A total of 405 people responded to the survey and of the participants, 264 were therapists and 124 parents. The therapists reported on a total of 292 clients. A small sampling of clients (17) responded and only 6 completed the survey.

The demographics of professionals using CST for ASD, their level of CST training, and their qualifications to work with ASD were as follows:

1. Manual/massage therapists comprised the largest demographic of professionals utilizing CST for ASD.
2. Physical and Occupational Therapists equally (1:1)

Generalizations of common clinical findings through palpation of their clients with ASD reported by therapists were summarized in (Figure 2). These findings are consistent with Upledger’s original clinical observations of the craniosacral system in children with severe autism.

Perceived changes in behavior attributed to the use of CST were explored through analysis of answered responses to both the Likert scale as well as open comments (Figure 3). Clearly a vast amount of participants reported observing positive changes in behaviors.

From the data collected it appeared that most therapists reported seeing a measurable change in ASD within 1-5 treatment sessions of CST (Figure 4).

Therapists however tended to more strongly recommend a treatment protocol of weekly and ongoing sessions to maximize results.

Referral sources for parents were surveyed and the data suggests CST is being recommended as a treatment for ASD (Figure 5).

Open Comments were provided by parents and therapists revealed the unique and individualized nature and types of changes.

**CONCLUSIONS**

This study represents the first documented evidence of global use of CranioSacral Therapy as a treatment modality for Autism Spectrum Disorders. CST has been clinically available for three decades but little reported clinical data exist. The drive behind the use of CST is theorized to be the mass effect of the sharing of anecdotal evidence. Upledger described his first publication (1953) to the skill of palpation and noted that “palpation is an art which is grossly neglected in the health care profession.” He came to understand that therapists possessed more than adequate educational qualifications to become qualified CST practitioners.

This study shares a representation of personal observations of treatment outcomes by a large sample of therapists, parents, and clients. It provides participant demographics and offers a reasoning for the chosen use of CST for ASD. Strong therapist bias for choosing clients with more favorable responses to report observations is assumed and was not controlled for.

The clinical observations by therapists, however, were consistent with Upledger’s original palpation findings on subjects with autism theorized to be structural and functional effects of craniosacral inflammation as a result of encephalopathy. In consideration of various theories about manual therapies relieving symptoms of body inflammation, perhaps this is why therapists reported a positive change in biological behaviors, particularly headaches. Results suggested that the majority of participants practicing CST offered clients with ASD originated from a manual-based therapy practice (Figure 1). Quite clearly the data from the participant groups appeared to witness a vast amount of positive change in behaviors and function (Figure 3). The observed improvements in cognitive function, forms of communication and social skills suggests an overall improvement in the psychological wellbeing of a large sample of children with ASD who received CST.

Intervention of sensory reactions and processing was the most frequently reported improvement.

Although the information provided by the parents was not suitable in this instance for data analysis, it did expand our curiosity why parents made comments such as “Sometimes my daughter asks for CST when she feels anxious” and “CranioSacral Therapy has been available in treating my child.” “I see the difference if we go too long without a treatment.” “He is more comfortable, happy and engaged after treatment.” This survey reported that CST facilitated positive change in lives of the participants with ASD, as well as suggesting a potential to help the whole family unit.

The results of the survey further suggest that CST is being professionally recommended as a treatment for ASD. Further research may want to focus on the identification of quantifiable biomodal and behavioral markers to more accurately measure the clinical effects and test the effectiveness of a specific protocol. The lack of a control group in this study gave no foundation for direct comparison. Any future meta-analysis could be performed to include a more diverse population. The participants’ experiences narrated or observed changes, suggest that CST for ASD holds value to pursue future clinical study.

**KEY REFERENCES**

3. Osterby JF, Gavaudan V, Bäckström T. "Sounds of speech increased." "Expressive language has improved." Calm and happy.” CranioSacral Therapy has an immediate calming effect on my child" “I wish I had been able to use CST on day one. It makes her feel better.”
4. Osterby JF, Gavaudan V, Bäckström T. “Other children work with our daughter - creating a sort of dependency on the therapist. The second therapist worked ‘with’ our daughter, which taught her for more self-regulating skills. She made much more progress with the second therapist.”
5. Osterby JF, Gavaudan V, Bäckström T. “We have been very pleased with how CST has improved our grandson’s quality of life.”

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