Effects of multicomponent exercise training on physical functioning among institutionalized elderly

ABSTRACT

This quasiexperimental study aimed to measure the effects of 12-week multicomponent exercise training on physical functioning among institutionalized elderly. Forty-three participants (age = 70.88 ± 7.82 years) were self-assigned to an intervention (n=23) or control (n=20) group. Before and after training, cardiorespiratory endurance, arm curl strength, grip strength, lower limb strength, upper and lower limb flexibility, balance, and mobility were assessed. The training included aerobic, resistance, balance and flexibility exercises, performed 3 times per week. Significant increases ($P<0.05$) were observed in the exercise group on cardiorespiratory endurance (41.79%), right arm curl strength (25%), left arm curl strength (30.79%), right hand grip strength (13.65%), left hand grip strength (9.93%), lower limb strength (46.19%), balance (49.58%), and mobility (26.37%). Measures of flexibility in the exercise group also showed improvement (right lower limb (63.57%), left lower limb (44.17%), right upper limb (36.67%), and left upper limb (63.1%)) but were not statistically significant (all, $P>0.05$) The control group did not show any significant changes ($P>0.05$) in any variables. The data suggested that 12-week multicomponent exercise training may improve physical functioning among institutionalized elderly.

Keyword: Multicomponent exercise training; Physical functioning; Institutionalized elderly