

**EFFECTIVENESS OF CRANIOSACRAL THERAPY WITH MYOFASCIAL RELEASE  
AND CONVENTIONAL PHYSIOTHERAPY ON PAIN AND FUNCTION IN SUBJECTS  
WITH NON SPECIFIC NECK PAIN****Bhambhani Nasroon<sup>1\*</sup>, P. Pundarikaksha<sup>2</sup>, Patchava Apparao<sup>3</sup> and Ganapathi Swamy<sup>4</sup>**<sup>2</sup>MPT Orthopaedics, Associate Professor, <sup>3</sup>MPT Orthopaedics, <sup>4</sup>Ph.D., MBA, Assistant Professor, Statistician.<sup>1,2,3,4</sup>Department of Physiotherapy, GSL College of Physiotherapy, GSL Medical College, Rajamahendravaram, Dr.YSR University of Health Sciences, Andhra Pradesh, India.**\*Corresponding Author: Bhambhani Nasroon**

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**ABSTRACT****Background and Objective:** The purpose of the study was to find the effectiveness of Craniosacral Therapy with Myofascial Release and conventional physiotherapy on pain and function in subjects with non specific neck pain.**Methods:** Quasi experimental study design. In this study, there were 80 subjects with an average age of over 20 years, a clinical diagnosis of nonspecific neck pain, who were divided into two groups randomly. The subjects in Group A(n=40) received Craniosacral therapy with Myofascial Release, while the subjects in Group B (n=40) received conventional physiotherapy. Intervention was given to participants 3 times a week for six weeks. The outcome measures of Group A were measured in terms of Visual Analogue Scale for pain and Neck Disability Index for function. **Results:** Independent “t” test was used to compare the mean significance difference between continuous variables. Paired “t” test was used to assess the statistical significance difference between pre and post test scores. Statistical analysis of this data revealed that, both groups significantly improved in both parameters when compared within groups, but when compared between groups, the Craniosacral Therapy with Myofascial Release group improved better than the conventional physiotherapy group. **Conclusion:** According to the results of the present study, both Craniosacral Therapy with Myofascial Release and conventional physiotherapy were similarly effective. In contrast, subjects with nonspecific neck pain responded better to Craniosacral Therapy with Myofascial release than conventional physiotherapy in terms of pain relief and functional improvement.**KEYWORDS:** Non-specific Neck Pain, Craniosacral Therapy, Myofascial Release, Conventional Physiotherapy, Neck Disability Index.**INTRODUCTION**

Neck Pain is one of the most common musculoskeletal condition on a global scale.<sup>[1]</sup> Approximately half of all individuals will experience a clinically important neck pain episode over the course of their lifetime.<sup>[2]</sup> It is potentially disabling and has a high rate of transition to chronic or persistent problems. It has a considerable impact on individuals and their families, communities, health-care systems and businesses. Neck pain may be classified based on duration, severity, etiology, structure and type.<sup>[3]</sup> The global burden of neck pain measured in disability-adjusted life years was estimated at approximately 65.3 million.<sup>[4]</sup> Non-Specific Neck Pain is defined as pain in the posterior and lateral aspect of neck between the superior cervical line and the spinous process of the first thoracic vertebra without signs and symptoms of major structural pathology and no or minor to major interference with activity of daily life as well as with the absence of neurological signs and specific pathologies.<sup>[5]</sup>

According to the Global burden of Disease 2010 study, Neck Pain is the fourth leading cause of years lost of disability, ranking behind back pain, depression, arthralgias.<sup>[2]</sup> According to Somaye Kazeminasab et al, In 2017, the global age-standardised prevalence and incidence rate of neck pain were 355.1 and 806.6 per 100,000, respectively.<sup>[6]</sup> Mostly seen age groups of 45 years of age. Annual prevalence ranging between 30% to 50%<sup>7</sup>, with a mean rate of 37.2%.<sup>[8]</sup> Prevalence is generally higher in women than in men, higher in urban areas compared with rural areas.<sup>[9]</sup>

The main symptom of NS-NP is pain and disability. Based on severity of symptoms The Neck Pain Task Force recommends a clinical classification in 4 grades: Grade I: Neck Pain with no signs or symptoms of major structural pathology and no or minor interference with activities of daily living

Grade II: Neck Pain with no signs or symptoms of major structural pathology but major interference with activities of daily living.

Grade III: Neck Pain with no signs or symptoms of major structural pathology but with neurological signs of nerve compression.

Grade IV: Neck Pain with signs of major structural pathology.<sup>[10]</sup>

Based on symptoms another type of classification proposed by IASP is based on the duration of neck pain. Acute Neck Pain usually lasts less than 7 days, Subacute Neck Pain lasts more than 7 days but less than 3 months, and Chronic Neck Pain has a duration of 3 months or more.<sup>[10]</sup>

Neck Pain has multiple factors in its etiology and its impact on the individual. It is assumed that there are several risk factors contributing to its development. Risk factors can be work related or non work related and they can be roughly divided into 3 categories (physical, psychosocial and individual risk factors).<sup>[11]</sup> The origin and exact pathophysiologic mechanisms of chronic neck pain often remain obscure because trauma or severe degenerative conditions at working age are found only in a few cases.<sup>[10]</sup>

There are some of the causes of neck pain, tightness of muscles of both neck and upper back, pinching sensation of the nerves originating from the cervical vertebrae, joint disruption and some other numerous spinal problems.<sup>[12]</sup> Most common cause is that soft tissues become strained or sprained from overuse or over extension.<sup>[13]</sup> Neck pain can be divided into upper cervical segment pain in which pain is usually referred to the head and lower cervical segment pain in which pain is referred to scapular region, shoulders, and upper limb. Pain develops in the neck and spreads up to the shoulder or to the base of the skull.<sup>[14]</sup>

Non-Specific Neck Pain is diagnosed by an orthopaedician. Conservative treatment are used to help manage Non-Specific Neck Pain are numerous and include usual medical care.<sup>[15]</sup> Although there is limited evidence for these treatments, conventional treatment options include the prescription of non-steroidal anti-inflammatory drugs, intramuscular injections of lidocaine. Physical Therapy includes manipulation, mobilization, low-level laser therapy, dynamic and isometric exercises have also been proved to be moderately effective.<sup>[16,17]</sup>

Diverse treatments exist for neck pain including Cryotherapy, Manual Therapy, Mobilization, TENS, IFT, Conventional based guideline-based treatments such as Physical Therapy and complementary and alternative medicine therapies like acupuncture, are proved to be effective in treating Non-Specific Neck Pain, among them Craniosacral Therapy along with Myofascial Release and Conventional Therapy individually are

proved to be effective in treating Non-Specific Neck Pain.<sup>[18]</sup>

Craniosacral Therapy intends to normalize sympathetic nerve activity, often increased in chronic pain patients, by modifying craniosacral rhythms. While the specific mechanisms of Craniosacral Therapy are still understudied, clinical trails have shown a preliminary evidence for Craniosacral Therapy on improving patient-reported outcomes such as pain and function in subjects with Non-Specific Neck Pain.<sup>[19,20,21]</sup>

Myofascial Release is a kind of extension of Craniosacral Therapy that concentrates more in a peripheral fascial problems. It is proved to be effective manual technique to release area of impaired sliding fascial mobility, and to improve pain perception over short duration in people with Non-Specific Neck Pain.<sup>[22]</sup> Myofascial Release uses gentle pressure as used in Craniosacral Therapy and stretching to facilitate the release of fascial restrictions and restore tissue mobility, it also decreases pain, improves posture.<sup>[23]</sup> It is one of the passive therapies which would reduce the fascial tightness and bring back the normal movement in fascia.<sup>[24]</sup> The technique uses hand mobility to mobilize soft tissues that aims to release adhesions in the myofascia.<sup>[25]</sup>

The goal of both CST and MFR is to effect somatic and visceral bodily changes by using these cranial bone-meningeal-fascial connections, viewing the patient as integrated totality. Proponents of these two manual techniques state that either CST or MFR or combination of two, could be effective in treatment.<sup>[26]</sup>

Conventional Physiotherapy includes Cervical Stabilization exercises aiming to train deep stabilizer muscles of the cervical spine and improve coordination between superficial and deep cervical muscles have been increasingly used in recent years.<sup>[27]</sup>

#### **Need of the study**

Neck pain is often recurrent, non-specific nature, and associated with disability of both social and occupational life. Evidence is still limited for treating Non-Specific Neck Pain, as only therapeutic exercises, and manual therapies were recommended in recent clinical practice guidelines. Craniosacral Therapy and Myofascial Release can help to improve function and decrease Pain by releasing Myofascial restrictions individually. But studies on Craniosacral Therapy with Myofascial Release are less known. Therefore, the purpose of the study is to compare Effectiveness of Craniosacral Therapy with Myofascial Release and Conventional Physiotherapy on Pain and Function in Subjects with Non-Specific Neck Pain and to get better results and greater benefits for the Subjects.

**Aim of the study**

The aim of the study was to compare the effectiveness of Craniosacral Therapy with Myofascial Release and Conventional Physiotherapy on pain and function in subjects with Non-Specific Neck Pain.

**Objectives of the study**

1. To determine the effectiveness of Craniosacral Therapy with Myofascial Release on Pain and Function in subjects with Non-specific Neck Pain.
2. To determine the effectiveness of Conventional Physiotherapy on Pain and Function in subjects with Non-Specific Neck Pain.
3. To compare the effectiveness of Craniosacral Therapy with Myofascial Release and Conventional Physiotherapy on Pain and Function in subjects with Non-Specific Neck Pain.

**Hypothesis**

**Research hypothesis(H):** Craniosacral Therapy with Myofascial Release is significantly effective on improving Pain and Function when compared with Conventional Physiotherapy in subjects with Non-Specific Neck Pain.

**Alternate hypothesis(H<sub>1</sub>):** Conventional Physiotherapy is significantly effective on improving Pain and Function when compared with Conventional Therapy along with Myofascial Release in subjects with Non-Specific Neck Pain.

**Null hypothesis(H<sub>0</sub>):** There will be no significant difference between Craniosacral Therapy with Myofascial Release and Conventional Physiotherapy treatment on improving Pain and Function in subjects with Non-Specific Neck Pain.

**MATERIALS AND METHODS**

**Study design:** Prospective study design

**Ethical Clearance and Informed consent:** The study protocol was approved by the Ethical Committee of GSL Medical college & General Hospital (Annexure-I), the investigator explained the purpose of the study and given the patient information sheet. The participants were requested to provide their consent to participate in the study (Annexure-II). All the participants signed the informed consent and the rights of the included participants have been secured.

**Study population:** Subjects clinically diagnosed as Non-specific neck pain by an orthopaedician.

**Study setting:** Out-patient physiotherapy department, Rajahmundry, Andhra Pradesh, India.

**Study duration:** Study was conducted during the period of one year.

**Treatment duration:** 30 mins per session, 3 sessions per week for 6 weeks.

**Study sampling method:** Systematic Random Sampling method.

**Sample size:** A total number of 80 subjects, both men and women with nonspecific neck pain who are willing to participate in the study were included in this study, all the recruited participants were explained about the study. After obtaining informed consent form and meeting the criteria, total 80 subjects were allocated into two groups with 40 in each group equally by systematic random sampling method.

**Group A-** Craniosacral Therapy with Myofascial release (40 subjects)

**Group B-** Conventional physiotherapy (40 subjects)

Groups	No. of subjects	Treatment
Group-a	40	Craniosacral therapy+myofascial release
Group-b	40	Conventional physiotherapy(cervical stabilization exercises)

**Materials used**

1. Arm rest chair
2. Stool
3. Examination Couch
4. Pillows
5. Stopwatch
6. Neck Disability Index Questionnaire
7. VAS score sheet

**Criteria for sample selection****Inclusion criteria**

1. Subjects with age 18-65 years.
2. Subjects including both males and females.
3. Subjects with Grade 1 and Grade 2 based on severity of symptoms by The Neck Pain Task Force.
4. Subjects that score 5-34 on the Neck Disability Index which assesses perceived Pain and Physical disability.

**Exclusion criteria**

1. Non Mechanical cause of Neck-pain.
2. Disc Herniation with positive radicular arm pain.
3. Spinal fractures.
4. Recent cervical surgery.
5. Inflammatory Traumatic diseases.
6. Neck pain for Non Musculoskeletal causes.
7. Signs of Neurological involvement

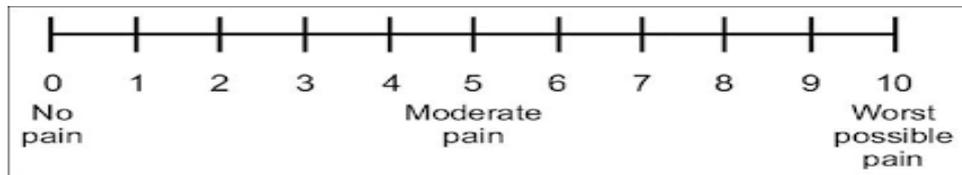
**Study Tools and Outcome measures**

1. **Visual analog scale (VAS):** To measure pain in subjects with Non-specific Neck Pain at the baseline and at the end of 6 weeks.
2. **Neck disability index:** To measure function in subjects with Non-specific Neck Pain at the baseline and at the 6 weeks.

### Measurement of severity of pain

Visual Analogue Scale (VAS) was used to measure pain severity at baseline (pre-test) and at the end of the 6<sup>th</sup> week (post-test). The VAS scale is reliable, valid and frequently used outcome measure for pain. Visual

analogue scale usually consists of 100 milli meters or 10 centimeters horizontal line. The line has the words "NO PAIN" on its left end and "WORST PAIN" on its right end.<sup>[28]</sup>



### Measurement of functional disability

**Neck disability index:** Is a 10-item questionnaire that measures a patient's self-reported neck pain related disability. A higher NDI scores means the greater a patients perceived disability due to neck pain, The "minimally clinically important change" by patients has been found to be 5 or 10%. 0 points means :no activity limitation, 50 points means complete activity limitation.<sup>[29]</sup>

### Interventions

This is a 6-week study which includes Craniosacral Therapy with Myofascial Release for Group A and Conventional Physiotherapy for Group B.

### Group A

**Craniosacral therapy with myofascial release:** Techniques were applied in each session according to the following predefined sequence:

**Sub occipital inhibition technique:** Both hands were placed under the occiput, with the fingers in contact with the atlas (Posterior arch). Deep, sliding, and progressive pressure was applied for 10 min. The objective of this technique was to relax the sub occipital muscles.



**Fig. 1: Subject performing sub occipital inhibition technique.**

**Frontal technique:** The therapists ring and little fingers were placed along the outside of the frontal bone (zygomatic processes), while the middle and index fingers were positioned next to the frontal bone (midline). A slight pressure in a posterior direction was performed with the index fingers on the midline of the

frontal bone, and at the same time, the ring fingers were moved in an anterior and caudal direction for 5 min. The aim of this technique was to relax the tissue around cranial structures, since extracranial tissues such as pericranial muscles and periosteum are innervated by some meningeal afferents.



**Fig. 2: Subject performing frontal technique.**

**Sphenoid technique:** The index finger was put over the sphenoid (Greater wing), the middle finger on the pterion, the ring finger behind the ear over the asterion, and the little finger over the occiput (Lateral angle). Both thumbs were applied together on the midline of the head. A gentle distraction force was performed for 5 min.



**Fig. 3: Subject performing sphenoid technique.**

**Fourth ventricle technique:** Both hands with palms up were applied under the patients occiput, with the thumb tips together. The therapist made a slight approximation of the thenar eminence and a cephalic traction for 10 min.



**Fig. 4:** Subject performing fourth ventricle technique.

**Lubosacral technique:** One flat and palm-up hand was located under the sacrum and the lumbar vertebrae L4-L5, whereas the other hand was placed flat and palm down on the pelvic upper surface, with both hands vertically aligned. The therapist performed a slight compression with both hands for 5 min.<sup>[30]</sup>



**Fig. 5:** Subject performing lubosacral technique.

**Myofascial release:** Trigger point pressure release followed by muscle stretching for the trapezius, sternocleidomastoid, levator scapulae, suboccipital muscles.

**Trapezius muscle:** While the patient in sitting position, gradual friction was applied to the primary trigger point for 30 seconds followed by passive stretching of the trapezius muscle for 1 minute to the opposite side, local stretching is fulfilled by direct pressure on the muscle, exerted by flat or pincer pressure directed along the length of the taut band over a distance of approximately 1 to 2 inches, will further relax the trigger point.



**Fig. 6:** Subject performing Passive stretching for Rt upper fibers of trapezius muscle.

**The suboccipital muscle:** Extending the neck and stretched by keeping the neck straight and performing a chin tuck.

**The posterior rotator muscles:** (The splenii and oblique capitis muscles) are stretched by flexing the neck and slightly rotating the head. The oblique capitis inferior is specifically stretched by fixing the transverse process of C2 with the operators fingers while rotating the head 10 degree to 15 degree away from the affected side, to increase the distance between the origin and insertion on the muscle on the transverse process of C1 and posterior process of C2, respectively.



**Fig. 7:** Subject performing Stretch of rotator muscles of Neck and The oblique capitis inferior muscle.

**The sternal head of the sternocleidomastoid muscle:** Is stretched by combining extension of the neck and rotation to ipsilateral side, while tilting the head upward. The second position of the stretch is full turn of the head to ipsilateral side and a downward tilt of the head, to increase the distance between the sternum and mastoid process. The clavicular head of sternocleidomastoid muscle is stretched by extension of the neck, upward tilt of the head, and rotation of the head, and rotation of the head to the contralateral side.



**Fig. 8:** Subject performing myofascial release of Rt sternocleidomastoid muscle.

**The scalene muscles:** are stretched by combining lateral bend to the opposite side (Medial head) a neck straightening exercise was performed by retracting the head (Suboccipital muscles) 5 times for 3-5 sec. Each patient was individually advised how to perform the stretching exercises and information was also given in writing.<sup>[25]</sup>



**Fig. 9:** Subject performing Myofascial release of scalene muscles.

**Group B**

**Conventional physiotherapy**

Subjects in this group received cervical stabilization exercises.



**Fig. 10:** Subject performing axial elongation exercise.

Craniocervical flexion and cervical extension exercises were performed to retrain deep cervical flexors and

improved postural awareness. The participants were requested to learn the correct cranio cervico flexion in a supine position.



**Fig. 11:** Subject performing craniocervical flexion.

For the cervical extension exercise, the participants firstly maintained craniocervical flexion and then lifted and held the head and neck in prone position.



**Fig. 12:** Subject performing craniocervical extension exercise.

A rowing exercise with elastic band was performed in a seated position to strengthen shoulder extension and scapular retractors.



**Fig. 13:** Subject performing rowing exercise.

Y exercise with an elastic band was performed in the standing position to strengthen the lower trapezius

muscles. The participants were instructed to maintain chin-in posture and spinal alignment while performing these exercises.<sup>[31]</sup>



Fig. 14: Subject performing Y exercise.

#### Statistical analysis

All Statistical analysis was done by using SPSS software version 21.0 and Microsoft excel-2007. Descriptive data was presented in the form of mean $\pm$  standard deviation and mean difference percentages were calculated and presented.

**Within the groups:** Paired student “t” test was performed to assess the statistical difference within the groups for Pain and Function (NDI) from pre-test and post-test values.

**Between the groups:** Independent student “t” test was performed to assess the statistically significant difference

#### TABLES

Table 1: Analysis of mean score of vas within the Group A and Group-B.

Group a		Mean	Std. Deviation	P value	Inference
Vas	Pre	7.95	.815	0.0001	Highly significant
	Post	3.08	.797		

Group b		Mean	P value	Inference
Vas	Pre	8.10	0.0001	Highly significant
	Post	4.15		

#### Results

The above table shows that the mean score of VAS changes from pre-test to post-test values within the group

in mean value between the groups for Visual Analogue Scale for Pain, Neck Disability Index.

For all statistical analysis,  $p \leq 0.05$  will be considered as Statistically Significant.

#### RESULTS

The results of this study were analysed in terms of reduction of Pain on Visual Analogue Scale and improved function on Neck Disability Index Questionnaire. The consort flow chart of the study showed the study organization in terms of subjects screening, random allocation and analysis following the intervention.

Total 80 subjects with Non-Specific Neck Pain were screened for eligibility, all of them met inclusion criteria have undergone baseline test and randomized into 2 groups through Systematic Random Sampling and each group has 40 subjects and Group A was given Craniosacral Therapy with Myofascial Release and Group B was given Conventional Physiotherapy. After 4 weeks of intervention, there were 4 dropouts from each group after 4 weeks due to other health issues.

Comparison was done both within the group as well as in between the two groups. So as to evaluate the intra group and inter group effectiveness of Craniosacral Therapy with Myofascial release and conventional physiotherapy which are under consideration in the present study.

A were found to be statistically highly significant ( $p < 0.05$ ), within group B were found to be highly significant ( $p < 0.005$ ).

Table 2: Comparison of mean score of vas in between the groups at baseline and post-test.

	Group	Mean	Std. Deviation	p value	Inference
Vas pre	1	7.95	.815	0.402	Significant
	2	8.10	.778		
Vaspost	1	3.08	.797	0.0001	Highly Significant
	2	4.15	.864		

#### Results

The analysis of above Table shows the baseline line measurement and post test of VAS between the Groups

were found statistically insignificant at Pre-test ( $P > 0.05$ ) and statistically highly significant in Post-test measurements ( $P < 0.05$ ).

**Table 3: Analysis of mean scores of NDI within Group-A AND Group-B.**

Group a		Mean	Std. Deviation	P value	Inference
Ndi	Pre	28.93	3.751	0.0001	Highly significant
	Post	17.43	4.883		

Group b		Mean	P value	Inference
Ndi	Pre	29.58	0.0001	Highly significant
	Post	25.18		

**Results**

The above table shows that the mean score of NDI changes from pre-test and post-test values within the

Group A were found to be statistically highly significant in Post-test measurement ( $P < 0.05$ ), and Group-B were found to be statistically highly significant ( $p < 0.05$ ).

**Table 4: Comparison of mean score of NDI in between the group at Baseline and Post test.**

	Group	Mean	Std. Deviation	p value	Inference
Ndipre	1	28.93	3.751	0.377	Significant
	2	29.58	2.697		
Ndipost	1	17.43	4.883	0.0001	Highly significant
	2	25.18	2.500		

**Results**

The above table shows the baseline and post-test measurement of NDI mean score in between the groups. The NDI mean score at baseline in Group A is 28.93 and Group B is 29.58 and at post-test in Group A is 17.43 and Group B is 25.18 were found to be statistically significant.

**DISCUSSION**

The aim of our present study was to evaluate the effectiveness of Craniosacral Therapy with Myofascial Release and Conventional Physiotherapy on Pain and Function in subjects with nonspecific neck pain. In this study, subjects were assessed for Pain and Function. The following outcome measures Visual Analogue Scale (VAS), and Neck Disability Index Questionnaire were used to measure the intensity of Pain and Function.

The results showed significant improvement in both outcome measures, VAS and NDI Questionnaire, in both the techniques. Both Group A and Group B are effective in decreasing Pain and improving Function in subjects with Non-Specific Neck Pain.

Both the groups showed statistically significant differences, but the Craniosacral Therapy with Myofascial Release group (VAS mean- 7.95, NDI mean- 28.93) showed clinically effective slightly when compared to Conventional Physiotherapy group (VAS mean- 3.08, NDI mean- 17.4). This study supports the previous study of Melissa A. Stefanosky "Is Craniosacral therapy effective in the reduction of pain intensity in individuals with Non-specific Neck and/or Back pain?" This study concluded that Craniosacral Therapy is effective in the reduction of pain intensity in individuals with non-specific neck and/or back pain. Craniosacral Therapy requires minimal resources and is able to be performed in an outpatient office setting which makes it marketable to patients as well as healthcare providers.

This study concluded that in future trials combination therapy involving Craniosacral Therapy with other commonly utilized interventions, such as physical therapy would be beneficial. (Melissa A. Stafansky) Based on the conclusion of the above study by Melissa A. Stafansky Craniosacral Therapy in Combination with Myofascial Release was taken in one group, based on the evidence of the study by Sandra L. Ehrett "Craniosacral Therapy and Myofascial Release in entry level physical therapy curricula" Research on CST and MFR has been published primarily in the osteopathic literature, with no known scientific data that affect clinical care yet available in the physical therapy literature. Despite the lack of hard data, many physical therapists appear to be interested in the concepts of CST and MFR and to have strong opinions about the role of the techniques in physical therapy, based on number of articles.

According to Sandra L. Ehrett, based on the osteopathic literature, Craniosacral therapy is based on five physiological premises, Motility of central nervous system, Rhythmic fluctuation of the cerebrospinal fluid, Mobility of the 22 bones of the skull, Mobility and continuity of the meninges with the connective tissues (fasciae) of the rest of the body, Continuity of the meninges with the connective tissue (fasciae) of the rest of the body.

Myofascial release is a kind of extension of CST that concentrates more on peripheral fascial problems.

The goal of both CST and MFR is to effect somatic and visceral bodily changes by using these cranial bone-meningeal-fascial connections, viewing the patient as an "integrated totality".

Proponents of these two manual techniques state that either CST or MFR, or some combination of the two,

could be effective in treatment of orthopaedic problems.(Sandra I ehrett).

The other Group B that involved conventional physiotherapy which consists of Cervical Stabilization exercises. According to Yi-Liang Kuo, Tsung-Han Lee and Yi-Ju Tsai, cervical stabilization exercises are frequently used to reduce pain, maximize Function, and improve physical impairments for people with Non-Specific Neck Pain. According to that study, significant improvements were observed in neck pain, control of deep cervical flexors, and some outcome measures after the 6-week intervention

#### Limitations

- No follow up
- No control group
- No blinding of evaluators
- Small Sample Size

#### Recommendations for further research

- The length of the study can be decreased by either 4 or 5 weeks.
- In this study the intervention protocol was given to the subjects with non specific neck pain, for further research, the protocol can be given to specific neck pain conditions and mechanical neck pain.

#### CONCLUSION

After 6 weeks of Intervention, both the Craniosacral Therapy group and Conventional Physiotherapy group showed significant improvement in reducing Pain and Function in subjects with Non Specific Neck Pain. However, CST with MFR group showed better results when compared to Conventional Physiotherapy group.

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