EFFECTIVNESS OF INJURY PREVENTION PRIMARY PREVENTION MOVEMENT PROGRAM AMONG HANDBALL PLAYERS

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OBJECTIVES

The aim of the present study was to investigate the effectiveness of an injury prevention exercise programme among handball players.

METHODS

This prevention exercise was carried out at the U14 age group (13-14 year old) of the Electric Sports Association in the sports hall of the Orchidea Hungarian-English bilingual primary school in Budapest between January and March 2022.

The sample element size was 12 (n =12), where sampling was non-randomized.

Preventive training was provided 2 times a week for 30 min at the end of their training. Surveys were administered before and after the programme.

We used the Flamingo, Y-Balance, Multisegmental Flexion and Extension, Plank, Side Plank, and Back Plank tests. In our study we used

mean-square and paired t-test.

RESULTS

For static balance, a significant improvement was shown through reduction in the number of imbalances ($p<0.05$) (right side: decreased from 13.17 to 11.42, $p=0.000$; left side: decreased from 13.08 to 11.00, $p=0.000$). The sagittal plane flexion and extension mobility of the spine improved significantly as a result of the exercise programme (flexion by 3.33 cm on average) (decreased from 9.33 cm to 6.00 cm, $p=0.000$), (extension increased from 25.42 cm to 28.25 cm, $p=0.000$). For upper limb joint stability, both limbs showed significant improvement in each direction (medial, supero-lateral, infero-lateral) ($p<0.005$).

For lower limb joint stability, there was a significant improvement ($p<0.05$) in all directions (anterior, infero-lateral), except for the right and left lower limbs in the infero-medial direction, but here an improvement on average was observed as well.

CONCLUSIONS

The exercise programme we used is suitable for improving core muscular strength, upper and lower joint stability, dynamic balance and balancing skills, which may reduce the risk of possible injuries.

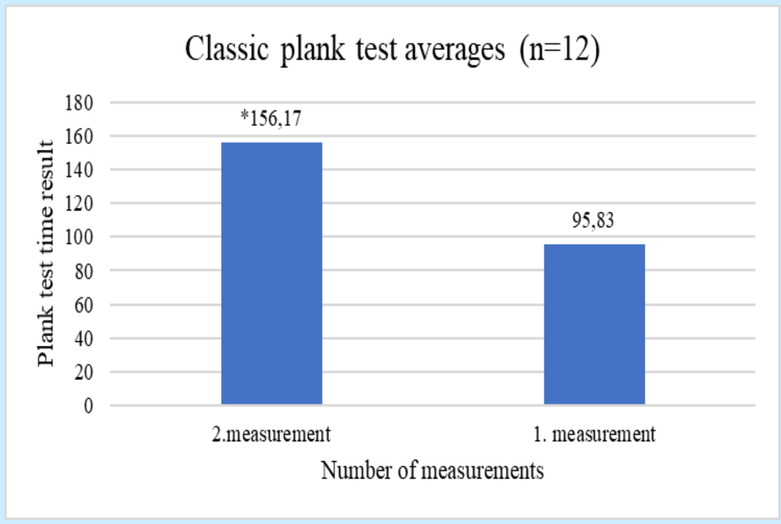

Figure 1. Classic Plank test

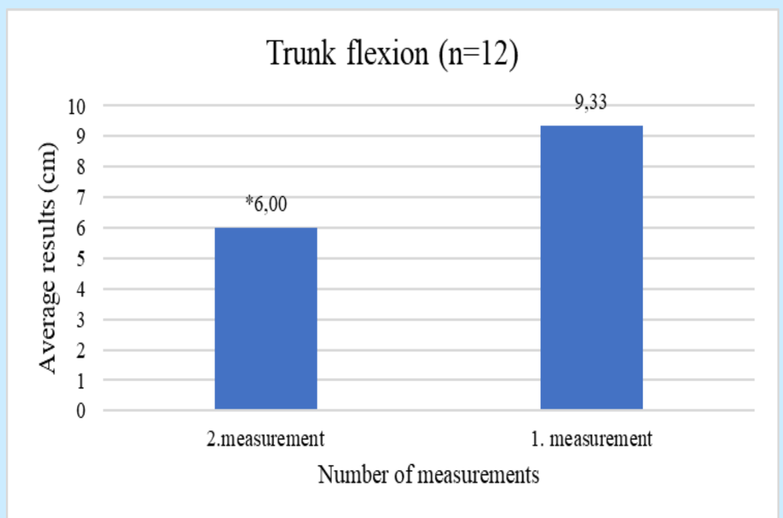

Figure 2.
Trunk flexion test

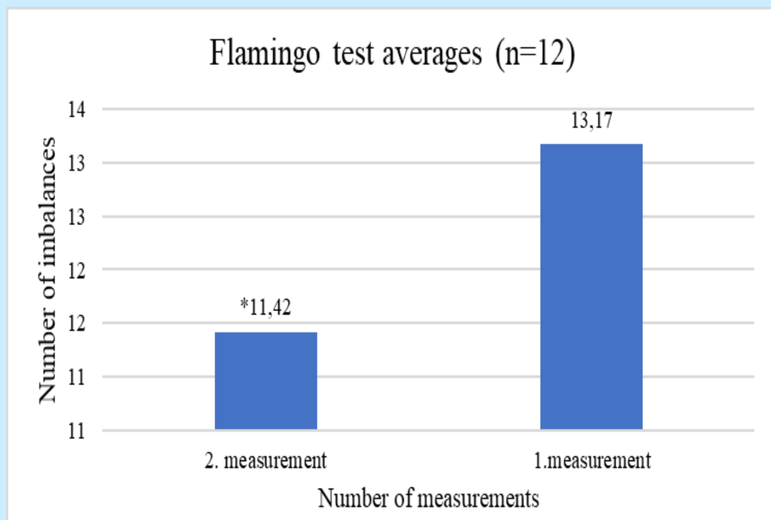

Figure 3.
Flamingo test (right lower limb)

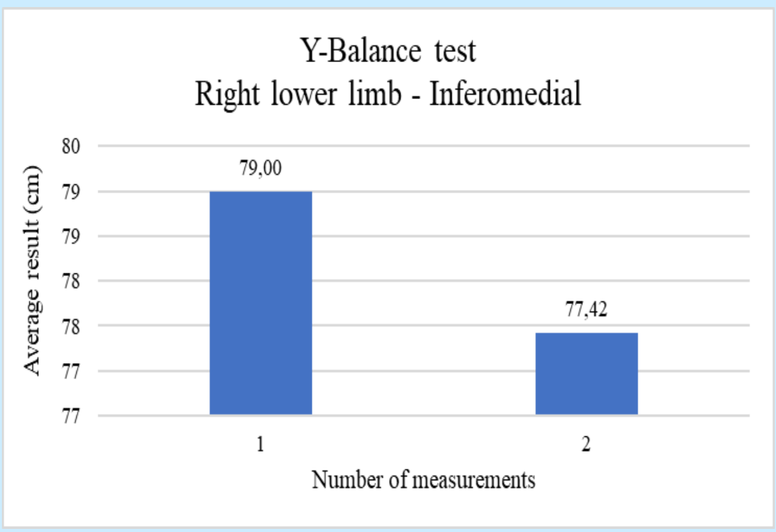

Figure 4.
Y-Balance test (right lower limb)
Inferomedial direction

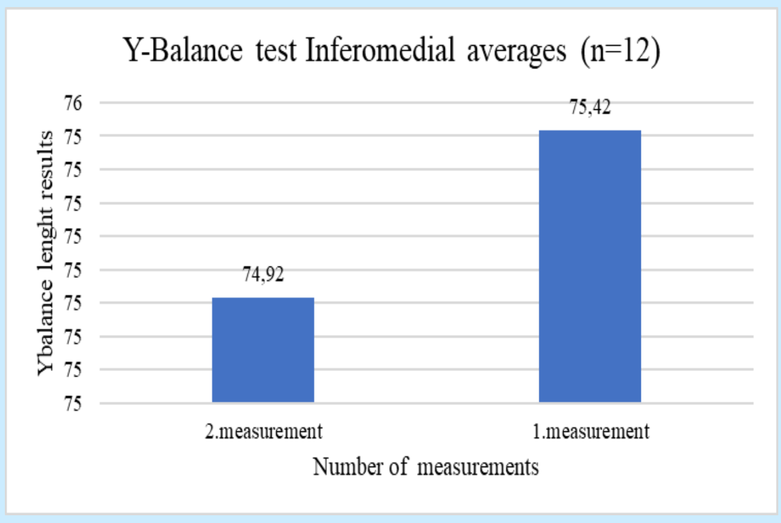

Figure 5.
Y-Balance test interomedial direction

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