

# Body mass index, gait speed and manual pressure force in Chilean older women

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## Abstract

The aim of this study is to compare the gait speed (VM), manual pressure force (PM) and the Body Mass Index (IMC) in older women who participate regularly in physical activity programs, according to age, as well as, to verify the association between Age, IMC and PM with MV in 10 meters. 85 older women ( $70.1 \pm 6.9$  years) from the physical activity program of the National Sports Institute of the Ñuble / Chile region voluntarily participated in the study. The participants were categorized according to age range (total group [GT], 60-64, 65-69, 70-74, 75-79 and 80-84 years). Body weight and height were evaluated for the calculation of IMC, upper body strength with the manual grip test (PM) in the dominant hand and the MV in 10 meters. Results: The main results indicate that MV was significantly lower for the 80-84 year-old group compared to the GT ( $p < 0.03$ ), 60-64 ( $p < 0.00$ ) and 65-69 years ( $p < 0.03$ ). The 70-74 year group were significantly slower than the 60-64 year group ( $p < .024$ ). The relationship between MV and PM for the analyzed group was positive, low and not significant ( $r = 0.20$ ,  $p < 0.06$ ). Finally, Age and BMI resulted in a statistically significant model [ $F(2,82) = 13,784$ ;  $p < 0.001$ ;  $R^2 = 0.252$ ,  $SE = 0.204\text{m} / \text{s}$ ] for prediction of MV. Conclusion: In general, we conclude that MV decreased in older age groups and that PM does not present the same trend and that Age and IMC are predictors of MV in older women. © 2021 Federacion Espanola de Docentes de Educacion Fisica. All rights reserved.

## Author keywords

Body mass index; Elderly; Gait speed; Muscular strength

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