THE FFECTS OF CALF RAISES POWER TRAINING THERAPY AND ANKLE HOPS ON GASTROCNEMIUS MUSCLE INJURY IN FUTSAL EXCTRACURRICULAR MEMBERS OF SMA N 1 SENTOLO

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ABSTRACT

The high amount of time the students of SMA Negeri (state senior high school) 1 Sentolo experienced pain in the gastrocnemius muscle when doing exercises had inspired the researcher to conduct this study. This study aimed to determine the effect of calf raises and ankle hops strength training therapy on gastrocnemius muscle injury in futsal extracurricular students at SMA Negeri 1 Sentolo.

This study used a Quasi-Experimental method with a non-equivalent control group design pattern. The population in this study was 30 futsal extracurricular students at SMA Negeri 1 Sentolo, who were selected using a purposive sampling technique with inclusion and exclusion criteria. The research sample was divided into two groups using the ordinal pairing technique. The instruments in this study were the Numeric Rating Scale (NRS) with a score of 0-10, and the goniometer to measure the knee and ankle's ROM (joint area of motion). Data analysis of this research was the descriptive data analysis, normality test with Shapiro-Wilk test ($p>0.05$), homogeneity test counted using Levene's test ($p>0.05$), and independent t-test ($p<0$). 0.05) to determine the effect of each variable.

The results showed that the combination treatment of calf raises and ankle hops strength training therapy could significantly reduce pain scale and increase knee and ankle ROM in patients with gastrocnemius muscle injury ($p<0.05$). From the difference in post and pre-test data, it was discovered that the effectiveness of reducing the gastrocnemius muscle pain scale in the right leg was 15.69%, and on the left was 39.91%. The effectiveness of increasing knee ROM in right leg flexion was 1.58%, and left was 1.48%. The effectiveness of increasing ankle ROM on dorsiflexion of the right foot was 15.86%, and left was 16.07%, right foot plantar flexion was 6.57%, and left was 6.48%.

Keywords: futsal, gastrocnemius, muscle injury, power training therapy