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# Craniosacral Therapy and Professional Responsibility

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As our profession advances toward Vision 2020, we are called to accept the responsibility of an accountable practitioner and to actively monitor and challenge our profession in an effort to eliminate unwarranted imprudent practice variation.<sup>2,4</sup> This level of accountability entails challenging clinicians whose practice patterns may have the best intentions of maximizing outcomes, yet in reality may not be in the best interest of the patient. In an article in this issue of the *JOSPT*, Dr Downey and colleagues<sup>3</sup> explore the biological mechanisms of craniosacral therapy (CST). Their results require us to seriously evaluate what role these techniques have in the management of patients with musculoskeletal conditions.

CST is traditionally believed to be “a systematic approach to evaluating and treating dysfunction occurring within the articulations of the skull.”<sup>9</sup> CST practitioners have upheld the belief that restrictions, misalignments, and immobility of the cranial sutures and tension of the intracranial meninges directly impact the health of the individual. Despite a consistent lack of evidence to suggest such a relationship exists, the premise of CST maintains that physical or emotional trauma can result in misalignment of the cranial sutures and sacrum, resulting in myriad musculoskeletal and nonmusculoskeletal sequelae.<sup>10</sup>

Regardless of the controversies surrounding movement of the cranial sutures, practitioners of CST claim they can identify alterations in the movement patterns of the sacrum and cranial sutures through manual palpation. As discussed by Dr Downey and colleagues, the reliability reports of identifying the rhythmic movement of the sutures using palpation have ranged from worse than chance to fair.<sup>3</sup> This lack of reliability certainly does not provide conclusive evidence that these techniques should be abandoned from clinical practice. In fact, other commonly used assessment techniques by physical therapists with reportedly low reliability have continued to be mainstream practice. For example, similar to the palpation of craniosacral rhythm, the reliability of mobility assessment in the lumbar spine has been identified as ranging from poor to fair. However, these mobility assessment techniques have been identified to possess clinical utility in both patients with hypomobility of the lumbar spine (demonstrating greater reduction in disability when treated with thrust manipulation) and patients with hypermobility of the lumbar spine (demonstrating greater reduction in disability when treated with stabilization exercises).<sup>5</sup> In contrast, palpation of cranial suture movement and the perceived identification of misalignment or altered cranial rhythms have not been shown to enhance clinical decision making nor have they provided clinicians with a means to identify treatment strategies that will improve patient outcomes.

Proponents of CST have reported that between 5 to 10 g of force applied across a cranial suture can assist with normalizing suture movement and intracranial rhythm.<sup>6</sup> Downey and

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colleagues set out to investigate if the 5 to 10 g recommended force produced coronal suture movement or alteration in intracranial pressure. Their results show that the recommended forces do not result in any suture movement or alterations in intracranial pressure in a rabbit model. In fact, the one rabbit that underwent incrementally increasing forces did not exhibit movement within the coronal suture until 500 g of force was applied. Furthermore, forces up to 22 kg were required to cause 1 mm of movement. While limitations associated with the animal model are acknowledged, the work by Downey et al<sup>3</sup> clearly challenges the biological framework around which CST is based. We are not suggesting that the theoretical framework of a particular therapy must be clearly understood prior to utilizing it in patient care; however, in such a case where scientific rationale does not exist to support the use of a particular intervention, the intervention itself should exhibit evidence of efficacy. For example, while the neurophysiologic rationale underlying the mechanism by which manipulation exerts its effects remains elusive, support for the use of the technique is derived from the literature demonstrating that thrust and nonthrust spinal manipulation is effective in reducing disability in subgroups of patients with headaches,<sup>8</sup> neck pain,<sup>7</sup> and low back pain.<sup>1</sup> CST proponents have not established a plausible theoretical rationale for its use in clinical practice, nor demonstrated that the assessment techniques used contribute to directing care in an effective manner. However, even as we write this editorial, we recollect instances of anecdotal evidence suggesting that some of our own patients with headaches and spinal pain may have benefited from certain cranial techniques, though this may have been nothing more than a placebo effect. To date there continues to be an absence of peer-reviewed reports demonstrating CST is effective in improving outcomes in patients with musculoskeletal disorders.

Despite more than 50 years of investigation and the promotion of CST by some practitioners, there remains a void in credible evidence supporting the ability of these techniques to alter the movement of the cranial sutures or improve patient-centered outcomes. We need to abandon CST as a viable rehabilitative theory (ie, that cranial sutures move) and instead focus on whether any of these procedures as manual techniques can be proven effective for specific musculoskeletal conditions.

As a professional responsibility, we must provide procedures, such as manual therapy techniques and exercise interventions that are supported by evidence, to our patients who experience headaches as well as spinal and extremity disorders. In an evolving evidence-based healthcare environment, it is incumbent upon physical therapists utilizing CST techniques to justify their efficacy and value in terms of documented patient outcomes in peer-reviewed clinical research or abandon them altogether. It is also imperative that physical therapy professionals who perform cranial techniques do not communicate to patients disproved concepts of moving cranial sutures or balancing cranial rhythms. This language is disingenuous and may lead to creating disability in our patients by providing the perception that there is some sort of structural deformity in their body and implying that they are ill. If utilizing such techniques, clinicians should inform their patients that the care they are receiving has not been supported by documented clinical outcomes or evidence. The time is past due for advocates of CST to contribute well-designed studies evaluating the efficacy of these techniques to the peer-reviewed literature. The challenge is clear: prove that it works, or move on.

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