1. *Saint Anselm College, Manchester, New Hampshire, United States, 2. Birmingham-Southern College, Birmingham, Alabama, United States, 3. Kent State University, Kent, Ohio, United States*

Cross-sectional studies reveal the health burden of grandparent caregiving. Still, longitudinal, research is needed to understand how grandparent caregiving compromises grandparents' long-term health. Using three waves of data from the Midlife in the United States Study (MIDUS), we examined sociodemographic factors, health and well-being outcomes between caregiving (CG) and non-caregiving (NCG) grandparents. By wave 3, 12.8% (n = 234) were CG. CG were younger, more likely female, and had lower income and education. MANCOVA adjusted for age, gender, education, and number of children revealed CG reported poorer physical and emotional well-being (e.g. higher depression, anxiety, lower life satisfaction, greater morbidity); CG were consistently less healthy than NCG across all three waves. Lower income and less healthy older adults are more likely to become grandparents, and they remain less healthy over time. Policies and resources to assist grandparents, particularly low-income and vulnerable older adults who are caring for grandchildren, are needed.

A NATIONAL PROFILE OF FRAIL OLDER ADULTS WITH INSUFFICIENT CARE AND MISMATCHED SUPPORT

Jyoti Savla,[1] Karen A. Roberto,[1] and Laura Sands[1], 1. *Virginia Tech, Blacksburg, Virginia, United States*

Older adults differ widely both in the care they require and who they rely upon for care. We use data from the National Health and Aging Trends Study (2011; N=3,265; MAge [SD] = 77 [7.74] years, 62% women) to classify community-living older adults based on their care needs and the various informal and formal providers of care. We also examine the type of care they receive, predictors of this care, and its implications on their health. Older adults with a co-residing caregiver were more likely to report that their needs were not being met (OR = 1.67; 95% CI=1.15–2.42), compared to those who received informal care and paid support. Moreover, older adults who needed help with self-care activities, but received help with household activities were more likely to report unmet needs (OR = 1.55; 95% CI=1.13–2.12). Results are discussed in light of sociodemographic factors differences and mismatched support.

AGING-RELATED CHANGES IN MENTAL, PHYSICAL, AND COGNITIVE HEALTH: THE IMPACT OF THE RETIREMENT TRANSITION

Robert S. Stawski,[1] and Kelly D. Chandler[1], 1. *Oregon State University, Corvallis, Oregon, United States*

Retirement is an important transition in later life, associated with changes in social roles. It is unclear, however, whether the retirement transition modifies aging-related changes in mental, physical, and cognitive health. Using data from the Health and Retirement Study, we examined changes in depressive symptoms, self-rated health, and memory prior to, at, and after the retirement transition among 6,830 participants (Ages=50-97, 58% female) assessed biennially up to 10 times from 1992-2010. Preliminary results indicate a sudden and significant increase in depressive symptoms and decreases in self-rated health and memory at the transition to retirement (ps<.05). These effects increased among individuals retiring at older ages (ps<.01). Further, aging-related increases in depressive symptomatology became faster after retirement (p<.01). Aging-related decreases in self-rated health and memory were unchanged by the transition. Discussion will focus on the contribution of transitions to understanding trajectories of mental, physical, and cognitive health in later life.

SESSION 4040 (SYMPOSIUM)

HEALTH TRAJECTORIES OVER TIME IN THE ATHLOS PROJECT: FINDINGS FROM MULTIPLE COHORTS

Chair: Matthew Prina, *King's College London, London, United Kingdom*

The ATHLOS (Ageing Trajectories of Health: Longitudinal Opportunities and Synergies) project is a consortium of 15 partners across Europe who are working together to understand patterns of healthy ageing trajectories, and to seek the factors that determine those patterns, in a harmonised dataset of 17 international cohort studies of ageing. During this symposium we will be presenting some of the work that has recently been carried out within this project. The symposium will consist of four talks: the first talk will introduce the project, and describe the preliminary work that took place within the first few years of the project, and the challenges faced by the consortium. The second talk will focus on the harmonisation process and on the development of the health metric, an indicator used to measure healthy ageing in this project. The third talk will focus on inequalities in healthy ageing, specifically investigating the impact of education and wealth across cohorts. Finally, in the last talk we will describe the role of lifestyle behaviours (specifically physical activity, smoking and alcohol consumption) and their impact on healthy ageing trajectories.

AN INTRODUCTION TO THE ATHLOS PROJECT: AGEING TRAJECTORIES OF HEALTH: LONGITUDINAL OPPORTUNITIES AND SYNERGIES

Matthew Prina,[1] Demosthenes Panagiotakos,[2] Martin Prince,[3] Martin Bobak,[4] Warren Sanderson,[5] Serguei Scherbov,[5] Jose L. Ayuso-Mateos,[6] and Jose Maria Haro[7], 1. *King's College London, London, United Kingdom, 2. Harokopio University, Athens, Attiki, Greece, 3. Global Health Institute, King's College London, London, England, United Kingdom, 4. Department of Epidemiology and Public Health, University College London, London, England, United Kingdom, 5. International Institute for Applied Systems Analysis, World Population Program, Wittgenstein Centre for Demography and Global Human Capital, Laxenburg, Niederosterreich, Austria, 6. Centro de Investigación Biomédica en Red de Salud Mental, Madrid, Madrid, Spain, 7. Parc Sanitari Sant Joan de Déu, Barcelona, Catalonia, Spain*

ATHLOS is a 5-year project, funded by the European Union's Horizon 2020 Research and Innovation Program. Its aim is to achieve a better understanding of healthy ageing, utilising longitudinal data from existing cohort studies. The measure of healthy ageing used within ATHLOS is based on

the definition used by the World Health Organization as the ongoing process of developing and maintaining functional ability to enable well-being in older age. The first step of the project was to harmonise 17 community based cohort studies of ageing, covering 38 countries over the world and over 411,000 individuals. In this talk we will discuss the work of the different work packages of the project, including a description of the existing evidence on risk factors of healthy ageing.

CREATION OF A COMMON METRIC OF HEALTH STATUS IN THE HARMONIZED DATASET OF THE ATHLOS PROJECT

Albert Sanchez-Niubo,[1] Francisco Felix Caballero,[2] Christina Daskalopoulou,[3] Javier de la Fuente,[4] Alejandro de la Torre,[4] Iago Giné Vazquez,[5] Yu-Tzu Wu,[3] and Matthew Prina[3], *1. Parc Sanitari Sant Joan de Déu, Universitat de Barcelona, Barcelona, Spain, 2. Centro de Investigación Biomédica en Red de Salud Mental, CIBERSAM, Madrid, Madrid, Spain, 3. Social Epidemiology Research Group. Health Service and Population Research Department, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, England, United Kingdom, 4. Department Preventive Medicine and Public Health, Universidad Autónoma de Madrid, Madrid, Madrid, Spain, 5. Parc Sanitari Sant Joan de Déu, Baecelona, Catalonia, Spain*

Although life longevity has increased across the world, evidence suggests some heterogeneity of the ageing process across individuals. To investigate different ageing patterns, the ATHLOS project harmonised data from 411,000 individuals across 17 existing cohort studies. The harmonised dataset provides comparable information on functioning measures, cognition, mental health, sociodemographic and lifestyle behaviours. To measure the process of healthy ageing across time and cohorts, we employed a Bayesian Multilevel Item Response Theory(IRT) and created a common metric of health status by using items of functioning. The IRT measurement model includes parameters describing the difficulty and discriminatory power of each item. We adopted the Bayesian Multilevel framework as it allows item parameters to vary among studies and the simultaneous estimation of all parameters under a Markov Chain Monte Carlo(MCMC) method. Finally, we assessed the predictive validity of the metric against mortality by performing a Receiver Operating Characteristic(ROC) curve analysis.

INEQUALITIES IN HEALTHY AGING: THE DIFFERENTIAL IMPACT OF EDUCATION AND WEALTH ACROSS COHORT STUDIES

Yu-Tzu Wu,[1] Christina Daskalopoulou,[1] Graciela Muniz Terrera,[2] Martin Prince,[3] and Matthew Prina[3], *1. Social Epidemiology Research Group, Health Service and Population Research Department, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, England, United Kingdom, 2. Centre For Clinical Brain Sciences, University Of Edinburgh, Edinburgh, Scotland, United Kingdom, 3. Global Health Institute, King's College London, London, England, United Kingdom*

Several studies have investigated longitudinal changes in health status and functional ability but few have examined whether inequalities in healthy ageing varied across different countries. The aim of this study is to investigate trajectories of health metric scores (generated in previous symposium abstract) over the ageing process and examine the impact of education and wealth on the trajectories across eight cohorts in the ATHLOS consortium (N=135,828) using multilevel regression modelling. After adjusting for age, gender and study, higher levels of education (9.52; 95% CI: 9.30, 9.74) and wealth (8.06; 95% CI: 7.84, 8.28) were associated with higher baseline scores but had minimal impacts on decline rates. These effect sizes varied across different cohort studies and the inequality gradient was found to be strongest in the Health Retirement Study from US. Future research may investigate potential mechanisms which might explain the differential impact of education and wealth in different societies.

THE IMPACT OF LIFESTYLE BEHAVIORS ON HEALTHY AGING TRAJECTORIES: THE ATHLOS PROJECT

Christina Daskalopoulou,[1] Yu-Tzu Wu,[1] Artemis Koukounari,[2] Graciela Muniz Terrera,[3] Stefanos Tyrovolas,[4] Demosthenes Panagiotakos,[5] Martin Prince,[6] and Matthew Prina[1], *1. Social Epidemiology Research Group, Health Service and Population Research Department, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, England, United Kingdom, 2. Faculty of Epidemiology and Population Health, London School of Hygiene & Tropical Medicine, London, England, United Kingdom, 3. Centre for Dementia Prevention, Centre for Clinical Brain Sciences, University of Edinburgh, Edinburgh, England, United Kingdom, 4. Parc Sanitari Sant Joan de Déu, Universitat de Barcelona, Barcelona, Catalonia, Spain, 5. Department of Nutrition and Dietetics, School of Health Science and Education, Harokopio University, Athens, Attiki, Greece, 6. Global Health Institute, King's College London, London, England, United Kingdom*

The number of people above 60 years old will double by 2050. There is a considerate variability in the health status of older people. The identification of the different trajectories that people follow as they grow older constitutes one of the aims of the ATHLOS project. In the current study, we created a metric of health in the four available waves (2001, 2003, 2012, 2015) of the Mexican Health and Aging Study (MHAS) by employing Bayesian multilevel Item Response Theory. Growth mixture modelling indicated that older Mexicans (n=14,143) age by following four distinct pathways (i.e. high-stable, moderate-stable, low-stable, decliners). Adherence to healthy lifestyle behaviours (i.e. physical activity, non-smoking, limited alcohol consumption) was associated with better health trajectories. Preliminary analyses in the ATHLOS harmonised dataset also suggest that older people age by following four distinct pathways. The impact of lifestyle behaviours within the harmonised dataset will be investigated and also presented.