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TO STUDY THE EFFECTIVENESS OF MUSCLE ENERGY TECHNIQUE WITH STRETCHING VERSUS POSITIONAL RELEASED TECHNIQUE WITH STRETCHING IN FAST BOWLER HAVING LOW BACK PAIN BECAUSE OF QUADRATUS LUMBORUM TIGHTNESS: A COMPARATIVE STUDY

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ABSTARCT

Introduction: Fast bowlers in cricket often face musculoskeletal issues, particularly with the quadratus lumborum, a key muscle for stability and movement control. Tightness in the QL can cause discomfort, reduced performance, and injury risk. Therapies like Muscle Energy Technique (MET) and Positional Release Technique (PRT) help relieve tension. MET uses voluntary muscle contraction to aid stretching, while PRT applies manual pressure for muscle relaxation. These methods, combined with stretching, enhance flexibility and reduce tightness.

Methodology: This experimental study divided 30 subjects into two groups: Group A (Stretching with MET) and Group B (Stretching with PRT), each with 15 participants. Outcome measures included Numerical Pain Rating Scale (NRPS), Oswestry Disability Index (ODI), lumbar range of motion (Modified Schober's Test), and hip flexion/abduction range. A tailored 4-week treatment protocol was implemented for each group.

Results: In the paired sample t-test, $P < 0.001$, indicating high statistical significance within both groups (pre to post). Between Group A and B, analysis was conducted using the Mann-Whitney U test.

Conclusion: For fast bowlers with low back pain due to quadratus lumborum tightness, both MET and PRT with stretching effectively reduced discomfort and improved lumbar mobility. MET showed slightly greater improvement, making it ideal for urgent relief, while PRT is beneficial for gentler, passive intervention.

Keywords: musculoskeletal, quadratus lumborum tightness, Muscle Energy Technique (MET) and Positional Release Technique (PRT)

INTRODUCTION

Sports have been an integral part of human life for centuries, with origins dating back to ancient times, like the Greek Olympic Games. Athletes and fans understand the importance of sports, making scientific research essential for achieving top performance **[1]**.

There are two types of bowlers in cricket: spin bowlers and fast bowlers. Every bowler drives a 5.5-ounce ball in the direction of a batsman or his wickets, but a spin bowler rotates the cricket ball, causing it to change course when it strikes the ground. This is accomplished by the spin bowler using either "finger spin," which is the quick flexing of the fingers around one side of the ball, or "wrist spin," which is the quick movements of the wrist when the ball is released. There is no documentation of the biomechanics of these bowling motions in the literature **[2, 3]**.

studied 99 India cricketers (mean age 20.2 years) and found the prevalence of low back pain to be 48.1% in 27 spin bowlers, compared with 75.6% in 37 fast bowlers **[4-6]**.

BIOMECHANICS OF FAST AND FAST/MEDIUM BOWLING [8]

Most research on men's cricket biomechanics focuses on fast bowling due to its impact on Test success. A key factor is ball release speed, which limits batsmen's reaction time, increasing shot execution difficulty **[7]**. the action of bowling is divided into the four distinct stages **[8]**

1. Run-up: Builds momentum and prepares the body for delivery.
2. Pre-Delivery Stride: Positions the body for explosive movement.
3. Delivery Stride: Transfers energy from the lower body to the bowling arm for maximum speed.
4. Follow-Through: Decelerates the body, maintaining balance and reducing injury risk.

Cricket fast bowlers at elite levels attempt to release the ball with speeds > 145 km/hr. so as to limit the response time available to the opposing batsman. However, bowling at such high speeds comes at the cost of large loads on the lumbar spine **[9-12]**.

Adults with chronic low back pain (LBP) often show reduced trunk muscle cross-sectional areas (CSAs), especially at the lower vertebral levels. The observation of decreased CSA and increased intramuscular fat in those with chronic LBP, when compared to adults experiencing acute LBP, suggests that disuse may be a contributing factor **[13]**.

Tightness in the quadratus lumborum (QL) is a common problem among fast bowlers, primarily due to the significant stress placed on the lower back during the fast-bowling motion in cricket. The QL is a deep muscle located in the lower back that plays a crucial

role in stabilizing the spine and aiding in lateral trunk flexion and rotation. During the delivery phase of fast bowling, the spine experiences considerable rotational and lateral flexion forces, which can gradually lead to strain on the QL, resulting in tightness and discomfort **[14]**.

The quadratus lumborum (QL) is a key source of lower back pain due to its role in daily movements and compensatory strain. Overuse can lead to spasms and trigger points, which contribute to pain. The four QL trigger points are: **[15, 16]**

- **Upper**: Near the 12th rib and lumbar muscles.
- **Middle**: Adjacent to the 3rd and 4th lumbar vertebrae.
- **Lower**: Along the iliac crest.

QL Pain:

- **Upper**: Flank, hip crest, and upper groin.
- **Middle**: SI joint and lower buttock.
- **Lower**: Hip joint, worsens when lying on that side.

Stretching applies force to lengthen shortened, hypomobile structures. Pain reduction occurs through Golgi tendon organ inhibition, relaxing the musculotendinous unit and modifying pain perception via Pacinian corpuscles **[17]**.

Muscle Energy Technique (MET) are a class of tissue manipulation method that incorporate precisely directed and controlled patient initiated, isometric and/or isotonic contraction designed to improve musculoskeletal function and reduce pain. MET can be used to lengthen and strengthen muscles, to increase fluid mechanics and decrease local oedema, and to mobilize a restricted articulation **[18, 19]**. Literature (Muscle energy technique for non-specific low-back pain) has shown the support of MET for acute low back pain for improving functional ability when used with supervised neuromuscular re-education and resistance exercise training **[20]**.

Positional release therapy (PRT) is, whereby dysfunctional joints and their muscle are moved away from their restrictive barrier into position of ease in the treatment of both musculoskeletal and visceral dysfunctions **[21]**. The application of positional release therapy for somatic dysfunction requires a practitioner to first palpate a tender point in the soft tissues. The patient's limb is then moved in such a way that the pain associated with pressure on the tender points is reduced by at least 70 percent to find position of ease **[22]**. Positional release therapy treats quadratus lumborum trigger points by holding a position of ease for at least 90 seconds, promoting therapeutic changes through proprioceptive and nociceptive mechanisms **[23-27]**.

AIMS

Aim of the study to find the effectiveness of MET with stretching versus PRT with

stretching on pain function and disability in fast bowlers having LBP because of Ql tightness.

METHODOLOGY

METHOD OF COLLECTION OF DATA

Study design: - Comparative study

Study subject: - Fast bowler

Source of data: - Cricket Academy (Unicorn Cricket academy Ahmedabad, suramya farm and cricket academy)

Sample size: - 30.

Age group: - 16- 23 Yr. **[28]**

Sample Design: - Simple Random Sampling

Study Duration: - 4 weeks **[20]**

MATERIALS

Pen and pencil, Paper, Physiotherapy mat, Writing Pad, Plinth, Goniometer and Measuring tape

CRITERIA

INCLUSION CRITERIA

Subjects were eligible for inclusion in this study if they met the following criteria:

Age range between 16 and 23 years **[28]**, Male fast bowlers who have participated in Action Cricket at an intermediate league level for a minimum of six months, Players with comparable experience and league ranking, Individuals experiencing lower back pain, specifically at the Quadratus Lumborum (QL) muscle attachment sites **[29]**, Pain lasting no more than six weeks **[29]**, A noticeable trigger point in the QL muscle **[29]**, Lower back pain lasting more than 3month, A positive pelvic tilt test, A history of sudden pain due to an overload during play or a gradual buildup of pain from repeated stress on the muscle, Willingness to take part in the research.

EXCLUSION CRITERIA [8]

Subjects were not included in this study if they met any of the following criteria:

Had conditions that could restrict abdominal muscle strengthening, such as:High blood pressure, Osteoporosis, Spinal injuries, Poor circulation (as referenced by Harms-Ringhdal, 1993), Cardiac-related concerns, Experienced significant discomfort when engaging their abdominal muscles, Were classified as spin bowlers, Had undergone lower limb surgery in the past, Had a history of fractures or injuries within the last six months.

PROCEDURE

PROCEDURE & SAMPLING

Participants were recruited from various cricket academies after ethical approval. Screening involved interviews, medical history reviews, and physical exams to determine eligibility.

Eligible participants (30 active fast bowlers) were randomly assigned to two groups. Group A (15 bowlers) received stretching and muscle energy techniques for four weeks, while Group B (15 bowlers) received stretching and positional release therapy for the same duration.

PROCEDURE OF OUTCOME MEASURE

The **Numeric Pain Rating Scale** (NPRS) is an 11-point scale (0–10) used to assess pain severity, with 0 for "no pain" and 10 for "worst pain imaginable." It can be administered orally or visually, with higher scores indicating greater pain intensity. Validity correlations range from 0.86 to 0.95 **[25]**.

OSWESTRY DISABILITY INDEX (ODI) is a "gold standard" tool for assessing long-term functional impairment in individuals with back pain. It evaluates how pain affects daily activities, with respondents selecting the statement that best describes their condition.

Scoring:(Minimal disability: 0-20%, Moderate disability: 20%-40%, Severe disability: 40%-60%, Completely disabled: 80%-100%) The ODI assesses more than just pain intensity, with strong test-retest reliability (mean ICC: 0.937 ± 0.032).

LUMBAR RANGE OF MOTION

Schober's test measures lumbar mobility by assessing changes in distance between marked points on the spine during flexion and extension. Normal flexion increases by at least 5 cm, while normal extension decreases by 1–2 cm. The Modified Schober Test (MMST) norms are 2.42 cm ± 0.74 cm for extension and 6.85 cm ± 1.18 cm for flexion **[30]**.

HIP RANGE OF MOTION

Hip flexion is measured with a goniometer placed at the greater trochanter, aligning the movable arm with the femur and the stable arm with the pelvis. The normal range is 80–140° (average 85°) **[31]**. **Hip abduction** is measured by aligning the stationary arm across the anterior superior iliac spines and the moving arm toward the mid-patella, with a normal range of 25–40°. **[31]**

QUADRATS LUMBORUM OVER ACTIVITY PALPATION ASSESSMENT

The practitioner stands at the patient's back, positioned to easily palpate the lateral border of the quadratus lumborum, a key trigger point site, using the hand closest to the patient's head **[32]**. The patient lies on their side, with the upper arm extended overhead to grip the top edge of the table, which helps to open up the lumbar area **[32]**.

The activity of the quadratus lumborum can be evaluated by palpating it with the cephalad hand while simultaneously using the caudad hand to assess the gluteus Medius and tensor fasciae late (TFL) during leg abduction. If the quadratus lumborum engages first or activates alongside these muscles, it may indicate overactivity and potential shortening, suggesting that stretching could be beneficial.

If the practitioner feels the quadratus lumborum becoming active before the leg reaches at least 25° of abduction, it indicates that the muscle is likely overactive.

STRETCHING [33]

Standing Quadratus Lumborum Stretch: To stretch the right QL standing,

Foot Positioning: Place your left foot in front of your right foot. This stance helps in isolating the right side during the stretch.

Arm Placement: Raise your right arm overhead, ensuring it is fully extended.

Lateral Flexion: Lean your torso to the left side while reaching your right arm over and across your body. This motion stretches the right side of the lower back.

Hold the Stretch: Hold this position for 20–30 seconds, deepening your breathing to enhance the stretch.

Repeat: Return to the starting position and, if desired, repeat on the opposite side to keep things balanced.

Muscle Energy Technique [32]

The Quadratus Lumborum Side-Lying Muscle Energy Technique (MET), as a manual therapy technique aimed at treating the quadratus lumborum muscle. Here's a breakdown of the steps and important points to follow during this technique:

Steps for Quadratus Lumborum Side-Lying MET

1. **Positioning the Patient**: The patient should be placed in a side-lying position, while the practitioner stands at waist level behind them. The patient's upper arm should be extended overhead, grasping the top edge of the table for support.
2. **Abduction of the Leg**: The patient, while inhaling, abducts the uppermost leg (away from the midline of the body) until the practitioner feels activity in the quadratus lumborum. This is typically around 30° of leg elevation.
3. **Isometric Contraction**: The patient holds the leg in this abducted position (and, if specified, also holds their breath), creating an isometric contraction. The practitioner uses gravity to provide resistance during this contraction.
4. **Release and Slight Fall of the Leg**: Following approximately ten seconds of maintaining the isometric contraction, the patient lets the leg drop gently toward the floor, shifting it over the back of the table and behind the torso.
5. **Stretching Phase**: By straddling the leg, the practitioner stabilizes it. The practitioner then interlocks the fingers over the pelvis while holding it in both hands. Leaning back guarantees that the soft tissues, especially the quadratus lumborum, are free of any slack. This motion pulls the pelvis away from the lower ribs, which strains the quadratus lumborum. Ten to thirty seconds should be spent holding this stretch.
6. **Importance of Table Edge**: The patient must grasp the top edge of the table in order for the practitioner to execute the stretch with firmness.

7. **Repetition and Variations in Leg Position**: Once or twice more, the contraction and stretch are performed with the leg elevated in front of the trunk, and once or twice more with the leg behind the trunk. The change in leg posture makes it possible to target various quadratus lumborum fibres.

   Muscles with long fibres are most impacted when the leg lags behind the trunk.

   Targeting the diagonal fibers is the primary effect of elevating the leg in front of the trunk.
8. **Changing Positions for Effectiveness**: For the best results, the practitioner will need to move from the back to the front of the table to perform the technique effectively, ensuring that different muscle fibers are stretched.
9. **Direction of Stretch**: The direction of the stretch should always align with the long axis of the abducted leg. This ensures that the quadratus lumborum muscle is properly stretched in the direction of its fibers.

POSITIONAL RELEASE THERAPY [29]

Positional Release Therapy (PRT) is a soft tissue technique designed to relieve pain, decrease muscle tension, and improve muscle function.

Position of the Subject: The subject was comfortably positioned in prone.

Tender Point Identification: The therapist uses their thumb and index finger to palpate the afflicted region and apply pressure in order to find the tender areas within the QL. The patient was then instructed to flex laterally toward the side of the trigger point.

Gentle Passive Positioning: The patient's body is then gently positioned by the therapist to reduce stress and strain on the identified sensitive areas. The objective is to achieve a comfortable position where the muscle is relaxed and less painful.

Procedure: Standing behind the patient, the therapist placed one knee on the table and rested the afflicted leg on the patient's thigh. The position was then adjusted by gently turning the subject's hip internally, extending, and abducting at a 45° angle. Each repeat was held for 90 seconds, with a 60-second break in between.

Monitoring Response: The therapist keeps a careful eye on the subject's reaction while situating them, noting any variations in tissue texture, muscular tension, or discomfort levels. The objective is to lessen muscular hypertonicity and soreness.

Release and Return: After the allotted amount of time, the therapist carefully and slowly helps the patient leave the position so that the muscle may gradually return to a neutral or slightly stretched state **[29]**.

QUADRATUS LUMBORUM STRETCH

QUADRATUS LUMBORUM MUSCLE ENERGY TECHNIQUE

QUADRATUS LUMBORUM POSITIONAL RELEASE THERAPY

STATISTICAL ANALYSIS

- Descriptive statistics (Mean and SD) was computed for different parameters.
- Here within group of A & B analysis by pair sample t test, P value is <0.001 Here we can say that statistical highly significance for both group from pre to post comparison.
- Between Group A and B analysis by Mann-Whitney U test.

RESULT

We Test Normality Distribution Test for All Outcomes Measure for Both Groups, Based on Above Shapiro-Wilk Test Most of Outcomes Measure Our Null Hypothesis Is Normally Distributed Accepted for Both Group and Assume All Outcomes Measure Are Normally Distributed. So, We Can Use Parametric Test for Statistically Significant.

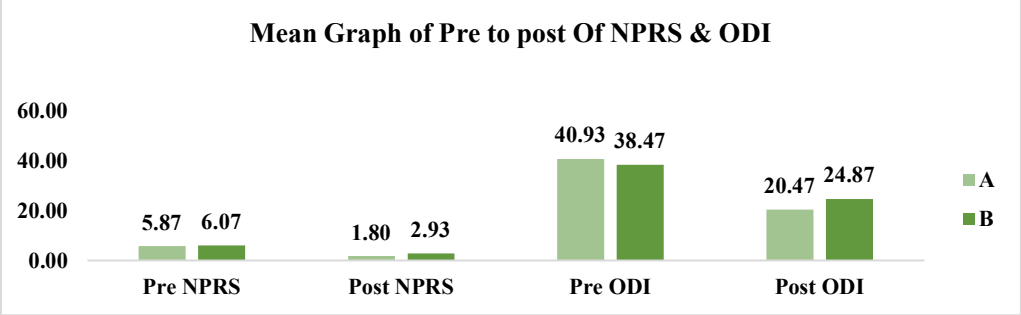
Table 1: Within Group Analysis of NPRS, ODI in Group A and Group B

Outcome Measures	Group A Mean ± SD	P-value (within A)	Group B Mean ± SD	P-value (within B)	P-value (between groups)
Pre NPRS	5.87 ± 0.99	P < 0.001	6.07 ± 1.22	P < 0.001	0.740
Post NPRS	1.80 ± 1.21		2.93 ± 1.28		0.015
Pre ODI	40.93 ± 11.98	P < 0.001	38.47 ± 9.68	P < 0.001	0.547
Post ODI	20.47 ± 4.24		24.87 ± 6.01		0.041

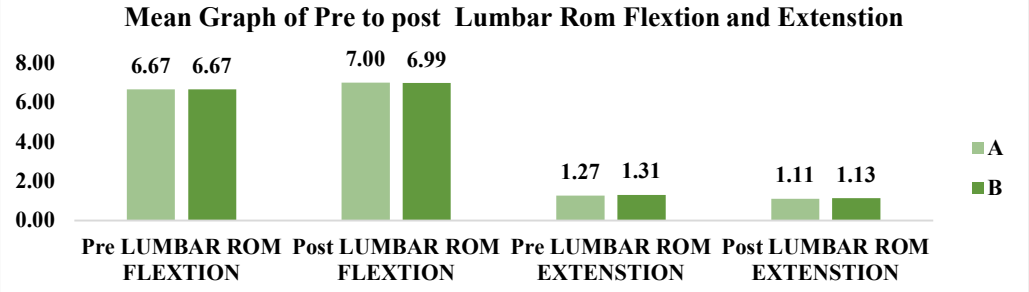
Table 2: Within Group Analysis of ROM in Group A And Group B

Outcome Measures	Group A Mean ± SD	P-value (within A)	Group B Mean ± SD	P-value (within B)	P-value (between groups)
Pre Lumbar Flexion	6.67 ± 0.32	P < 0.001	6.67 ± 0.34	P < 0.001	0.899
Post Lumbar Flexion	7.00 ± 0.15		6.99 ± 0.15		0.726
Pre Lumbar Extension	1.27 ± 1.86	P < 0.001	1.31 ± 1.85	P < 0.001	0.251
Post Lumbar Extension	1.11 ± 0.10		1.13 ± 0.08		0.514
Pre-Right Hip Flexion	134.33 ± 2.02	P < 0.001	135.07 ± 2.55	P < 0.001	0.413
Post Right Hip Flexion	137.87 ± 1.77		137.73 ± 2.19		0.949
Pre-Left Hip Flexion	134.53 ± 2.26	P < 0.001	134.87 ± 2.92	P < 0.001	0.768
Post Left Hip Flexion	137.80 ± 1.90		137.93 ± 2.22		0.749
Pre-Right Hip Abduction	41.93 ± 1.75	P < 0.001	42.40 ± 2.03	P < 0.001	0.580
Post Right Hip Abduction	44.47 ± 0.64		44.00 ± 1.00		0.202
Pre-Left Hip Abduction	42.13 ± 1.77	P < 0.001	42.47 ± 2.03	P < 0.001	0.672
Post Left Hip Abduction	44.47 ± 0.64		44.07 ± 1.03		0.332

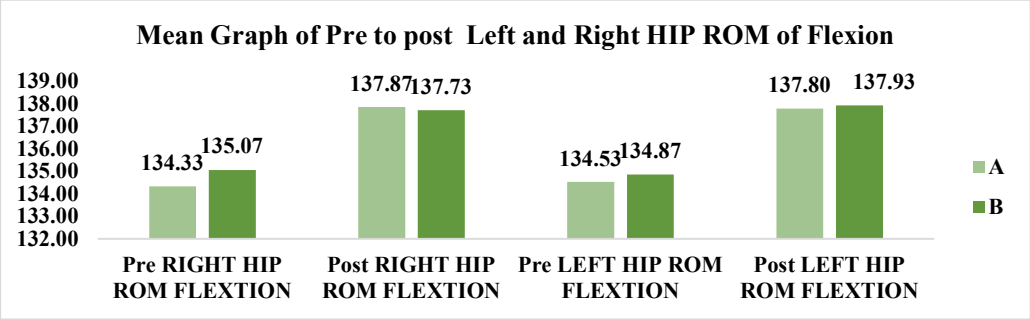
Here Within Group Of A & B Analysis By Pair Sample T Test, P Value Is <0.001 Here We Can Say That Statistical Highly Significance For Both Group From Pre To Post Comparison. Between Group A And B Analysis By Mann-Whitney U Test.



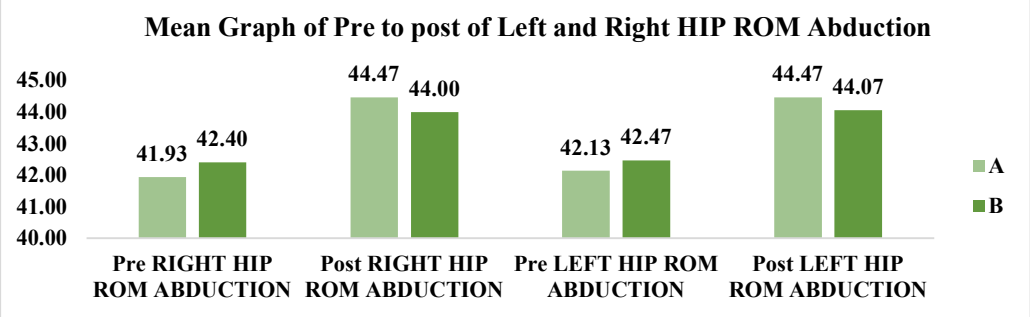
Graph 1: Within Group A And Group B Analysis of NPRS and ODI



Graph 2: Within Group A And Group B Analysis of Lumbar ROM



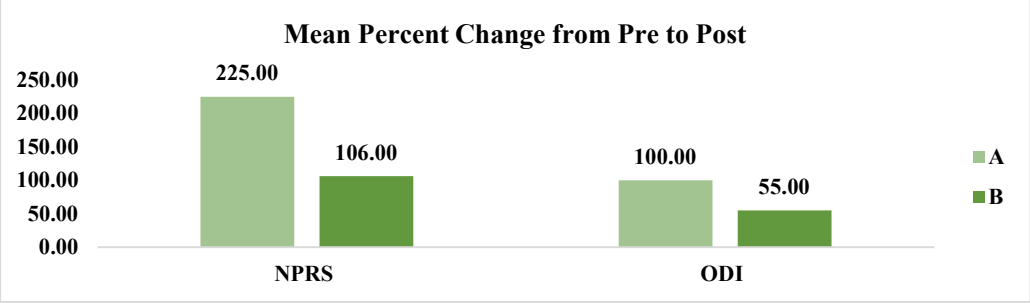
Graph 3: Within Group A And Group B Analysis of HIP FLEXION ROM



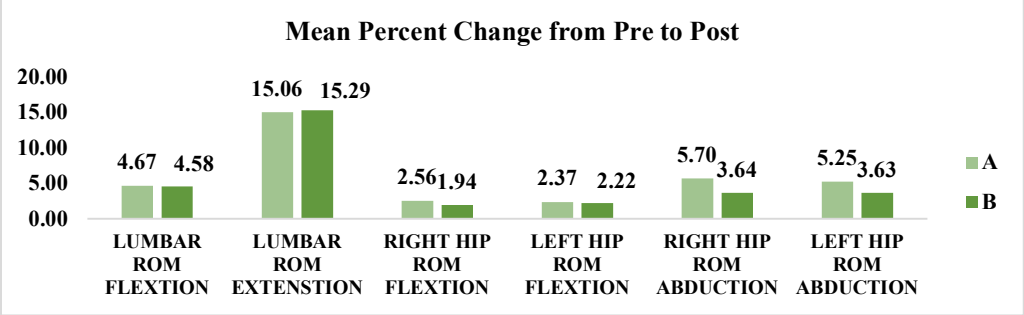
Graph 4: Within Group A and Group B Analysis of HIP A BDUCTION ROM

Table 3: Mean Percent Change Pre to Post

MEAN PERCENT CHANGE PRE TO POST							
NPRS	ODI	LUMBAR ROM FLEXTION	LUMBAR ROM EXTENSION	RIGHT HIP ROM FLEXION	LEFT HIP ROM FLEXTION	RIGHT HIP ROM ABDUCTION	LEFT HIP ROM ABDUCTION
225.00	100.00	4.67	15.06	2.56	2.37	5.70	5.25
106.00	55.00	4.58	15.29	1.94	2.22	3.64	3.63



Graph 5: Between Group Analysis of Group, A and Group B of NPRS AND ODI



Graph 6: Between Group Analysis of Group, A and Group B of Lumbar and HIP ROM

DISCUSSION

Sports are among the essences for centuries; India has a rich history in physical activities while cricket, which started in England in the sixteenth century, worldwide had three major formats in which it required skill, fitness, and strategy. The Aim of The Study to Find the Effectiveness of Muscle Energy Technique with Stretching Versus Positional Release Therapy with Stretching on Pain Function and Disability in Fast Bowlers Having Low Back Pain Because Of Quadratus Lumborum Tightness. The primary outcome measures included the Oswestry Disability Index (ODI), Numeric Pain Rating Scale (NPRS), hip flexion, hip abduction, and lumbar Sober test for flexion and extension**.** 30 participants were divided into two groups, with group A receiving MET with stretching and group B receiving PRT with stretching.

The current study's findings indicate that fast bowlers' low back discomfort caused by tight quadratus lumborum can be effectively managed with both Muscle Energy Technique (MET) and Positional Release Technique (PRT) combined with stretching. Nonetheless, MET *al*ong with stretching proved to have greater advantages concerning muscle tightness reduction, flexibility improvement, and functional performance enhancement over time. Although PRT proved helpful in the provision of instant relief from pain and muscle relaxation, it did not have a significant impact on long-term functional improvement compared to MET plus stretching. Thus, MET with stretching would be a more efficient intervention for treating quadratus lumborum tightness in fast bowlers, whereas PRT could be an effective adjunct for managing pain.

Fast bowlers frequently have quadratus lumborum (QL) stiffness as a result of asymmetrical loading, overuse, and poor biomechanics, which can cause lower back pain and limited mobility. Unbalances and increased strain on the lumbar spine might result from a tight QL that raises the pelvis. Frequent stretching enhances neuromuscular function, blood flow, and flexibility, which lessens pain and boosts output. Bowlers should warm up, stretch frequently, and refrain from overstretching themselves into pain in order to prevent injury **[33]**.

Stretching and MET can increase QL flexibility in fast bowlers, which may improve hip and lumbar range of motion and lower injury risk. The Oswestry Disability Index (ODI) and the Numeric Pain Rating Scale (NPRS) are two outcome measures that are frequently used to evaluate functional disability and pain levels, respectively. Improvements in these metrics may show how well the intervention worked to reduce QL tightness and related pain. In conclusion, reducing QL tension in fast

bowlers with stretching and MET therapies may enhance hip and lumbar mobility, lessen pain, and minimize functional impairment, all of which may help to lower the possibility of lumbar spine injuries.

In February 2021 **Smith, R., *et al*** reported Muscle Energy Techniques and their effectiveness in reducing pain and improving function in athletes. Both static passive stretching and muscle energy techniques were shown to be beneficial in increasing hamstring flexibility; however, in patients with non-specific low back pain, muscle energy techniques were found to have a greater impact than static passive stretching. The findings of the comparison of ODI scores can be seen as indicating that both interventions also contributed to enhanced functional mobility and reduced limitations in daily activities. Results showed that stretching with Muscle Energy Technique is a successful therapy method for managing low back pain because of quadratus lumborum tightness **[34]**.

Muscle Energy Technique (MET) relieves quadratus lumborum (QL) tightness through post-isometric relaxation, allowing the muscle to lengthen after controlled contraction. It also induces reciprocal inhibition by engaging antagonist muscles, leading to reflexive relaxation. Activation of Golgi tendon organs reduces excessive contraction, while improved blood circulation enhances oxygenation and waste removal. Additionally, MET improves fascial and lumbar joint mobility, reducing stress on adjacent structures and minimizing compensatory movement patterns. These mechanisms make MET an effective approach for alleviating QL tightness and low back pain, especially in fast bowlers and athletes **[35]**.

In 2021 Bhosale *et al,* reported effects of muscle energy technique on quadratus lumborum and active posterior pelvic tilt exercises on pain and disability in acute low back pain subjects - a comparative study, they conclude that in individuals with acute low back pain, both the active posterior pelvic tilt exercises and the muscular energy approach on the quadratus lumborum decreased pain and impairment. When it comes to lowering pain and impairment in people with acute low back pain, energy method on the quadratus lumborum is superior than active posterior pelvic tilt exercises **[36]**.

The findings from this study are consistent with the results from the present research.

The Positional Release Technique (PRT) is a manual treatment method that reduces neurological and muscular stress by putting the afflicted muscle in an easy posture. This helps to relieve pain and stiffness in the muscle. For people with low back pain from tight quadratus lumborum (QL) muscles, such as quick bowlers, PRT can be quite

beneficial. The QL muscle is essential for spinal stability and mobility.

The mechanism behind PRT involves identifying tender points within the QL and positioning the patient in a way that shortens the muscle, typically through lateral flexion towards the affected side. This position minimizes tension and discomfort, allowing the muscle spindles sensory receptors within the muscle to adapt to the new, relaxed state. The position is maintained for approximately 90 seconds, which helps "reset" the muscle spindle activity, decreasing sensitivity and reducing the muscle's reflexive contraction. This neuromuscular resetting effect promotes relaxation and can alleviate tightness and pain.

CONCLUSION

For fast bowlers having low back pain because of quadratus lumborum tightness, both MET and PRT along with stretching successfully decreased discomfort and enhanced lumbar mobility and flexibility.

MET is a recommended method for improving mobility and alleviating urgent problems because it showed a slightly larger magnitude of improvement in all outcome metrics. Where PRT is valuable, especially in those scenarios requiring gentler, passive intervention.

LIMITATIONS AND FUTURE RECOMMENDATIONS

The study had a limited sample size and focused on short-term results, requiring further research on long-term effects. While ROM and pain were assessed, bowling performance metrics like speed and accuracy were not measured. Future studies should include performance-related outcomes. Responses to MET and PRT may vary based on muscle tone, injury history, and training load.

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