TEXAS A&M UNIVERSITY
Huffines Institute

2024 Dr. JP Bramhall Faculty Research Grant Award from the Huffines Institute for Sports Medicine and Human Performance

Does Osteopathic Manipulative Treatment Performed After Sport-Related Concussion Affect Return To Play Timeframe In Division I Collegiate Athletes?

Principal Investigator: Dr. Stephen Line

Congratulations to Dr. Stephen Line, Clinical Assistant Professor in the Department of Primary Care and Rural Health with the Health Science Center at Texas A&M University. Dr. Line has been awarded funding for his project titled "*Does Osteopathic Manipulative Treatment Performed After Sport-Related Concussion Affect Return To Play Timeframe In Division I Collegiate Athletes?"*

Dr. Stephen Line, Clinical Assistant Professor, Department of Primary Care & Rural Health at Texas A&m University. https://medicine.tamu.edu/faculty-listings/line.html

An estimated 1.6 to 3.6 million sport-related concussions (SRC) are estimated to occur each year in the United States. Men's tackle football and women's soccer are high-risk sports for sustaining an SRC. SRCs are a type of traumatic brain injury caused by a direct blow to the head, neck, or body, resulting in an impulsive force being transmitted to the brain during athletic activity. This injury causes a massive neurotransmitter and metabolic response with possible injuries at the neuron level.

Post-concussion symptoms can vary significantly between injured athletes and require intentional and individualized medical decisions. SRCs present physicians with unique challenges in evaluating, managing, and deciding to return athletes to unrestricted play. In athletics, concussions can lead an injured athlete to miss a significant amount of practice and competition time. Absence from their sport due to this complex injury can cause the victim of an SRC to have physical and psychosocial symptoms. This project builds on the current research supporting Osteopathic Manipulative Medicine (OMM) use in post-sport-related concussion care. Osteopathic team physicians may be capable of aiding student athletes' recovery from a concussion by achieving improvements in soft tissue compliance, cervicothoracic and cranial range of motion, and by reducing their musculoskeletal driven symptoms (i.e., headache, neck pain) through their arsenal of manual techniques. These techniques aim to improve soft tissue and cerebral blood flow, restore the physiologic motion of the injured tissues, and calm the affected tissues' inflammatory state. In doing so, the victims of an SRC will feel better faster and report fewer post-concussion symptoms during their check-ins with the sports medicine team.

The long-term goal of this research is to determine OMM's benefits in athlete injury recovery, specifically concerning concussion management. This study aims to evaluate if performing timely Osteopathic Manipulative Treatment (OMT) to Division I football and soccer student-athletes in the acute management of SRC improves overall return to play time frame. We hypothesize that OMT, in addition to standard of care, will significantly decrease return to play time compared to standard of care alone. The data will be collected over the 2024-2025 football and soccer seasons, and the primary endpoint of OMT's influence on a quicker return to play for injured student-athletes will be investigated. Data collected will be compared to previous seasons where the standard of care was solely utilized. The anticipated outcome is that OMT performed in the acute setting will lead to a faster return to unrestricted play and concussion clearance.