

### **“Acupressure for chronic low back pain: a single system study”**

#### **Abstract:**

Lower back pain is a condition that affects a large portion of people globally. It is a leading cause of global disability<sup>1</sup>. The purpose of this case is to determine the effectiveness of acupressure in treating chronic lower back pain. Acupressure is a manual application that could be used for the self-management of lower back pain. In this research case, they designed a single system study while utilizing an AB design. They used a convenience sample. For phase A: a subject would receive normal physical therapy interventions. Then in phase B: the subject received acupressure in supplement to traditional therapy interventions. In this study, their data indicates that supplementing physical therapy could reduce pain, increase function, and decrease disability.

#### **Introduction:**

Lower back pain can affect people of all ages and causes many people to seek medical help<sup>2</sup>. Acupressure is an ancient healing art, similar to acupuncture, it can be suitable for self-management. It doesn't require expensive equipment or a large space for treatment. The purpose of

this study is to research the effectiveness of integrating acupressure in treating chronic lower back pain.

#### **Case Presentation:**

For this case study the subject was recruited by sampling an outpatient physical therapy clinic. The criteria included adults between the ages of 18-65 in need of medical attention on their lower backs. Exclusion criteria included no lower back pain caused by infection, fractures, cancer, systematic disease, osteoporosis, or psychiatric disease, no neurological symptoms, herniation, or osteoarthritis of the spine, or treatments of acupressure or acupuncture in the past month, and no open wounds. The study was done in a single system study and used a two-phase AB design. In phase A, a subject would receive traditional physical therapy. In phase B, a subject would receive acupressure in addition to other physical therapies.

#### **Management and Outcome:**

One plan for treatments included; three 90 minute sessions in 2 weeks, traditional therapy in the first session, and acupressure and physical therapy in the last two. The traditional physical therapies included: stretching, strengthening, modalities, treadmill walking, and motorized mechanical traction. The acupressure points used during therapies included; LI 4, GB 31, and GB 34. The points were held for approximately 1 minute.

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<sup>1</sup> Hoy D, March L, Brooks P, et al.: The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis*, 2014, 73: 968-974. [Medline] [CrossRef]

<sup>2</sup> Hoy D, March L, Brooks P, et al.: The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis*, 2014, 73: 968-974. [Medline] [CrossRef]

The pain was measured using a Visual Analog Scale (VAS), the function was measured with Patient-Specific Functional Scale (PSFS), and disability was measured using a modified Oswestry disability Index (ODI). After each session the subject was measured. The subject reported a baseline of 38.8mm and decreased to 11.3 mm after phase A. After phase B the pain decreased significantly to 2.5 mm. When measuring the PSFS, the subject's function was 5/10 and remained the same after phase A, but increased to 9/10 after phase B. When measuring the ODI the subject indicated a moderate disability at 30%, after phase A it decreased to a minimal 14%, and after phase B it was completely resolved 0%.

### Discussion:

This study provides information on management of chronic lower back pain. It indicates that integrating acupressure in physical therapy could reduce pain, increase function, and decrease disability. This data is consistent with other studies.<sup>3,4,5</sup> Although there are limitations because

of the convenience sampling and the small sample size because of limited resources for researchers. This research does indicate results for using acupressure. Using acupressure, therapists can teach patients a technique to control their own pain, as it is relatively easy to learn key points.<sup>6</sup> Overall, this study supports similar studies done using acupressure on lower back pain.<sup>7</sup>

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<sup>3</sup> Yip YB, Tse SH: The effectiveness of relaxation acupoint stimulation and acupressure with aromatic lavender essential oil for non-specific low back pain in Hong Kong: a randomised controlled trial. *Complement Ther Med*, 2004, 12: 28-37. [Medline] [CrossRef]

<sup>4</sup> Hsieh LL, Kuo CH, Lee LH, et al.: Treatment of low back pain by acupressure and physical therapy: randomised controlled trial. *BMJ*, 2006, 332: 696-700. [Medline] [CrossRef]

<sup>5</sup> Hsieh LL, Kuo CH, Yen MF, et al.: A randomized controlled clinical trial for low back pain treated by acupressure and physical therapy. *Prev Med*, 2004, 39: J. Phys. Ther. Sci. Vol. 29, No. 8, 2017 1420 168-176. [Medline] [CrossRef]

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<sup>7</sup> Li-Hua Yang, Pei-Bei Duan, Qing-Mei Hou, Shi-Zheng Du, Jin-Fang Sun, Si-Juan Mei, Xiao-Qing Wang, "Efficacy of Auricular Acupressure for Chronic Low Back Pain: A Systematic Review and Meta-Analysis of Randomized Controlled Trials", *Evidence-Based Complementary and Alternative Medicine*, vol. 2017, Article ID 6383649, 14 pages, 2017. <https://doi.org/10.1155/2017/6383649>