

Effects of the newly developed short stick exercise for fall prevention in older adults.

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The most prominent feature of the exercise we have developed is to improve body balance by allowing older adults to experience unusual body movements. The procedure of exercise consist of the throwing a round newspaper stick by one hand and catching it by other hand like a juggler. In addition, rotation and dropping of the stick also done.

During the handling of the stick, clients might lose their balance, and might return to the normal position as well. This movement is believed to be effective for the balance training.

The aim of this study was to clarify the effect of the newly developed short stick exercise to prevent old community-dwelling adults from falling by physiological measures. .

Seventy-two old adults who use day service twice a week were asked to participate to this study. They were divided into three groups; 1) short stick exercise (n =27, average age =79.6±9.4), 2) weight machine exercise (n = 21, average age =75.7±7.4) and 3) control group (n = 24, average age =79.4±7.5). Participants in the control group experienced recreational activities. Physiological measure (Grip strength, CS-30, drop stick test, Functional Reach Test, One Leg Standing, Long Sitting Flexibility Test, Timed UP and GO Test, Normal/Rapidly Gait Time) and Fall Efficacy Scale were assessed. The number of falling and stumbling were also counted.

After one month, the short stick exercise group improved all assessment measures except for Grip Strength, and Normal/Rapidly Gait Time, while machine training group improved CS-30. However the control group did not improved all assessment measures. These results demonstrated that the short stick exercise were effective in improving legerity, static and dynamic balance, as well as flexibility. These scores improved remarkably in only one month.

This suggests that the short stick exercise training is highly effective in preventing falling by maximizing older adults' both physiological ability and self efficacy for falling in a short period.