

more pronounced for males, we did not find significant sex moderation. Univariate biometric models considered smoking behavior (status and pack years) and age as moderators of genetic and environmental components contributing to cognitive performance. Results for both Symbol Digit and Block Design suggest that smoking (current and past) is associated with lower genetic, and higher environmental influences on cognition compared to non-smoking. For Block Design, but not for Symbol Digit, pack years moderated shared environmental contributions, with the highest contributions found for current smokers compared to former. Overall, results illustrate an increasing saliency of smoking related environmental influences for processing speed and spatial reasoning tasks. Cognitive tasks with speed components may be sensitive to age-related declines, and speed may also represent a factor vulnerable to smoking exposure, potentially implicating important health and neurobiological pathways. Supported by NIH Grant Nos. R56 AG037985, R01 AG060470.

LINKAGES BETWEEN INDIGENOUS CULTURAL GENERATIVITY AND SOBRIETY TO PROMOTE ALASKA NATIVE SUCCESSFUL AGING

Jordan P. Lewis¹, *1. University of Alaska Anchorage, Anchorage, Alaska, United States*

The aim of this study was to explore motivating and maintenance factors for sobriety among older AN adult participants (age 50+) from across Alaska. Ten life history narratives of Alaska Native older adults, representing Alutiiq, Athabascan, Tlingit, Yup'ik/Cup'ik Eskimos, from the PA sample were explored using thematic analysis. AN older adults are motivated to abstain from, or to quit drinking alcohol through spirituality, family influence, role socialization and others' role modeling, and a desire to engage in indigenous cultural generative activities with their family and community. A desire to pass on their accumulated wisdom to a younger generation through engagement and sharing of culturally grounded activities and values, or indigenous cultural generativity, is a central unifying motivational and maintenance factor for sobriety. The implications of this research indicate that family, role expectations and socialization, desire for community and culture engagement, and spirituality are central features to both AN Elders' understanding of sobriety and more broadly, to their successful aging. Future research is needed to test these findings in population-based studies and to explore incorporation of these findings into alcohol treatment programs to support older AN adults' desire to quit drinking and attain long-term sobriety. Sobriety can put older AN adults on a pathway to successful aging, in positions to serve as role models for their family and community, where they are provided opportunities to engage in meaningful indigenous cultural generative acts.

NUTRITIONAL RISK PREDICTS HEALTH SERVICES UTILIZATION AND DEATH OVER 1 YEAR: RESULTS FROM THE UAB STUDY OF AGING II

David R. Buys,¹ Richard E. Kennedy,² Yue Zhang,² Julie Locher,² and Cynthia J. Brown², *1. Mississippi State University, Starkville, Mississippi, United States, 2. University of Alabama at Birmingham, Birmingham, Alabama, United States*

GSA 2019 Annual Scientific Meeting

Nutritional risk has been demonstrated to be associated with poor health outcomes, increased risk of health services utilization (HSU), and mortality among older adults. The aim of this study was to assess the prospective relationship between nutritional risk; HSU focusing separately on emergency department visits, hospitalization, and nursing home admission; and mortality. Using the University of Alabama-Birmingham Study of Aging II, we examined this relationship among 419 community-dwelling older Alabamians (75+years). We used the Mini-Nutrition Assessment (MNA), a well-validated nutritional risk assessment, which classifies individuals as either well-nourished, at-risk or malnourished, collected at baseline. We assessed HSU by asking about healthcare encounters since the last monthly follow-up call for 12 months and verified death with family reports and official documents. We completed univariate, bivariate, and Cox proportional hazards regression analyses with one-year of follow-up data, adjusting for social support, social isolation, comorbidities, and demographic variables. Accounting for covariates, being either at-risk or malnourished, relative to well-nourished, was associated with emergency department visits (HR: 1.30, 95% CI:1.14,1.48), hospitalization (HR: 1.58, 95% CI:1.37,1.82), nursing home admission (HR: 8.94, 95% CI:3.99,20.02), and mortality (HR: 1.90, 95% CI:1.25,2.88). These findings underscore the growing awareness that nutritional risk, particularly for older adults, is a significant factor affecting their well-being and particularly their ability to continue living in the community. Nutrition assessment, interventions, and services for community-dwelling older adults may lead to a reduction in health care utilization, particularly nursing home placement, and ultimately to reduced healthcare costs to families and taxpayers.

SENSE OF PURPOSE IN LIFE AND REDUCED LIKELIHOOD OF FUTURE DRUG MISUSE

Eric S. Kim,¹ Carol Ryff,² Afton Hasset,³ Chad Brummett,³ Charlotte Yeh,⁴ and Victor Strecher³, *1. Harvard T.H. Chan School of Public Health, Boston, United States, 2. University of Wisconsin, Madison, Wisconsin, United States, 3. University of Michigan, Ann Arbor, Michigan, United States, 4. AARP Services, Inc., Washington, District of Columbia, United States*

A stronger sense of purpose in life is hypothesized to reduce the likelihood of drug misuse because it has been linked with several protective factors including: increased ability to handle stress and pain tolerance, decreased impulsivity, and reduced risk of depression and chronic conditions. However, the association between purpose in life and drug misuse has been understudied. We tested whether people with a stronger sense of purpose in life had a decreased likelihood of incident drug misuse 9-10 years later. We also tested whether people with a stronger sense of purpose were less likely to cope with stress by misusing drugs. Participants were drawn from the Midlife in the United States Study (MIDUS; n=3,483) and from a stress coping module of the Health and Retirement Study (HRS; n=498). Among MIDUS respondents not misusing drugs at baseline, people in the highest quartile of purpose (compared to people in the lowest quartile) had 42% reduced odds (95% CI: 0.37-0.92) of incident drug misuse 9-10 years later in the fully-adjusted model (e.g.,

sociodemographic factors, depression, chronic conditions, and chronic pain). Among HRS respondents, people in the highest purpose quartile had 65% decreased odds (95% CI: 0.14-0.89) of misusing drugs to cope with stress in the fully-adjusted model. A growing number of intervention studies show that purpose in life can be raised. With additional research, these data suggest that sensitively tailored and administered purpose in life may reduce the likelihood of drug misuse and help stem the tide of our nation's growing drug epidemic.

SESSION 1430 (SYMPOSIUM)

INTEREST GROUP SESSION—EPIDEMIOLOGY OF AGING: BIOSOCIAL RESEARCH ON BRAIN AGING AND BIOLOGICAL AGING

Chair: Daniel W. Belsky, *Columbia University Mailman School of Public Health, New York, New York, United States*

Our aging global population presents a new set of challenges for public health. Individual-disease focused models are becoming outmoded as geriatricians recognize multimorbidity and frailty as the central challenges in preserving health for older adults. Evidence from research into the biology of aging suggests that a set of common cellular-level processes underpin decline in system integrity that induces vulnerability to disease across multiple organ systems, including the brain. In parallel, research in life-course gerontology indicates that the roots of aging-related decline in system integrity extend from early life and encompass histories of social, psychological, and biochemical exposures. The research presented in this symposium aims to integrate these emerging paradigms in aging research by mapping connections among measures of aging in the brain and body and social, psychological, and nutrition exposures. Our symposium focuses on (1) links between social-psychological determinants of health and biological aging in the brain and body; and (2) social and behavioral protective factors that may buffer emerging biological risk in aging. The overarching goal of this symposium is to introduce an approach to gerontology that integrates geroscience with life-course social and psychiatric epidemiology to advance understanding of cognitive aging and functional decline, and ultimately identify novel interventions to extend healthy lifespan.

MENTAL AND PHYSICAL HEALTH SEQUELAE OF BEREAVEMENT IN OLDER ADULTS: U.S. HEALTH AND RETIREMENT STUDY ANALYSIS

Benjamin Domingue,¹ Laramie Duncan,² Amal Harrati,³ and Daniel Belsky⁴, *1. Stanford University Graduate School of Education, Stanford, California, United States, 2. Psychiatry and Behavioral Sciences, Stanford, California, United States, 3. Primary Care & Population Health, Stanford, California, United States, 4. Epidemiology, New York, New York, United States*

Death of a spouse (bereavement) is associated with poor mental and physical health outcomes in older adults. But it is unknown how mental- and physical-health sequelae of bereavement are related and the clinical significance of

bereavement-related depression has been questioned. We analyzed US Health and Retirement Study (HRS) data tracking mental and physical health of 36,034 older adults during 1992-2016. Post-bereavement data were available for N=4,985 participants with recorded date of spousal death. We analyzed longitudinal repeated-measures data on survivors' depression, disease, disability, and mortality. Bereavement effects on depression were immediate, but short-lived, attenuating within the year. In contrast, bereavement effects on physical health and mortality persisted over follow-up. Critically, the magnitude of short-lived effects on depression correlated with the magnitude of longer-lasting effects on disease, disability, and mortality. Results reveal connections between mental and physical health and aging and suggest bereavement-related depression as a biomarker of enduring health risk.

PREDICTING TRANSDIAGNOSTIC PSYCHOPATHOLOGY FROM INDICES OF AGING IN THE HUMAN STRUCTURAL CONNECTOME

James Madole,¹ James W. Madole,¹ Simon R. Cox,² Colin R. Buchanan,² Stuart J. Ritchie,³ Mark E. Bastin,² Ian J. Deary,² and Elliot M. Tucker-Drob¹, *1. The University of Texas at Austin, Austin, Texas, United States, 2. The University of Edinburgh, Edinburgh, Scotland, United Kingdom, 3. King's College London, London, England, United Kingdom*

Imaging-derived indices of brain structure and white-matter connectivity evince steep declines with adult age and are robustly linked to neurological disease and a wide range of psychopathologies. Risk for psychopathology may be related to rapid structural brain aging, but the specific patterns of relations are not well documented. Using structural and diffusion MRI data from UK Biobank, we estimated a structural connectome for each participant (N = 3155), and used empirically-driven machine-learning algorithms to identify features of the connectome most susceptible to brain aging. In an age-homogenous hold-out sample of older adults, we score participants' "connectome age" using the coefficients saved from the training sample. We examine associations between connectome age and both psychiatric symptom counts and polygenic risk scores for a range of psychiatric disease traits. This will be amongst the first and most comprehensive investigation of the extent to which psychopathology relates to signatures of structural connectome aging.

INTEGRATIVE ANALYSIS OF ALZHEIMER'S DISEASE GWAS TO DEVELOP A NEW POLYGENIC PREDICTOR AND TEST BIOSOCIAL ETIOLOGY

Amal Harrati¹, *1. Stanford School of Medicine, Stanford, California, United States*

Alzheimer's disease (AD) has genetic and environmental causes and etiology is thought to reflect interplay among these factors. A barrier to integration of genetic and environmental etiologic factors in research to inform prevention and intervention is poor understanding of AD genetics beyond APOE4. We used the new Genomic SEM methodology to conduct integrative analysis of results from several AD genome-wide association studies (GWAS), including brain-imaging and autopsy AD GWAS, to derive a novel, polygenic genetic predictor of AD. We applied this polygenic predictor