performance in older adults. The purpose of this study was to assess the longitudinal effect of hypertension on cognition in older adults (Mage=75.6 years, SD=8.3). Participants came from the National Alzheimer’s Coordinating Center database. The cognitive assessment included the MoCA, Digit Span, Trail-Making Test A and B, WAIS-R Digit Symbol, Category Fluency, and Letter Fluency. Linear mixed effects modeling examined the random and fixed effects of clinician-assessed hypertension, months since first study visit, sex, age, and the interaction between hypertension and time since first visit on cognitive performance across five annual study visits. Results showed that hypertension had a significant main effect on Category Fluency, Trails B, Letter Fluency, and Digit Span-Forward and Backward. However, effect sizes were quite small (tp2 range: 3.93x10-4 – 1.73x10-3). Main effects of age and months since first visit were significant predictors of all cognitive measures, such that older age was associated with worse cognitive performance and more months since the first visit was associated with better cognitive performance. This positive association is perhaps suggestive of practice effects across study visits. A significant interaction between hypertension and months since first visit for Category Fluency and Trails B showed that hypertensives and non-hypertensives performed differently at the initial visit but similarly by the last visit. However, effect sizes were small (tp2 range: 3.86–9.64x10-4). These results suggest hypertension effects on cognition in older adults are minimal.

LIFE COURSE CONDITIONS AND COGNITION IN A NATIONALLY REPRESENTATIVE SURVEY OF OLDER ADULTS
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By the time people reach older adulthood, their cognitive function may be conserved, or in decline, in part due to their social experiences over their entire life course. Researchers have gained a greater understanding, over recent decades, of the importance of life-course events for cognition in later life. Nevertheless, our understanding of many of these factors, especially in childhood, remains limited. Drawing upon Round 2 of the National Social Life, Health, and Aging Project (NSHAP; N=3,377), and data linked to the 2010 census, the 1940s census, and air pollution data, we undertake a whole-life-course approach to understanding the determinants of cognitive function in older adults. Building on the work of the Lancet Commission on risk factors for dementia, we considered health conditions, low education, incarceration, and brain injury (ever); poor health behaviors and low social contact (current); and air pollution (average over past five years). We also considered adverse childhood experiences, and home conditions in 1940. Similar to other studies, we found that female gender, identifying as white, and being born in the US were significantly associated with better cognitive function. Higher depression and lower social contact were associated with worse cognition. There were no significant associations between cognition and early childhood factors - with the exception that growing up in an urban area was associated with better cognitive function. Experiencing jail time was also negatively associated with cognitive function. Findings point towards the need for a more expansive consideration of life course conditions, as they impact cognition in late life.

COGNITIVE RESERVE, PHYSICAL HEALTH, AND COGNITIVE FUNCTIONING IN OLDER ADULTS
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Prior research has shown positive relationships between cognitive reserve (CR), physical health, and cognition, meaning that higher levels of physical health and CR are associated with higher cognitive functioning and vice versa. A group of community-dwelling older adults (N = 45, mean age = 70.5 years) completed a measure of CR (Cognitive Reserve Questionnaire; CRQ), as well as cognitive tests, with number of physician diagnosed health conditions and number of medications measuring physical health. Initially, we ran correlations with the intention of running a mediation model (physical health factor as the independent variable, LEQ as the mediator, and cognitive test scores as dependent variables). Significant correlations were found between physical health and CR (r = -.44, p = .01) with a medium effect size, and between CR and some test scores. However, there were no correlations between physical health and cognitive scores. Therefore, using linear regression analyses, the LEQ significantly predicted scores on some tests of executive functioning (DKEFS: Colour-Word Interference Test; Trial 3: F(1,39) = 7.42, p = .010), and processing speed (DKEFS: combined colour naming/reading: F(1,32) = 4.32, p = .046). However, the LEQ did not significantly predict verbal fluency, any set-switching tests, or a set-switching and inhibition test. Additionally, when physical health was added to the model, there was no significant improvement. The results suggest that CR may predict some types of executive functioning test scores, but not other executive functioning tests. Additionally, physical health did not predict cognitive test scores in this sample.

AGING AND LONGITUDINAL EFFECTS ON NUMERACY
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Numeracy, the ability to competently make use of numbers and numerical information, is a skill associated with diverse positive outcomes across the lifespan. Numeracy is related to increases in education attainment, economic success, and the quality of health and financial decisions (e.g., Chesney, Bjälkebring, & Peters, 2015; Reyna et al., 2009; Smith, McArdle, & Willis, 2010). More generally, numeracy correlates positively with measures of fluid and crystallized intelligence, but accounts for a unique portion of the variance in models predicting risk comprehension (Cokely et al., 2012) and performance in many decision-making tasks (e.g., Peters et al., 2006; Peters, 2012). Age effects on cognitive functioning are well established, generally describing declines in fluid abilities and increases or stability in crystallized abilities (for a review, see Salthouse 2010), but little is known about the longitudinal trajectory of numeracy into
older age. The current study investigates longitudinal age effects on numeracy using a sample of 524 adults (2008 Age range = 20-78) from the RAND American Life Panel. Participants completed a numeracy measure in both 2008 and 2019, a span of 11 years. Results show that numeracy scores generally decreased between measurement points (β = -0.24, t = -2.27, p = .03) and that increased age was predictive of a larger decrease in numeracy scores (β = -0.02, t = -2.07, p = .04). Results are discussed as they relate to cognitive aging and how the trajectory of numeracy compares to other cognitive constructs.

COHORT SHIFTS IN POPULATION COGNITIVE AGING

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Declines in cognitive functioning with increased age, on average and individually, is well documented and demonstrated to be related to genetics and a variety of life course risk factors, many of which are modifiable. Related to population cognitive aging is the phenomenon of the Flynn effect, the finding of increasing cognitive test scores across successive cohorts of young adults (e.g., Flynn 1987). This cohort effect has been repeatedly observed, in a wide variety of contexts, for over 30 years, with evidence that it has been occurring for at least a century. Our research looks at the interaction of the population cognitive aging and the Flynn effect. Using data from the English Longitudinal Survey of Ageing (ELSA) we show that, indeed, later born cohorts show significant (and meaningful) differences from earlier born cohorts. Using nonlinear Bayesian modeling we find that, on certain measures, later born cohorts have higher initial ability. This higher ability leads to a persistent advantage for later born cohorts. Using multilevel growth curve models, we found family risk factors, many of which are modifiable. Related to population cognitive aging is the phenomenon of the Flynn effect, the finding of increasing cognitive test scores across successive cohorts of young adults (e.g., Flynn 1987). This cohort effect has been repeatedly observed, in a wide variety of contexts, for over 30 years, with evidence that it has been occurring for at least a century. Our research looks at the interaction of the population cognitive aging and the Flynn effect. Using data from the English Longitudinal Survey of Ageing (ELSA) we show that, indeed, later born cohorts show significant (and meaningful) differences from earlier born cohorts. Using nonlinear Bayesian modeling we find that, on certain measures, later born cohorts have higher initial ability. This higher ability leads to a persistent advantage for later born cohorts, even as they experience (or will experience) cognitive decline. Additionally, we find that the advantage for later born cohorts is not present for every measure. Later born cohorts show an advantage for verbal fluency and episodic memory, however there is no cohort advantage on orientation scores. The lack of measurable differences on orientation is likely due to ceiling effects on orientation, which suggests that any substantial decline on that measure is indicative of pathology. We discuss the potential factors underlying both population cognitive aging and recent birth cohort trends.

EARLY LIFE ADVERSITY, ALLOSTATIC LOAD, AND COGNITIVE FUNCTION AMONG MIDDLE-AGED AND OLDER ADULTS

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Early life adversity (ELA) is consequential for poor cognitive health in mid to late life. ELA is associated with higher allostatic load (AL), a biological indicator of physiological dysregulation due to cumulative wear-and-tear from chronic stress. Higher AL is also associated with poorer cognitive function across the lifespan. To date, however, a paucity of research has investigated AL as a mechanism through which ELA impacts cognition. Using cross-sectional data from the Midlife in the United States (MIDUS) Study, the objective of this study was to investigate the mediating role of AL in the relationship between ELA and cognitive performance (global cognition, episodic memory, executive function) among middle-aged and older adults without cognitive impairment (n=1541, mean age=53±12, 53% female). ELA, including physical, emotional, and sexual experiences, was measured retrospectively using the Childhood Trauma Questionnaire. AL was composed of 20 biomarker proxies of neuroendocrine, metabolic, inflammatory, and cardiovascular systems, stratified by sex. Cognitive performance was evaluated using a battery of neuropsychological tests from the Brief Test of Adult Cognition by Telephone. Controlling for age, education, and ethnicity, AL significantly mediated the relationship between ELA and global cognition (ß= -0.01, 95%CI [-0.02, -0.003]) and executive function (ß= -0.01, 95%CI [-0.02, -0.003]) such that higher ELA was associated with higher AL, and higher AL was associated with poorer global cognition and executive function. No such effects were found for episodic memory. Consistent with the biopsychosocial lifespan model of cognitive aging, findings suggest that ELA may become biologically embedded over time to negatively impact cognitive function in later adulthood in a domain-specific manner.

FAMILY FLYNN EFFECTS AND LINKS TO MIDDLE-AGE HEALTH OUTCOMES

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The Flynn effect (Flynn, 1984; 1987) refers to increases in cognitive performance, for later-born cohorts. It has been documented globally, occurring for more than a century. In a meta-analysis, Pietschnig and Voracek (2015) noted that the effect may be even stronger in adults than in children, though little research has addressed this topic (or its implications) for aging adults. Similarly, overall life-time health has improved, and incidences of cognitive impairment have decreased during the last two decades (Clouston et al., 2021). Using multilevel growth curve models, we found family Flynn effects in the National Longitudinal Survey of Youth; children in families with later-born mothers, and later-born first children, had higher PIAT math scores, and steeper developmental slopes. Although the link from childhood and adolescent cognitive function to later life outcomes has been well studied, research that takes advantage of the Flynn...