

### THE IMPACT OF AN EDUCATION INTERVENTION: IMPROVING COMMUNICATION BETWEEN OLDER ADULTS AND HEALTH CARE PROVIDERS

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As people age, ensuing physical and psychological problems can increase, which makes it paramount to be comfortable discussing medical needs with health care professionals, particularly in light of the danger associated with misunderstanding medication use and combining alcohol with prescriptions and/or over the counter medications (National Institute on Aging, 2018). National studies found that about 40 percent of adults ages 65 and older drink alcohol and often do not understand the dangers of combining alcohol with medications (National Institute for Alcohol and Alcohol Abuse, 2008). An educational intervention was developed with a team of expert physicians, nurses, pharmacists and social workers who work in gerontology to focus on improving communication and addressing alcohol and medication use for older adults. A randomized controlled trial was conducted to assess whether the educational intervention improved older adults' comfort in communicating with their health care providers, as well as their knowledge of the concomitant use of alcohol and prescription and over-the-counter (OTC) medications. Results of a MANCOVA showed that those in the intervention group showed larger increases in scores on communication with their health providers and knowledge about the implications of combining alcohol with prescription drugs than those in the control group (Wilks' Lamda=.808,  $F(3,76)=6.039$ ,  $p=.001<.05$ ). In addition, linear regression models showed that the intervention was significantly associated with participants' knowledge of the implications of combining alcohol with prescription drugs. The coefficient across models was approximately 1.00, which represented a substantial increase given the average score of 6.5.

### EFFECTIVENESS OF MULTICOMPONENT EXERCISE INTERVENTIONS IN DEMENTIA PATIENTS: A SYSTEMATIC REVIEW

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Multicomponent training (MT) combines aerobic, strength, postural, and balance exercises, and has been presented as a promising intervention strategy for dementia due to its potential influence in treating symptoms and/or delaying the disease progression in addition to its intrinsic health benefits. This study aims to systematize evidence on how effective MT is in what concerns physical fitness, cognition, and functionality in dementia patients. Four databases (PubMed, WoS, Scopus & SportDiscus) were systematically searched to locate potential trials through March 2019.

A total of 2,312 records were identified and a final set of 17 manuscripts reviewed; of these, only 6 satisfied all inclusion/exclusion criteria: peer-reviewed studies performed with humans aged 60+ years; interventions exclusively MT conducted with clinically diagnosed dementia patients; controlled trials (randomized or not). Cochrane Collaboration's tool was used to estimate risk of bias. Samples sizes ranged from 27 to 170 participants; MT programs lasted between 4 weeks up to 12 months, took place from a daily basis to twice a week, and sessions ranged from 30 to 60min. Routine medical care was the most frequent intervention offered to control groups. In overall, studies revealed that MT benefits agility/balance, gait speed and strength. Evidence remains unclear regarding MT effectiveness on increasing cognitive function and ADL performance, although maintenance and more pronounced decline on control groups were reported. MT may be an important non-pharmacological strategy to enhance physical conditioning on dementia patients, but further evidence is needed for acknowledging its benefits in specific cognitive abilities and ADL performance.

### EXECUTING AN ENVIRONMENTAL SCAN OF UNIVERSITY AGE-FRIENDLINESS: FINDINGS FROM A MIXED METHODS STUDY

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Internationally, universities are recognizing the importance of understanding and enhancing age as a component diversity and inclusion efforts through the Age-Friendly University (AFU) initiative. This session will describe an environmental scan of "age-friendliness" that one AFU university designed. The overall aims of the project include: (1) exploring how stakeholders understand age-friendliness, (2) identifying current efforts and opportunities that exist within the university, and (3) gathering data that describes the perception of barriers that older learners encounter at the university. This presentation will be used to discuss a mixed-methods study that included interviews and a survey of performance and importance ratings of the international AFU principles. Twenty-eight participants were purposefully recruited from divisions across a campus of a regional university to participate in in-depth interview data collection with the research team. Qualitative thematic findings that emerged through a constant comparative method of analysis of interview transcripts include: Existence of Age-Inclusivity Barriers and Opportunities for Change, Need for Intentionality in Age-Friendly Efforts, and Importance of Connections. Furthermore, AFU principle performance and importance ratings were descriptively analyzed in order to prioritize university efforts to enhance inclusion initiatives related to age.

### PHYSICAL ACTIVITY ATTENUATES AGE DIFFERENCES IN CHANGE IN PERCEIVED PHYSICAL FATIGABILITY

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Lower physical activity is cross-sectionally associated with greater fatigability; whether such a relationship holds for longitudinal changes in fatigability is under-studied. We examined this question in offspring ( $\geq 60$  years, range 60-93y, 99.7% white; 53.2% female) enrolled in the Long Life Family Study, a two-generation cohort enriched for exceptional longevity and their spousal controls. At Visit 2 (2014-2017), we measured self-reported physical activity (PA) with the Framingham Physical Activity Index (dichotomized by median value: less active  $< 37$  MET-hrs/wk and more active  $\geq 37$  MET-hrs/wk). Perceived physical fatigability was assessed using the Pittsburgh Fatigability Scale (PFS, 0-50) at Visit 2 and repeated during a follow-up contact  $2.7 \pm 0.92$  years later. We constructed a repeated-measures linear mixed-effect model to examine the effect of PA on longitudinal change in PFS by median age (younger  $< 70$ y; older  $\geq 70$ y) adjusted for family structure, field center, follow-up time, sex, and self-rated health. We found a strong dose-response relationship of PFS scores across the four age/PA groups (ptrend  $< 0.001$ ). Specifically, older/less active (N=310) participants had the highest annual PFS increases of 0.37 points/yr ( $p < 0.001$ ) while those older/more active (N=340) had annual increases of 0.17 points/yr ( $p = 0.03$ ). Younger/less active (N=371) participants had annual PFS increases of 0.09 points/yr ( $p = 0.008$ ); those younger/more active (N=341) had annual decreases (improvement) of 0.18 points/yr ( $p < 0.001$ ). Although annual PFS changes were modest, our findings indicate physical activity attenuated age differences in these trajectories. Physical activity is emerging as a potential target for intervention aimed at reducing fatigability - an important risk factor in the disability pathway.

#### IMPROVEMENT IN FINE MOTOR CONTROL IN DEMENTIA ELDERLY FROM A COMPUTERIZED TOUCHSCREEN TRAINING PROGRAM

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Dementia, a prevalent ageing disease, affects both the higher brain function and motor function, particularly finger movements (Chan, Haber, Drew, & Park, 2014). Task-based finger-tapping speed on a touchscreen device has been used as an assessment criterion to identify patients with deteriorating cognitive abilities (Gualtieri & Johnson, 2005; Cipriani, Bianchetti, & Trabucchi, 2006). As part of a larger project, we designed a computerized cognition intervention program and examined whether the intervention program would improve the finger-tapping speed of the dementia vis-à-vis the cognitively-healthy elderly. Ten mild-to-moderate dementia elderly (aged  $83 \pm 5.6$ ) and 8 cognitively healthy elderly (aged  $78 \pm 6.1$ ) participated in a computerized

intervention program where they played cognitive games on touch-screen tablet for about 30-45 minutes per session over two weeks. Participants' touch interaction data over six sessions were collected and analyzed. Using a linear mixed-effect model for analysis, we found that in the 1st session, the touch performance of the dementia elderly was significantly worse than that of the cognitively-healthy elderly ( $b = -0.172$ ,  $Z = -2.311$ ,  $p < .05$ ). By the 6th session, the dementia elderly had significantly improved their touch performance ( $b = -0.171$ ,  $Z = -8.042$ ,  $p < .001$ ) such that their touch performance was now comparable to the cognitively-healthy elderly ( $b = -0.064$ ,  $Z = -0.874$ ,  $p = .393$ ). Overall, our preliminary results suggested that after participating in 6 sessions of our computerized cognitive intervention program, the dementia elderly showed significant improvement in their fine motor movement as measured by their finger-tapping speed. The improved finger-tapping speed serves as a first step toward slowing down the cognitive decline of the dementia elderly.

#### PREPARATION FOR THE END OF LIFE AND PERCEIVED QUALITY OF CARE PRIOR TO HOSPICE REFERRAL: A SURVEY OF CAREGIVERS

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Lack of preparation for the end of life (EOL) can lead to poor outcomes for caregivers. The purpose of this study was to learn if perceived quality of EOL care and communication provided by the primary clinician prior to hospice referral is associated with caregivers' perceived preparedness to deal with medical emergencies/complications at the EOL. We conducted a survey of caregivers of patients who died and were referred to hospice in the prior year. Perceived quality, was measured by the Quality of End of Life Care (QEOLC) scale, and "preparedness" was a binary measure asking if caregivers felt unprepared to deal with medical emergencies and/or complications related to the care of the patient at the EOL. We performed a bivariate analysis using a two-sample t-test to determine if QEOLC scores were greater among those indicating they were prepared compared to those indicating they were not prepared. We received a response rate of over 22.8% (49/215). Mean EOL scale scores were 82.0 (SD=3.8) for those reporting that they did not feel unprepared for medical emergencies/complications that arose near the EOL, and 68.2 (SD=7.3) for those who reported that they did feel unprepared. Results show that the mean difference approached significance ( $t = 1.85$ ;  $p = 0.07$ ). Although results only approached significance, EOL care from clinicians involved prior to hospice enrollment may be perceived as higher quality among those who felt prepared to handle emergencies/complications. This finding suggests that caregivers highly value early EOL education and communication aiding in preparation for emergencies/complications arising after hospice referral.