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Efficacy of Myofascial Trigger Release Technique versus Muscle Energy Technique on Muscle Activity and Pain among Individuals with Text Neck Syndrome: an Electromyography Analysis

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ABSTRACT

Aims: The study aims to determine the effectiveness of the Myofascial Trigger Release Technique (MTRT) versus Muscle Energy Technique (MET) on muscle activity and pain among individuals with Text Neck Syndrome.

Method and Materials A total of 112 subjects with Text neck syndrome were selected using a simple random sampling technique from Saveetha Medical College and hospital, based on inclusion and exclusion criteria, after which detailed study procedures were explained to patients, and written informed consent was obtained. The participants aged from 18 to 30 years and both male and female genders had been diagnosed with Text neck syndrome. The 56 individuals in each group were divided into two groups: the experimental group (MTRT) and the control group (MET). For both groups, pretest results from EMG and pressure algometer were documented. The treatment intervention consisted of 4 weeks, with three sessions per week.

Findings: Comparing pre-test and post-test values within the experimental group and control group on EMG and pressure algometry scores showed a highly significant difference in mean values at $P \leq 0.0001$.

Conclusion: The study concluded that the myofascial trigger release technique was more effective than the muscle energy technique.

Keywords: Electromyography, Muscle Activity, Myofascial Trigger, Pain, Pressure Algometry

Introduction

Text neck syndrome is a type of repetitive stress injury caused by extended neck flexion at various angles and pain from lengthy, binge-watching or messaging on portable electronics. The first person to use the word "Text Neck" was Dr. Dean L. Fishman, a chiropractor in the United States. This term refers to pain in the neck and damage to the muscles in the upper back that result from often flexing the neck at different angles while looking down at a phone, which changes the cervical spine's natural curve [1].

According to a report, the forces pushing on the neck increase with head flexion angle: 27 pounds at 15 degrees, 40 pounds at 30 degrees, 49 pounds at 45 degrees, and 60 pounds at 60 degrees; the model prediction at 90 degrees is not accurate. These days, the mobile phone is the most generally used and well-liked gadgets for a wide range of everyday tasks, including using social media sites, gaming, watching movies, accessing the internet, and exchanging information. According to a survey, 79% of adults between the ages of 18 and 44 use their smartphones for work most of the time [2].

In recent years, an increasing amount of data has been reported, suggesting that "Text Neck Syndrome" may be a 21st-century condition [3]. Teenagers are more likely to develop text neck syndrome because they are hunching over smartphones and computers more often than they used to be, often for several hours each day and several days a year. It has been estimated that 75% of people on the planet are thought to spend hours each day slumped over their mobile devices with their necks cocked forward [4].

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Nevertheless, we are becoming dependent on technology more and more. They were designed primarily for communication, much like cell phones, but have gained significant versatility over time [5]. Nomophobia is a phobia that some people get as a result of their increased addiction to their mobile phones. The fear of being without one's mobile device is a defining characteristic of our time. Specific individuals have been observed engaging in problematic or compulsive mobile phone-related behaviors, including phubbing, excessive texting, and frequent phone monitoring. Homophobic are those who exhibit compulsive behaviors related to their mobile phones [6].

Overreliance on smartphones hurts mental, physical, and social well-being. They begin to experience various physical issues like muscle tightness, pain in arms, legs, neck, and back, headaches, and eye strain. Additionally, it can lead to digestive problems, decreased energy levels, weight gain, and other health issues [7].

Text Neck Syndrome typically causes neck pain, upper back pain, and soreness in those who suffer from it. Over time, it can result in persistent, sharp, and lingering pain, as well as severe muscle spasms in the upper back [8]. The abnormal posture associated with the syndrome leads to the weakening of the cervical muscles, particularly the deep cervical flexors, due to increased muscle strain, which is the primary cause of pain in Text Neck Syndrome [9]. If text neck goes unnoticed and untreated, it can cause long-lasting, serious harm, including spinal curvature flattening, early arthritis development, misalignment, degeneration, disc compression, herniated discs, nerve or muscle damage, inflamed cervical ligaments, nerve irritation, increased spine curvature, and more [10]. This clinical disease describes the beginning of cervical spinal degeneration brought on by the recurrent stress of frequently bending our heads forward while looking down at our phones or when we are engaged in prolonged "texting" Teenagers are more likely to develop text neck syndrome because they are hunching over smartphones and computers more often than they used to be, often for several hours each day and several days a year [11].

The defining elements of myofascial pain are myofascial trigger points, which have components related to the motor, sensory, and autonomic nervous systems [12]. The motor features of both active and latent myofascial trigger points can include impaired motor function, stiffness, limited range of motion, and muscular weakness resulting from motor inhibition. Peripheral and central sensitization, referral of pain to a remote location, and local discomfort are examples of sensory components [13].

Myofascial release affects these fascial changes, which is why treating chronic pain with it is advised. The goals are to reduce discomfort, lengthen muscles to their ideal length, enhance function, and ease myofascial system tissue sensitivity. MFR entails treating a single patient at a time with a single therapist using a low-load, long-duration stretch to the myofascial tissue barriers [14].

Muscle Energy Technique is an active manual treatment where the physiotherapist does not control the corrective force. The patient ought to be able to execute focused, variable-intensity voluntary contractions. Isometric, concentric, and eccentric contractions are the three types of muscle contractions that should be performed in MET, according to Green Man PE in 1989 [15]. By promoting regular muscle contractions, this method can treat muscular weakness or contractures and lessen localized edema. Through localized vasodilatation and fascial stimulation, MET lowers sympathetic tone. The patient can then execute an isometric contraction and a post-isometric relaxation of the contracted muscle. Moreover, reciprocal agonist muscle inhibition is induced by MET [16].

Surface electromyographic recordings are often used in the investigation of muscle activity in occupational tasks because prolonged muscle activity is known to generate ischemic muscular discomfort. Using electromyography to assess muscle activity can provide insight into patterns of tension or activation that have been established in the muscles [17]. It has been demonstrated that continuous contractions can cause localized muscle fatigue even with joint stresses as little

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as 5% of maximal capacity [18]. Furthermore, muscle activation patterns can be utilized as input into models to create estimates of muscle tension and loads in other tissues that are unique to an individual or as a means of testing the hypotheses of biomechanical models.

Pressure algometers are used to gauge resistance to tenderness or deep pressure pain thresholds. The device measures the pressure applied to a specific location on the body when a 1 cm^2 rubber disk is pressed there [19]. Lipmann first proposed the idea of quantification in 1934, and since the 1980s, measurements have been made of the natural pressure pain thresholds of the body's skeletal muscles. Since then, clinical practice has extensively utilized pressure algometers [20]. Myofascial pain syndrome and other musculoskeletal disorders have been extensively assessed using pressure algometry, a technique that utilizes this apparatus.

The pressure pain thresholds of patients with myofascial pain syndrome were standardized. For instance, a patient's pressure pain threshold was considered abnormal if it was not greater than 3 kg/cm2, was at least 2 kg/cm2 lower than the pressure pain threshold of the opposing site, or was lower than the usual value [21].

The current study employed surface electromyography to assess the muscle activity of neck muscles and a pressure algometer to measure pain in individuals with text neck syndrome. Specifically, this study aims to compare the efficacy of the Myofascial Trigger Release Technique (MTRT) and the Muscle Energy Technique among individuals with Text-neck syndrome, as well as to determine how Text-neck syndrome impacts them in their daily lives.

Method and Materials

A total of 112 subjects with Text neck syndrome were selected using a simple random sampling technique from Saveetha Medical College and Hospital based on inclusion and exclusion criteria. To initiate the study, the detailed procedures were explained to the patients, and written informed consent was obtained. The participants aged from 18 to 30 years and both male and female genders had been diagnosed with Text neck syndrome. The 56 individuals were randomly assigned to each of the groups. Experimental (Myofascial trigger release technique) and control group (Muscle energy technique). For both groups, pretest results from EMG and pressure algometry were documented. The treatment intervention consisted of 4 weeks, with three sessions per week. The inclusion criteria were subjects with neck pain, those who spent an average of 3 to 4 hours daily using mobile phones, and individuals aged 18 to 30 years. The exclusion criteria were neck injury, osteoporosis, cervical spondylosis, postural disorders, cervical spondylolisthesis, recent spinal fracture, recent cervical surgery, and hypermobility of the joint.

In this study, the experimental group received the Myofascial Trigger Release Technique.

Therefore, the therapist positioned herself behind the patient's head, moved her left hand under the patient's head, and placed her index finger on the upper trapezius. The patient was placed in a supine position and stretched diagonally downward on the neck region of the upper trapezius using the thumb of the right hand. Hold, let go, and then extend the neck region once more. Stretch down and outward, following the arc of the muscle fibers, without releasing the contact and holding, then awaiting release before extending once more. Repeat the release technique, moving the thumb further down the shoulder section of the upper trapezius, until the patient's head is in midline and the entire upper trapezius has been released.

After applying deep transverse friction for ten minutes, the upper trapezius muscle was myofascially stretched three times, with a 90-second hold in between each stretch. With the patient comfortably seated on a chair and both feet firmly planted on the ground, the right thumb was used to gradually provide friction to the primary trigger point, while the left thumb provided upper reinforcement. The therapist then used the ulnar border of both palms to apply myofascial release to the upper trapezius. The patient's cervical spine was in a side flexion position to the opposite side at

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that moment.

In the control group, the Muscle Energy Technique was used. The practitioner stabilizes the shoulder with one hand and cups the ipsilateral ear and mastoid area with the other. The patient rests supine with their arm on the side to be treated resting alongside the trunk, and their head and neck are side-bent away from the side being treated, just short of the limitation barrier.

The posterior fibers of the upper trapezius are contracted when the flexed neck is fully side-bent and rotated towards the opposing side. This makes it easier to stretch this particular part of the muscle later on. When the neck is fully bent to one side and partially rotated, the contraction involves the middle muscles. The anterior fibers of the upper trapezius are activated when the flexed neck is fully side-bent and has a slight rotation towards the side being treated.

The practitioner can perform different contractions and stretches by crossing their arms and using their hands to stabilize their shoulder and mastoid areas. To move the stabilized shoulder toward the ear (a shrug action) and the ear toward the shoulder, the patient applies mild resistance (approximately 20% of available strength). To induce a synchronous contraction of the muscle from both ends, it is crucial to exert an opposite effort toward movement. There should not be any pain, and only a modest amount of effort is required. After holding this contraction for seven to ten seconds, the practitioner should stretch the shoulder caudally and then gradually ease the head and neck into a more pronounced degree of side bending and rotation, where they are stabilized. The patient can help during this part of the therapy by helping to initiate the muscle stretch when instructed to do so (e.g., "As you breathe out, please slide your hand towards your feet"). The likelihood of a stretch reflex being triggered is decreased when the patient participates in the stretch. After the patient relaxes and the muscle is stretched, the stretch can be maintained for up to 30 seconds.

The collected data were tabulated and analyzed. The mean and Standard Deviation (SD) were taken for all parameters. To analyze the significant differences between pre- and post-test measures, a paired t-test was performed. To examine significant differences between the two groups, an unpaired t-test was performed. P-value < 0.001 was considered statistically significant.

Table 1) Pre and post-test of the experimental group

Parameters	Tests	Mean	SD	T-Value	P-Value
EMG	Pre-Test	609.53	31.73	31.73	<0.0001
	Post-Test	874.11	28.95		
Pressure Algometry	Pre-Test	3.46	1.21	17.16	<0.0001
	Post-Test	6.96	0.81		

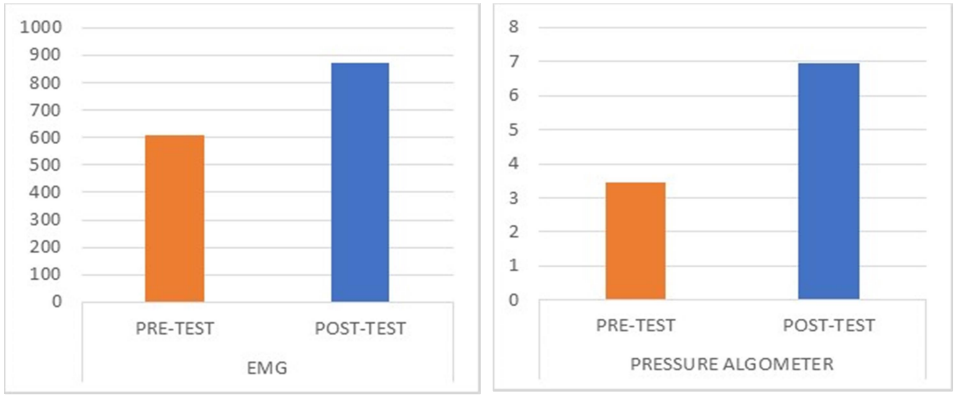

Fig-1) Pre and post-test of the experimental group

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Table 2) Pre and post-test of the control group

Parameters	Tests	Mean	SD	T-Value	P-Value
EMG	Pre-Test	604.73	23.14	24.68	<0.0001
	Post-Test	788.53	25.82		
Pressure Algometry	Pre-Test	3.36	1.12	15.32	<0.0001
	Post-Test	5.86	0.82		

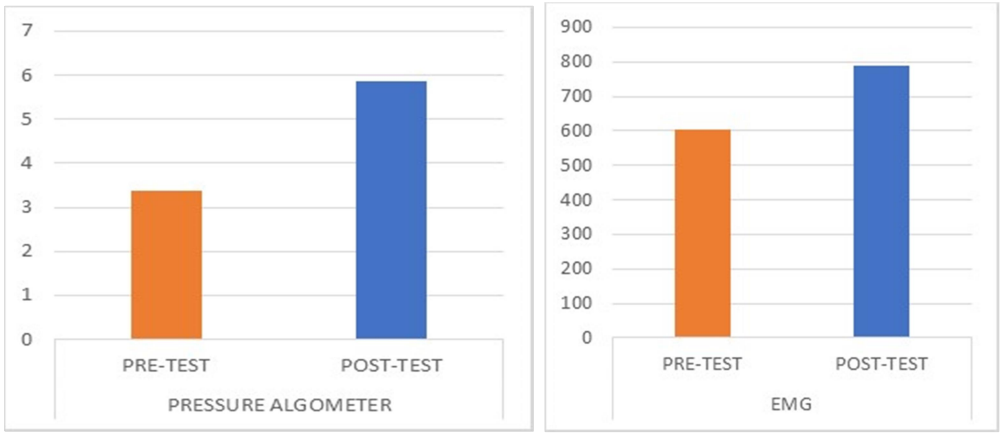

Fig-2) Pre and post-test of the control group

Table 3) Post-test values of the experimental group and control group

Parameters	Post-Test Value		T-Value	P-Value
	Experimental Group	Control Group		
EMG	874.11	788.53	8.54	<0.0001
Pressure Algometry	6.96	5.86	7.14	<0.0001

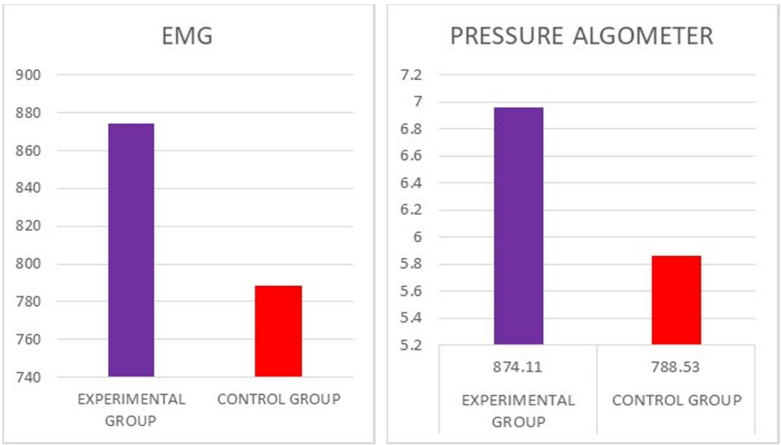

Fig-3) Post-test values of the experimental group and control group

Findings

The statistical analysis of the quantitative data revealed statistically significant differences in the values between the two groups. Table 1 presents a comparison of the pre-test and post-test values for the experimental group. The pre-test value of 609.53 increased to 874.11 in the post-test, as measured by EMG. Additionally, the pre-test value of 3.46 increased to 6.96 in the post-test, as measured by the pressure algometer. Hence, the result is considered to be incredibly significant statistically, with a P-value of <0.0001

Table 2 shows the comparison of the pre-test and post-test values of the control group, the pre-test value of 604.73, which is increased to 788.53 in the post-test from EMG, and the pre-test value of 3.36, which is increased to 5.86 in the post-test from the pressure algometer. Hence, the result is considered to be highly

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statistically significant with a P-value of <0.0001

Table 3 presents the post-test mean values of EMG in the Experimental and control groups, respectively (874.11 and 788.53). Hence, the result is considered to be highly statistically significant with the P-value <0.0001. Both groups show some improvement in muscle activity and pain in the subjects with text neck syndrome.

According to the 1-3 tables, it was found that the experimental group was more effective than the control group in terms of muscle activity and pain among subjects with text neck syndrome. Based on the statistical data analysis.

Discussion

The goal of this study is to compare the efficacy of the Myofascial Trigger Release Technique versus Muscle Energy Technique (MET) on muscle activity and pain among individuals with text neck syndrome This study demonstrates that EMG score in terms muscle activity, the MTRT (Experimental group) has higher statistical significance compared to MET (Control group), and pressure algometer for pain, MTRT (experimental group) has higher significance compared to Muscle Energy Technique (Control group).

Releasing the fascia limitation that is putting pressure on the fibrous band of connective tissue, the myofascial release technique is used. The myofascial release technique, combined with a hot pack, was more effective than muscle stretching in reducing pain, improving disability, and increasing the range of motion of the cervical spine. It causes capillary dilation and an increase in blood flow to the muscle, which in turn enhances the removal of waste products that stimulate the nociceptor's pain fibers, reducing pain, muscle tension, and improving range of motion [22].

The immediate effects of positional release technique and myofascial release technique on NDI score, cervical range of motion, and pain on a VAS scale in students with trapezitis demonstrated that both techniques are useful for reducing pain and disability; however, since baseline cervical ranges in both groups were unaffected, there was no discernible difference in the post-intervention cervical range of motions among college-bound students with trapezitis [23].

In the comparative study, both groups showed significant improvements in terms of pain reduction, functional limitation, and range of motion when comparing the effectiveness of the Myofascial Release Technique with Laser versus the Positional Release Technique (PRT) with Laser for trapezius pain. However, when comparing the subjects in the two groups, the Myofascial Release Technique (MRT) with Laser has demonstrated a greater improvement than PRT with Laser [24].

Although MET is frequently recommended for treating somatic dysfunction and pain, little is known about how MET affects pain and tenderness. The MET group's pain results were consistent with the earlier study's findings, which showed that pain in the neck region and other body areas decreased after treatment [25]. Comparing the effects of the Muscle Energy Technique and Positional Release Technique Therapy, it was found that there was no significant difference in pain and neck disability among the subjects with neck pain. Therefore, both techniques can be used in clinical practice [26].

The primary goal of the study was to determine whether the recently developed MRT was more effective than conventional neck exercises in reducing pain and neck disability in females with cervicogenic headaches. The study's exclusion of male participants, despite their susceptibility to the disease, limits its applicability. The study's findings lead the authors to the conclusion that traditional neck exercises are less effective than myofascial release therapy for the suboccipital muscles [27].

Several limitations should be considered. The study's sample size was relatively small, which may limit the generalizability of the findings. Additionally, the study's duration was short-term, and long-term effects were not assessed. Due to the small sample size, the results might not be widely applicable. Further studies could also explore the effects on different patient populations, as well as its interaction with other therapeutic modalities,

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to provide a more comprehensive understanding of its role in managing Text neck syndrome.

Conclusion

The present study concluded that 4 weeks of Myofascial Trigger Release Technique and Muscle Energy Technique significantly improved EMG and pressure algometer among Text Neck Syndrome Patients. The superiority of the Myofascial Trigger Release Technique has been demonstrated by using EMG to outperform the Muscle Energy Technique. Based on the result obtained in this study, Myofascial Trigger Release Technique shows more improvement in muscle activity and pain among Text Neck Syndrome Patients than the Muscle Energy Technique.

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Authors' Contribution: All authors participated in different parts of the research. They helped in writing the first draft of the manuscript and approved the final manuscript.

Conflict of Interest: There were no conflicts of interest for this study.

Ethical Approval: Ethical principles in manuscript writing have been adhered to the guidelines of the National Ethics Committee and the COPE regulations.

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References

1. Kumari S, Kumar R, Sharma D. Text neck syndrome: the pain of modern era. Int J Health Sci Res. 2021;11(11):161–165.
2. David D, Giannini C, Chiarelli F, Mohn A. Text Neck Syndrome in Children and Adolescents. Int J Environ Res Public Health. 2021;18(4):1565. doi: 10.3390/ijerph18041565.
3. Kumar R, Kumari S, Bharti P, Sharma D. Nomophobia: A rising concern among Indian students. Ind Psychiatry J. 2021;30(2):230-233. doi: 10.4103/ipj.ipj_134_21.
4. Effectiveness of Pilates along with conventional exercise program and conventional exercise program alone in subjects with text neck syndrome. Int J Sci Res. 2021; 10(3):1322-1326 doi: 10.21275/SR21322101821.5.
5. Pawaria S, Kalra S. Comparing effectiveness of myofascial release and muscle stretching on pain, disability, and cervical range of motion in patients with trapezius myofascial trigger points. Indian J Health Sci Care. 2015;2(1):8–13. doi: 10.5958/2394-2800.2015.00002.4.
6. Shinde S, Bhende R. Evidence based treatment strategies for "text neck syndrome": a review. Int J Occup Saf Health. 2023;13(2):245-57.
7. Anitha A, Manikumar M, Muthukumaran J. Importance of hand impairment measures on return to work among industrial workers with Zone II flexor tendon repair. Int J Health Sci. 2022;6(S6):1944–1953.
8. Costa MV, Raulino LT, Silva RR, Fernandes TA. Association of text neck with the appearance of neck pain: systematic review. Coluna/Columna. 2024;23(3):e285741.
9. Kotteeswaran K, Manikumar M, Muthukumaran J, Swetha K. Effectiveness of Maitland mobilization technique (talocrural glides) and kinesio taping on posterior ankle impingement syndrome in dancers. Int J Physiother Res 2024, 12(5):4791-97. doi: https://dx.doi.org/10.16965/ijpr.2024.132
10. Yüzbaşıoğlu Ü, Ekici E, Aytar A. Pain of modern age text neck syndrome: A traditional review. İstanbul Gelişim Üniversitesi Sağlık Bilimleri Dergisi. 2024;24:1321-31.
11. Anitha A, Manikumar M, Muthukumaran J. Evaluation of quality of life in subjects with Zone II flexor tendon repair: A cross-sectional study. Int J Health Sci. 2022;(II):5775–5786.
12. Chu EC. Preventing the progression of text neck in a young man: A case report. Radiol Case Rep. 2022;17(3):978-82.
13. Overmann L, Schleip R, Anheyer D, Michalak J. Effectiveness of myofascial release for adults with chronic neck pain: a meta-analysis. Physiotherapy. 2024;123:56-68. doi: 10.1016/j.physio.2023.12.002.
14. bardella S, La Russa C, Bernetti A, Mangone M, Guarnera A, Pezzi L, Paoloni M, Agostini F, Santilli V, Saggini R, Paolucci T. Muscle Energy Technique in the Rehabilitative Treatment for Acute and Chronic Non-Specific Neck Pain: A Systematic Review. Healthcare (Basel). 2021;9(6):746. doi: 10.3390/healthcare9060746.
15. Sommerich CM, Joines SM, Hermans V, Moon SD. Use of surface electromyography to estimate neck muscle activity. J Electromyogr Kinesiol. 2000;10(6):377-98. doi: 10.1016/s1050-6411(00)00033-x.
16. Park G, et al. Reliability and usefulness of the pressure pain threshold measurement in patients with myofascial pain. J Korean Med Sci. 2011;35(3):412–417.
17. Jain D, Jawade S, Chitale N. Effectiveness of progressive resisted exercise along with conventional exercise and conventional exercise program alone in subjects with text neck syndrome. J. Pharm. Res. Int. 2021;33(59B): 536-542.
18. Seemal P, Noor R, Riaz S, Afzal H, Anwaar S, Niaz M,

[DOI: 10.22034/IJMPP.10.1.1141]

et al. Effects of muscle energy technique with and without Bowen therapy in text neck syndrome. Pak J Med Health Sci. 2022;16(06):164-.166. doi:https://doi.org/10.53350/pjmhs22166164
19. Straatman LN, Lukacs MJ, Carlesso L, Grewal R, Lalone EA, Walton DM.. A systematic review of the psychometric properties of pressure pain detection threshold in evaluating mechanical pain threshold in people with hand or wrist injuries. J Hand Ther. 2023;36(4):845–859. doi: 10.1016/j.jht.2023.06.001.
20. Pawaria S, Kalra S. Comparing effectiveness of myofascial release and muscle stretching on pain, disability, and cervical range of motion in patients with trapezius myofascial trigger points. Indian J Health Sci Care. 2015;2(1):8–13.
21. Chaudhary ES, Shah N, Vyas N. Comparative study of myofascial release and cold pack in upper trapezius spasm. Int J Health Sci Res. 2013;3(12):20–27.
22. Fiebert I, Kistner F, Gissendanner C, DaSilva C. Text neck: An adverse postural phenomenon. Work. 2021 Jan 1;69(4):1261-70.
23. Patel N, Desai S, Patel P. Effectiveness of muscle energy technique versus positional release technique on upper trapezius trigger points in subjects with neck pain: A comparative study. Int J Curr Res Rev. 2021;13(11):10–15.
24. Vispute S, Kumar N. A comparative study of immediate effects of myofascial release technique and positional release technique on trapezitis among college students. Int J Physiother Res. 2021; Int J Physiother Res 2022, Vol 10(3):4243-49. doi: https://dx.doi.org/10.16965/ijpr.2022.122
25. Ravish VN, Shridhar, Sneha Helen. Comparative effectiveness of myofascial release technique versus positional release technique with laser in patients with unilateral trapezitis. Int J Physiother Res 2022, Vol 10(3):4243-49. doi https://dx.doi.org/10.16965/ijpr.2022.122:
26. Yadav H, Goyal M. Efficacy of muscle energy technique and deep neck flexors training in mechanical neck pain: A randomized clinical trial. Int J Ther Rehabil Res. 2015; 4 (1): 52-66. DOI:10.5455/ijtrr.0000004827.
27. Mittal S, Sharma S. Effect of myofascial release and muscle energy technique on patients with chronic neck pain: a scoping review. Phys Act Nutr. 2024;28(1):45-51. doi: 10.20463/pan.2024.0007.

[DOI: 10.22034/IJMPP.10.1.1141]