

Effect Of Bowen Technique On Pain, ROM And Function In Subjects With Non-Specific Low Back Pain-A Pilot Study.

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ABSTRACT: BACKGROUND: The Bowen technique is a vital connective tissue treatment that was initiated by the “Late Tom Bowen” in Geelong Australia. In this therapy a therapist uses finger or thumb to apply painless, smooth rolling on muscle, tendons, other connective tissue in specific part of the body. PURPOSE: This study is carried out to see the effectiveness of dynamic soft tissue mobilization on pain, ROM and function in subjects with non-specific low back pain. METHODOLOGY: This study was undertaken on 30 participants with age 30-60 years and diagnosed with non-specific low back pain. All participants received protocol for 4 weeks 4 sessions per week. The modified ODQ, modified schober’s test and VAS were used for data collection before and after treatment. Data were analysed using MS Excel 2019 and SPSS version 20 software. RESULT: The mean score before treatment for MODIFIED ODQ, MODIFIED SCHOBER’S TEST, and VAS were respectively 48.78000, 3.4600, and 6.656. After treatment, they were and 35.8333, 4.1467 and 3.0067 respectively with p value (<0.5). CONCLUSION: Based on analysis and result it was concluded that, Bowen technique was highly significant for increasing ROM, function and reducing pain in subjects with non-specific LBP.

KEYWORDS: Bowen Technique, modified schober’s test, VAS, low back pain, modified ODQ

Introduction

Mostly LBP is taken to be non-specific. Which is wrong concept that explain for eighty to ninety of LBP patients is unknown has keep on for many years. Tension in muscles and muscle spasm are reasons for LBP. It has also clinical symptoms like radiating pain, SI pain and disc pain like spinal stenosis.^[1] The Bowen technique is a vital connective tissue treatment that was initiated by the “Late Tom Bowen” in Geelong Australia. In this therapy a therapist uses finger or thumb to apply painless, smooth rolling on muscle, tendons, other connective tissue in specific part of the body. It was suggested in many conditions like whiplash injury, neck pain, herniation of disc, headache, tightness of a hamstring, This technique stimulates of particular points on body with of 2-8 points at single time. Atleast 2 minute wait should be taken between some movements and will also allow the body to respond this steps.^[2,3] The cardinal Bowen moves censor a muscle or tendon which is not under pressure. After that rolling on it. At specific position without slipping on the skin. Golgi tendon organs will regulate the resting position of muscle through CNS. The nearby fascia become less hard and will allow more motion to lymph via the tissue, It will also promote nutrition and will remove waste from the injured site.^[4,5]

MODIFIED OSWESTRY LOW BACK PAIN DISABILITY QUESTIONNAIRE:

Modified ODQ is notable condition .It will help to assess disability in patient with lumbar abnormal symptoms. It made up of 10 items individually score from 0-5. The total of this questionnaire is done with multiplication of the sum total of the score with 2. It will give a range between 0-100. Highest score will indicate the more disability.^[6,7]

MODIFIED SCHOBER’S TEST:

The modified schober’s method of assess lumbar spine motion. It is most easy repeatable method. It is suggested for clinical examination of lumbar spine movement.^[30] For

measuring this test, male marks on both PSIS level then draws parallel line on the centre of that both marks. Then mark a line at 5cm below of the first line and mark a line at 10cm above the first line. The subject will do forward bending as he/she can do. The distance of these two points will be measured.^[8, 9]

VAS (VISUAL ANALOGUE SCALE):

A Visual Analogue Scale (VAS) is measurement instrument that is use for assess the pain which the person is feeling. The quality of pain that a patient senses ranges across a continuous from none or shows extreme pain. VAS is a horizontal line which 100 mm long.. The subject will make mark on the paper that how subject feels. The VAS score is decided by measuring this line.^[10]

NEED OF THE STUDY

The vast majority of the patients having a non-specific low back pain which is define as symptoms without a clear specific cause that is low back pain of unknown origin. Therefore, it necessary to treat these problem using advance therapeutic techniques in order to provide a good well-being to patients. Hence, the need of this study was to see the effect of Bowen Technique on pain, ROM and function in subjects with non-specific low back pain.

METHODOLOGY

- SOURCE OF DATA
Parul sevashram hospital
- METHOD OF COLLECTION OF DATA
 - Study population: subjects with non-specific low back pain
 - Sample size:- 30 subjects
 - Treatment duration:-3 days per week up to 1 month.
 - Study duration:- Total study duration: 3 months ,Intervention duration: 4 weeks

CRITERIA FOR SELECTION

- 1) INCLUSION CRITERIA:
 - Age 30-60 years.
 - Subjects who agree to give written informed consent.
 - Participant having a non-specific low back pain.
 - Participants of both male and female will be included
 - 2) EXCLUSION CRITERIA:
 - Back pain with trauma.
 - Any neurological symptoms involving prolapsed intervertebral disc, Radiculopathy
 - Any systemic disease like RA, Ankylosing spondylitis etc.
 - History of recent abdominal, back surgeries.
 - History of the fracture in spine.
 - pregnancy
- Material use:
- Consent form
 - Assessment form
 - Pencil/pen
 - Chair/plinth
 - Measure tape

OUTCOME MEASURES:

- Modified Oswestry low back pain disability questionnaire
- Modified schober's test
- VAS (visual analogue scale)

ETHICAL CLEARANCE:

- In the act of research consists of human subjects, ethical clearance was acquired from ethical committee of Paul University Institutional Ethical Committee for human research (PU-IESHR).

PROCEDURE

- Subjects were taken from parul sevashram hospital. The age of the contestants ranged between 30-60.
- Participants who were fulfilling the inclusion-exclusion criteria were selected and assessed before starting the intervention. A written and consent about enrolment in the study and maintaining adequate privacy and confidentially was taken from all participants involved in the study.
- All participants were subjected to a standardized interview including details regarding the event. A clinical history and a complete physical and functional physiotherapy examination were taken in each participant.
- After the contestant agreed to join in the study, he/she was asked to sign the informed consent. Before starting the intervention pre data was taken. The Bowen Technique group were evaluated in terms of the evaluation pain, physical function and lumbar ROM. The training period was 4 week at the frequency of 4 working session per week.
- At the end of 4 week 3 participants were drop out. The reason for the drop out is all participants refuses to give follow up.

- Outcome measures were re-evaluated at the end of 4 week then pre and post scores were compared. All used measures were valid and shown to have acceptable reliability.
- Scores was assessed by statistical method.

BOWEN TECHNIQUE

- Initial position: Patients assume the full prone lying position on a plinth.
- Therapist Place the thumb on the affected side muscle.
- Hook the thumb on the lateral edge of the muscle to form pressure against the muscle.
- Than Generate a minor pause.
- The muscle will pluck-respond in particular way, when thumb in flatten in inner direction.
- Therapist hands are place with an inch of space between the thumbs and fingers so that the hands can play the muscles simultaneously.
- Treatment time – 15 min alternate day (4 sessions)



Fig 1: Bowen technique

STATISTICAL ANALYSIS

- Data were evaluated by MS excel 2007 and SPSS version 20 software. Paired-t test were used to analyse the data. For pre and post comparison of within group, paired t test was used and 'p' value for the analysed data was <0.05.

RESULT:

TABLE 1: PRE-POST COMPARISON OF MODIFIED ODO VALUE

	MEAN	±SD	T-VALUE	DF	P-VALUE
PRE	48.78000	18.99256	7.991	26	0.000
POST	35.8333	14.6407			

GRAPH 1: PRE-POST COMPARISON OF MODIFIED ODO VALUE

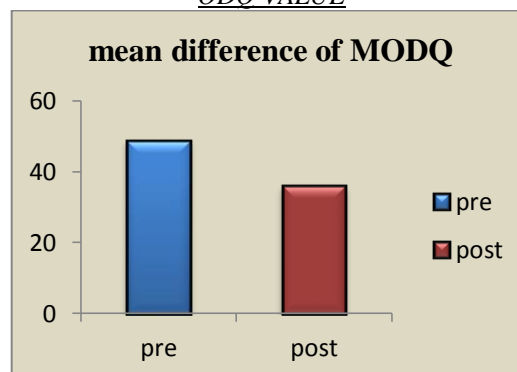


TABLE 2: PRE-POST COMPARISON OF MODIFIED SCHOBER'S TEST VALUE

	MEAN	±SD	T-VALUE	DF	P-VALUE
PRE	3.4600	1.15627	4.969	26	0.000
POST	4.1467	1.14943			

GRAPH 2: PRE-POST COMPARISON OF MODIFIED SCHOBER'S TEST VALUE

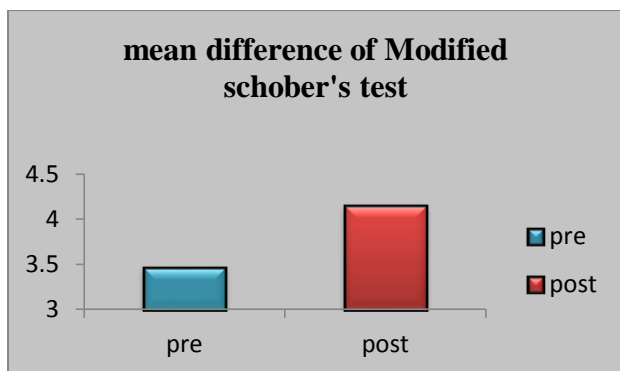
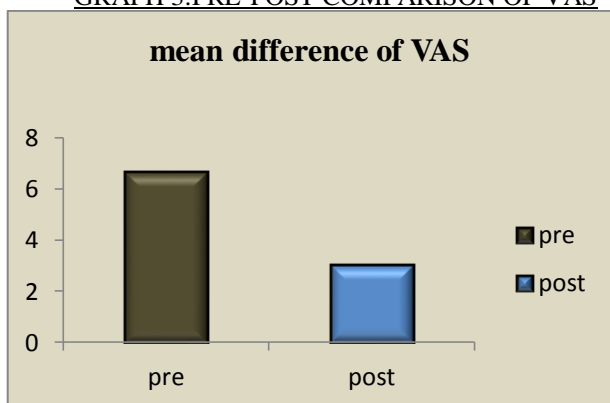


TABLE 3: PRE-POST COMPARISON OF VAS VALUE

	MEAN	±SD	T-VALUE	DF	P-VALUE
PRE	6.656	1.164	12.369	26	0.000
POST	3.0067	1.144			

GRAPH 3: PRE-POST COMPARISON OF VAS



Discussion

The current study is a randomized controlled study. Its aimed to see the effect of Bowen technique on pain, ROM and function in patient with NSLBP. The result of the current study showing that, Bowen technique is more effective in function, improving ROM and decreasing pain after 4 weeks of intervention in subject with NSLBP. Ewellina Kopczynska, Roksana malak, Anna kostiukow, Wlodzimierz samborski showed that Bowen therapy improve health condition and reduced low back pain. Other study shown by dr. vijay kage the Bowen technique reduced the pain intensity (VAS), increasing mobility and function. Bowen

therapy being effective in pain because it is a holistic approach, it causes relaxation and patient falls asleep. The Bowen moves stimulate proprioceptors in muscles and tissues that instigate brain response to normalise resting rate of tissue which lead to increased blood and fluid movements, decreases pain and boosts tissue repair, it also enhances motor firing that causes softening of muscle and improves range of motion. Discussing about function was measured with the help of modified ODQ is shown in table 1 and graphically represented through graph 1, where the mean value post intervention reduces to 35.8333 from 48.78000. Discussing about modified schober's test was measured with the help of measure tape is shown in table 2 and graphically represented through graph 2, where the mean value post intervention improves to 4.1467 from 3.4600. Discussing about pain was measured with the help of VAS is shown in table-3 and graphically represented through graph-3, where the mean value post intervention reduces to 3.0067 from 6.656. So now considering the hypothesis part, here as Bowen Technique showed significant improvement, the alternative hypothesis made gets accepted each and null hypothesis made here are rejected post intervention as both the groups have showed significant results by increasing in function and ROM and reducing pain.

CONCLUSION

The current study was aimed to check the effect of Bowen Technique on pain, ROM and function in subjects with NSLBP. Based on analysis and result it was concluded that, Bowen technique was highly significant for increasing ROM, function and reducing pain in subjects with non-specific LBP.

LIMITATIONS

- The sample size of the study was small.
- The intervention duration of the study was small.
- There was no follow up taken after the treatment of 4 weeks to assess the pain, ROM and function for beneficial effect of DSTM.

FUTURE RECOMMENDATIONS

- The study can be performed by recruiting more participants for better results.
- A multi centric study can be conducted by including participants from different geographical locations.
- A large duration study can be recommended along with follow-up sessions after a month of cessation of post intervention to check out the long-lasting benefits of DSTM.

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