Prof. Bruce Walker

Spinal manipulative therapy is a common manual therapy treatment for lower back pain. The objective of this study was to investigate whether spinal manipulation to the lower back affected two types of pain sensitivity (deep pressure and superficial pinprick) in various areas of the body, how they changed over 30 minutes, and whether any changes were different side to side.

We recruited 34 healthy individuals with an average age of 22 years. Each participant randomly received either a right or left lower back spinal manipulation. We measured sensitivity to pressure and to pinprick on both sides of the body at the calf, lower back, shoulder blade, and forehead. These were tested straight after the treatment, and after 10 minutes, 20 minutes, and 30 minutes.

We found that lower back manipulation led to reduced sensitivity to pressure pain in the lower back and calf after 10 - 20 minutes (by 7 - 12%), lasting until at least 30 minutes. Sensitivity to pinprick was also reduced in all the areas tested, but we think this is not a response to the manipulation. There were also small side to side differences.

The findings suggest that lower back spinal manipulation reduces deep pressure sensitivity in the lower back and leg for at least 30 minutes. It is the first study to observe these changes after lower back manipulation. The physiological explanation is unknown, though there are several theories. More research is needed to understand this effect.

We would like to thank the individuals who participated in this valuable research.