

brain abnormalities in both bivariate and multivariable analysis. Conclusion: Subclinical cardiac dysfunction, identified by GLS, was associated with worse cognitive function and presence of cerebral abnormality on brain imaging. The underlying mechanism could be attributed to dysfunctional autoregulatory and microvascular processes occurring in the brain vasculature. Further longitudinal studies are needed to better delineate the relationship between GLS and cognitive function.

#### THE ASSOCIATION BETWEEN LEISURE GAMES AND COGNITIVE FUNCTIONING AMONG OLDER ADULTS

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Stimulating leisure games have been shown to offer cognitive stimulation among older adults. This cross-sectional study examined the association between word games (crossword puzzles and scrabble) / cards and games (games such as chess) and cognitive functioning among adults aged 65 years and older (n=3271). All data were collected from the Health and Retirement Study (2016). Results from the hierarchical regression models suggest that higher levels of participation in word games (p<.01) and cards and games (p<.01) predicted higher levels of cognitive functioning. In the final model, after controlling for age, gender, ethnicity, marital status, education, and income, a total variance of 31 percent was explained. All covariates were statistically significant except marital status. Word games ( $\beta=.117$ , p<.01) and cards and games ( $\beta=.054$ , p<.01) had a significantly positive association with cognitive functioning. These findings suggest that participation in word games and cards and games are associated with cognitive functioning among older adults.

#### THE EFFECTS OF MILD COGNITIVE IMPAIRMENT ON FALL SEVERITY IN OLDER ADULTS

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Falls affect more than 30% of older adults and are one of the leading causes of injury, hospitalization, and mortality in this population. Mild cognitive impairment (MCI) is one of the risk factors for falls in older adults. The purpose of this study is to determine if older adults with MCI have increased fall severity than older adults without MCI. Participants (n: 81: age: 79 ± 6) completed a Montreal Cognitive Assessment (MoCA) and a Hopkins Falls Grading Scale, a tool used to grade the severity of falls on a scale of 1-4 (1 = loss of balance without fall; 4 = fall requiring hospital admission). Participants were categorized as having MCI (score <26: N: 44: age: 81 ± 6.4) or non-MCI (score ≥26: n: 37: age: 77 ± 6). Groups were analyzed using a one-way ANOVA in SPSS to compare the severity of falls within the previous 12 months. There were no differences between groups for fall grade 1 (p =.22) or fall grade 2 (p =.45). There was a significant difference between groups for fall grade 3 (p =.04) and fall grade 4 (p =.05) with the MCI group having more of these falls

compared to the non-MCI group. Older adults with MCI had a higher number of falls requiring medical attention than older adults without MCI. Although falls are a risk in all older adults, those with MCI may be at higher risk of more injurious falls than older adults without MCI.

#### VITAMIN D, INSULIN-LIKE GROWTH FACTOR, AND COGNITIVE PERFORMANCE: AGE AND SEX VARIATIONS

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Vitamin D has been consistently linked to better cognitive function in observational studies. This impact may be due in part through its influence on neurotrophins. Whether the relationships between vitamin D, neurotrophins, and cognition vary based on biological factors such as age and sex is unclear. Using data from a sample of 400 community-dwelling older (mean age=75.3±9.4; 47% female) participants in a cross-sectional study of cognitive aging, we assessed relationships between plasma 25-hydroxy-Vitamin D and performance on a neuropsychological battery modeled after the UDsv3.0. Moderation by age and sex and the impact of vitamin D on the relationship between Insulin-like Growth Factor-1 and cognitive performance were assessed by linear regression stratified by sex and age (median split at 76y). We found vitamin D to be positively linked to global cognition (MoCA:  $\beta=0.095\pm0.025SE$ , p<.001), working memory (Number Span Forward:  $\beta=0.017\pm0.007SE$ , p=0.011; Number Span Backward:  $\beta=0.016\pm0.007SE$ , p=0.028), episodic memory (Immediate Recall :  $\beta=0.089\pm0.027SE$ , p=0.001; Delayed Recall:  $\beta=0.047\pm0.015SE$ , p=0.002), attention and processing speed (Trail Making A:  $\beta=-0.365\pm0.163SE$ , p=0.026), executive function (Trail Making B:  $\beta=-0.537\pm0.215SE$ , p=0.014; Number-Symbol Coding:  $\beta=0.139\pm0.057SE$ , p=0.016), and an overall measure of cognitive function (z score:  $\beta=0.049\pm0.018SE$ , p=0.007). Most of these relationships were observed in women and younger older individuals (<76y). In addition, vitamin D increased the effect of IGF-1 on global cognition and memory by 13% and 8%, respectively. Our findings suggest that vitamin D-focused dementia prevention efforts would benefit if targeted to women and younger segments of the senior population and/or as an adjuvant to cognitive enhancement interventions.

### Cognition I

#### Session 9135 (Poster)

#### AGE-RELATED DECLINE IN PRAGMATIC REASONING OF OLDER ADULTS

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