
BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Eileen M. Crimmins	POSITION TITLE AARP Professor of Gerontology and Sociology		
eRA COMMONS USER NAME (credential, e.g., agency login) crimmin			
EDUCATION/TRAINING (<i>Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.</i>)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Chestnut Hill College, Philadelphia, PA	B.S.	1968	Mathematics
University of Pennsylvania, Philadelphia	M.A.	1969	Demography
University of Pennsylvania, Philadelphia	Ph.D.	1974	Demography

Personal Statement

The proposed project will further develop a Network on Biological Risk. Crimmins has co-directed a similar Network for 5 years. Crimmins is involved in the development, collection and use of data from a number of national surveys which now have biomarkers. She is a Co PI of the Health and Retirement Study (HRS), CHARLS, and works on IFLS and LASI. She also co-directs the USC/UCLA Center on Biodemography and Population Health, directs a multidisciplinary training grant, and co-directs a Multidisciplinary Aging in Gerontology Training Grant. She is a member of the IOM and AAAS.

The Network will be co-directed by Crimmins and Teresa Seeman who have worked together on the recent Network, the CBPH, and a Current R01. They have co-authored several general papers on the interdisciplinary approach to health outcomes. They have also been co-authors on several papers examining risk models for mortality, disability, and cognitive and physical decline in older age some of which incorporate biological indicators

Below are listed 4 papers authored by Crimmins that indicate the use of biomarkers in population surveys.

Crimmins, E. M. 2015. Physiological Differences across Ageing Populations Reflecting Early Life and Later Life Nutritional Status and Later Life Risk for Chronic Disease. Journal of Population Aging, 8: 51-69.

Solé-Auró, A., Michaud, P.-C., Hurd, M., Crimmins, E. 2014. Disease Incidence and Mortality among Older Americans and Europeans. Demography 52: 593-611.

Levine, M., Cole, S., Weir, D., Crimmins, E. 2015. Childhood and Later Life Stressors and Increased Inflammatory Gene Expression at Older Ages. Social Science and Medicine, 130:16-22. NIHMSID 672793.

Crimmins, E., Kim, J.K., McCreath, H., Faul, J., Weir, D., Seeman, T. 2014. Validation of Blood-based Assays using Dried Blood Spots for use in Large Population Studies. Biodemography and Social Biology, 60: 38-48. PMC4117354.

B. Positions and Honors

a. Positions and Employment

1973-1978 Assistant Professor of Sociology and Public Health, University of Illinois at Chicago Circle
1978-1980 Visiting Adjunct Professor of Sociology, Rutgers University
1980-1981 Visiting Associate in Sociology, California Institute of Technology
1982-1992 Assistant & Associate Professor of Gerontology and Sociology, University of Southern California
1992-present Professor of Gerontology and Sociology, University of Southern California

1997-2009 Edna M. Jones Professor of Gerontology
2007-2008 Assoc. Dean of Gerontology

b. Other Professional Experiences

1994-1995 Technical Panel On Assumptions and Methods, Advisory Council on Social Security; Chair Demographic Sub-panel

2004-2005 Vice President, Population Association of America

1993-present REVES International Network on Healthy Life Expectancy - Steering Committee

1995-2007 Secretary- Treasurer, Board Of Directors - Society for the Study of Social Biology

1996-present Member NIA Monitoring Committees: LSOA ,HRS and AHEAD (2007), LLFS

1999-present Director, USC/UCLA Center on Biodemography and Population Health

2003-2004 Scientific Board of Counselors – National Center for Health Statistics

2002-2004 Chair-Elect, Chair - American Sociological Assn. Section on Aging and the Life Course

2001-present National Academy of Sciences, Committee on Population, Panel on Race/Ethnic Health Differentials ,Co-Chair Panel on Diverging Longevity, Panel on Grand Challenges of an Aging Society, Panel on International Health Differences, Panel on Premature Mortality, Panel of Integrating Genetic Data into Social Surveys

Associate Editor - Journal of Gerontology, Research on Aging, Aging and Health, Demography. Demographic Research

Editor – Biodemography and Social Biology

NIH Review Panels, 1987- 2015

c. Honors

Fellow AAAS, 2010

Member Institute of Medicine, 2012

University Professor of the University of Southern California, 2014

Kleemeier Award for Gerontological Research, 2013

C. Contributions to Science

Healthy and Disability Free Life Expectancy

Crimmins was one of the initial researchers to combine indicators of health and mortality to examine trends and differentials in healthy life expectancy. This work has been important because it clarifies how it is that one can have improvements in average individual life cycles – e.g. life expectancy – without necessarily having improvements in population health – e.g. the percent of the population with a disability. Such insights are essential for understanding the implications of changes in technology and health behaviors for future demands for health care. This work has also clarifies how there can be an increase in the prevalence of major diseases at the same time as there is decreasing disability.

Solé-Auró, A., Beltrán-Sánchez, H., Crimmins, E.M. 2014. Are differences in disability-free life expectancy by gender, race and education widening at older ages? Population and Policy Review. 34(1), 1-18.

Crimmins, E.M., Hayward, M.D., Hagedorn, A., Saito, Y., Brouard, N. 2009. Change in Disability-Free Life Expectancy for Americans 70 Years Old and Over. *Demography* 40: 627-646. PMID 19771948.

Cai, L., Hayward, M.D., Saito, Y., Lubitz, J., Hagedorn, A., Crimmins, E. 2010. Estimation of Multi-State Life Table Functions and Their Variability from Complex Survey Data Using the SPACE Program, *Demographic Research*, 22:6. PMID: 2867357

Crimmins, E., Hayward, M.D., Saito, Y. 1994. Changing Mortality and Morbidity Rates and the Health Status and Life Expectancy of the Older U.S. Population, Demography, 31, 159-175

Trends in Disability and Health

Crimmins has investigated trends in disability, disease prevalence and mortality in the United States in many papers.

Freedman, V., Spillman, B., Andreski, P., Cornman, J., Crimmins, E., Kramarow, E., Lubitz J., Martin, L., Merkin, S., Schoeni, R., Seeman, T., Waidmann, T. 2012. Trends in Late-Life Activity Limitations in the United States: An Update from Five National Surveys. *Demography*, 50, 661-71. PMID: 23104207. PMCID: 3586750.

Crimmins, E. Saito, Y., Reynolds, S. 1997. Further Evidence on Recent Trends in the Prevalence and Incidence of Disability Among Older Americans from Two Sources: The LSOA and the NHIS. *Journal of Gerontology: Social Sciences*, 52B, 59-71.

Kim, JK, Alley, D., Seeman, T., Karlamangla, A., Crimmins, E. 2006. Recent Changes in Cardiovascular Risk Factors Among Women and Men. *Journal of Women's Health*, 15(6), 734-740.

Crimmins, E., Beltran-Sanchez, H. 2011. Trends in Mortality and Morbidity: Is there a compression of morbidity. *Journal of Gerontology: Social Sciences*, 66: 75-86. PMID: 20948986 PMCID: PMC3001754

International Differences in Health

Much of Crimmins' recent work has addressed how the US compares in health to other developed countries and how health at older ages changes with development.

Crimmins, E., Preston, S. and Cohen, B. (Eds). 2011. *Explaining Diverging Levels of Longevity in High-Income Countries. Panel on Understanding Divergent Trends in Longevity in High-Income Countries*. National Research Council.

Crimmins, E.M., J.K. Kim, S, Vasunilashorn, A. Hagedorn, .Y. Saito. 2008. A comparison of biological risk factors in two populations: the United States and Japan. *Population and Development Review*, 34: 457-482. PMID: 19421428. PMCID: PMC2676846.

Beltran-Sanchez, H. and Crimmins, E.M. 2013. Biological Risk in the Mexican Population at the Turn of the 21st Century. *Journal of Cross-Cultural Gerontology*, 3:299-316. PMID: 23812952. NIHMSID: 500350.

Crimmins, E. 2015. Physiological Differences across Ageing Populations Reflecting Early Life and Later Life Nutritional Status and Later Life Risk for Chronic Disease. *Journal of Population Aging*, 8: 51-69.

Social Determinants of Health and Mortality

Crimmins' research highlights the connections between socioeconomic status and health, broadly defined. Crimmins more recent work has expanded traditional demographic approaches by integrating indicators of physiological states into analysis to determine how social and economic circumstances "get under the skin." Most of this work refers to the later part of the life span.

Crimmins, E., J.K. Kim, T. Seeman. 2009. Poverty and biological risk: The earlier "Aging" of the poor. *Journal of Gerontology: Medical Sciences*, 64: 286-92. PMID: 19196637. PMCID: PMC2655037.

Levine, M.E., and Crimmins, E. 2014. Evidence of Accelerated Aging among African Americans and its Implications for Mortality. *Social Science and Medicine*. 118:27-32. PMID 25086423, PMC 4197001

Crimmins, E., J.K. Kim, T. Seeman. 2009. Poverty and biological risk: The earlier "Aging" of the poor. *Journal of Gerontology: Medical Sciences*, 64: 286-92. PMID: 19196637. PMCID: PMC2655037.

Crimmins, E., Sole Aura, A., Kim, J.K. 2010. Gender differences in health: Results from SHARE, ELSA, and HRS. *European Journal of Public Health*. Epub. PMID: 20237171. PMCID: PMC3023013.

Biodemography

Crimmins has played a pioneering role in the field of biodemography and she has been pivotal in bridging the gulf between the biological and population sciences. By integrating insights from biology to provide a better understanding of the evolution of health and well-being over the life course and across environments.

- Crimmins, E., Wheaton, F., Vasunilashorn, S., Beltrán-Sánchez, H., Zhang, L., Kim, J.K. 2013. A Global Perspective on Physiological Change with Age. In McDaniel S.A. and Zimmer Z, editors, Global Ageing in the Twenty-First Century: Challenges, Opportunities and Implications. Ashgate Publishing Ltd: England, pp. 79-103.
- Crimmins, E.M. Hayward, M.D., Ueda, H., Saito, Y. Kim, J.K. 2008. Life with and without heart disease among women and men over 50, *Journal of Women and Aging*, 20, 5-19. PMID: 18581697. PMCID: PMC2994551.
- Levine, M.E., and Crimmins, E. 2014. Evidence of Accelerated Aging among African Americans and its Implications for Mortality. Social Science and Medicine. 118:27-32. PMID 25086423, PMC 4197001
- Crimmins, E., Finch, C. 2006. Infection, Inflammation, Height, and Longevity, Proceedings of the National Academy of Sciences, 103(2), 498-503. PMC1326149.

List of Published Work in My Bibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/eileen.crimmins.1/bibliography/44133020/public/?sort=date&direction=ascending>.

D. Research Support.

Ongoing Research Support

R01 AG049020
8/15/2015-4/30/2020
PIs: Eileen Crimmins, Teresa Seeman
Biomarker Cross-Calibration to Investigate International Health Inequalities.
Harmonize data for biological measurement.

R01AG051125
09/15/2015-6/30/2016
Principal Investigator: Jinkook Lee
Harmonized Diagnostic Assessment of Dementia (DAD) for Longitudinal Aging Study of India (LASI)
Collect and analyze data on cognition in India
Role: Co-investigator

U01 AG009740
1/1/01-12/13/17
Principal Investigator: David Weir
Health and Retirement Study
Data collection for national sample of the mature population including biomarkers.
Role: Co investigator

NIA P30 AG17265
8/15/99-6/30/19
PIs: Eileen M. Crimmins, Teresa Seeman
USC/UCLA Center on Biodemography and Population Health
The primary purpose of BPH is to provide a synergistic research environment for the integration and translation of research findings from a variety of disciplines such as epidemiology, clinical geriatrics, biostatistics, and biology into their effects on the health status of populations and the expected life cycles of individuals.

NIA 5-T32-AG00037
5/1/03 - 4/30/19
Principal Investigator: Eileen Crimmins
Multidisciplinary Research Training in Gerontology
Pre and postdoctoral research training in gerontology.

R24AG045061
09/19/2014 to 8/30/2019
Principal Investigators; James House, Eileen Crimmins

Network on Life Course Health, Dynamics and Disparities in 21st Century America

NIA R24 AG037898
9/1/2010-8/31/2016

PIs: Eileen Crimmins and Teresa Seeman

Network on Measurement of Biological Risk

NIA R01-AG040176-01
7/01/12-6/30/17

Principal Investigator: Pierre Carl Michaud

Working Lives, Physiological Dysregulation and International Health Differences
Role: Co-investigator

NIA R01 AG037031
05/01/2011 to 04/30/2016

Principal Investigator: Yaohui Zhao

China Health and Retirement Longitudinal Study
Role: Co-investigator

NIA R21 AG045625
09/15/13 to 8/30/15

PIs: Eileen M. Crimmins and Jennifer Ailshire

Adding Contextual Data to the Health and Retirement Study

Completed Research Support

NIA R01-AG043656
09/15/13 to 8/30/15

Principal investigator: Carol A. Prescott

A 55 Year Follow-up Study of Project Talent Twins, Siblings, and Classmates
Role: Co-investigator

NIA R21-AG033675-01
8/01/2009 – 7/31/2012

Principal Investigators: John Strauss and Eileen Crimmins

Biomarkers in the China Health and Retirement Survey
Assays of samples collected in China.