

Yoth Kaewkongkwan 2006: The Effect of Open and Closed Kinetic Chain Exercise toward Quadriceps Angle. Master of Science (Sports Science), Major Field: Sports Science, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Supitr Samahitao, Ph.D. 143 pages.
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The purpose of this research is to study the results of the effect of open and closed kinetic chain exercise toward quadriceps angle (Q angle). Thirty female Kasetsart University students from the Faculty of Education of BangKhen Campus who were 18 -22 years old in 2005 academic year. Samples were selected by using simple random sampling. Then the samples were divided into 3 groups, ten of each using randomly assignment sampling. First group is the control group, which was trained with the open kinetic chain weight training program at 70% of 1 RM. Second group was trained with the closed kinetic chain weight training program at 70% of 1 RM. The training schedule was three times a week; Monday, Wednesday, and Friday, at 12.00 – 16.30 p.m. for 6 weeks. The obtained data are statistically analyzed by using computer program for one way analysis of variance (ANOVA), repeated measure was used in two – dimensional design, repeated measure in one – dimensional design, Tukey multiple comparison which sets the significant difference at the level of .05

Results revealed that the Q angle average value of the control group was not significantly different at the level of .01 before the training and after the 3th and 6th week of training schedule. There was a reduction on the Q angle average value of group 1, which is significantly different at the level of .01 after the 3th and 6th week of training. Moreover, there was also a reduction on the Q angle average value of group 2, which was significantly different at the level of .01 after the 3th and 6th week of training. After the 3th week, group1 has the Q angle average value less than the control group, which was significantly different at the level of .01 while group1 and group2 were not significantly different at the level of .01. After the 6th week of training, the Q angle average value of group1 and group2 were less than the control group, and significantly different at the level of .05, which the Q angle average value of group2 decrease more than group1.

Student's signature

Thesis Advisor's signature