

Developing a Yoga Anatomy Course for Medical Students: Integrating Mind-Body Education and Wellness into Healthcare Training

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Introduction

Background

During medical school, first-year students learning anatomy encounter information both in the classroom and the lab, with limited opportunity to experience the function of each muscle & how that applies to human movement first-hand.¹ They also manage daunting workloads and increased levels of stress, leaving minimal time for self-care. This study incorporates the unique combination of:

- 1) Relevant anatomy coursework —musculature, function, innervation, & clinical correlates and
- 2) Yoga sequences to encourage learning and self-care into a single practice.

Program Design



Fig. 1. Program design workflow for each Yoga Anatomy Session.

Methods

- IRB approval obtained
- Students participated in a pre- and post-participation survey to assess (1) anatomy knowledge & (2) self-perceived wellness
- All data entered in RedCap
- Paired t-test analyzed improvement of the knowledge-based anatomy questions from the pre- to post-survey.
- 5-point Likert scale analyzed proportion of students who agreed or strongly agreed that the session was satisfactory and likelihood of future participation.

Results

Session 1: The Back

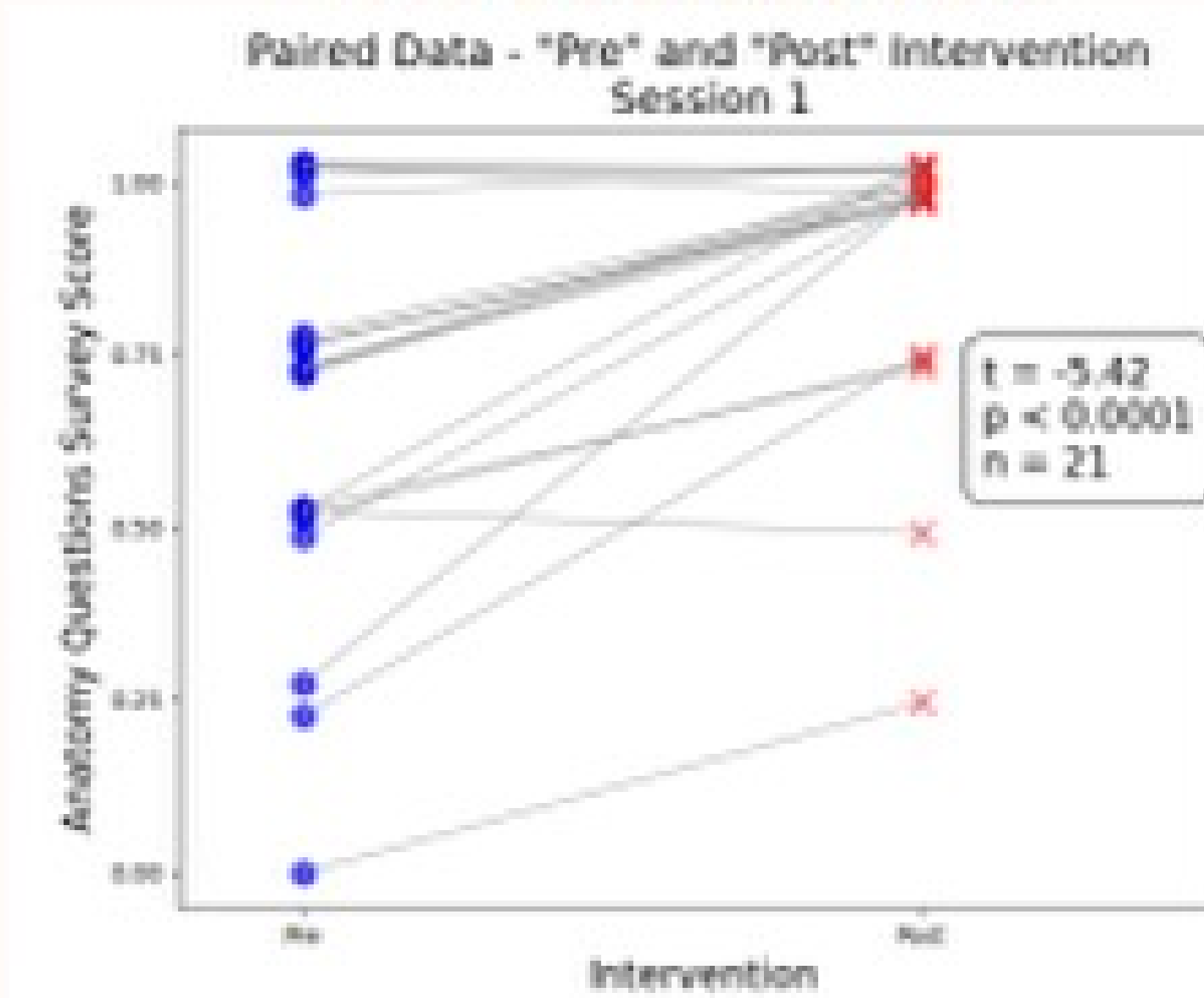


Fig. 2.1. Yoga Anatomy Session 1 significant improvement in anatomy knowledge, (t = -5.2, p < 0.00001, n = 21).

Session 2: The Abdomen

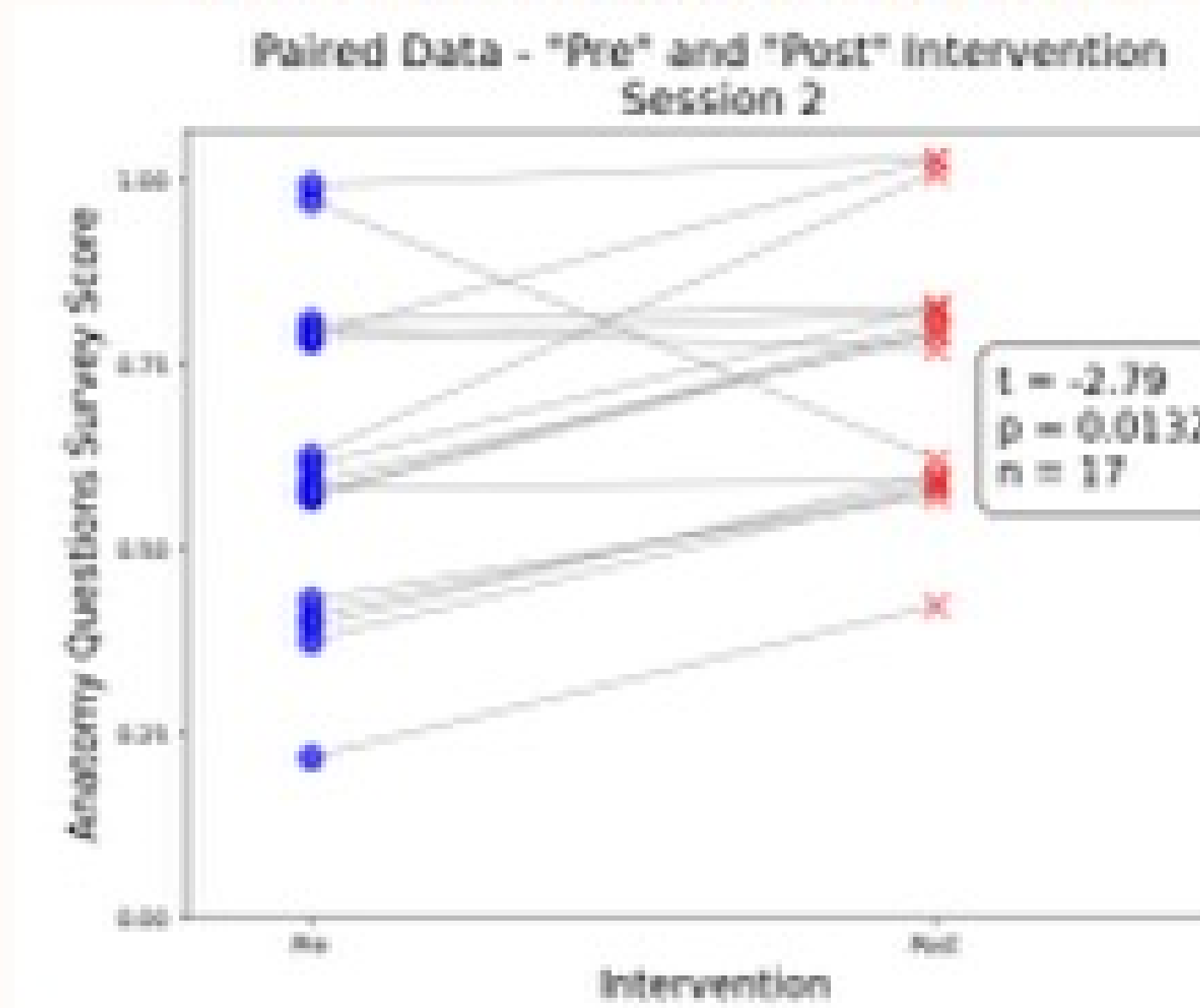


Fig. 2.2. Yoga Anatomy Session 2 significant improvement in anatomy knowledge, (t = -2.79, p < 0.013, n = 17).

Session 3: The Lower Extremities

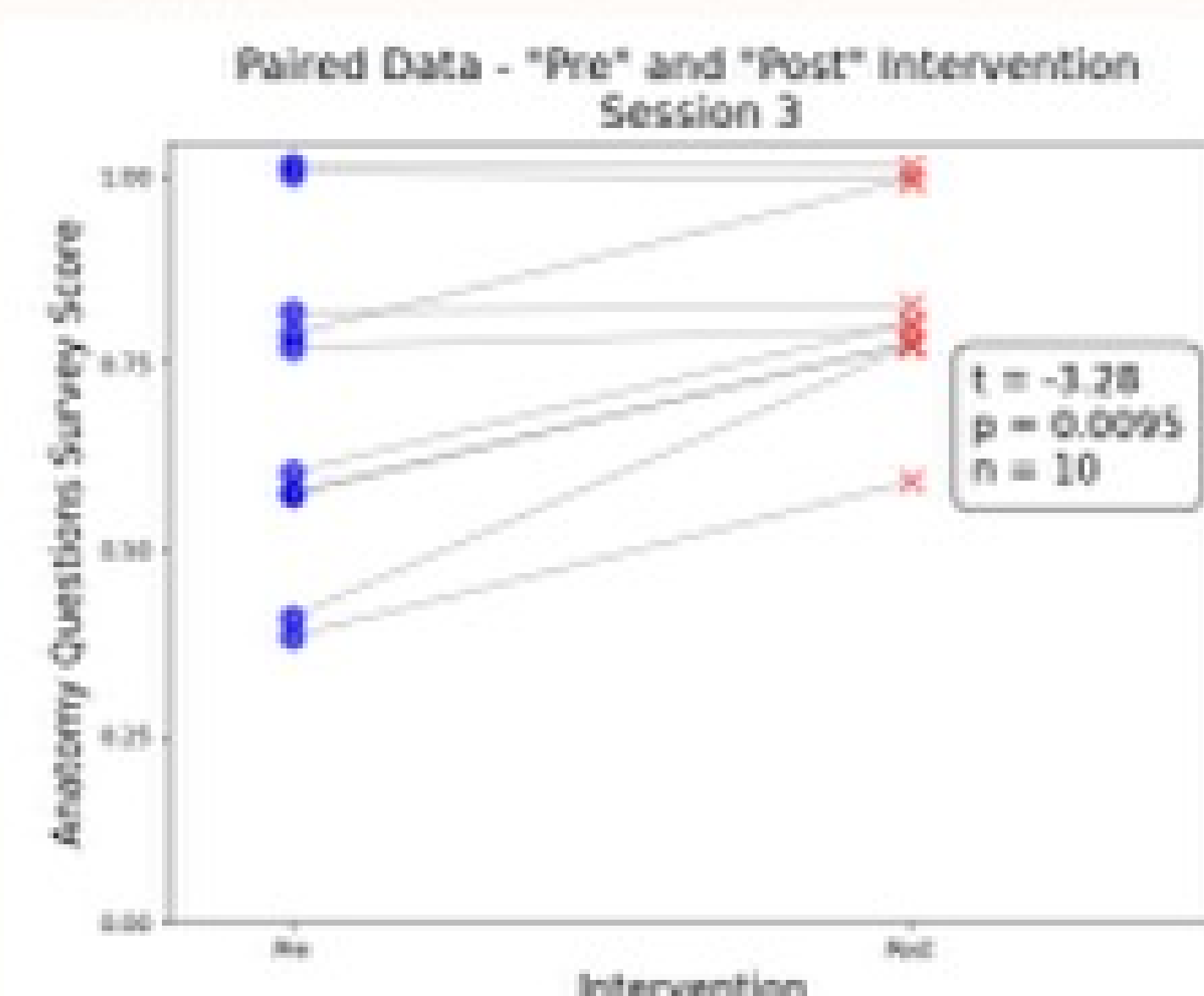


Fig. 2.3. Yoga Anatomy Session 3 significant improvement in anatomy knowledge, (t = -3.28, p < 0.0095, n = 10).

Session 4: The Upper Extremities

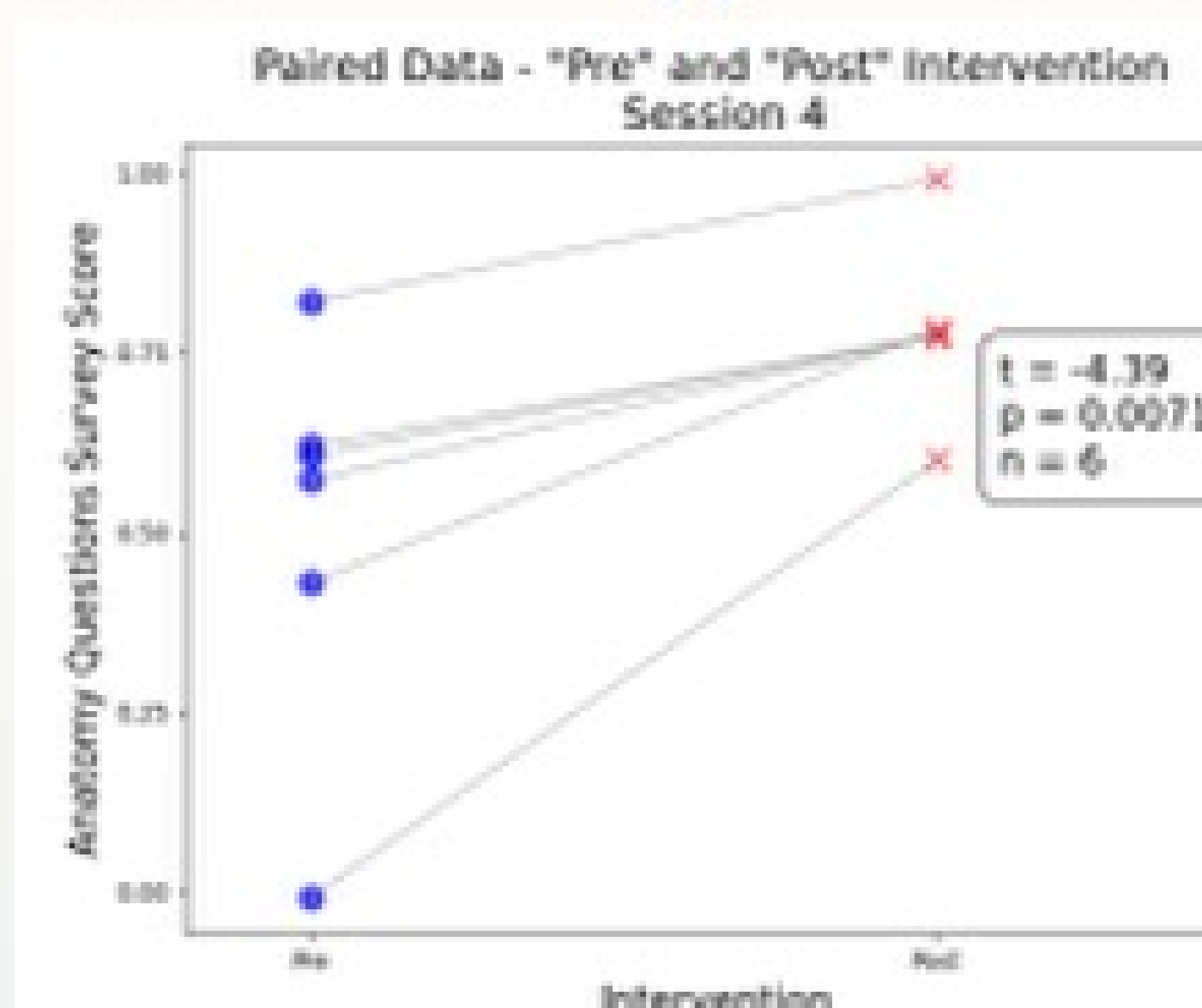


Fig. 2.4. Yoga Anatomy Session 4 significant improvement in anatomy knowledge, (t = -4.39, p < 0.0071, n=6).

Results

There were 54 participants across 4 sessions. The students showed significant improvements in the anatomy knowledge-based questions from the pre- to post-survey. The paired t-test results are as follows:

- Session 1: t = -5.2, p < 0.00001 (n = 21)
- Session 2: t = -2.79, p < 0.013 (n = 17)
- Session 3: t = -3.28, p < 0.0095 (n = 10)
- Session 4: t = -4.39, p < 0.0071. (n=6).

All 54 participants either agreed or strongly agreed that it is important to them to have self-care practices during and after medical school. They all agreed or strongly agreed that this event helped them understand what they learned in their anatomy course and that they would like to participate in similar events in the future.

Conclusion

Discussion

- This project had a significant improvement on students' anatomical knowledge following each Yoga Anatomy session and was positively regarded as a helpful tool for their learning.
- Our students agree that wellness activities, such as yoga, are an important aspect of their professional spheres
- We hypothesize that combining educational activities with those that encourage well-being could positively impact academic performance and overall life satisfaction.

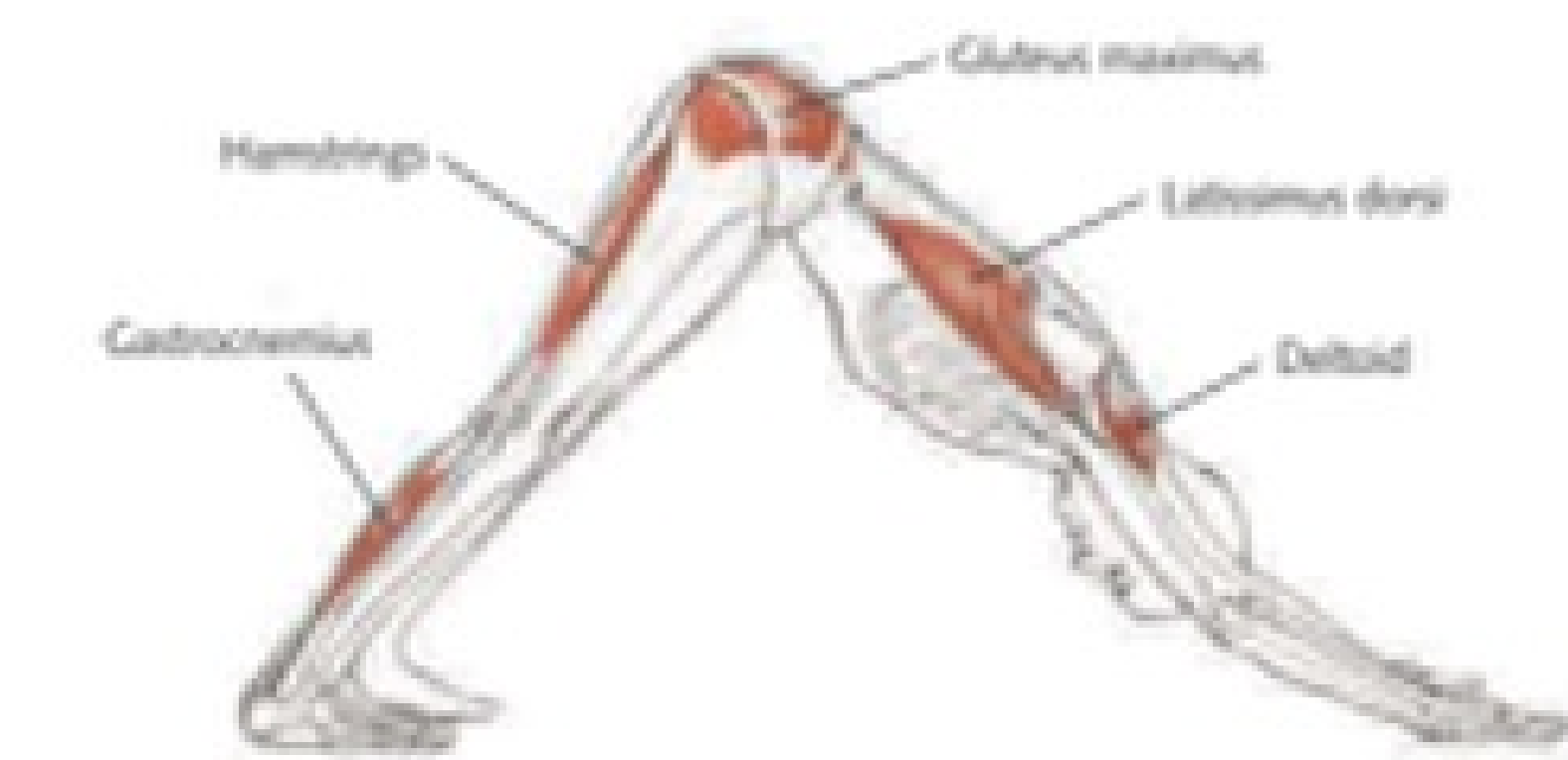


Fig. 3.2 In Downward-Facing Dog, the calf muscles are being stretched. These are the gastrocnemius and soleus, which are both innervated by the fibial division of the sciatic nerve.

Future Directions

While this project showed significant improvements in students' anatomical knowledge directly following the session, future studies could look at the relationship with long-term academic outcomes. They could also explore how involvement in combined academic and wellness activities, such as these, improve students' mood or mental health. Ultimately, we would be interested in helping to establish similar programs at other institutions and exploring how students in other parts of the country respond to these Yoga Anatomy sessions.

References

1. McLachlan JC, Bligh J, Bradley P, Searle J. Teaching anatomy without cadavers. *Med Educ.* 2004;38(4):418-424. doi:10.1046/j.1365-2923.2004.01795.x
2. Kaminoff L, Matthews A. *Yoga Anatomy.* 2nd ed. Human Kinetics; 2011:176.