

**RESULTS:** The sample comprised 18 women with medium age of 77 years [range 62-90], and a baseline medium score of 20,64 points on *Mini Mental State Examination*. Results from Paired-Samples Signed Test revealed a statistically significant positive effect on SPPB ( $p=0,001$ ) from pre ( $9,04 \pm 2,42$ ) to post intervention ( $10,28 \pm 1,97$ ); and on TUG ( $p<0,000$ ), emphasized by 22 individuals that performed the task quicker at post-test ( $9,35 \pm 3,27$ ). Results from OLB showed a slight improvement from baseline ( $4,40 \pm 6,83$ ) to post-intervention ( $6,00 \pm 7,51$ ), although not statistically significant ( $p=0,307$ ).

**CONCLUSIONS:** Data suggest that a 6-month MT intervention may be an important strategy to improve physical function on dementia patients and, therefore, it might have an impact on reducing the risk of falls. In addition, this intervention may positively influence dementia subjects on daily tasks by promoting their mobility, critical to decrease the progression of dependence on caregivers'.

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### Physical Function Of Aged Population Is Predicted By Motor Competence And Physical Fitness

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Fitness and cognitive status on aging has been widely studied and well reported on literature. Independence and functioning are decisive in elders life quality. Motor competence has been associated to children physical activity levels and healthy weight status. Whether or not Motor Competence has additional value in promoting physical function on aging is not well established. **PURPOSE:** to investigate the relationship and influence of motor competence, physical fitness and cognitive status on physical functioning, in aged population.

**METHODS:** institutionalized participants were recruited as a convenience sample in three day-care centers (N=283, women N=184, mean age =  $82.05 \pm 7.70$  years). Physical functioning was assessed through self-report using a composite physical function scale. Physical fitness was evaluated with the Senior Fitness Test. Motor competence was evaluated as the proficiency in overarm throw a tennis ball, measuring the ball velocity, and standing long jump. Cognitive performance was assessed with Mini-Mental State Examination test. T test was used to test the difference between women and men in all variables. Pearson correlation between physical functioning, physical fitness and motor competence was performed. Stepwise regression was used to identify the predictor variables of physical functioning. Significance was set at  $p < 0.05$ .

**RESULTS:** Men had significant better motor competence and physical fitness results than women. In women, the highest correlation were found between physical functioning and Chair stand ( $r=0.25$ ), standing long jump ( $r=0.19$ ) and 2-min step ( $r=0.19$ ). In men, the highest correlation were found on 2-min step ( $r=0.30$ ) and overarm throw ( $r=0.27$ ). Stepwise regression retained the following variables: 2.44 m up-&-Go, standing long jump, and sex ( $F_{(3, 212)} = 33.73$ ;  $p < 0.001$ ,  $R^2 = 0.32$ ). Men has an estimate of more 2.162 points in physical functioning than women. Physical functioning is estimate to increased 1 point for every -0.151 s in 2.44 m Up-&-Go, and 1 point for every 0.051 cm in standing long jump.

**CONCLUSION:** Despite having found significant moderate to low correlations in both men and women, it seems that both Motor Competence and Fitness status has important influence on physical functioning.

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### The Effect Of Traditional Chinese Exercise On Diabetic : A Non-randomized Controlled Trial

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**OBJECTIVE:** Clinical practice recommendations issued by the American Diabetes Association in 2019 include the health status and quality of life of people with diabetes as part of their daily care, and believe that it's important to strengthen physical exercise for diabetic patients. Previous studies have shown that the Baduanjin, a traditional Chinese sport, can regulate blood glucose and blood lipids, weight loss and improve immunity. This study was aimed at investigating the effects and safety of Modified Baduanjin on patients with type 2 diabetes.

**METHODS:** Forty patients were divided into the Modified Baduanjin group (A group, n=22) and the control group (B group, n=18) for 12 weeks according to their individual motivation. On the basis of conventional hypoglycemic treatment, Group A practiced Baduanjin for 30 minutes per day, 4 times per week, while no exercise intervention was given in group B. The main study outcomes included changes in fasting blood glucose, blood lipids, glycosylated hemoglobin, Quality of Life score (QoL score, 100 in total), muscle endurance, and flexibility after 12 weeks.

**RESULTS:** There were no significant differences in patient characteristics between the two groups at baseline. Group A in glycosylated hemoglobin (pre  $6.56 \pm 0.70$  vs post  $6.28 \pm 0.70$ ), QoL score (pre  $80.18 \pm 9.02$  vs post  $86.64 \pm 9.91$ ), muscle endurance (pre  $3.76 \pm 4.38$  vs post  $6.91 \pm 5.73$ ) and flexibility (pre  $2.86 \pm 9.69$  vs post  $5.88 \pm 9.75$ ). All the above results were statistically significant ( $P < 0.05$ ). There were no statistical significance in group B ( $P > 0.05$ ). 2) Few changes were found in fasting blood glucose and lipid parameters both in two groups ( $P > 0.05$ ). 3) All patients completed the exercise programme with no adverse effects.

**CONCLUSION:** Chinese traditional exercise is effective and safe in regulating and control the level of blood glucose, enhancing physical fitness and improving the quality of life.

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### Peer-led Fall Prevention Program For People Aged 50+: Are We Attracting The Right People?

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Falls are established as the leading cause of hospitalization amongst older adults leading to institutionalization and premature mortality. Peer-led exercise has been recognized as a powerful intervention for reducing the risk of falls. However, it is unclear if current community programs are attracting individuals at risk of falling.

**PURPOSE:** To examine the characteristics of participants enrolled in a community-based peer-led fall prevention exercise program.

**METHODS:** Between 2012-2018, 912 older adults participated in this program. The 12-week peer-led fall prevention exercise program was offered to older adults 50+ twice per week for a total duration of 120 minutes. The program consisted of endurance, strength and balance exercises. At baseline, sex, age, falls, injuries due to falls, balance, hospital visits and medications were self-reported. Five time sit-to-stand (S-S) tests and 8ft up and go (8UG) tests were also measured to assess lower extremity strength and dynamic balance in relation to risk of mobility loss and falls.

**RESULTS:** A total of 87.5% were women with an average age of 68 years old. Sixteen percent of participants reported falling in the past year, 58% of which resulted in injury. One-third of the participants reported having issues with balance, 9% had been to hospital in the past year and were prescribed an average of three medications. On average, females completed the 8UG test in 9.18 seconds and the S-S test in 13.10 seconds while males completed the tests in 10.25 seconds and 14.35 seconds, respectively. According to norms, all test means classified participants as at risk for mobility loss and falls. Females performed significantly better than males in the 8UG test ( $p = 0.001$ ) and S-S test ( $p = 0.040$ ).

**CONCLUSION:** The peer-led fall prevention program is attracting mainly women participants with various physical capacities and risks of falls.

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