

SUMMARY:

Influence of badminton training on anterior knee stability in badminton players between 10 and 12 years old

Background: The Anterior cruciate ligament (ACL) tear is a very common injury especially in athletes and physically active people and for that reason it is a very interesting topic for orthopedics and physiotherapists. The ACL tear can lead to knee joint instability. Most frequent injuries among young badminton players are torsional injuries and ruptures of lower limb ligaments. There are two main mechanisms of the ACL tear that are described in the literature during which this injury occurs: landing after a jump and dynamic lunges.

Purpose: The purpose of this study was to evaluate the influence of badminton training on sagittal knee stability in young badminton players aged from 10 to 12 years old. Additionally subjects were tested using the Functional Movement Screen (FMS).

Material and methods: One hundred sixteen children (aged 10 to 12) were included in this study. The study group consisted of 68 children, practicing badminton on a regular basis. The control group included 48 children who did not practice any sport.

Results: The results indicated that regular practice of badminton did not influence sagittal knee stability in players aged between 10 to 12 years old. It was also demonstrated that regular training of badminton did not influence the final score in the FMS in badminton players. Additionally, based on the results of this study there was no relationship between the FMS score and frontal knee stability in both groups. There were no significant differences between boys and girls in the variables considered.

Keywords: anterior cruciate ligament, arthrometry, functional movement screen, FMS, badminton