

Abstract

Title:

Comparison of the effectiveness of ice skate training using the change of directional speed exercises and powerskating in the U10 category

Goals:

The main goal of this study is to compare the effectivity of ice hockey skating training using partial skating tasks and training with the usage of change of directions speed. 8 skating tests were used to compare these two methods in the U10 category.

Methods:

The method of quantitative analysis was used to compare the results in each test. A total of 13 players under the age of 10 years with an average training age of 4.73 ± 1.15 participated in the research. A total of three test measurements were conducted. The first one taking place before any stimulation for both groups. The second, which followed six weeks of intervention using skating technique and agility exercises respectively, and the third, which followed a further six weeks of intervention when the groups were rotated. The measured times were tabulated and then statistically processed.

Results:

After the second measurement (POST_1), the group starting with the skating technique improved in 7 out of 8 tests. The group starting with agility skating showed improvement in 6 out of 8 tests.

The most significant improvement for both groups was seen in the 30m backwards test, with the group training using the skating technique improving their time by more than 2 and a half seconds. After the second intervention (POST_2), when the groups flipped, the group starting with the skating technique also improved on 7 of the 8 tests. The group that started with agility exercises showed improvement on 6 out of 8 tests. In this measurement, both groups showed the most significant improvement on the S-Corner test.

In terms of comparing the effectiveness of the two methods using Cohen's d, it was found that stimulation using the skating technique showed a better effect in the 4 m forward with the puck test ($d=0.84$), followed by the 30 m forward with the puck, 4 m backward, 30 m backward and

7x7 tests. Change of direction skating proved more effective in the 4 m forward test without the puck ($d=0.65$), 30 m forward test without the puck ($d=0.54$) and S-Corner test.

Key words:

Ice hockey, motor abilities, youth category, change of directional speed, skating technique, motor skills, tests, training, motor learning