

Summer 2018

Chronic Low Back Pain

Lascalles Williams

The College at Brockport, Lwill10@u.brockport.edu

Follow this and additional works at: https://digitalcommons.brockport.edu/research_posters



Part of the [Rehabilitation and Therapy Commons](#), and the [Sports Sciences Commons](#)

Recommended Citation

Williams, Lascalles, "Chronic Low Back Pain" (2018). *Posters@Research Events*. 19.
https://digitalcommons.brockport.edu/research_posters/19

This Book is brought to you for free and open access by Digital Commons @Brockport. It has been accepted for inclusion in Posters@Research Events by an authorized administrator of Digital Commons @Brockport. For more information, please contact kmyers@brockport.edu.



Exercise Treatments for *Chronic Non-Specific Low Back Pain*

A Systematic Review

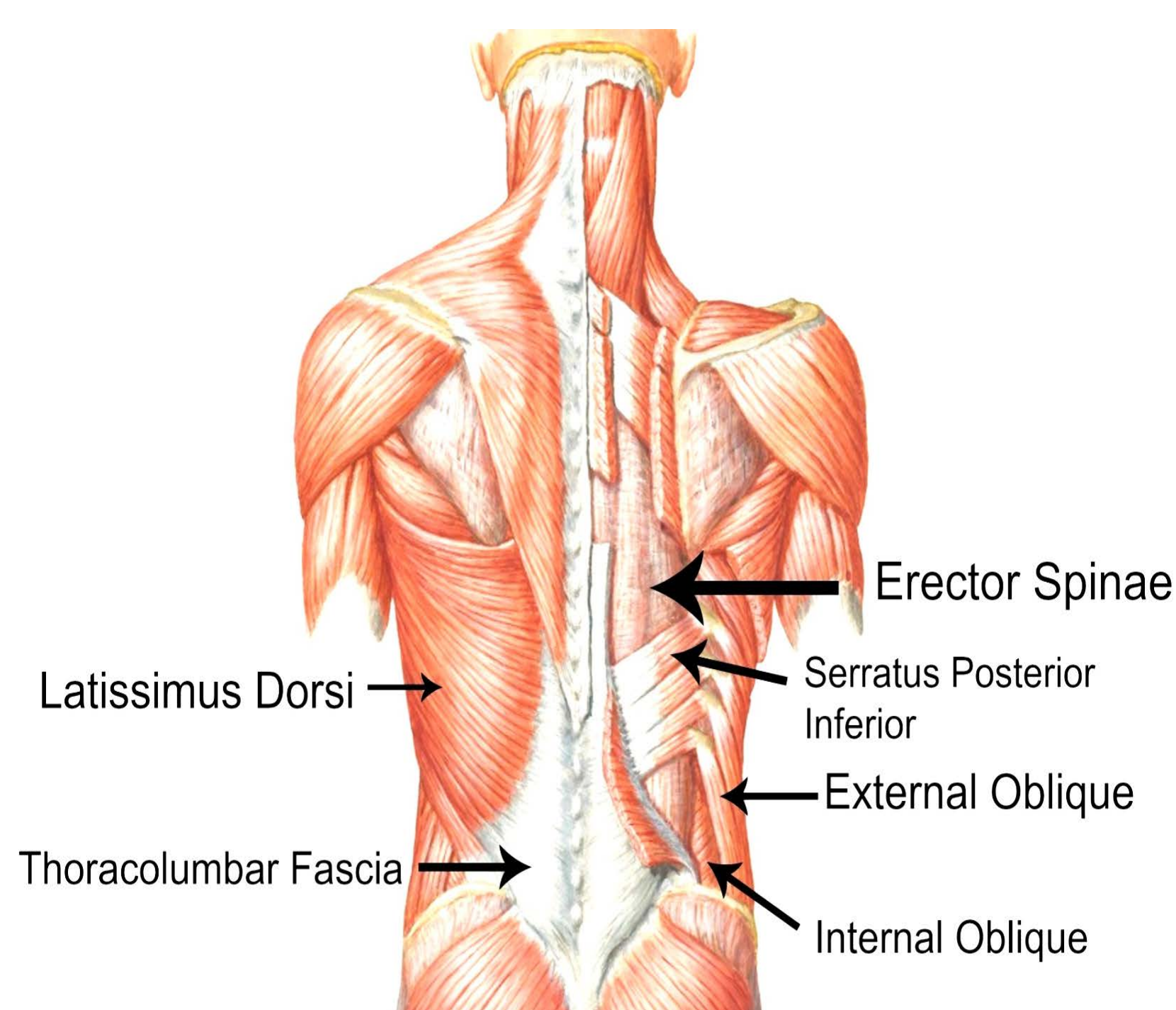
SUNY, The College at Brockport



Author: Lascelles Williams Jr. Mentor: Dr. Christopher Williams

Background

Chronic Low back pain (CLBP) is a condition relating to discomfort felt along the lumbar region of the spine. It is a rising problem across all populations, especially the newly aging. Nearly 80% of the Western Adult population suffer from low back pain at some point in their lives. The condition can be detrimental to one's well being and quality of life.



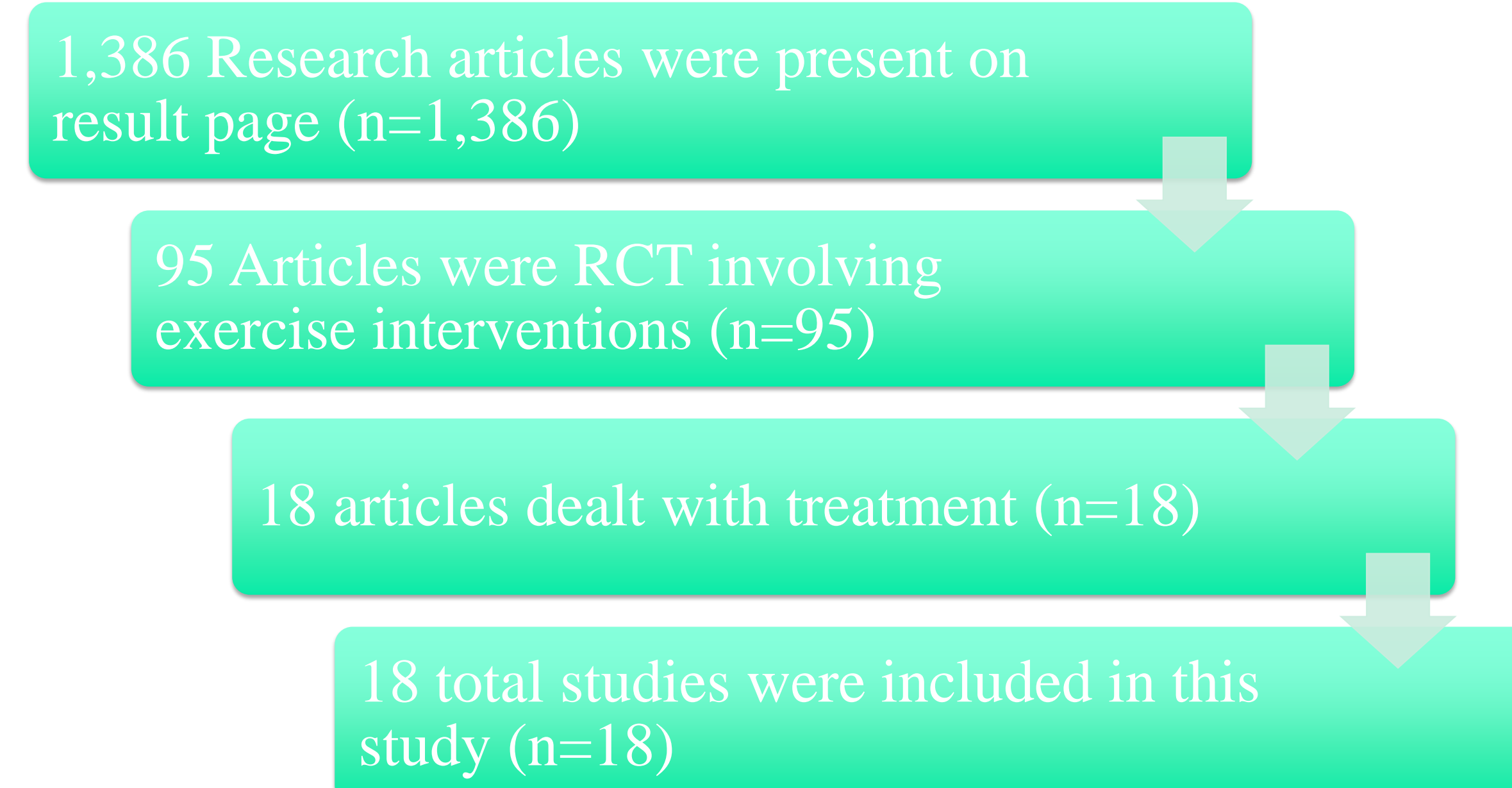
Aim

The purpose of this study was to examine the literature to identify the most effective exercises that would contribute to a reduction in low back pain.

Limitations

- Length of research studies
- Statistical comparisons between variables that were not included in this study
- Numbers of studies within each exercise domain

Methodology



Flowchart Showing Selection Strategies
RCT= Randomized Control Trial

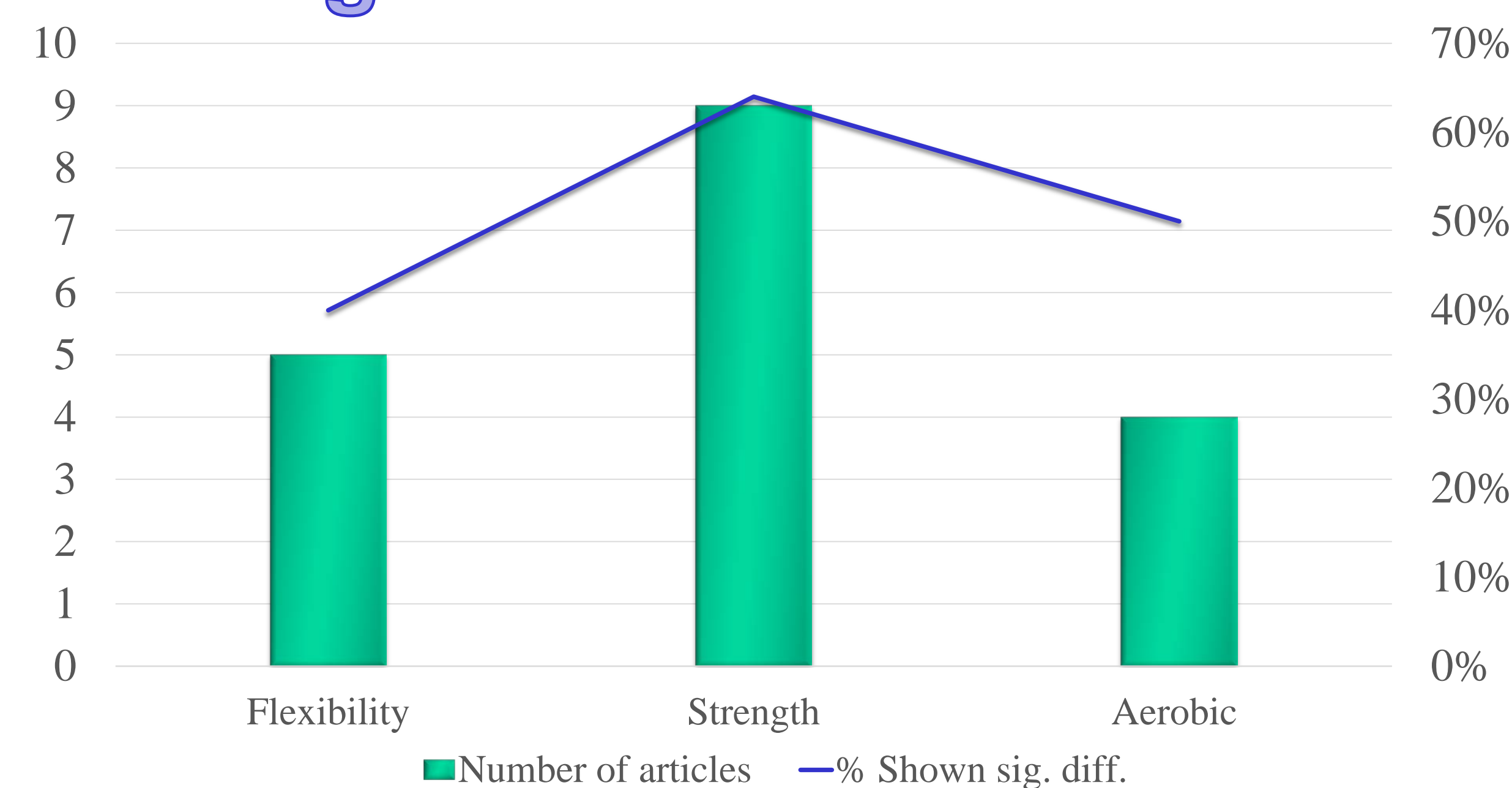
Methods (continued)

- A systematic review of scholarly journal articles containing RCT obtained from databases such as SportsDISCUSS, Google Scholar, and Academic Search Complete.
- Cochrane Medical Review guidelines for selecting proper articles was used in this study.

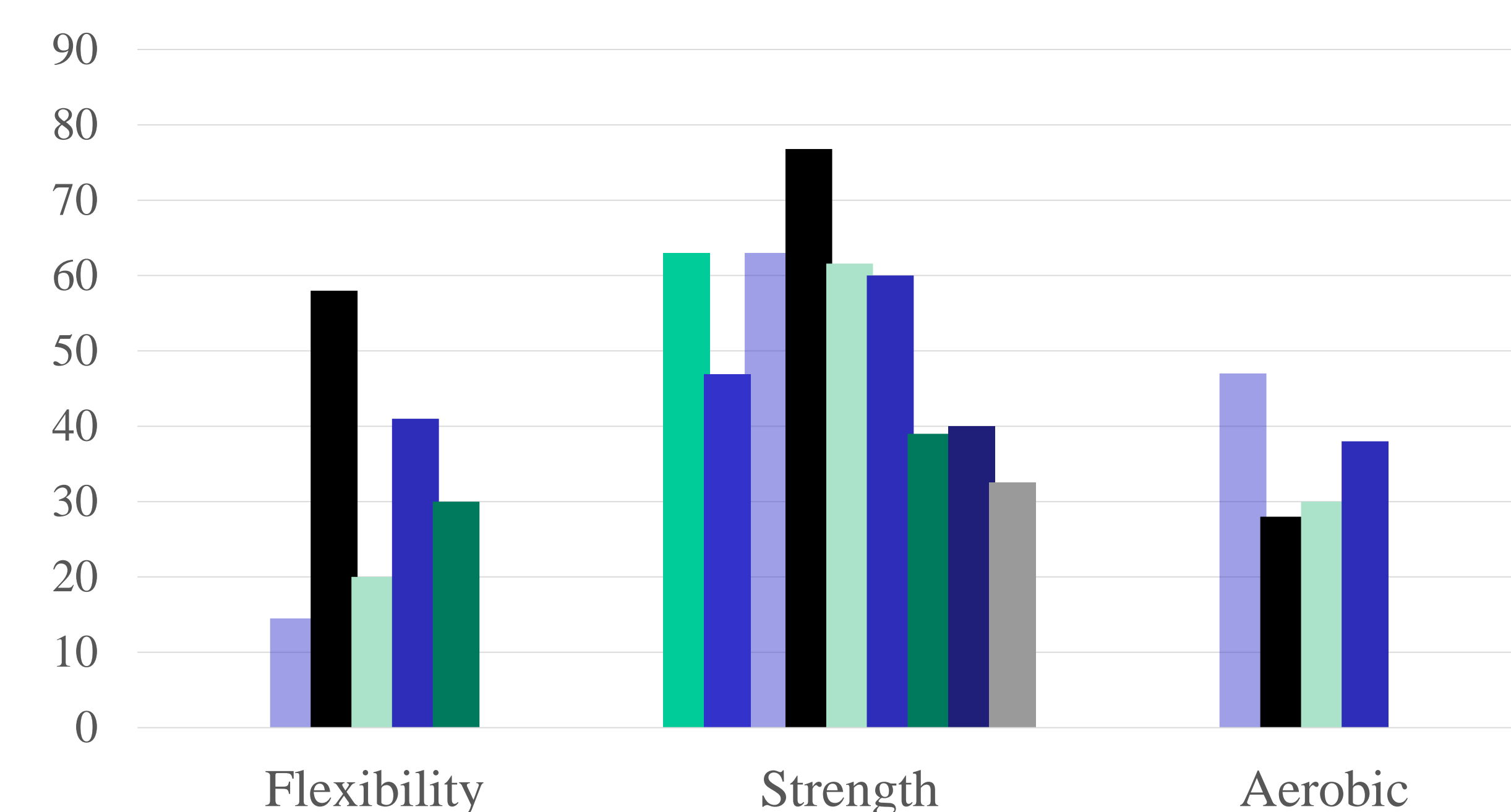
Future Research

I plan to investigate more intervention options and to personally conduct these studies and document the results.

Findings



Number of Articles and How Many Show Significant Differences



% Change Between Pre and Post Groups

Conclusion

Although there were no statistically significant differences between groups, strengthening exercises have the greatest impact in relieving lower back pain.

Acknowledgements

Dr. Christopher Williams
Barbara Thompson
Helen J. Cheves
Dr. Algernon Kelley
McNair Research Program at
SUNY Brockport

References

1. Akhtar MW, Karimi H, Gillani SA. Effectiveness of core stabilization exercises and routine exercise therapy in management of pain in chronic nonspecific low back pain: A randomized controlled clinical trial. *Pakistan Journal of Medical Sciences*. 2017;33(4). doi:10.12669/pjms.334.12664.
2. Chou R, Huffman LH. Nonpharmacologic Therapies for Acute and Chronic Low Back Pain: A Review of the Evidence for an American Pain Society/American College of Physicians Clinical Practice Guideline. *Annals of Internal Medicine*. 2007;147(7):492. doi:10.7326/0003-4819-147-7-200710020-00007.
3. Gordon R, Bloxham S. A Systematic Review of the Effects of Exercise and Physical Activity on Non-Specific Chronic Low Back Pain. *Healthcare*. 2016;4(2):22. doi:10.3390/healthcare4020022.
4. Hayden JA, Cartwright JL, Riley RD, Vantulder MW. Exercise therapy for chronic low back pain: protocol for an individual participant data meta-analysis. *Systematic Reviews*. 2012;1(1). doi:10.1186/2046-4053-1-64.
5. J. E. Sklar M, Chang D. Yoga as a Treatment for Low Back Pain: A Review of the Literature. *Low Back Pain*. September 2012. doi:10.5772/35617.
6. Lawand P, Júnior IL, Jones A, Sardim C, Ribeiro LH, Natour J. Effect of a muscle stretching program using the global postural reeducation method for patients with chronic low back pain: A randomized controlled trial. *Joint Bone Spine*. 2015;82(4):272-277. doi:10.1016/j.jbspin.2015.01.015.
7. Low Back Pain Fact Sheet. National Institute of Neurological Disorders and Stroke. https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Fact-Sheets/Low-Back-Pain-Fact-Sheet#3102_3. Accessed July 12, 2018.
8. Macedo LG, Maher CG, Hancock MJ, et al. Predicting Response to Motor Control Exercises and Graded Activity for Patients With Low Back Pain: Preplanned Secondary Analysis of a Randomized Controlled Trial. *Physical Therapy*. 2014;94(11):1543-1554. doi:10.2522/ptj.20140014.
9. Meng X-G, Yue S-W. Efficacy of Aerobic Exercise for Treatment of Chronic Low Back Pain. *American Journal of Physical Medicine & Rehabilitation*. 2015;94(5):358-365. doi:10.1097/pbm.0000000000000188.
10. Peek AL, Stevens ML. Different forms of exercise for chronic low back pain (PEDro synthesis). *British Journal of Sports Medicine*. 2015;50(3):188-188. doi:10.1136/bjsports-2015-095745.
11. Searle A, Spink M, Ho A, Chuter V. Exercise interventions for the treatment of chronic low back pain: a systematic review and meta-analysis of randomised controlled trials. *Clinical Rehabilitation*. 2015;29(12):1155-1167. doi:10.1177/0269215515570379.
12. Stockman J. Yoga for Chronic Low Back Pain: A Randomized Trial. *Yearbook of Pediatrics*. 2013;2013:339-341. doi:10.1016/j.yeped.2012.03.045.
13. Tulder MV, Koes B. Chronic Low Back Pain. *Evidence-Based Chronic Pain Management*. 2010:69-82. doi:10.1002/9781444314380.ch7.
14. Wells C, Kott GS, Marshall P, Hill B, Bialocerkowski A. The Effectiveness of Pilates Exercise in People with Chronic Low Back Pain: A Systematic Review. *PLoS ONE*. 2014;9(7). doi:10.1371/journal.pone.0100402.
15. Şahin N. Effectiveness of physical therapy and exercise on pain and functional status in patients with chronic low back pain: a randomized-controlled trial. *Turkish Journal of Physical Medicine and Rehabilitation*. 2017;64(1):52-58. doi:10.5606/tftrd.2018.1238.
16. Foster, Nadine EBuchbinder, Rachelle et al. Prevention and treatment of low back pain: evidence, challenges, and promising directions. *The Lancet*, Volume 391, Issue 10137, 2368 - 2383