

# A COMPARATIVE STUDY BETWEEN THE EFFECTIVENESS OF KINESIO TAPING VERSUS IASTM IN PATELLOFEMORAL PAIN IN LONG DISTANCE CYCLER

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## **ABSTRACT**

### **BACKGROUND:**

Patellofemoral pain syndrome (PFPS) is a syndrome characterized by pain in the anterior knee.<sup>1,2</sup> It is the most frequent disease of the knee in early childhood.

Patellofemoral pain syndrome (PFPS) is a broad term used to describe pain in the front of the knee and around the patella, or kneecap. It is sometimes called "runner's knee" or "jumper's knee" because it is common in people who participate in sports—particularly females and young adults—but PFPS can occur in non-athletes, as well. The pain and stiffness caused by PFPS can make it difficult to climb stairs, kneel, and perform other everyday activities<sup>12</sup>

### **METHODOLOGY:**

Comparative study design. **40** patients diagnosed with patellofemoral pain..Were randomly selected according to inclusion and exclusion criteria and were divided into two groups – Group A: Kinesio taping ; Group B: IASTM, Duration of Study: 30 minutes per day, 3 days in a week, total 12 Weeks

### **CONCLUSION :**

This comparative study provides evidence that both Kinesio Taping and IASTM are effective in reducing pain and improving functional outcomes in long-distance cyclists with patellofemoral pain. While both interventions demonstrated significant effectiveness, IASTM showed slightly superior outcomes in terms of pain reduction and functional improvement.

P<0.005

## INTRODUCTION

Patellofemoral pain syndrome (PFPS) is a syndrome characterized by pain in the anterior knee.<sup>1,2</sup> It is the most frequent disease of the knee in early childhood.

Patellofemoral pain syndrome (PFPS) is a broad term used to describe pain in the front of the knee and around the patella, or kneecap. It is sometimes called "runner's knee" or "jumper's knee" because it is common in people who participate in sports—particularly females and young adults—but PFPS can occur in non-athletes, as well. The pain and stiffness caused by PFPS can make it difficult to climb stairs, kneel, and perform other everyday activities<sup>12</sup>

Patellofemoral pain syndrome occurs when nerves sense pain in the soft tissues and bone around the kneecap. These soft tissues include the tendons, the fat pad beneath the patella, and the synovial tissue that lines the knee joint.<sup>12</sup>

Patellofemoral pain syndrome (PFPS) is a condition characterized by an aching pain in the peripatellar area that is exacerbated by physical activities such as climbing stairs, squatting, jumping, and running and/or by sitting with the knees flexed for prolonged periods of time<sup>14</sup>

## STUDY MATERIALS

Written concern form / General assessment form / Treatment couch / Paper and Pencil / Chair / IASTM TOOL and KINESIO TAPING / Scissor / Gel and Cotton.

## METHODS

After collecting the written consent form the patients selected by inclusion and exclusion criteria they would be divided into two groups- group A and group B.

**Group A will be treated with kinesio taping** (Taping was applied twice a week, 12 times in total during the treatment period of 12<sup>th</sup> weeks)



## **Group B will be treated with IASTM**

**Preparation:** Ensure that the patient's skin is clean and dry before beginning the IASTM treatment. Gather all the necessary materials, including the selected IASTM tools, lubricant (if applicable), and any additional accessories.

**Assessment and Marking:** Assess the area of patellofemoral pain and identify the specific soft tissues involved. Mark any areas of tenderness or dysfunction to guide the IASTM treatment.

**Lubrication (if applicable):** Apply a thin layer of lubricant to the skin over the treatment area, if using a lubricant with IASTM tools. This helps reduce friction and enhance the glide of the tools.

**Instrument Selection:** Choose appropriate IASTM tools for the treatment, considering the size, shape, and material of the instruments. Select tools that will allow for precise targeting of the affected soft tissues around the patellofemoral joint.



## **RESULTS**

### **INTERPRETATION:**

Forty patients with patellofemoral pain in the age group between 20-45 years were randomly selected according to inclusion and exclusion criteria and divided into two groups with 20 patients in each group.

This comparative study provides evidence that both Kinesio Taping and IASTM are effective in reducing pain and improving functional outcomes in long-distance cyclists with patellofemoral pain. While both interventions demonstrated significant effectiveness, IASTM showed slightly superior outcomes in terms of pain reduction and functional improvement.

## **DISCUSSION**

This study aimed to compare the effectiveness of Kinesio Taping and Instrument-Assisted Soft Tissue Mobilization (IASTM) in the management of patellofemoral pain in long-distance cyclists. The study objectives were to evaluate the effects of Kinesio Taping and IASTM individually, compare their effectiveness, and explore any new findings regarding these physiotherapy techniques.

The findings of this study provide valuable insights into the effectiveness of Kinesio Taping and IASTM in treating patellofemoral pain in long-distance cyclists. The study involved a total of 40 patients, with 20 patients in each group. The demographic data presented in Table 1 demonstrates that both groups were well-matched in terms of age.

The analysis of the Visual Analog Scale (VAS) scores within Group A (Kinesio Taping) revealed a significant improvement from a mean pre-test score of 6.2 to a mean post-test score of 3.4 ( $p < 0.05$ ). Similarly, within Group B (IASTM), there was a significant improvement in VAS scores from a mean pre-test score of 6.05 to a mean post-test score of 2.55 ( $p < 0.05$ ). These findings suggest that both Kinesio Taping and IASTM were effective in reducing pain levels in long-distance cyclists with patellofemoral pain.

Furthermore, the analysis of the Kujala Patellofemoral Scale scores within Group A showed a significant improvement from a mean pre-test score of 35.55 to a mean post-test score of 68.4 ( $p < 0.05$ ). In Group B, there was also a significant improvement in Kujala Patellofemoral Scale scores from a mean pre-test score of 34.55 to a mean post-test score of 93.6 ( $p < 0.05$ ). These findings indicate that both Kinesio Taping and IASTM led to improved functional outcomes in long-distance cyclists with patellofemoral pain.

The comparison of post-test values between Group A and Group B revealed that both Kinesio Taping and IASTM were effective in reducing pain levels, as evidenced by the lower VAS scores in both groups. However, Group B (IASTM) showed a slightly greater reduction in pain compared to Group A (Kinesio Taping), with a mean difference of 0.85. Similarly, in terms of functional outcomes measured by the Kujala Patellofemoral Scale, Group B demonstrated a greater improvement compared to Group A, with a mean difference of 25.2. These results suggest that IASTM may have a slightly superior effect in managing patellofemoral pain in long-distance cyclists, although both interventions showed significant effectiveness.

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