



# The Use of CranioSacral Therapy for Autism Spectrum Disorders: Benefits from the Viewpoints of Parents, Clients, and Therapists

Susan Vaughan Kratz, Jane Kerr, Lorraine Porter

Clinical Affiliation: Special Therapies, Inc. Waukesha, Wisconsin info@specialtherapies.com



## PURPOSE

The purpose of this preliminary, retrospective study was to survey the extent of anecdotal outcomes of therapists who use CranioSacral Therapy (CST) to treat Autism Spectrum Disorders (ASD), and collect observations of the parents and clients who participated in this experiential intervention. Reference to the competence in CST (Upledger 10-step protocol) was made as a common frame of reference as inclusion criteria for therapists. The study surveys the demographics of the therapist participants and the various backgrounds and qualifications for using CST to treat clients with ASD. In an attempt to guide a description of the observed outcomes, the participants were also asked to retrospectively and subjectively rate a level of change to key ASD behavioral features attributed to the treatment intervention.

## BACKGROUND

Emerging biological science suggests the presence of brain inflammation in Autism Spectrum Disorders (ASD). CranioSacral Therapy (CST) theoretically offers direct treatment to the central nervous system to address the structural impact of inflammation on tissues and compromised exchange of fluids. Scant scientific data exists for physical and structural medicine to treat symptoms of ASD.

Cranial therapies date back to nineteenth century osteopathic medicine. Upledger (1983) revolutionized these practices through his discovery and eventual study of the craniosacral system. CST was created out of this research to directly treat the body system of fascia and fluids (meninges and cerebral spinal fluid), to promote the self-correcting mechanisms of the central nervous system. Children with severe autism were one of the first populations to receive CST. Given the current body of scientific research suggesting cerebral and systemic inflammation is present in ASD, it is not surprising that Upledger showed an apparent correlation between meningeal tissue restrictions of the craniosacral system and severity of ASD behaviors. (Upledger, 1978; 1990) The effects of treatment can be observed and measured by changes in characteristic features of ASD behaviors and functional tasks.

Following the introduction of CST into therapy arenas over three decades ago, this is the first study to investigate CST as a treatment option for Autism Spectrum Disorders.

## METHODS

Retrospective clinical and parental observations were collated through the use of an online survey. Recruitment of participants was completed over a twelve month period via:

- Upledger Institute International alumnae data base (CST training source).
- CST study groups and social media sites for practitioners.
- International parent support networks for Autism Spectrum Disorders.

Participants were guided to an online questionnaire unique to each group (THERAPIST, PARENT, and CLIENT). Demographic questions were posed to gain understanding of the rationales for seeking and using such treatment, levels of experience, and survey clinical observations. All participants were given a 20-item functional behavior checklist as a means to measure their perception of change attributed to this intervention. A forced choice Likert scale was assigned for each behavioral feature to record a level of Worsening, No Change, or Improvement. Open-ended comments were also encouraged to explore perspectives from participants' experiential treatments.

The Qualitative data collected was analyzed via Inductive Content Analysis.

### Inclusion Criteria:

**THERAPISTS:** Alumnae status of Upledger training implies therapists have the minimal knowledge of a specific introductory 10-Step protocol to practice CST. The actual protocol administration was not investigated since the true nature of mature CST treatment is one of improvisation during live treatment sessions. Therapists' level of training and expertise in ASD were explored. The therapists acknowledged having treated at least one client with ASD and were encouraged to recruit parents and clients, directing them towards the survey. Therapists were allowed to report on a maximum of five clients.

**PARENTS:** One parent (or caregiver) of a given family with a child with a confirmed diagnosis of ASD who participated in any form or length of CST.

**CLIENTS:** Clients were directed towards their respective survey by either the parent or the therapist to pursue self-reporting of personal experiences if they were able. Clients were allowed to have assistance in completing the questionnaires on the honor system that their own opinions were expressed.

## RESULTS

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 reflected. Manual/massage therapists comprised the largest demographic of professions utilizing CST for ASD, followed by Physical and Occupational Therapists equally (Figure 1).

Generalizations of common clinical findings through palpation of their clients with ASD reported by therapists are summarized in (Figure 2). These findings are consistent with Upledger's original clinical observations of the structural status of the craniosacral system in children with severe autism. Perceived changes in behavior attributed to the use of CST were explored through analysis of assimilated 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 empirical studies exist. The drive behind the use of CST is theorized to be the mass effect of the sharing of anecdotal evidence. Upledger dedicated his first publication (1983) to the skill of palpation and stated that "palpation is an art which is grossly neglected in the health care professions." 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 of their experiences. 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 effects of cerebral 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 suggest that the majority of participants practicing CST (offered to clients with ASD) originate 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. Improvements in 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 invaluable 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 participant children 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 biomedical and behavioral markers to more accurately measure the clinical effects and test the effective 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 reported or observed changes, suggest that CST for ASD holds value to pursue future clinical study.

## KEY REFERENCES

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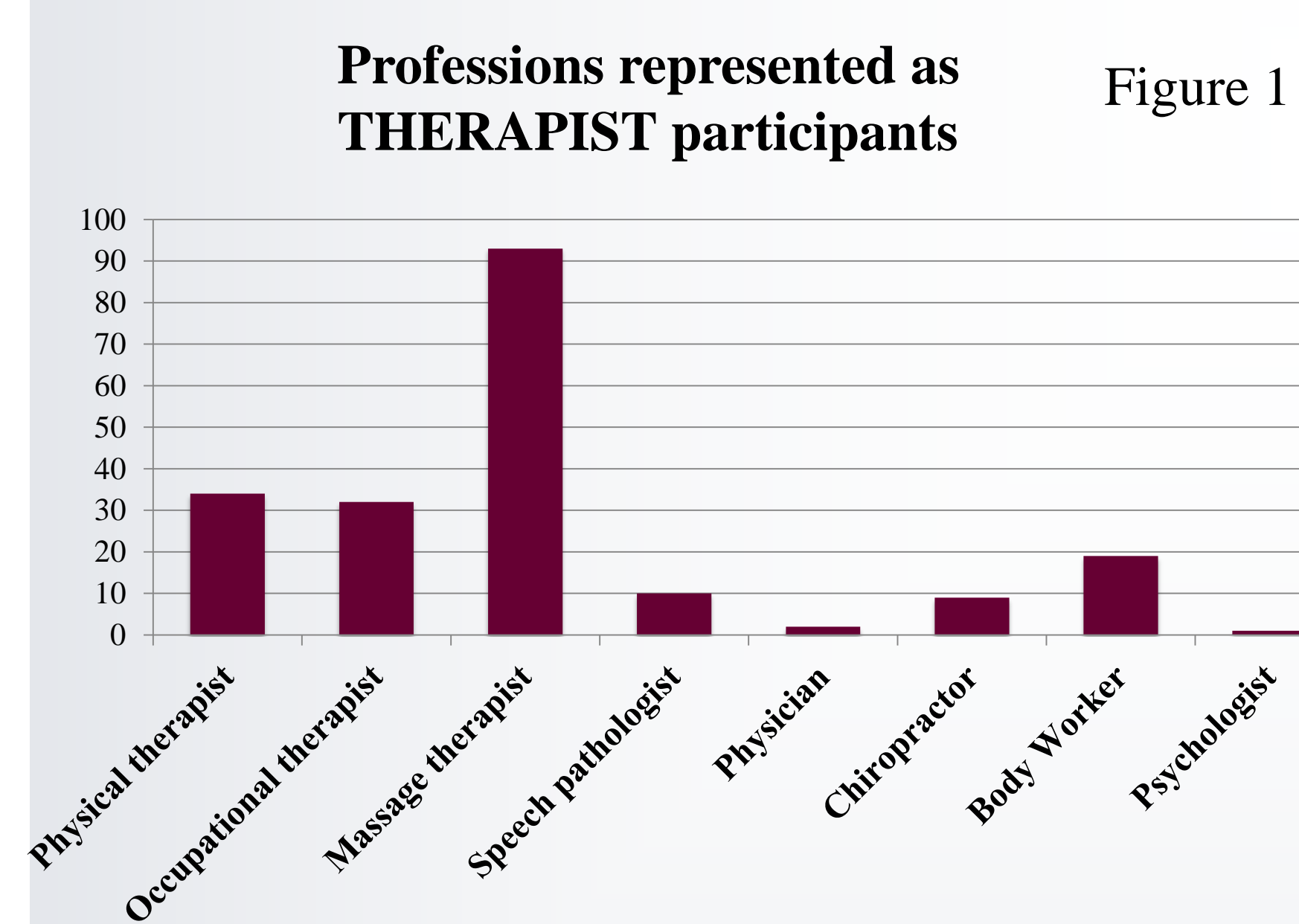


Figure 1

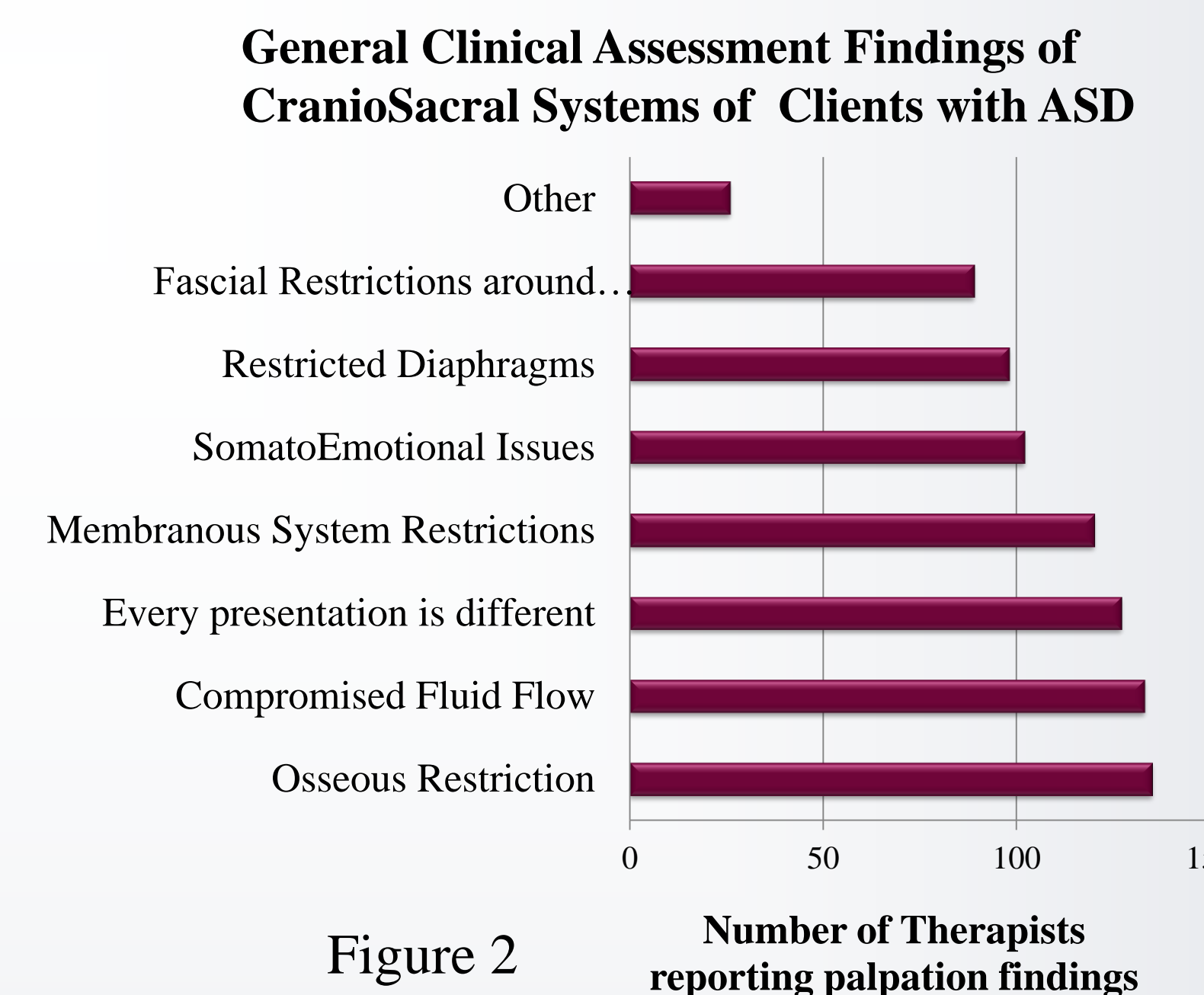


Figure 2

## RESULTS – PARENT OBSERVATIONS

Over 130 compelling comments were offered. This information did not lend itself to data analysis, however, specifics of improvements fell into these categories of behavioral features. A small sample is presented here:

### Anxiety and emotional stability:

- "Sometimes my daughter asks for CST when she feels anxious."
- "We are currently doing 1/2 sessions. We see our therapist more regularly during more stressful times and also when my son demonstrates increased sensitivities and difficulty managing stress and demands. We have been seeing our therapist for approximately 3 years."
- "CranioSacral Therapy has an immediate calming effect on my child"
- "Able to calm self down faster than before."
- "Calm and happy."

### Sensory – motor changes:

- "My son does not have sensory issues to the extreme degree he had when he first began treatment and has significantly decreased his ongoing anxiety."
- "My daughter who doesn't like being touched not only copes with but seems to look forward to going to cranial. It makes her feel better."
- "It made a dramatic difference in sensory defensiveness (improved), allowed better sleep, and has been a key therapy in helping my son to recover from his Autism. It has been a vital and necessary therapy."

### Language or cognitive changes:

- "Cognitive improvements."
- "Expressive language has improved."
- "Sounds of speech increased."
- "After 1st session our daughter began language, her balance improved, she began to look up and outside of herself."
- "Great improvement in communication, using language at right moment."
- "After a therapy session one time he blurted out the word "bubbles" he is non-verbal; not enough sessions to say if it would get him speech."

### General comments:

- "Very beneficial for my child. I recommend it to all parents with children with autism as each child will respond different."
- "This is an area that there is not a lot of practitioners. My CST therapist was advanced - we moved and have yet to even come close to replacing her ability the other issue is several autism people have seizures and CST is great for that."
- "One therapist worked 'on' our daughter - creating a sort of dependency on the therapist. The second therapist worked 'with' our daughter, which taught her far more self-regulating skills. She made much more progress with the second therapist."
- "We have been very, very pleased with how CST has improved our grandson's quality of life."
- "VERY thankful we found this therapy. What a blessing to witness change."
- "Less pain in GI area."

### Analysis of Therapists' Observations of Change in Behaviors following Craniosacral Therapy



Figure 3

### Number of CST sessions before measurable changes were observed

	Parents n=84	Therapists n=292 clients
Saw no changes	8.14%	0%
1 session	0.00%	28%
1 to 3 sessions	60.47%	53%
3 to 5 sessions	22.09%	19%
5 to 10+ sessions	9.30%	7%

Figure 4

### CranioSacral Therapy referral source for PARENTS

Another parent's recommendation	21.51%
By a professional referral	41.94%
Through internet research	11.83%
Read about U-CST in book/magazine	4.30%
Attending a conference on the topic	6.45%
Other	21.51%
<b>Total Respondents:</b>	<b>93</b>

Figure 5