SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 4 | April 2026 - Peer Reviewed Journal

A STUDY TO COMPARE EFFECTIVENESS OF MUSCLE ENERGY TECHNIQUE AND MYOFASCIAL RELEASE TECHNIQUE AMONG SUBJECTS WITH PIRIFORMIS TIGHTNESS IN STUDENTS OF UKA TARSADIA UNIVERSITY

Vishami Prajapati[1]*, Saloni Purohit[1], Jenis Patel[1], Zinal Gelani[1], Krutika Patil[1], Tarpan Shah[1]

[1]Department of Physiotherapy, Shrimad Rajchandra College of Physiotherapy, Uka Tarsadia University, Bardoli, Gujarat, India

**Corresponding Author: Vishami Prajapati*

Article DOI: https://doi.org/10.36713/epra27254
DOI No: 10.36713/epra27254

ABSTRACT

Background: Piriformis tightness is common among young adults with sedentary lifestyles and may result in restricted hip range of motion and functional limitations. Manual therapy techniques such as Muscle Energy Technique (MET) and Myofascial Release (MFR) are widely used to improve muscle flexibility. Objective is to compare the effectiveness of MET and MFR in improving piriformis tightness among university students. A comparative interventional study was conducted on 60 students aged 18–25 years with confirmed piriformis tightness. Participants were randomly allocated into two groups: Group A (MET, n=30) and Group B (MFR, n=30). Hip internal rotation range of motion (ROM) was measured using a universal goniometer before and immediately after intervention. Paired and independent t-tests were used for statistical analysis with significance set at $p < 0.05$.

Results: Both groups showed significant improvement in hip internal rotation ROM post-intervention ($p < 0.05$). The MET group demonstrated greater improvement (mean difference: 8.4° ± 2.1) compared to the MFR group (mean difference: 5.6° ± 1.9), which was statistically significant ($p = 0.01$).

Conclusion: Both MET and MFR are effective in reducing piriformis tightness; however, MET showed superior improvement in hip ROM among young adults.

KEYWORDS: *Piriformis tightness, Muscle Energy Technique, Myofascial Release, Range of Motion, Manual therapy*

BACKGROUND

Piriformis muscle stiffness is more common in people with sedentary lifestyles who spend a lot of time sitting, standing, and walking for long periods of time. It is mainly seen in young adults. The reported prevalence of piriformis stiffness in young adults was 79.5%, which is higher than in other age groups.

While piriformis stiffness is often confused with piriformis syndrome, which is defined as inflammation of the sciatic nerve caused by injury or irritation to the piriformis muscle, stiffness is simply shortened muscle length due to a sedentary lifestyle.

MET is being used to lengthen shortened or spastic muscle, to strengthen weakened muscles, to reduce localized edema, or to mobilize restricted joint motion. MET is classified as an active technique with direct positioning in which restrictive barriers are engaged, but not stressed.

In myofascial release Myo means ‘muscle’ and fascia means ’band’. Fascia- an embryologic tissue often sometimes called as connective tissue, is web like 3 dimensional matrixes’ that intertwines surrounds, support and protects every other parts of human body.it is a single uninterrupted sheet of tissue that extended from the inner aspects of the skull down to the soles of the feet and from that outer to inner of the body, ultimately making up the shape and form body itself.

MFR is a treatment approach, a therapy and rehabilitation tool. It is a hands on therapy meaning that the therapist applies pressure with the hands onto and into the patient’s body part. MFR is treatment approach refers to the manual technique for stretching the fascia and releasing bonds between fascia, muscles, Bones and ligaments with the goal of eliminating pain, increasing range of motion and balancing the body. The therapist addresses the tissue barrier of resistance by feeling for tightness, restrictions and adhesions in any plane that may be causing pain or dysfunction. The actual application of the hands- on technique is slow, sustained pressure held for 90-120 second at the barrier of tissue resistance, usually for 3-5 minutes or move without slipping over the skin.
The **purpose** of this perspective paper is to provide an overview of current evidences with respect to:

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 4 | April 2026 - Peer Reviewed Journal

1. Effect of manual therapy (MET & MFR) in Piriformis Tightness Patient.
2. Immediate effect of manual therapy in Piriformis Muscle.
3. Effects of manual therapy decreased tightness and improve ROM.

Both Muscle Energy Technique and Myofascial Release are useful for treating tightened muscle to know whether which is more effective for a subject with a piriformis tightness side by side comparison is required to get the proper knowledge of which one should be used more often.

This study focuses on the effectiveness between MET and Myofascial release so that one can utilize the best technique to prevent Piriformis Syndrome.

AIM: To study the effectiveness of MET versus MFR for piriformis tightness in Uka Tarsadia University Student.

METHOD

- **STUDY DESIGN:** An Interventional Comparative study.
- **SOURCE OF DATA:** Students of Uka Tarsadia University Bardoli Surat.
- **SAMPLE SIZE:** 90
- **STUDY POPULATION:** Students of Uka Tarsadia University of Age group between 18-25 years.
- **SAMPLING METHOD:** Simple Random Sampling
- **STUDY DURATION:** 3 Months

- **MATERIALS USED IN STUDY**
  - Universal Goniometer
  - Consent Form
  - Pen & Paper
  - Chair
  - Data collection sheet

- **INCLUSION CRITERIA**
  - Both Male and Female.
  - Age between 18-25 years.
  - Volunteers willing to participate.
  - Normal healthy individuals.
  - Positive piriformis stretch test.
  - Individuals with signed inform consent form.

- **EXCLUSION CRITERIA**
  - Individuals with any neurological, cardiovascular or musculoskeletal problems.
  - Any traumatic conditions in last 6 months in or around the pelvic region.
  - Undergone any surgery past 6 months.
  - Recent history of back or pelvic injury.

- **OUTCOME MEASURE**
  - Range of motion of Hip joint using Universal Goniometer (Internal & External rotation).

- **METHOD**
  - Ethical approval was obtained for study by Institutional Review Board (IRB).
  - Subjects were selected based on Inclusion and Exclusion criteria.
  - Subjects were made to understand the nature and procedure of the study.
  - Piriformis stretch test and Range of motion of hip joint (Internal & External Rotation) were used to determine the present condition of the subjects.
  - Basically study was divided into two phases.
  - In phase 1: piriformis tightness was tested in subjects using piriformis stretch test. accordingly, subjects were selected for our research.
  - In phase 2: selected candidates were allotted into two groups.
  - The subjects were divided into two groups:
    Group A: Subjects who received Muscle energy technique.
    Group B: Subjects who received Myofascial Release.
  - Post treatment Outcome measures were immediately taken immediately after the treatment.

- **Testing for Tightness**
  - When it is short, piriformis will usually cause the affected side leg of the supine patient to appear to be short and

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 4 | April 2026 - Peer Reviewed Journal

externally rotated.

- The supine patient's tested leg is placed into flexion at the hip and knee so that the foot rests on the table lateral to the contralateral knee.
- The angle of hip flexion should not exceed 60°.
- The non-tested side ASIS is stabilized to prevent pelvic motion during the test and the knee of the tested side is pushed into adduction, to place a stretch on piriformis.
- If piriformis is shortened the degree of adduction will be limited and the patient will report discomfort posterior to the trochanter.

➢ MEASUREMENT OF RANGE OF MOTION

- In Present study, we are majorly focusing on Internal and External rotation of Hip joint as we are targeting Piriformis Muscle.
- Hip Internal Rotation: Motion occurs in transverse plane around a vertical axis when individual is in anatomical position. Normal medial rotation ROM values for adults vary from about 30-45 degrees. Testing Position: Seated with Hip and Knee flexed to 90 degrees. If femur is not in 90 degrees of flexion, then place towel roll under distal end of femur to maintain femur in horizontal plane. Goniometer Alignment: Fulcrum: Over the anterior aspect of patella. Proximal arm: Align perpendicular to floor or parallel to supporting surface. Distal arm: Align with anterior midline of lower leg, using crest of tibia.
- Hip External Rotation: Motion occurs in transverse plane around a vertical axis when individual is in anatomical position. Normal lateral rotation ROM values for adults vary from about 32-50 degrees. Testing Position: Seated with Hip and Knee flexed to 90 degrees. If femur is not in 90 degrees of flexion, then place towel roll under distal end of femur to maintain femur in horizontal plane. Goniometer Alignment: Fulcrum: Over the anterior aspect of patella. Proximal arm: Align perpendicular to floor or parallel to supporting surface. Distal arm: Align with anterior midline of lower leg, using crest of tibia.

➢ MUSCLE ENERGY TECHNIQUE

- Amongst different Muscle energy techniques, we selected Lewit' post isometric relaxation technique.
- This method is based on the test position and is described by Lewit (1992).
- With the patient supine, the treated leg is placed into flexion at the hip and knee, so that the foot rests on the table lateral to the contralateral knee (the leg on the side to be treated is crossed over the other, straight, leg).
- The angle of hip flexion should not exceed 60°.
- The practitioner places one hand on the contralateral ASIS to prevent pelvic motion, while the other hand is placed against the lateral flexed knee as this is pushed into resisted abduction to contract piriformis for 7-10 seconds.
- Following the contraction the practitioner eases the treated-side leg into adduction until a sense of resistance is noted; this is held for 10-30 seconds.
- Approximately, 3-6 repetitions were performed.

➢ MYOFASCIAL RELEASE TECHNIQUE

- Position of subject is Prone.
- Therapist will stand beside the subject at waistline, working on contralateral side.
- Piriformis muscle was located by an imaginary line drawn between the midpoint of lateral aspect of sacrum and the greater trochanter.
- A contact was established in the gluteal area about 3cm from the sacrum.
- With an elbow, a gradual pressure will be applied in an anterior direction.
- When the first layer of resistance was engaged, a constant pressure was maintained until that layer softened and the fibers of piriformis were contacted (approximately 90s).
- A line of tension was taken along the muscle, in the direction of the greater trochanter. Possibilities of muscle guarding were monitored and the depth of contact adjusted accordingly.
- The lower leg was lifted off the table to 90 of knee flexion while maintaining the pressure in piriformis. The leg was supported and guided into internal rotation with an active assistance from client with direction.
- Duration for treatment was about 3 minutes on each side.

➢ RESULT

Present study was conducted to compare the effectiveness of Muscle Energy Technique and Myofascial Release Technique among subjects with piriformis tightness. Present study included 60 positive participants between age 18-25 years of age, among which 30 were allocated to Group A, who received MET and 30 in Group B who receives MFR. The Group A and B were compared based on outcome measure i.e. Internal and External Rotation Range of Motion of Hip.

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 4 | April 2026 - Peer Reviewed Journal

➢ STATISTICAL ANALYSIS

Statistical analysis for the present study was done by using Microsoft Excel 2016. For this purpose, the data was entered into an excel spread sheet, tabulated and subjected to statistical analysis. Various statistical measures such as Mean and Standard Deviation were employed. Mean and Standard Deviation was used to measure the pre and post intervention outcome measure in the form of Range of Motion, change in pre and post ROM, between groups comparison was done by using mean and standard deviation.

	Female	Male	N
Group A	18	12	30
Group B	17	13	30
Negative	15	15	30

Table 1: Shows total no of participants N= 90, Where 30 participants were with Negative piriformis test. Remaining positive test participants N= 60 were divided in Group A N=30 and Group B N=30.

	Group A MET	Group B MFR	N
BMI	21.13	19.86	60
Height	60.73	56.93	60
Weight	168.43	165.8	60

Table 2: Shows BMI, Height and Weight in mean and standard deviation of the Group A N=30 and Group B N=30.

Piriformis stretch test	
Positive test	60
Negative test	30

Table 3: Shows results of piriformis stretch test, where N=60 participants were tested positive and remaining N=30 participants were tested negative.

MET	Right				Left			
	Active		Passive		Active		Passive	
	Internal rotation	External Rotation	Internal rotation	External Rotation	Internal Rotation	External Rotation	Internal Rotation	External Rotation
Pre treatment	29.3±4.59	33.5±5.58	36.76±4.74	39.53±4.68	30.73±5.0	31.16±6.15	37.46±5.0	37.76±6.47
Post treatment	34.56±4.25	36.7±4.48	39.6±4.96	41±3.67	34.63±4.64	34.93±5.22	39.43±4.63	41.06±4.84

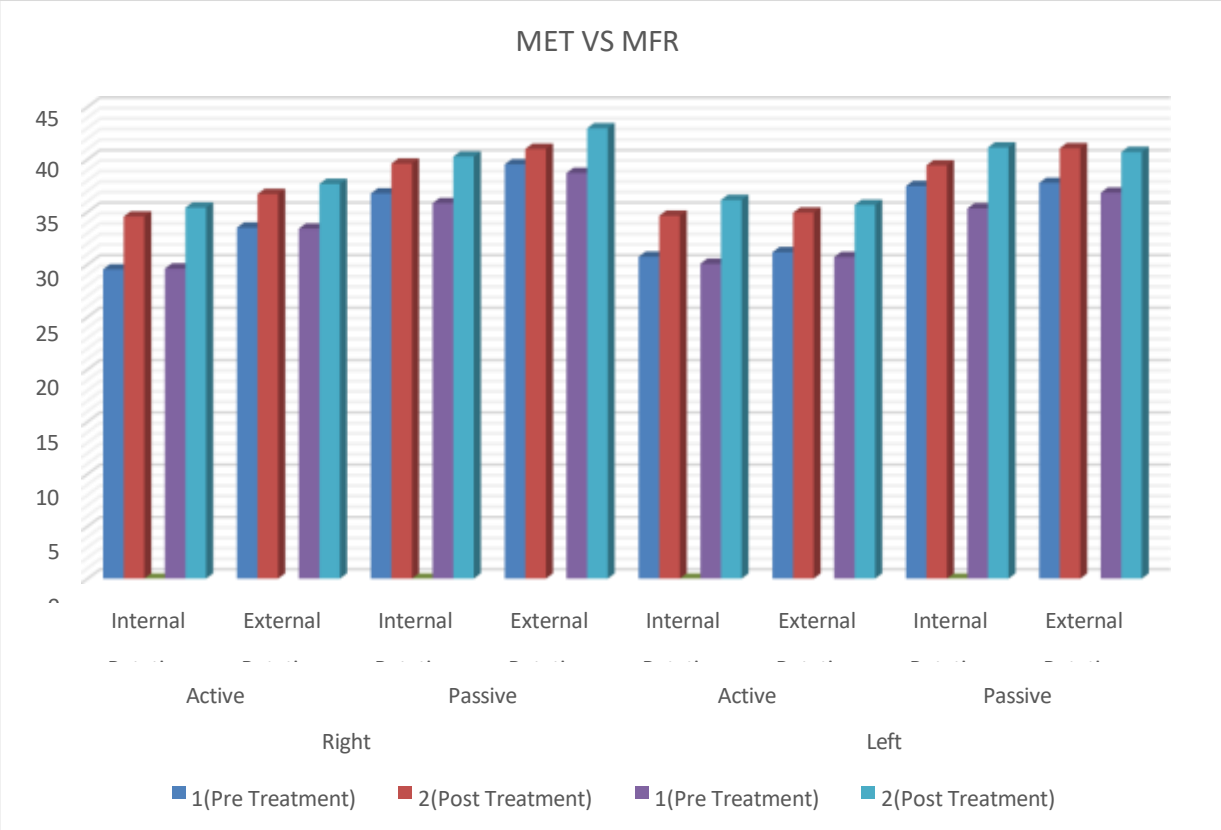
Table 4: Shows mean value and standard deviation of Group A participants. In which Active and Passive, Internal and External rotation of pre and post treatment ROM were mentioned.

MFR	Right				Left			
	Active		Passive		Active		Passive	
	Internal Rotation	External Rotation	Internal Rotation	External Rotation	Internal Rotation	External Rotation	Internal Rotation	External Rotation
Pre treatment	29.6±4.95	33.4±5.4	35.83±5.71	38.7±4.86	30.06±6.46	30.7±4.76	35.33±6.36	36.83±5.55
Post treatment	35.41±4.62	37.66±4.19	40.26±4.04	42.96±2.87	36.13±4.66	35.66±4.17	41.13±3.38	40.7±3.97

Table 5: Shows mean value and standard deviation of Group B participants. In which Active and Passive, Internal and External rotation of pre and post treatment ROM were mentioned.

Graph: It shows the difference of the Group A and Group B for both pre and post values after the treatment.

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 4 | April 2026 - Peer Reviewed Journal



DISCUSSION

The piriformis muscle is considered as a postural muscle and the postural muscles has the tendency to become overactive, hypertonic, weak and shortened in length. The piriformis muscle gets overactive and hypertonic during prolonged sitting and walking. Currently, people spend more time sitting than standing due to the development of science and technology and automation. Dependence on automobiles, even for traveling short distances and long periods spent working on computers; contribute to today's sedentary lifestyles.

According to Nicholson S the gluteus muscles are the most neglected group of muscle in whole body as individuals spend their most of the time in sitting and walking very little on the track. So, this may leads to the weakness of gluteal muscle group and synergistic activation of piriformis muscle. This over activation may cause the hypertonicity as well as the tightness of piriformis muscle. Another reason for the over activation of piriformis muscle during a maintained posture is the small size of its muscle fibers. According to Hennemans size principle, the smaller the fiber the easier it activates, the larger the fiber the faster it conducts. That's why postural muscles have abundant red fibers. The neurons are smaller and easier to activate, constantly sending impulses with correction messages to the postural muscles to maintain body position.

Prolonged activation of muscle may lead to localized muscle tension, muscle strains, muscle fatigue, and other softtissue damage. These reasons clearly explain the high prevalence of piriformis muscle tightness in sedentary population.

In this group subject included were college student who spend most of the time in sitting position. In this study, the number of male subject (n=40) was slightly less than the females (n=50) with male to female ratio as 4:5. Out of total affected subjects (n=60), 25 subjects were male and 35 subjects were female who were presented with piriformis tightness which was clinically diagnosed by piriformis stretch test. Results of this study showed that both interventions were effective in improving ROM improvement.

CONCLUSION

Present study concluded that, there was significant improvement in Range of Motion of Hip joint in both the Groups but Myofascial Release Technique was proved to be more beneficial in releasing Piriformis muscle and improving Hip range than Muscle Energy Technique. Thus, we can conclude that MFR can be used more frequently in clinical practice to get better treatment result for Piriformis Tightness.

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 4 | April 2026 - Peer Reviewed Journal

REFERENCES

1. *Bhagwan D Chaurasia's Human Anatomy Regional & Applied Dissection & Clinical, Volume -2, Edition 6, page no:78-80.*
2. *Advanced Soft Tissue Techniques, Leon Chaitow, Muscle Energy Techniques, Edition 3, page no: 162-165.*
3. *Myofascial Release, Ruth Duncan, Second Edition, page no: 3-14.*
4. *Mondal M, Sarkar B, Alam S, Das S, Malik K, Kumar P, Sahay P. Prevalence of piriformis tightness in healthy sedentary individuals: a cross-sectional study. International Journal of Health Sciences & Research. 2017 Jul;7(7):134-42.*
5. *Deshmukh MK, Phansopkar PA, Kumar K. Effect of Muscle Energy Technique on Piriformis Tightness in Chronic Low Back Pain with Radiation. Journal of Evolution of Medical and Dental Sciences. 2020 Nov 2;9(44):3284-9.*
6. *Rajendran S, Sundaram SS. The effectiveness of myofascial release over stretching on pain and range of motion among female college students with piriformis syndrome. Malaysian Journal of Movement, Health & Exercise. 2020 Jul 1;9(2):45.*
7. *Kukadia HA, Malshikare A, Palekar TJ. Effect of passive stretching v/s myofascial release in improving piriformis flexibility in females–a comparative study. Indian J. Physiotherapy. Occupational. Therapy. 2019 Oct;13:457.*
8. *Muhammad A, Rana MR, Amin T, Angela C, Pereira FA, Bhutto MA. Prevalence of Piriformis Muscle Tightness among Undergraduate Medical Students. Pakistan Journal of Medical & Health Sciences. 2022 Apr 7;16(02):964-.*
9. *Sbardella 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. InHealthcare 2021 June 17 (Vol. 9, No. 6, p. 746). MDPI*
10. *Smith M, Fryer G. A comparison of two muscle energy techniques for increasing flexibility of the hamstring muscle group. Journal of bodywork and movement therapies. 2008 Oct 1;12(4):312-7.*
11. *Shadmehr A, Hadian MR, Naiemi SS, Jalaie S. Hamstring flexibility in young women following passive stretch and muscle energy technique. Journal of back and musculoskeletal rehabilitation. 2009 Jan 1;22(3):143-8.*
12. *Nambi G, Sharma R, Inbasekaran D, Vaghesiya A, Bhatt U. Difference in effect between ischemic compression and muscle energy technique on upper trepezius myofascial trigger points: Comparative study. International Journal of Health & Allied Sciences. 2013 Jan 1;2(1):17-.*
13. *Selkow NM, Grindstaff TL, Cross KM, Pugh K, Hertel J, Saliba S. Short-term effect of muscle energy technique on pain in individuals with non-specific lumbopelvic pain: a pilot study. Journal of manual & manipulative therapy. 2009 Jan 1;17(1):14E8E.*
14. *Schenk RJ, MacDiarmid A, Rousselle J. The effects of muscle energy technique on lumbar range of motion. Journal of Manual & Manipulative Therapy. 1997 Jan 1;5(4):179-83.*
15. *Ahmad N, Akram MJ, Hussain H, Imtiaz I, Khan N, Qi L. Effectiveness of post facilitation stretch technique versus myofascial release in piriformis syndrome: A Randomized controlled trial. Rawal Medical Journal. 2022 Dec 11;47(4):936-.*
16. *Bhosale SV, Burungale M. Effectiveness of myofascial release, muscle energy technique and stretching of quadrartus lumborum muscle in patients with non-specific low back pain. Journal of Ecophysiology and Occupational Health. 2021:132-41.*
17. *Ajimsha MS, Daniel B, Chithra S. Effectiveness of myofascial release in the management of chronic low back pain in nursing professionals. Journal of bodywork and movement therapies. 2014 Apr 1;18(2):273-81.*
18. *Thomas E, Cavallaro AR, Mani D, Bianco A, Palma A. The efficacy of muscle energy techniques in symptomatic and asymptomatic subjects: a systematic review. Chiropractic & manual therapies. 2019 Dec;27:1-8.*
19. *Moore SD, Laudner KG, Mcloda TA, Shaffer MA. The immediate effects of muscle energy technique on posterior shoulder tightness: a randomized controlled trial. journal of orthopaedic & sports physical therapy. 2011 Jun;41(6):400-7.*
20. *Reed ML, Begalle RL, Laudner KG. Acute effects of muscle energy technique and joint mobilization on shoulder tightness in youth throwing athletes: a randomized controlled trial. International journal of sports physical therapy. 2018 Dec;13(6):1024.*
21. *Chen Z, Wu J, Wang X, Wu J, Ren Z. The effects of myofascial release technique for patients with low back pain: A systematic review and meta-analysis. Complementary therapies in medicine. 2021 Jun 1;59:102737.*
22. *Wu Z, Wang Y, Ye X, Chen Z, Zhou R, Ye Z, Huang J, Zhu Y, Chen G, Xu X. Myofascial release for chronic low back pain: A systematic review and meta-analysis. Frontiers in Medicine. 2021 Jul 28;8:697986.*
23. *Laimi K, Mäkilä A, Bärlund E, Katajapuu N, Oksanen A, Seikkula V, Karppinen J, Saltychev M. Effectiveness of myofascial release in treatment of chronic musculoskeletal pain: a systematic review. Clinical rehabilitation. 2018 Apr;32(4):440-50.*
24. *Ozsoy G, Ilcin N, Ozsoy I, Gurpinar B, Buyukturan O, Buyukturan B, Kararti C, Sas S. Response to: Non-specific low back pain in elderly and the effects of Myofascial release technique combined with core stabilization exercise: Not just muscles [response to letter]. Clinical interventions in aging. 2019 Nov 7:1947-9.*
25. *Lohr C, Medina-Porqueres I. Immediate effects of myofascial release on neuromechanical characteristics in female and male patients with low back pain and healthy controls as assessed by tensiomyography. A controlled matched-pair study. Clinical biomechanics. 2021 Apr 1;84:105351.*
26. *Ellythy MA. Efficacy of muscle energy technique versus myofascial release on function outcome measures in patients with chronic low back pain. Bull Faculty Physical Therapy. 2012 Jan;17(1):51-7.*
27. *Dhiman NR, Das B, Mohanty C, Singh OP, Gyanpuri V, Raj D. Myofascial release versus other soft tissue release techniques along superficial back line structures for improving flexibility in asymptomatic adults: A systematic review with meta-analysis. Journal of Bodywork and Movement Therapies. 2021 Oct 1; 28:450-7.*
28. *Sharan D, Rajkumar JS, Mohandoss M, Ranganathan R. Myofascial low back pain treatment. Current pain and headache reports. 2014 Sep;18(9):449.*
29. *de Araújo WN, dos SN Oliveira L, de Araujo TN. Effectiveness of acupuncture and myofascial release in analgesia of women with tensional neck pain: Systematic review. Int J Adv Eng Res Sci. 2019;6(12).*
30. *Hughes GA, Ramer LM. Duration Of Myofacial Rolling For Optimal Recovery,range Of Motion ,And Performance : A Systematic Review of The Literature .International journal of sports physical therapy. 2019 Dec 1;14(6).*

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 4 | April 2026 - Peer Reviewed Journal

31. *LeBauer A, Brtalik R, Stowe K. The effect of myofascial release (MFR) on an adult with idiopathic scoliosis. Journal of bodywork and movement therapies. 2008 Oct 1;12(4):356-63.*
32. *Malanga GA, Colon EJ. Myofascial low back pain: a review. Physical Medicine and Rehabilitation Clinics. 2010 Nov 1;21(4):711-24.*
33. *Franke H, Fryer G, Ostelo RW, Kamper SJ. Muscle energy technique for non-specific low- back pain. Cochrane Database of Systematic Reviews. 2015(2).*
34. *Boff TA, Pasinato F, Ben ÂJ, Bosmans JE, van Tulder M, Carregaro RL. Effectiveness of spinal manipulation and myofascial release compared with spinal manipulation alone on healthrelated outcomes in individuals with non-specific low back pain: randomized controlled trial. Physiotherapy. 2020 Jun 1;107:71-80.*
35. *López-Torres O, Mon-López D, Gomis-Marzá C, Lorenzo J, Guadalupe-Grau A. Effects of myofascial release or self-myofascial release and control position exercises on lower back pain in idiopathic scoliosis: A systematic review. Journal of Bodywork and Movement Therapies. 2021 Jul 1;27:16-25.*
36. *McKenney K, Elder AS, Elder C, Hutchins A. Myofascial release as a treatment for orthopaedic conditions: a systematic review. Journal of athletic training. 2013;48(4):522-7.*
37. *Zahran AM, Abdel-Aziz KS, Ghada E, Ebrahem MH. Effect of Myofacial release technique on Postnatal Sacroiliac joint pain.*
38. *Awad MA, Allah AH. Effect of Myofascial Release Technique Versus Mulligan Mobilization Technique on Post Natal Low Back Pain. InThe 20th International Scientific Conference Faculty of Physical Therapy Cairo 2019 Apr (pp. 6-7).*
39. *Dhami H, Kaur J, Kaur M. Comparison of Integrated Neuromuscular Inhibition Technique versus Myofascial Release of Upper Trapezius on Neck Range of Motion and Dysfunction in Individuals with Nonspecific Neck Pain. Indian Journal of Physiotherapy & Occupational Therapy Print-(ISSN 0973-5666) and Electronic– (ISSN 0973-5674). 2022 Oct 19;16(4):30-5.*
40. *Abd El Rahim AA, Essa MM, Shabana MMc, Mohamed SA, Mabrouk MI. Effectiveness of myofacial release technique in treatment of Sacroiliac joint HypoMobility in Postnatal Women. Turkish Journal of Physiotherapy and Rehabilitation.;32:3.*