

**“A COMPARATIVE STUDY- AN IMMEDIATE EFFECT OF
HAMSTRING FASCIA ACTIVATION THROUGH KINETIC
CHAIN ACTIVATION TECHNIQUE (K-CAT) VERSUS
CONVENTIONAL HAMSTRING STRETCHING TECHNIQUE
TO IMPROVE HAMSTRING FLEXIBILITY IN COLLEGE
STUDENTS USING SIT AND REACH TEST.”**

submitted by

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In

MUSCULOSKELETAL DISORDERS AND SPORTS



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ABSTRACT

TITLE: A COMPARATIVE STUDY- AN IMMEDIATE EFFECT OF HAMSTRING FASCIA ACTIVATION THROUGH KINATIC CHAIN ACTIVATION TECHNIQUE(K-CAT) VERSUS CONVENTIONAL HAMSTRING STRETCHING TECHNIQUE TO IMPROVE HAMSTRING FLEXIBILITY IN COLLEGE STUDENTS USING SIT AND REACH TEST.

BACKGROUND &PURPOSE:Flexibility is the ability to move a single joint or series of joints smoothly and easily through an unrestricted pain free range of motion (ROM). Reduced hamstring flexibility due to prolonged sitting causes to produce tension in hamstring fascia, which can lead to dysfunction of the hip, SI, lumbar spine joints. Muscle distributes a large portion of their contractile or tensional forces onto fascial sheets.Fascia undergoes tension and ultimately reduces the overall functioning of the body movements. Thus there is a need to create detention in these compensated fasciatio overcome the symptoms caused bythem. Considering above facts, we want to document effectiveness of new methods of physiotherapy like K-CAT and hamstringstretching. By performing K-CAT, we aredetentioningthe hamstring which leads to reduction in tightness ofhamstring. Static hamstring stretching is a common technique which takes the muscle to its end range and maintains this position for a specified duration. The sit and reach test was usedin this study which is used to measure hamstring flexibility.

METHEDODOLOGY:Patients were randomly allocated in 2 groups. Each patient evaluated bytherapist before & after the treatment. Group A was received Kinetic Chain Activation Technique (K-CAT) & group B was received Conventional Hamstring Stretching Technique. Hamstring flexibility was measured by Sit and Reach test. Sit and Reach Test measured pre & post immediately after the treatment.

RESULT:Result were statistically analyzed using Paired and Unpaired T test by usingSPSS version 20. There was significant improvement in Sit and reach test with <0.001 in group A & group B. But in between group, there was more significant improvement in Sit and Reach test with $p<0.001$ in group A rather than group B.

CONCLUSION: Kinetic Chain Activation Technique(K-CAT) is more effective than the Conventional Hamstring stretching technique to improve Hamstring flexibility immediately after treatment in college students with hamstring tightness.

KEY-WORDS: Hamstring Flexibility, Sit and Reach test, Kinetic Chain Activation Technique (K-CAT), Hamstring Stretching , College students.