

Abstract

Title: The influence of ankle strength on injury prevention in ballet

Objectives: The main aim of the study was to find out if injuries in the ankle area have a negative impact on later ankle strength and also if greater ankle strength can lower the probability of ankle injuries in ballet dancers. A secondary objective of this study was to set a limit for ankle strength needed for a safe start on pointe.

Methods: First part of this thesis is a systematic review. The other part is a quantitative research in a retrospective, cross-sectional study design. Data from all 24 subjects was analyzed and injured and uninjured dancers were compared. The data was measured at two angular velocities 30 d/s and 180 d/s.

Results: The results showed, that the prevention of injury does not depend on the level of minimal ankle strength but on the equal strength of both legs. Therefore the limit for a safe start on pointe was not set. Great plantar flexion deficit differences between the injured and uninjured group of dancers are the main finding in this study. The lowest value of plantar flexion strength has been found in uninjured ankles of injured dancers. Injured dancers had in general lower strength in ankle plantar flexion on the right foot. Injured dancers also had smaller differences between plantar flexion and dorsiflexion but only at an angular velocity of 180 d/s.

Keywords: dance, ballet, injury prevention, ankle joint, muscle strength

