



Jennifer Dionisio, MPH, MS , Rachel Contopoulos, JohnPaul Kwak, MS., Jacob Blitstein, and Victor Nuño, D.O.
College of Osteopathic Medicine
Touro University College of Osteopathic Medicine, Vallejo, CA.

**TAP TO GO BACK TO
KIOSK MENU**

Introduction:

Previous research has shown an increase in non-communicable diseases, including musculoskeletal conditions, in low-income countries. Osteopathic manipulative treatment (OMT) is a low-cost, safe and effective method for the treatment of chronic pain, which can be beneficial in countries with limited resources. The aim of this study is to assess somatic dysfunction, patient perceived improvement in pain, and change in attitude towards OMT pre- and post-treatment.

Hypothesis:

We hypothesize that OMT is an effective method for treating chronic pain and that patients will respond positively to treatment.

Materials and Methods:

This a pretest-posttest experimental study design. Treaters performed a focused history and osteopathic structural examination based on chief complaint(s). Using a short survey, pre- and post-treatment data were collected including demographics, attitude towards OMT and perceived pain using a Wong-Baker faces pain scale. Treaters reassessed for somatic dysfunction after treatment. Descriptive data analysis was performed using excel.

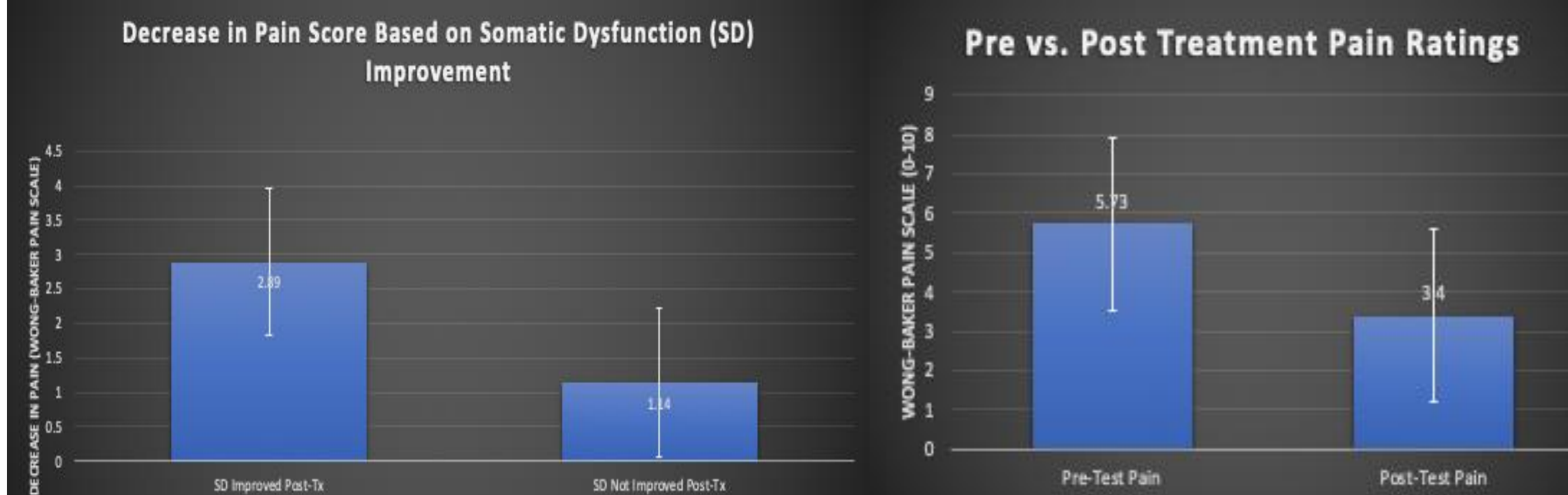
Setting:

The Touro University research team partnered with Shirati KMT district hospital to establish a free OMT station at the local market 2km away from the hospital. Data collection took place on June 10 & 17, 2019 and treatment was available to anyone present at the market. Translators briefed potential subjects on the purpose of the study and what to expect upon participation. Informed consent was obtained from participants.

Interventions:

There were a total of 30 participants recruited in the study. The most common chief complaint was back pain in the lumbar region. Osteopathic Manipulative Treatment techniques utilized include: soft tissue, counterstrain, muscle energy, balanced ligamentous tension, facilitated positional release, and myofascial release. Subjective pain scores and objective assessments of somatic dysfunction were collected pre- and post-treatment. Changes in attitude and knowledge about OMT was assessed. Statistical analysis was performed using a Paired Sample T-Test with alpha $\alpha = 0.05$. This method was used to compare the mean pre and post pain scores as reported by participants. It was also used to compare treater severity ratings of pre and post treatment somatic dysfunction, based on their osteopathic structural exam.

Results:



Average reported pain decreased from pre-treatment 5.73 (SD = 2.21) to post-treatment 3.40 (SD = 2.47) with a significant average decrease in pain of 2.33 ($p=0.0029 < \alpha=0.05$ $n=25$). There is a significant difference ($p=0.0377$, $\alpha=0.05$) in patient pain rating when comparing the group where treaters noted an improvement in somatic dysfunction (2.89 ± 1.97 ; $n = 18$) versus the group where treaters noted no improvement in somatic dysfunction (1.14 ± 1.07 ; $n = 6$). While only 20.7% of participants reported prior knowledge of OMT, 100% of participants reported they would be willing to receive OMT treatment again.

Conclusion:

Our results show a statistically significant objective improvement in patient's somatic dysfunction as well as subjective improvement in patient's pain level, suggesting OMT could be a valuable treatment for patients with chronic pain in Shirati. Despite having no prior knowledge of OMT, patients were very receptive and expressed desire to receive treatment again. Moreover, the palliative care team at the hospital was enthusiastic about learning techniques to provide patients with year-round care for pain management. Considering the cost and limited availability of pain medications in low-resourced areas, OMT could be the missing link to improving the health of local chronic pain patients.

Minimal research exists on the effectiveness of managing pain with OMT outside of the United States. Continued collaboration with Shirati KMT district hospital could take us towards a larger goal of establishing a self-sustaining clinic where people could receive OMT regularly to manage their pain.



Jennifer Dionisio, MPH, MS , Rachel Contopoulos, JohnPaul Kwak, MS., Jacob Blitstein, and Victor Nuño, D.O.
College of Osteopathic Medicine
Touro University College of Osteopathic Medicine, Vallejo, CA.

TAP TO GO BACK TO
KIOSK MENU

References:

1. Jerome, John A. "An Osteopathic Approach to Chronic Pain Management." *The Journal of the American Osteopathic Association*, vol. 117, no.5, 2017, p.306, doi: 10.7556/jaoa.2017.056.
2. Briggs, A. (2018, January 29). Reducing the global burden of musculoskeletal conditions. Retrieved from <http://www.who.int/bulletin/volume/96/517-204891/en/>
3. Licciardone, John. "The OSTEOPATHIC Trial Demonstrates Significant Improvement in Patients With Chronic Low Back Pain as Manifested by Decreased Prescription Rescue Medication Use." *The Journal of the American Osteopathic Association*, vol. 114, no. 7, 2014, pp. 528–529., doi:10.7556/jaoa.2014.103.
4. Noll, et al. "Benefits of Osteopathic Manipulative Treatment for Hospitalized Elderly Patients with Pneumonia." *The Journal of the American Osteopathic Association*, American Osteopathic Association, 1 Dec. 2000, jaoa.org/article.aspx?articleid=2092341.
5. Guiney, Peter A., et al. "Effects of Osteopathic Manipulative Treatment on Pediatric Patients With Asthma: A Randomized Controlled Trial." *The Journal of the American Osteopathic Association*, American Osteopathic Association, 1 Jan. 2005, jaoa.org/article.aspx?articleid=2093071&resultClick=1.

