Multicomponent Training in Progressive Phases Improves Functional Capacity, Physical Capacity, Quality of Life, and Exercise Motivation in Community-Dwelling Older Adults: A Randomized Clinical Trial

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## Abstract

Objective: To evaluate the effect of a multicomponent progressive training program (MPTP) on functionality, quality of life (QoL) and motivation to exercise (EM) in a group of older adults (OA) of a community. Methods: A total of 55 participants of  $69.42 \pm 6.01$  years of age were randomized into two groups; experimental (EG:35) and control (CG:20), and subjected to 27 weeks of MPTP. Functionality (pre/post-intervention) was assessed using the Short Physical Performance Battery (SPPB), Time Up and Go (TUG), Walking While Talking Test (WWT), Manual Dynamometry (MD), Forced Expiratory Volume in the first second (FEV<sub>1</sub>), Sit and Reach (SR), Back Scratch (BS), and walk for 2 min (2 mST). QoL was assessed using the SF-36 questionnaire and EM using the BREQ-3. The Kolmogorov–Smirnov and Levene tests were applied. A two-way repeated measures ANOVA was applied. A significance level of p < 0.05 was accepted for all comparisons. Results: The EG compared to the CG improved in SPPB (ΔEG/CG: 29.67%/p < 0.001), TUG (ΔEG/CG: 35.70%/p < 0.05), WWT (ΔEG/CG: 42.93%/p < 0.001), MD (ΔEG/CG: 20.40%/p < 0.05), FEV<sub>1</sub> (ΔEG/CG: 21.37%/p < 0.05), BS (ΔEG/CG: 80.34%/p < 0.05), 2 mST (ΔEG/CG: 33.02%/p < 0.05), SF-36 (AEG/CG: 13.85%/p < 0.001), and Intrinsic Regulation  $(\Delta EG/CG: 27.97\%) < 0.001)$ ; Identified by regulation ( $\Delta EG/CG: 9.29\%) < 0.001$ 0.05). Conclusion: An MPTP improves functionality, QoL and EM, and is a safe and effective method for community OAs. © 2023 by the authors. Author keywords

fitness; functional capacity; multicomponent training; older adults