Changes in anthropometric parameters and physical fitness in older adults after participating in a 16-week physical activity program

Valdés-Badilla, P.
Guzmán-Muñoz, E.
Ramírez-Campillo, R.
Godoy-Cumillaf, A.
Concha-Cisternas, Y.
Ortega-Spuler, J.
Herrera-Valenzuela, T.
Durán-Agüero, S.
Vargas-Vitoria, R.
Magnani-Branco, B.H.

Abstract
Introduction: Physical activity is important for achieving healthy aging. Objective: To analyze changes in anthropometric parameters and physical fitness among Chilean older adults after participating in a 16-week physical activity program and to evaluate whether there were differences in relation to their baseline nutritional status or not.

Materials and methods: Pre-experimental quantitative study. The study population consisted of 176 older adults (155 women and 21 men) distributed in three groups: normal weight (n=56), overweight (n=67) and obese (n=53). The following variables were evaluated: body mass index (BMI), waist circumference (WC), waist-to-height ratio (WHR) and physical fitness. Results: Significant decreases between pre-and post-measurements were found for WC (p<0.001), BMI (p=0.015), and WHR (p<0.001). Improvements were observed in the following tests: chair stand (p<0.001), arm curl (p<0.001), 2-min step (p<0.001), chair sit-&-reach (p=0.018) and back scratch (p=0.014). Regarding BMI, significant changes were observed between normal weight vs. overweight participants (p=0.001) and between normal weight vs. obese participants (p=0.001). Conclusion: Older adult participants that regularly attended the physical activity program were able to reduce their WC, BMI and WHR, and also improved their physical-functional performance on the chair stand, arm curl, 2-min step, chair sit-&-reach and back scratch tests. In addition, anthropo-metric parameters and physical fitness also improved regardless of their baseline nutritional status.

Author keywords
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