



# EFFECT OF POSITIONAL RELEASE TECHNIQUE WITH OR WITHOUT EXERCISES IN LUMBAR STRAIN GRADE 1 AMONG MALE CRICKET PLAYERS

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## ABSTRACT

Lumbar Strain is stretch injury or tear of paraspinal muscle and tendon in the Lumbar Region. Lumbar Strain is extrapolated from peripheral muscle Strain. It found that the LBP exercises with PRT have higher effect than PRT without exercises on pain, also it was concluded that PRT with exercises increases the abdominal strength and endurance more efficiently than the PRT without exercises. And finally, the PRT without exercise improve sub-acute low back pain function more than PRT with exercises.

**AIM** – Effect of Position Release Technique with or without exercise in Cricket Players with Lumbar Strain.

**METHODOLOGY**- The study was performed in the Physiotherapy department Helpline Physiotherapy Centre, Optims Healthcare and CSH. Patients with Lumbar Strain were randomly gathered. The sample was 16 individuals, 18 - 35 years old. They were split into two groups, Group A with 08 patients, receiving positional release technique with exercise over 3 weeks for 6 sessions. Group B with 08 patients received 6 sessions of positional release technique treatment for 3 weeks. The resulting measurements were used for pain NPRS, functional evaluation (RMQ).

**RESULT**- The P value in after treatment was equal to 0.798, which is greater than 0.05. Therefore, there is no significant difference between the two treatments, but effect size calculations suggest that pain in patients is reduced by position release technique with exercise more than position release technique without exercise. For (RMQ) outcomes, there was no significant difference between groups with P-value = 0.234 that is greater than 0.05 after treatment, but effect size calculations suggest that position release technique without exercise enhances more than position release technique with exercise function for chronic low back pain patients. The test for post-therapy results showed a P value of 0.234 for endurance results. This value greater than 0.05, so it deduces that after therapy there is no statistically significant distinction in outcomes of endurance test between group A and group B. but the effect size of

Position Release Technique with Exercises is higher than the effect size without exercises. Therefore, it can conclude that PRT with exercises increases the abdominal strength and endurance more efficiently than the position release technique without exercises.

## DISCUSSION

The present study was conducted to find out comparison between the Effect of PRT with exercise Versus Positional release therapy on sub-acute lumbar strain male cricketers. This study was conducted on 30 subjects (male) with age group of 18-35 years and were divided into two groups. They were divided into 2 groups; 15 in each group. The data was analysed using statistical package for the social science software (SPSS) 20 version. Before applying statistical tests

The current study was conducted to compare the effect of Positional release technique with or without exercises on pain, function, endurance in patients with lumbar strain.

The current study showed that both PRT and the exercise could be of advantage in the treatment of intense lumbar strain-associated erector spine muscle spasm. There was critical difference in the force of pain within the groups and between the groups after 3<sup>rd</sup> week of treatment. Decline in pain intensity as documented with improvement in lumbar ROM was huge in the PRT groups. relief from discomfort was accomplished with both Group A and Group B, in this study was considerably more critical in the PRT group. Here, exercise helps in increase in blood supply, Thus it decreases stiffness and restores the ROM. It helps in increasing mobility and strengthens the back muscles. While, hot moist packs helps in reducing erector spinae spasm as it is helpful in increasing vascular permeability, vasodilation and reducing inflammation. Thus, it leads to decrease in pain and increasing mobility of back. PRT, used in this study had result in pain reduction. Pain reduction might have been due to the incongruent decline in the intrafusal and extrafusal fibres and reproduction of the undue proprioceptive activity.<sup>1</sup> Koror has given a conceptual model, how various manipulative methodologies such as isometric and stretching might be effective in the somatic dysfunction treatment. Erector spinae strain is one of the causes of the back pain.<sup>2</sup>

The use of exercises and PRT probably worked in the resolution of inflammation and spasm of the erector spinae muscle due to its effects similar to the soft-tissue techniques such as stretching of soft tissue in affected area, moving of fluids out of inflamed area reflex relaxing or tonifying muscle.<sup>3</sup> Numerous studies have shown the benefits of exercise and PRT in low back ache. However, no study compared both techniques along with MODQ scale for daily living activities. There was statistically significant improvement in active and passive lumbar extension ROM with in the groups on last day of treatment, after 4 weeks, however, there was no factual distinction when looked at between the two groups. Schenk *et al.*<sup>4</sup> performed a randomized controlled trial to decide the adequacy of enhancing lumbar extension in symptomatic subjects and found that there was increase in ROM in experimental group<sup>5</sup> The study results on the current study are likewise agreeing with the study results of Schenk *et al.* A study was done on the impact of rib cage rigidity on low back pain in which the subject got treatment with Integrative Manual Therapy as PRT after treatment was finished, the subject gave diminished pain and improved ranges of motion.<sup>6</sup>

Reema Joshi and Manisha Rathi in their study "Effect of muscle energy technique versus positional release technique on pain and functions in patients with trapezeus. The study concluded clinically muscle energy technique was more effective than positional release technique in subjects having trapezeus with non-specific neck pain 7. Compared to our study, as the results it concludes that there is statistically significant difference between the pain before the treatment and the pain after the treatment with Positional Release Technique. After studying the means (averages) of pain, it discovered that the average pain before the treatment was 5.88 (0.64), while after the treatment the pain decreased to 1.88 (1.12). It means the PRT without exercises reduces chronic low back pain significantly. By looking at our results and their results, it was seen that their result not agreed ours.

Mulla and Gosavi, in their study "Effect of stretching exercise and neural tissue mobilization in piriformis syndrome", 42 subjects had participated who were diagnosed with piriformis syndrome. Out of which 12 patients did not come for follow up out of 30 involved patients 16 were females and 14 were males. The mean age of subjects included in group A (experimental group) was 26.13 and group B (conventional group) was 25.06 8.

Al-Shawabka., *et al.* in a previous study "Positional release technique versus manual pressure release on the upper trapezius muscle in patients with myofascial pain dysfunction syndrome" reported that the PRT group had a significant difference between pre-treatment and post-treatment values for pressure pain thresh-old 9. On the other hand, in our study there was a statistically significant difference within the two group, on pain before the treatment and the pain after the treatment with positional release technique. By looking at our results and their results

Mohamed and El Shiwi in their study "Effect of therapeutic ex-ercises with or without positional release technique in treatment of chronic mechanical low back pain patients, it was reported that there were no significant differences between groups in functional disability pre-treatment, and there was significant difference in favor of the group that had PRT on functional disability post-treat-ment 10. On the other hand, in current study, it was found that there is statically significant difference between the two groups in RMQ scores before the treatment and after the treatment, but from effect size calculation, it concludes that PRT alone can reduce low back pain more efficiently compared to PRT with exercises. By look-ing at our results and their results it was seen that their result not agreed ours.

**CONCLUSION-** It found that Exercises with PRT have higher effect than PRT without exercises on pain, also it was concluded that PRT with exercises increases the abdominal strength and endurance more efficiently than the PRT without exercises. And finally, the PRT without exercise improve Lumbar Strain function more than PRT with exercises.

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