

# Effectiveness of McKenzie Approach along with Tens (Transcutaneous Electrical Stimulation) Modality for Low Back Pain among Sculptors

Ashok Kumar. K<sup>1</sup>, R.Radha Krishnan<sup>2</sup>, R. Nivetha<sup>3</sup>

<sup>1</sup>Assistant Professor, Tagore College of Physiotherapy, Chennai  
Affiliated to The Tamilnadu Dr.MGR Medical University, Chennai  
Email: ashokmpt10[at]gmail.com

<sup>2</sup>Principal, Tagore College of Physiotherapy, Chennai  
Affiliated to The Tamilnadu Dr.MGR Medical University, Chennai  
Email: tagorecpt[at]gmail.com

<sup>3</sup>Intern, Tagore College of Physiotherapy, Chennai  
Affiliated to The Tamilnadu Dr.MGR Medical University, Chennai

**Abstract:** ***Background:** Low back pain is one of the most common musculoskeletal injuries. Back School and McKenzie methods are popular active treatment approaches that include both exercises and information for patients with chronic nonspecific low back pain. (TENS) is a noninvasive therapeutic modality that has been used in the management of chronic low back pain. The prognosis of the treatment was assessed using visual analog scale (vas) and Revised Oswestry low back pain disability questionnaire. This Treatments can reduce the low back pain among sculptors of Mahabalipuram. **Methodology:** Materials used in this study were: VAS, Revised oswestry low back pain disability questionnaire, TENS, 4 Leads and 4 carbon electrode, Cotton, Pillow, Couch, Consent form, Measurement tape, Cord, Assessment form, Blanket, Pen. We assessed the sculptors using assessment form. Consent form was obtained and then questionnaires were distributed. During participation, Subjects also provided general demographic data and completed the Revised Oswestry low back pain disability questionnaire. In the both pre and post pre intervention on day 1 and post intervention on day 8. **Result:** This study is based on 20 adults age group between 18- 60 years has been Revised Oswestry low back Questionnaire filled and vas scale to measure which age group has been affected commonly in low back pain based on statistic in present study the main objective of this clinical trial was to find out the Effectiveness of McKenzie approach along with Tens modality for the low back pain among sculptors. As we are giving the tens and McKenzie approach exercises results of the low back pain had been reduced. Among 20 subjects were selected by convenient sampling method The pre- and post-test (5.2) and (2.2) mean value of VAS of evaluation of pain. Revised Oswestry low back pain Questionnaire Scoring of pre and post test (73.95) and (40.5) are the evaluation of sculptors low back pain. Vas significant value (0.000) RQLBP Significant value (0.000). **Conclusion:** The study conclude that Effectiveness of McKenzie approach along with Tens modality for the low back pain among sculptors This study was conducted to assess and compare the effectiveness of TENS with McKenzie and TENS chronic low back pain. The subject of both the groups showed improvement in their VAS, Revised Oswestry low back pain Questionnaire Scoring Sheet showed statistically more improvement  $p < 0.05$  the result of the study shows that along with McKenzie and Tens Significant and decrease in pain and improving functional ability of the sculptors.*

**Keywords:** Low back pain, Trans-cutaneous electrical nerve stimulation (TENS), McKenzie exercise, visual analog scale (vas) and Revised oswestry low back pain disability questionnaire

## 1. Methodology

**Study Design:** Experimental Study.

**Study Population:** Sculptors with low back pain age group between (20 - 60).

**Study Duration:** Study was conducted for the period of 4 weeks treatment session duration will be 10 days with rest period 10 sessions for 10 days Total 10 sessions in 10 days for 15 minutes. Repetition- 1 time per day.

**Study Setting:** Mahabalipuram and Tagore college of Physiotherapy OPD.

**Sample Size:** A total number of 20 Patients were selected.

**Sampling Method:** Random Sampling.

**Inclusion Criteria:** Sculptors, (Straight leg raise Test) Positive will be considered, below age of 60, Sculptors who working more than 5 years.

**Exclusion Criteria:** shouldn't be above age of 60, any recent surgeries in lower limbs, Those with other systemic illnesses.

Based on the inclusion and exclusion criteria 20 subjects were selected. All subjects agreed not to change or increase their current exercise habits during the course of the study. Prior to the study, procedures were presented orally and in written form. Subjects agreeing to participate signed an institutionally approved consent form. Selection of Sample: Random sampling will be employed to select medical colleges from both government and private sectors across different regions in India. Sample Size: Sufficient sample size will be determined based on statistical power analysis to ensure adequate representation. Data Collection: A structured questionnaire will be used to collect data related to

Volume 13 Issue 6, June 2024

Fully Refereed | Open Access | Double Blind Peer Reviewed Journal

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low back pain, socio-demographic factors, academic workload, coping mechanisms, and support systems Ethical Considerations: The study will be conducted in compliance with ethical guidelines, ensuring participant confidentiality and informed consent. 20 patients were chosen for the experiment before it began based on the inclusion and exclusion criteria, and their informed consent was obtained. Patients were evaluated on the first day of therapy, and they were reassessed four weeks after treatment ended. During First week of therapy, we had given trans-cutaneous electrical nerve stimulation (TENS) Modality to reduce the pain During four weeks, patients underwent McKenzie approach along with TRANS-CUTANEOUS ELECTRICAL NERVE STIMULATION (TENS) Modality McKenzie approach were taught to them so they may repeat them as necessary. Participants' degrees of discomfort and disability were assessed after a 4-week therapy session. Statistics were used to analyze the posttest and pretest value TENS (Trans-cutaneous electrical nerve stimulation).

## 2. Data Analysis

**Statistical Tool:** Statistical analysis of to find effectiveness of McKenzie approach along with Tens modality for the lowback pain among subjects was done by using paired 't' test.

**Table 1**

The Table shows mean value standard deviation and unpaired T value between pre and post test score among subjects

Vas	Mean		SD		T test	Significance
	Pre test	Post- test	Pre test	Post- test		
	5.2	2.25	1.1	0.9	13.21	0

**Table 2**

The Table showing the difference between the pre-test and post-test values of Revised Qswestry low back pain Questionnaire scores

Mean		SD		T test	Significance
Pre test	Post- test	Pre test	Post -test		
73.95	40.5	7.6878	6.6292	13.738	0

## 3. Results

Among 20 subjects were selected by convenient sampling method The pre- and post-test (5.2) and (2.25) mean value of VAS of evaluation of pain. Revised Qswestry low back pain Questionnaire Scoring of pre and post test (73.95) and (40.5) are the evaluation of sculptors low back pain. Vas significant value (0.000) RQLBP Significant value (0.000).

## 4. Conclusion

The subject of both the groups showed improvement in their VAS, Revised Qswestry low back pain Questionnaire Scoring Sheet showed statistically more improvement  $p < 0.000$  the result the study shows that along with McKenzie and Tens Significant and decrease in pain and improving functional ability of the sculptors.

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