

Descriptive title

The use of Cranial Sacral Therapy (CST) in a physically impaired population in a disability service in Southern Ireland

Short title

Cranial Sacral Therapy in Southern Ireland

Word count: 2,291

Key words: physically disabled children, cranial sacral therapy

Abstract

Background: The use of Cranio Sacral Therapy (CST) is increasing in the general population. Cerebral palsy is a chronic disability that has no cure. Families may try CST at some stage to relive the effects of this debilitating condition.

Methods:

Objectives: A service evaluation was done to evaluate effects of CST on children living with physical disabilities. Parent's perceptions to CST were also looked at.

Sample: A convenience sample of families presenting to the clinic for services were evaluated. Forty six (46) service users were approached. The diagnosis of the sample varied, all attended a regional clinic, the criterion for which is a diagnosis of a predominant physical disability.

This was a small scale exploratory service evaluation. The sample was drawn from service users aged between 0-18 years attending the service from 2004. A 20 item survey was handed or posted to the parents of children attending the CST practitioner.

Results: Of 46 surveys posted 46 (100%) were returned. The mean child age was 8.32 years. Of the population surveyed 54.34 % were male and 45.65 % were female. The factors most frequently stated as important to families attending were symptom control or minimizing symptoms, avoiding side effects and / or adding to the conventional treatments. All families evaluated (100% (46)) reported that they had informed their family doctor of their attendance.

Conclusion: CST is being used by the population and is being used by families of children with physical disabilities. All parents reported a benefit to their children using CST. The factors most frequently stated as important were symptom control or minimizing symptoms, adding to the conventional treatments and avoiding side effects. All parents wanted more CST therapy. All parents reported an anecdotal decrease in family stress after the disabled sibling had received CST. Resources should be invested in the use of CST across the services for children with disability. Increased provision of CST may lead to significant improvements for children with disability. More information should be available on CST to the general public as to the reported benefits.

Introduction

The use of complementary and alternative medicine (CAM) is increasing in the general population (Sinh et al 2005, Thomas et al 2004) and in children (Nickel 1996). CAM use is widespread for children with cerebral palsy with rates of over 50% of the population examined by Hurvitz et al (2003). Physical disability conditions include Cerebral palsy, Muscular dystrophy among other neurological deficits. As these conditions are chronic in nature with no known cure the people and their families with these conditions also look to complementary therapies in search of relief from daily or weekly symptoms. We know from literature that the use of Cranio sacral therapy (CST) is common in children with special needs (Nickel 1996, Sanders et al 2003, Sinha et al 2005, Hurvitz et al 2003). Carlson and Krahn found that their sample of people with physical disabilities used CAM including CST because it fitted their lifestyles and because they perceived it to be more effective than conventional medicine for treating symptoms and decreasing functioning (Carlson et al 2006, Krauss et al 1998).

Cranio Sacral Therapy (CST) is a gentle, non invasive manipulative hands-on technique, a whole body method of releasing restrictions around the brain and spinal cord to enhance central nervous system performance and allow the body to self-correct (Upledger). It was developed by John Upledger after eight years of clinical research at Michigan State University. He developed an understanding of

system of diagnosis and treatment aimed at mobilizing cranial sutures which were determined to be abnormally restricted to physiologic motion (Sutherland 2001). A letter to Dr. Upledger from a Swiss neurosurgeon stated “I have observed in spinal operations without doubt rhythmic spinal cord movements. This rhythm is corresponding to (waves) of C.S.F, visible within the subarachnoid space”. This observation was made during operations done in 20,000 neurosurgical procedures (Gilchust 2006). The Upledger Institute was established in 1985 and has now trained more than 80,000 Cranio Sacral Therapists world wide. Several schools of Cranio sacral therapy have evolved since Still and Sutherland identified the Cranio Sacral system.

Still et al believed that by correcting misalignments in the body, the body could function better and its ability to heal itself could be greatly enhanced. Sutherland continued Stills work by applying his knowledge to Osteopathy including the cranium and sacrum. The technique works on the ‘slightly mobile cranial bones’ and structures within the cranium as well as the entire body fascia, thus influencing the whole body and how it functions.

Because CST concentrates on the central core System i.e. – meninges, spinal cord, cranial vault, dural sleeves, and all that is attached to and operates out of ; the entire system is affected – the greater the mobility of the core system, the greater the function of the body as a whole. This is observable in reduced spasticity- increases homeostasis globally which in turn increases mobility

thereby improving healing capacity and increasing independence for the whole person (Upledger).

Objectives

The purpose of this study was to describe the effects of CST practices on children as reported by their families and parents and whether this therapy had an effect on families and the service user themselves, as reported by the parents.

Methods

The work done in the CST department led to the development of a questionnaire to gain insight and feedback from the parents that were being treated in the department. Qualitative and quantitative methods were undertaken.

CST was chosen as a method of treatment to aid children to gain more flexibility, to minimize the effects of the spasticity of the CP diagnosis, to help reduce seizures and to assist in the conventional treatment of the physical diagnosis.

The sample was drawn from service users aged between 0-18 attending the service from the year 2004. A 20 item survey was handed or posted to the parents of children attending the CST practitioner. The questionnaire explored areas of daily living functions; chest, general-health, elimination, sleep pattern, appetite, flexibility, vocalization, relaxation, muscle tone, circulation and

alertness. The questionnaire was given to families of service users after they were attending the Early Services Team for one year. Sessions varied from weekly to monthly hourly sessions. The questionnaire asked parents to tick one of the following for a range of bodily functions; no change in condition, some improvement, apparent improvement, significant change, gross improvements in condition.

Ethical approval was not required as this was a service evaluation.

Results

From 46 surveys posted 46 (100%) were returned. The mean child age was 8.32years. Of the group 54.34 % were boys and 45.65 % were girls. Details of conditions see table 1. The factors most frequently stated as important were symptom control or minimizing, adding to the conventional treatments and avoiding side effects. 100% (46) reported that they had informed their General practitioner of their attendance. All (100%) of parents reported some improvement in their child condition. No parents reported any worsening effect in their children's condition. According to their parents 100% of children reported that they looked forward to their sessions. All or 100% of the families reported less stress between siblings and in the family set up. And 100% of families requested even more therapy in the future. On average the clients received 15 to 20 hours therapy per annum.

Results from the survey – parents reporting

Chest symptoms - 6 (13%) reported no change, 1 (2.2%) had some improvement, 39.1% (18) had apparent improvement, 17.4% (8) had significant change, 26.1% (12) had gross improvements in their chest symptoms.

General health - 3 (6.5%) no change, 6 (13%) had apparent improvement, 32.6% (15) had significant change, 47.8% (22) had gross improvements in their general health

Elimination – 2 (4.3%) did not answer the question, 4(8.7%) no change, 2 (4.3%) had some improvement 34.8% (16) had apparent improvement, 15.2% (7) had significant change, 15 (32.6%) had gross improvements in their condition.

Sleep pattern – all service users had some change except for 1 unknown as 2.2% (1) did not answer the question, 2 (4.3%) had some improvement, 28.3% (13) had apparent improvement, 28.3% (13) had significant change, and 37% (17) had gross improvements in their sleep pattern.

Appetite - 6.5% (3) did not answer the question, 3 (6.5%) no change, 2 (4.3%) had some improvement, 28.3% (13) had apparent improvement, 23.9% (11) had significant change, 30.4% (14) had gross improvements in their appetite.

Flexibility – 2.2% (1) did not answer, 1 (2.2%) no change, 1 (2.2%) had some improvement, 10.9% (5) had apparent improvement, 34.8% (16) had significant change, 47.8% (22) had gross improvements in their flexibility.

Vocalization – 6.5% (3) did not answer 1 (2.2%) no change, 1 (2.2%) had some improvement, 23.9% (11) had apparent improvement, 15.2% (7) had significant change, 50% (23) had gross improvements in their vocalization.

Relaxation - 2.2% (1) did not answer, 1 (2.2%) had no change, 15.2% (7) had apparent improvement, 23.9% (11) had significant change, 56.5% (26) had gross improvements in their relaxation.

Muscle tone – 4.3% (2) did not answer 2 (4.3%) no change, 15.2% (7) had apparent improvement, 13.4% (14) had significant change, and 45.7% (21) had gross improvements in their muscle tone.

Circulation -1 (2.2%) did not answer 4.3% (2) experienced no change, 10 (21.7%) saw apparent improvement, 32.6% (15) had significant change, 39.1% (18) had gross improvements in their circulation.

Alertness - 2 (4.3%) no change, 15.2% (7) had apparent improvement, 28.3% (13) had significant change, 52.2% (24) had gross improvements in their alertness.

When the mean of activities were ranked in order of reported effectiveness the results can be seen in table 2. parents reported chest improvements as first, elimination as second, appetite as third, concentration as fourth, sleep patterns as fifth, circulation improvements as sixth, general health as seventh, vocalization as eight, muscle tone as ninth, flexibility as tenth, relaxation as eleventh and finally alertness as twelfth.

Comments and feedback form families:

When it came to relaxation one parent reported –*‘My child was always so calm and relaxed after their sessions. During the holidays the anxiety would start to rise again. We would all be anxious for the holidays to be over!’* Of relaxation one parent spoke of how her child was *‘more tolerant of her siblings during treatment,* and another said *‘She doesn’t cry as much anymore since starting treatment.* In the whole area of concentration parents mentioned that teachers had noticed that *‘the sessions have markedly improved on his coordination and concentration. This allows his siblings to have a normal relationship with him.’* And on bodily functions it was reported that one child *‘has a regular bowel habit for the first time in her life and sleeps as a normal child would’.*

With regard to seizures parents noticed a significant reduction in seizure duration and severity. Though anecdotal, parents felt strongly that their child was *‘like a different child... her seizures have diminished!’* Other client’s seizures have disappeared totally and one client has gone from having several seizures daily lasting 50 minutes to 3-4 seizures per week lasting 5-8 minutes.

The factors most frequently stated as important were symptom control or minimizing, adding to the conventional treatments and avoiding side effects. 100% reported that they had informed their General practitioner of their attendance.

The comments from colleagues in the early service referring team were positive:

'I believe CST is a useful way of working with our client group, it is client centred and gentle'

'Parents always speak of the improved bladder and bowel function, improved concentration and attention'

'Children have become calmer and more ready to learn in early learning classes.'

There is an overwhelming improvement in the clients'

'Reduction of tone and relaxation is striking'

'All children who have attended the therapist has demonstrated improvements on their presenting condition'

'Huge psychological changes in clients, they demonstrate more self organizational skills'

CST is a major asset to team intervention'

'Parents have always spoken highly of the CST and request more all the time'

'We would love to see more information on CST in the public domain.'

All families reported some improvement in all areas of daily functioning and their children's symptoms. The factors most frequently stated as important were symptom control or minimizing symptoms such as spasticity, adding to the conventional treatments and avoiding side effects.

Discussion

CAM is being used by the general population and is being used by families of children with physical disabilities. The use of CST specifically is less reported. Use of paediatric complementary medicine has increased from 11% to 70% in Northwest America (Samdup & Smith 2006). No comprehensive studies have been done on this side of the world on either CAM or CST. This has to change in order to complement conventional medicine.

One hundred percent of our sample told their general practitioner that they were attending the CST service. Family doctors did not discourage this use of complimentary treatments in the search for improved daily functions for the children. In fact Ottolini et al (2001) noted that it is lack of knowledge which interferes with their ability to discuss CAM with patients. Understanding the feedback, listening to comments by parents who have seen the positive effects in their children through use of CST is essential to improve service and treatment in children with physical disabilities. CST therapies are frequently used to treat children. Most parents who use CST therapies to treat their children use such therapies themselves (Pitetti et al 2001).

A draw back to our study is that a worse option was not given in the questionnaires but no parent reported any worsening of symptoms in their children condition when asked.

Our study shows that families perceive improvements in all areas of daily functioning after using CST for a period of time. Anecdotal evidence like this cannot be discounted. Parents of physically impaired children are with their children 24 hours a day for the most part and their feedback cannot be discounted. More research needs to be done on larger cohorts because complementary and alternative medicine is here to stay. More evidenced based research, both qualitative and quantitative, is necessary so reliable information can be provided in giving advice to parents. This enables parents to make

informed decisions for their children's treatment. This needs to be done on both CAM and CST. Further resources need to be invested in the use of CST across the services for children with disability to enable this research to be done. More information should be available as to the reported benefits of CST and disseminated to the families of children with physical disabilities.

Acknowledgements - The completion of this work would not have been possible without the support of the service users and staff of Enable Ireland Cork Services.

Key messages from this paper:

All families reported some improvement in all areas of daily functioning and their children's symptoms.

The factors most frequently stated as important were symptom control or minimizing symptoms such as spasticity, adding to the conventional treatments and avoiding side effects.

Understanding the feedback, listening to comments by parents who have seen the positive effects in their children through use of CST is essential to improve service and treatment in children with physical disabilities.

Our study shows that families perceive improvements in all areas of daily functioning after using CST for a period of time.

More information should be available as to the reported benefits of CST and disseminated to the families of children with physical disabilities.

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