late life cognitive function. However, it is unclear whether non-traditional physical activities provide additional benefits for cognitive function above and beyond traditional leisure physical activities. This study examines the associations between movement therapy and cognitive function in the US population. We used data from the waves 1, 2 and 3 (1995-2014) of the Midlife in the United States (MIDUS) study. MIDUS included a national probability sample of community-living adults aged 25-75 years old in 1995 (wave 1) and added the wave 2 cognitive functioning tests of executive function and episodic memory. We applied multivariate linear regression models to estimate the effect of movement therapy (wave 2) on the cognitive episodic memory and executive function (wave 3) while controlling the covariates (wave 2 sociodemographic factors, health, and cognitive function). A total of 2097 individuals aged 42-92 years (mean 64.4, sd 10.9, 55.6% women) were included in the analysis. Movement therapy was independently associated with better episodic memory (beta=0.117, p=0.02), but not with executive function (beta=0.039, p=0.14), after including control variables. The results suggest that movement therapy may be an effective non-pharmacological intervention to attenuate age-related cognitive decline in middle-aged and older adults. Future research should test whether these findings can be replicated in similar populations and if confirmed, interventions should incorporate a wider range of physical activities in community-living older adults with the goal of maintaining and improving physical and cognitive health.

NEURAL INHIBITION TASK ELICITS AGE-ASSOCIATED CHANGES IN PREFRONTAL CEREBRAL OXYGENATION

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Certain cognitive tasks, such as those involving inhibition, can influence an older adult's dual-tasking ability more than others. This study aimed to manipulate cognitive task difficulty to evaluate age-associated differences in brain activity and behaviour during walking. Nineteen younger (M=21.3, SD=3.9) and 20 older (M=71.8, SD=6.4) adults completed four cognitive-auditory tasks: simple reaction time (SRT; processing speed), Go-no-Go (GNG; neural inhibition), N-back (NBK; working memory) and Double number sequence (DNS; working memory) with or without self-paced walking. Trials took place under single cognitive (SC), single motor (SM) and dual-task (walking with a cognitive task; DT) conditions. Throughout each condition, cerebral oxygenation changes (ΔHbO2) in the prefrontal cortex were acquired using functional near-infrared spectroscopy (fNIRS). Behavioural measures including response time (ms), accuracy (%) and gait speed (m/s) were also calculated. Repeated measures ANOVAs revealed that OAs exhibited greater ΔHbO2 than YAs in the left hemisphere during the GNG inhibition task (p = 0.04). Activation in the right hemisphere also increased compared to the left during DNS DT (p = 0.05). Response times increased with increasing task difficulty and YAs were faster than OAs during NBK SC (p = 0.09). Neural findings revealed age-associated changes in prefrontal activation at the GNG inhibition difficulty level. Behavioural results indicated poorer performance with increasing task difficulty including slower response times in OAs. Moreover, gait speed and accuracy only decreased within task and difficulty. Therefore, understanding the neural and behavioural changes across task difficulty may help monitor cognitive decline and distinguish normal aging from disease states.

NOW YOU SEE THEM, NOW YOU DON'T: AGE DIFFERENCES IN RISK AVERSION

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Older age has often, but not always, been associated with greater risk aversion. Some have suggested that age differences in risk may reflect age-related declines in cognitive abilities. This study investigated the robustness of age differences in risk aversion across three different risk-taking measures, after controlling for cognitive abilities. Community-dwelling younger (n = 75; 25-36 years, M age = 29.01) and older (n = 74; 60-90 years, M age = 69.11) adults completed self-report and behavioral measures of risk aversion and several measures of cognitive abilities. Results showed that older adults reported significantly greater risk aversion than young adults on the behavioral measure of risk (Balloon Analogue Risk Task, BART), but not on the self-report measures (Framing Task and Choice Dilemmas Questionnaire). Greater risk aversion on BART was significantly associated with lower analytic thinking, slower processing speed, and worse shifting of attention. Therefore, we tested the relation between age and risk aversion on the BART while controlling for these three cognitive abilities. Age differences in risk aversion remained significant even after accounting for cognitive abilities. Our results suggest that the lack of consistent age differences in risk aversion in the literature may at least partly be due to measurement differences, which raises concerns about the construct validity of these measures of risk aversion. Moreover, cognitive decline may not explain age differences in risk. Further research is needed to understand factors that dampen and heighten risk aversion in people of diverse ages.

PREDICTING AGE FROM LARGE-SCALE BRAIN NETWORKS: EVIDENCE FROM THE CAM-CAN DATASET ACROSS THE LIFESPAN

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Changes in cognition observed in aging (e.g. a shift from prioritization of fluid cognition in young adulthood toward an emphasis on crystalized knowledge and semantic cognition in older adulthood) are believed to reflect alterations in neural connectivity in aging. Recent work specifically highlights how increased connectivity between executive control (EC) regions and default mode network (DMN) may underlie characteristic shifts in cognitive abilities between younger and older adults. However, the contribution of the salience network, which plays a crucial role in