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. HEATH AND RETIREMENT STUDY ANALYSIS

Benjamin Domingue,[1] Laramie Duncan,[2] Amal Harrati,[3] and Daniel Belsky[4], *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-Drob[1], *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 Harrati[1], *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