



( )  
 1.  $2x^2 + 3x - 1$   
 2.  $x^2 - 4x + 7$   
 3.  $x^2 + 5x - 6$   
 4.  $x^2 - 2x + 1$   
 5.  $x^2 + 3x + 2$   
 6.  $x^2 - 7x + 12$   
 7.  $x^2 + 8x + 15$   
 8.  $x^2 - 9x + 14$   
 9.  $x^2 + 10x + 25$   
 10.  $x^2 - 11x + 28$   
 11.  $x^2 + 12x + 36$   
 12.  $x^2 - 13x + 42$   
 13.  $x^2 + 14x + 49$   
 14.  $x^2 - 15x + 50$   
 15.  $x^2 + 16x + 64$   
 16.  $x^2 - 17x + 56$   
 17.  $x^2 + 18x + 81$   
 18.  $x^2 - 19x + 63$   
 19.  $x^2 + 20x + 100$   
 20.  $x^2 - 21x + 70$   
 21.  $x^2 + 22x + 121$   
 22.  $x^2 - 23x + 78$   
 23.  $x^2 + 24x + 144$   
 24.  $x^2 - 25x + 85$   
 25.  $x^2 + 26x + 169$   
 26.  $x^2 - 27x + 92$   
 27.  $x^2 + 28x + 196$   
 28.  $x^2 - 29x + 99$   
 29.  $x^2 + 30x + 225$   
 30.  $x^2 - 31x + 106$   
 31.  $x^2 + 32x + 256$   
 32.  $x^2 - 33x + 113$   
 33.  $x^2 + 34x + 324$   
 34.  $x^2 - 35x + 120$   
 35.  $x^2 + 36x + 400$   
 36.  $x^2 - 37x + 127$   
 37.  $x^2 + 38x + 500$   
 38.  $x^2 - 39x + 134$   
 39.  $x^2 + 40x + 600$   
 40.  $x^2 - 41x + 141$   
 41.  $x^2 + 42x + 700$   
 42.  $x^2 - 43x + 148$   
 43.  $x^2 + 44x + 800$   
 44.  $x^2 - 45x + 155$   
 45.  $x^2 + 46x + 900$   
 46.  $x^2 - 47x + 162$   
 47.  $x^2 + 48x + 1000$   
 48.  $x^2 - 49x + 169$   
 49.  $x^2 + 50x + 1100$   
 50.  $x^2 - 51x + 176$   
 51.  $x^2 + 52x + 1200$   
 52.  $x^2 - 53x + 183$   
 53.  $x^2 + 54x + 1300$   
 54.  $x^2 - 55x + 190$   
 55.  $x^2 + 56x + 1400$   
 56.  $x^2 - 57x + 197$   
 57.  $x^2 + 58x + 1500$   
 58.  $x^2 - 59x + 204$   
 59.  $x^2 + 60x + 1600$   
 60.  $x^2 - 61x + 211$   
 61.  $x^2 + 62x + 1700$   
 62.  $x^2 - 63x + 218$   
 63.  $x^2 + 64x + 1800$   
 64.  $x^2 - 65x + 225$   
 65.  $x^2 + 66x + 1900$   
 66.  $x^2 - 67x + 232$   
 67.  $x^2 + 68x + 2000$   
 68.  $x^2 - 69x + 239$   
 69.  $x^2 + 70x + 2100$   
 70.  $x^2 - 71x + 246$   
 71.  $x^2 + 72x + 2200$   
 72.  $x^2 - 73x + 253$   
 73.  $x^2 + 74x + 2300$   
 74.  $x^2 - 75x + 260$   
 75.  $x^2 + 76x + 2400$   
 76.  $x^2 - 77x + 267$   
 77.  $x^2 + 78x + 2500$   
 78.  $x^2 - 79x + 274$   
 79.  $x^2 + 80x + 2600$   
 80.  $x^2 - 81x + 281$   
 81.  $x^2 + 82x + 2700$   
 82.  $x^2 - 83x + 288$   
 83.  $x^2 + 84x + 2800$   
 84.  $x^2 - 85x + 295$   
 85.  $x^2 + 86x + 2900$   
 86.  $x^2 - 87x + 302$   
 87.  $x^2 + 88x + 3000$   
 88.  $x^2 - 89x + 309$   
 89.  $x^2 + 90x + 3100$   
 90.  $x^2 - 91x + 316$   
 91.  $x^2 + 92x + 3200$   
 92.  $x^2 - 93x + 323$   
 93.  $x^2 + 94x + 3300$   
 94.  $x^2 - 95x + 330$   
 95.  $x^2 + 96x + 3400$   
 96.  $x^2 - 97x + 337$   
 97.  $x^2 + 98x + 3500$   
 98.  $x^2 - 99x + 344$   
 99.  $x^2 + 100x + 3600$   
 100.  $x^2 - 101x + 351$

Background

follow-up period, and with a parallel three-arm design, was conducted between March 2018 and January 2019. Three groups of community-dwelling older adults from Évora (Portugal) were compared: experimental group 1 (EG1) was enrolled in a psychomotor intervention program, experimental group 2 (EG2) was enrolled in a combined exercise program (psychomotor intervention program + WBV), and the control group (CG) maintained their daily level of physical activity. This study followed the CONSORT guidelines for RCTs (<http://www.consort-statement.org>). The protocol was registered in [ClinicalTrials.gov](https://clinicaltrials.gov) (NCT03446352), and no significant changes were made.

The participants were community-dwelling older adults and were recruited via pamphlets distributed in strategic locations and verbal communication (recreational and senior centers). The minimum sample size needed was estimated to be 15 participants/group, for a total of 45 participants, by the online G\*Power software, with  $\alpha = 0.05$  and power = 0.95. The sample size was increased to a minimum of 60 participants (20 in each group) to account for the expected dropout rate of 20%.

The inclusion criteria were: 1) male or female community-dwelling older adults who were aged  $\geq 65$  years; 2) had a moderate or high level of physical independence ( $\geq 18$  points), as assessed by the 12-item Composite Physical Function (CPF) scale [19]; and 3) reported at least one fall in the previous 6 months or who were at high risk of falling (a score of  $\leq 25$  points on the Fullerton Advanced Balance Scale) [20]. The exclu-

conditions) and the number of errors in the CRT tasks

determine the type and circumstances of each fall (e.g. indoor/outdoor; accidental fall during a usual or an unusual task; consequent injuries).

*Secondary outcome measures*

The Borg Rating of Perceived Exertion (RPE) scale [26] was used to monitor exercise intensity, with scores ranging from 6 points (very, very light) to 20 points (very, very hard). The Caregiver Treatment Satisfaction (CTS) questionnaire [27] through a “face scale” was used to assess the participants’ satisfaction level, with scores ranging from 1 point (extremely dissatisfied) to 5 points



(EG1 $\Delta$ %, 11%,  $p = 0.024$ ; EG2 $\Delta$ %, 16.5%,  $p = 0.014$ ) and the number of cognitive errors (EG2 $\Delta$ %, 166.7%,  $p = 0.040$ ). Concerning the CG, differences were observed

combining both methods has additional benefits. In addition, contrary to other researchers' findings [31, 32], the follow-up results in the present study showed that the benefits observed in RT, mobility, and DT performance by both intervention programs in community-dwelling older adults were reversed after the programs were discontinued.

The fact that the multimodal exercise programs in this study were supervised, instead of, for example, home-based, may have led to the programs being more effective [33]. Moreover, the adherence rate in the EGs in the present study (83.3%) was slightly higher than that in other studies on 24-week intervention programs (70%) [34] carried out in community-dwelling older adults. Concerning the Borg RPE scale results, the two EGs in the present study showed results similar to those in other studies on moderate-intensity intervention pro-



the neurocognitive losses associated with aging reported

were found that evaluated the effect of a psychomotor intervention program in the fall rate. The 16-week study implemented by Freiburger et al. [18], which included a psychomotor intervention focusing mainly on body awareness and coordination, showed improved physical function performance at the post-intervention, but no reduction in the number of falls at the 12-month follow-up. Although a previous meta-analysis [

2.  $\int \frac{1}{x^2} dx = \int x^{-2} dx = \frac{x^{-2+1}}{-2+1} + C = -\frac{1}{x} + C$