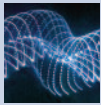




BOW STREET BULLETIN

News and Ideas from the
**Harvard Center for Population and
Development Studies**

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Recession, job loss, and health in older US adults:

Clemens Noelke explores the effects of recession-time job loss on mortality rates

Job loss can be difficult even in a thriving economy. The loss of income, health benefits, and an individual's overall sense of self-worth—and many other negative outcomes—can increase stress and stress-related health issues. But a recent study by Clemens Noelke and Jason Beckfield, entitled, "Recessions, Job Loss, and Mortality Among Older US Adults," which was published in the *American Journal of Public Health*, reveals that job loss during a recession can be so impactful that it results in increased mortality among US adults age 50 and over.



Noelke. "However, we find that it's only during recession that there's an effect of job loss on mortality."

Noelke and Beckfield's conclusion of increased mortality after job loss in recession builds on the well-respected work of their predecessors. Existing studies—for example, a study of mass layoffs in Pennsylvania during the 1980s conducted by economists Daniel Sullivan and Till Von Wachter—contain robust evidence that job loss in the US leads to increased reportings of symptoms of depression, as well as increased incidents of strokes and heart attacks—all of which can be seen as contributing to increased mortality risk.

"I think the important thing about our paper is that it pushes the debate over the causal effects of unemployment on mortality (e.g., Can losing your job kill you?) toward an understanding of unemployment in context," says Beckfield. "Our answer is that yes, losing your job can kill you—but only if you lose your job during a severe recession, and in the context of a laissez-faire labor market with a weak safety net. The next step is to place these results in comparative context, and discover whether and how differently designed safety nets protect people from death by job loss."

Older and wiser—but not better off

To rationalize their findings, Noelke and Beckfield point to the detrimental effects of

job loss on older workers' socioeconomic status. Older people have a much harder time finding another job than younger people due to a variety of factors. For example, often there's a reluctance to train older workers who are closing in on retirement. Older workers also have less flexibility to pick up and move to another location for work because they are rooted to their existing communities by home ownership, family ties, etc. Other contributing elements are that older workers are often part of industries that are dying out (e.g., newspaper printing and publishing), making it difficult to be rehired in the same industry once the economy recovers.

The data Noelke analyzed is representative of Americans between the ages 50 and older. He focused on this particular population segment because recent research has shown that older Americans mortality rates are particularly sensitive to fluctuations in the economy. Moreover, individuals in

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BOW STREET BULLETIN

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News briefs

Below is a sampling of the recent achievements of Pop Center faculty, fellows, affiliates, and staff. Congratulations to all!

Awards:

■ **Christina Roberto**, alumna of the Robert Wood Johnson Foundation Health & Society Scholars at Harvard program and assistant professor of social and behavioral sciences and nutrition at the Harvard T.H. Chan School of Public Health (Harvard Chan School), was recently awarded The Obesity Society's 2014 Early-Career Research Grant.

■ **Ichiro Kawachi**, chair of the Department of Social and Behavioral Sciences at the Harvard Chan School, co-director of the RWJF Health & Society Scholars program at Harvard, and Pop Center faculty member, has been named the John L. Loeb and Frances Lehman Loeb Professor of Social Epidemiology.

In the News:

■ **Cassandra Okechukwu**, Pop Center faculty member and assistant professor at the Harvard Chan School was featured in a January 14, 2015 *Time Magazine* article where she commented on a study that found people who work more than 48 hours a week are more likely to drink at dangerous levels. Okechukwu had written an editorial in *BMJ*, where the study results appeared.

■ In a *Harvard Magazine Forum* piece, **Rohini Pande**, professor at the Harvard Kennedy School and Pop Center faculty member, addressed the root causes of violence against women in South Asia and shared her perspective on steps that can be taken, both short and long term, to curb this rash of violence.

■ **SV Subramanian**, professor of population health and geography at the Harvard Chan School and Pop Center faculty member, spoke at the November 10 UNICEF South Asia conference "Stop Stunting" held in New Delhi. Subramanian's appearance at the conference was featured online in a Harvard Chan School news brief, a *New York Times* article, and in a video on Vimeo sponsored by UNICEF South Asia.

Visiting Scientists:

■ **Jairam Ramesh**, a renowned Indian economist and politician belonging to the Indian National Congress and a member of

Parliament, visited the Pop Center in October. Ramesh (on right) is pictured with Pop Center faculty member SV Subramanian.



■ In November, **Ranganayakulu (Ranga) Bodavala** of Thrive Energy spoke to a number of researchers at the Harvard Pop Center on efforts to get solar powered lamps into India. Dr. Bodavala is a former Takemi Fellow at the Harvard T.H. Chan School of Public Health.

New Funding:

■ The **Program on the Global Demography of Aging (PGDA)** at Harvard University has received a new five-year award from the National Institute on Aging at the National Institutes of Health. The program is led by Pop Center member **David E. Bloom**, the Clarence James Gamble Professor of Economics and Demography, and **David Canning**, associate director of the Pop Center, and the Richard Saltonstall Professor of Population Sciences, and Professor of Economics and International Health, both at the Harvard Chan School.

Recent Pop Center Seed Grant Awards Funded by the RWJF Health & Society Scholars Program:

■ Understanding the Benefits of Improved Housing for a Low-income Elderly Population: A Housing Lottery as a Natural Experiment (**PI: Mariana Arcaya**, Yerby Postdoctoral Research Fellow, Harvard Center for Population and Development Studies).

■ Infrastructure Building and Cross Jurisdictional Governance of Vector Borne Disease in a Time of Climate Change (**PI: Angie Boyce**, Robert Wood Johnson Foundation Health & Society Scholar, Harvard Center for Population and Development Studies).

■ Utilizing Biomarkers to Assess the Health of Young Adult Women with Complex

Work-Family Roles (PI: **Adam Lippert**, Robert Wood Johnson Foundation Health & Society Scholar, Harvard Center for Population and Development Studies).

■ Health and Economic Mobility (PI: **Rourke O'Brien**, Robert Wood Johnson Foundation Health & Society Scholar, Harvard Center for Population and Development Studies).

■ The Multilevel Association of Alcohol Exposure, Misuse, and HIV Diagnoses (PI: **Yusuf Ransome**, Yerby Postdoctoral Research Fellow, Harvard Chan School).

■ Health Disparities and Inequality of Opportunity in the United States (PI: **Alexander Tsai**, assistant professor of psychiatry, Harvard Medical School).

■ The Construction of a New Measure to Assess Bonding and Bridging Social Capital to be Used in Public Health Settings (PI: **E. Villalonga-Olives**, research fellow, the Harvard Chan School).

■ Mandatory Breast Density Reporting: Patient Understanding and Effects on Mammography Screening, Risk Perception, and Worry (PI: **Erica Warner**, Yerby Postdoctoral Research Fellow, Harvard Chan School).

Publications:

■ **Livia Montana**, a Harvard Pop Center senior research scientist, co-authored a paper published in *Spatial Demography* that introduces a novel sampling approach to delineate urban slum and non-slum areas using satellite data in order to evaluate family planning services in six cities of Uttar Pradesh, India.

■ Research published in the journal *PNAS* by **Mariana Arcaya**, **S V Subramanian** and the M.E. Zukerman Professor of Sociology at Harvard University and Pop Center affiliated faculty member **Mary C. Waters** reveals that Hurricane Katrina survivors who suffer from health problems are at increased risk for living in poor neighborhoods.

■ Harvard Pop Center Bell Fellow **J.M. Ian Salas** has co-authored a study in the *Journal of Economics of Ageing* that compares the

patterns of consumption, labor income earned, and financing of consumption at different ages or stages of the lifecycle of the average Filipino between the years 1999 and 2007 using the Philippine National Transfer Account (NTA). The findings suggest that there has been an overall increase in per capita labor income and consumption in real terms, a rise in real per capita private health spending at older ages, and a change in reliance on labor income as a source to finance consumption of the young and the elderly.

■ A study published in *Tobacco Control* co-authored by **David Canning**, Pop Center associate director, estimates that tobacco tax increases from 1970–2005 saved over 50,000 lives in US in 2010.

■ The findings of a study published in *PLoS One* co-authored by **Gunther Fink**, assistant professor of international health economics at the Harvard Chan School and Pop Center faculty member, suggest that patients receiving a text message reminder improved their adherence to malaria treatment. Receiving an initial simple text message reminder increased the odds of adherence to treatment, whereas additional messages did not have a significant impact on completion of treatment.

■ **Mark Schuster**, the William Berenberg Professor of Pediatrics at Harvard Medical School and a Pop Center faculty member, was lead author on a study in *Pediatrics* indicating that obese kids are more likely to become obese teens, with over 80% of kids who were obese at age 11 being obese at age 16. The results of this study were featured in *U.S. News and World Report* and *Canada's Global News*.

■ **Matthew Gillman**, director of the Obesity Prevention Program in the Department of Ambulatory Care and Prevention at Harvard Medical School, has examined the significance of beverage consumption during infancy and childhood in a study published in *Obesity*, and found that higher juice intake during infancy (at one year) was associated with higher juice and sugar-sweetened beverage intake and higher BMI during early and mid-childhood.

In December 2014, *Social Science and Medicine* released a Special Issue entitled “Educational attainment and adult health: Under what conditions is the association causal?” edited by Jennifer Karas Montez and Esther Friedman, both former Robert Wood Johnson Foundation Health & Society Scholars at the Pop Center. The Special Issue is the result of an exploratory workshop spearheaded by Montez and Friedman in 2012 when, with funding and support from the Pop Center, an interdisciplinary group of sociologists, economists, epidemiologists, physicians, and education scholars arrived at Harvard to exchange ideas on this broadening topic.



Esther Friedman (left) and Jennifer Karas Montez

Research results from both the workshop participants, as well as others who submitted manuscripts through an open call, are represented in the issue. Over 20 articles and commentaries from renowned scholars are organized into five themes. The categories of themes included “The health benefits of compulsory schooling are more apparent in disadvantaged contexts” and “More years of schooling appears to suppress genetic risks for preventable health conditions.” All the papers, including the introduction by Montez and Friedman, are online; the hard copy is scheduled to be released this winter. Visit www.sciencedirect.com for more information. ■

Recession, job loss, and health in older US adults, *continued from page 1*

their 50s and early 60s are not yet eligible for Medicare and are in a more tenuous position in terms of health care and finding new employment. (For information on other Pop Center projects that explore issues of aging, see p.5.)

The protective effects of recession

Noelke and Beckfield's study also provides suggestive evidence that recessions may have protective effects on those not experiencing job loss. While this result was sensitive to the particular statistical model specification employed, it echoes findings of previous studies indicating that recessionary labor market conditions are associated with lower, not higher, mortality rates. A paper published in 2000 by Christopher Ruhm, an economist at the University of North Carolina at Greensboro—and several other studies since then—has provided compelling evidence that recessions are not only associated with lower mortality rates, but also with improvements of other indicators of population health (e.g., reduced BMI, smoking, and drinking).

“On the one hand, people who lose their jobs during a recession are clearly in worse health. But on the other hand, in a recession, when economic conditions are terrible, other parts of the population may actually experience improvements in health. Or at least they do not exhibit the strong health declines that you might intuitively expect,” says Noelke. “Exploring this contradiction and figuring out how those two realities exist together is one of the most important things I want to explore in my work.”

There are a number of plausible hypotheses that are being tested. One is that during a recession, work stress goes down among those who don't experience job loss. “We know that among those who remain employed, work hours go down during a recession. As a result, there is less pressure to work hard, fewer risks of having work accidents, and more free time to invest into things that are good for health and well-being,” explains Noelke. “In contrast, when the economy is growing and there is greater demand for goods and services, it raises work demands and work hours, and reduces time for rest and recreation.”

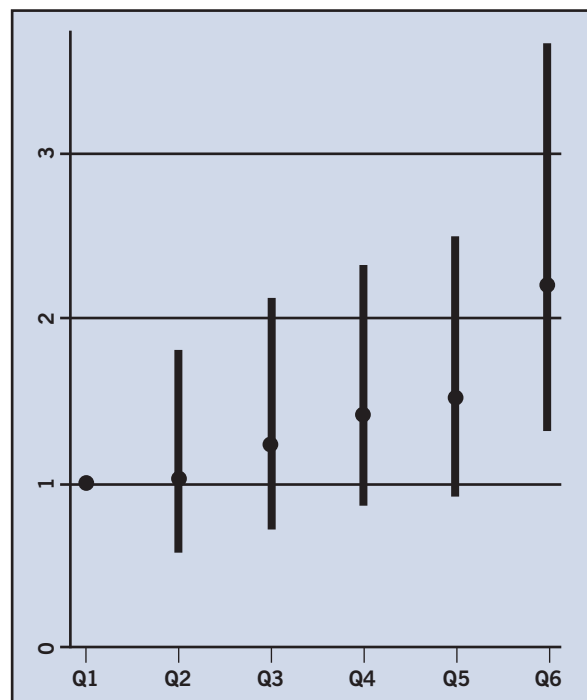
Another theory is that the quality and amount of care for older people in particular rises during a recession and diminishes during booms, when skilled nurses exit care work for more lucrative jobs in other industries.

To complicate things further, the relationship between recessions and mortality rates seems to have changed in recent recessions. Deaths from cardiovascular disease continue to be procyclical (i.e., up during booms and down during recessions), while deaths from cancer, similar to suicides, have become countercyclical (i.e., up during recessions and down during booms). Similarly the protective effect of recessions on health behaviors and risk factors, such as smoking and drinking, may have weakened.

Fertile ground for further exploration

The effects of recession on mortality—both its impact on mortality in specific segments of the population and the purported protective effect on other segments—are a complex and fertile area of study to

**Figure 1. Individuals Experiencing Job Loss
Business Cycle Effect (Ref.: Q1)**



The figure represents the analyses of individuals all of whom lost their job between ages 45 and 67. It shows the effect of local labor market conditions at the time of job loss. Local labor market conditions were measured using an index with six ordered categories, with a value of 1 corresponding to local labor market conditions experienced during boom periods, (for example the late 1990s), and a 6 corresponding to local labor market conditions experienced during recessions, such as were witnessed during the early 1990s or the late 2000s. The index in turn is “extracted” from multiple unemployment rate measures (annual county unemployment rates, annual commuting zone unemployment rates, monthly state-level unemployment rates among those aged 45 to 66 years, and monthly state-level unemployment rates among the active workforce) using principal component analyses, which is a method to combine multiple variables into one variable. The figure shows that labor market conditions at the time of job loss are predictive of subsequent mortality risks. Compared to boom periods (Q1), which is the reference group, the risk of dying during the observation period (1992-2010) increases. Therefore losing a job in a recession as opposed to during a boom period, is associated with an increase in mortality risks of more than 60%, or a factor of 1.6.

which Noelke is eager to contribute. To that end, he is currently working on a follow-up study that delves more specifically into the effects of economic downturn and job loss on cardiovascular disease in older Americans.

It is his goal to perform further research that will clarify which health conditions are affected by job loss during recessions and whether access to health care following job loss moderates this relationship.

“There is a long chain of causation from job loss to ill health and mortality,” says Noelke. “I’m eager to discover the pathways connecting the two variables, not least because that might provide some evidence on how to reduce the impact of job loss and recessions on health.” ■

A Sampling of Other Pop Center “Aging-Related” Studies

Research Programs and Projects

Title: Health and aging in Africa: longitudinal studies of INDEPTH communities (HAALSI)

Principle Investigator (PI): Lisa Berkman, director, Harvard Center for Population and Development Studies

Summary: The goal of this longitudinal research project is to study the drivers and consequences of HIV and non-communicable diseases in an aging population in sub-Saharan Africa.

Title: Program on the Global Demography of Aging (PGDA)

PIs: David Bloom, Clarence James Gamble Professor of Economics and Demography, Harvard Chan School, and David Canning, Richard Saltonstall Professor of Population Sciences, and Professor of Economics and International Health, Harvard Chan School

Summary: This program provides support for research on demographic change and aging throughout the world, with a particular focus on developing countries.

Title: The long-term effects of economic fluctuations around retirement on cognitive function

PI: Phillip Hessel, David E. Bell Research Fellow, Harvard Center for Population and Development Studies

Summary: This study examines whether older American workers who are faced with a recession around the time they approach retirement have significantly lower levels of cognitive functioning throughout retirement compared to their counterparts who experienced more favorable economic times at the end of their working lives. One potential pathway connecting recessions at the end of the working life and cognitive functioning is likely the timing of retirement itself. Workers with a history of unemployment tend to retire early when experiencing a recession, but those who have been continuously employed tend to postpone retirement in order to compensate for financial losses.

Title: Discrimination, aging and health: Exploratory pilot study to improve implicit measures of exposure

PI: Nancy Krieger, Professor of Social Epidemiology, Harvard Chan School

Summary: The pilot study is expanding the PI’s work on implicit measures of discrimination and explores whether experiences of adverse discrimination increase risk of chronic disease and accelerated aging.

Title: Investigating compression of morbidity and disability in the Health and Retirement Survey

PI: SV Subramanian, Professor of Population Health and Geography, Harvard Chan School

Summary: This project seeks to determine whether compression or expansion of morbidity is occurring in the US by defining and creating a quantifiable indicator of morbidity for older ages and by estimating the age at onset of morbidity, disability, and major health risk factors for people aged 50 or older.

Recent Papers

Robert Wood Johnson Foundation Health & Society Scholar at Harvard alumna Jennifer Karas Montez has coauthored a Brief Report, entitled “Socioeconomic Disparities in Health Among Older Adults and the Implications for the Retirement Age Debate,” in the *Journals of Gerontology: Series B*. The findings suggest that socioeconomic disparities such as educational attainment levels need to be considered when debating retirement age.

Harvard Pop Center faculty members Maria Glymour and Mauricio Avendano Pabon are co-authors on a paper published in the *American Journal of Public Health*, entitled “Health Effects of Unemployment Benefit Program Generosity.” The results suggest that unemployment benefits may significantly alleviate the adverse health effects of unemployment among men. ■



Upcoming Winter 2015 Events

POP CENTER SEMINARS

Harvard Center for Population and Development Studies, 9 Bow Street, Cambridge, 4:00 PM – 5:30 PM

These Monday sessions are open to everyone: faculty, research scientists, postdoctoral fellow and students

DATE	TITLE & SEMINAR LEADER
February 2	Postpartum Protection from Pregnancy: Evidence from Developing Countries Iqbal Shah, Principal Research Scientist, Department of Global Health and Population, Harvard T.H. Chan School of Public Health
March 2	Global Demographic Projections: Future Trajectories and Associated Uncertainty John Wilmoth, Director of the Population Division, United Nations, and Professor, Department of Demography, University of California at Berkeley
March 23	The Decline of Marriage: Family Systems, Economic Opportunity, and Relative Income Steven Ruggles, Regents Professor of History, University of Minnesota, and Director, Minnesota Population Center
April 13	Title TBA Esther Duflo, Abdul Latif Jameel Professor of Poverty Alleviation and Development Economics, MIT, and Director, Abdul Latif Jameel Poverty Action Lab (J-PAL)

FRIDAY LUNCHEON SEMINARS

These Friday seminars, co-sponsored by the Harvard Pop Center and the Program on the Global Demography of Aging, focus on salient issues in population health, demography, and economics. These informal gatherings serve as opportunities for researchers to garner important feedback from others working in similar areas. Open to everyone: faculty, research scientists, postdoctoral fellows and students. Please check our website for seminar titles. Lunch is provided.

DATE	SEMINAR LEADER
January 30	Fahad Razak, Bell Fellow, Harvard Center for Population and Development Studies
February 6	Evan Peet, Research Fellow, Department of Global Health and Population, Harvard T.H. Chan School of Public Health
February 13	Walter De Neve, Doctoral Student, Department of Global Health and Population, Harvard T.H. Chan School of Public Health
February 20	Sanjay K. Mohanty, Visiting Scientist, Harvard Center for Population and Development Studies, and Professor, International Institute for Population Sciences, India
February 27	Jessica Cohen, Assistant Professor of Global Health, Department of Global Health and Population, Harvard T.H. Chan School of Public Health
March 6	Catalina Herrera Almanza, Assistant Professor in Economics and International Affairs, Northeastern University
March 13	Sujin Kim, Research Fellow, Harvard Center for Population and Development Studies
March 27	Molly Rosenberg, Bell Fellow, Harvard Center for Population and Development Studies
April 10	Philipp Hessel, Bell Fellow, Harvard Center for Population and Development Studies
April 17	Rourke O'Brien, RWJF Health & Society Scholar, Harvard Center for Population and Development Studies
April 24	Germana Leyna, Spiegelman Fellow, Harvard Center for Population and Development Studies

ROBERT WOOD JOHNSON FOUNDATION HEALTH & SOCIETY SCHOLARS SEMINARS

Harvard Center for Population and Development Studies, 9 Bow Street, Cambridge, 4:00 PM – 5:30 PM (unless noted by an *)

These Thursday sessions are open to faculty, research scientists, and postdoctoral fellows.

DATE	TITLE & SEMINAR LEADER
January 29	Race, Class, Genes, Exposure and Health: Parsing Out Susceptibility Joel Schwartz, Professor of Environmental Epidemiology, Department of Environmental Health and Department of Epidemiology, Harvard T.H. Chan School of Public Health <i>*Note: This event will take place at the Harvard T.H. Chan School of Public Health, Kresge 708</i>
February 12	Population Approaches to Addressing the Obesity Epidemic: Menu Labeling, Taxes, and More Jason Block, Assistant Professor of Population Medicine, Department of Population Medicine, Harvard Medical School
February 26	FEATURED SEMINAR Structural Stigma and the Health of Lesbian, Gay, and Bisexual Populations Mark Hatzenbuehler, Assistant Professor of Sociomedical Sciences, Mailman School of Public Health, Columbia University
March 12	Conceptualizing Stress in Diverse Mothers and Infants: Can We Capture the Intergenerational Transmission of Risk Through the Perinatal Period? Cindy Liu, Director of Multicultural Research, Commonwealth Research Center, Beth Israel Deaconess Medical Center, and Instructor in Psychiatry, Harvard Medical School <i>*Note: This event will take place at the Harvard T.H. Chan School of Public Health, Kresge 708</i>
April 2	The End of an Epidemic: Public Health Practices and HIV/AIDS in 2015 Evelynn M. Hammonds, Barbara Gutmann Rosenkrantz Professor of the History of Science and Professor of African and African-American Studies, Harvard University

FEATURED SEMINAR



The Harvard Pop Center is pleased to welcome Mark Hatzenbuehler, assistant professor of Sociomedical Sciences and co-director, Center for the Study of Social Inequalities and Health at the Mailman School of Public Health at Columbia University.

Psychological research has made significant advancements in the study of stigma, but has tended to focus almost exclusively on individual and interpersonal stigma processes. Recently, researchers have expanded the stigma construct to consider how broader, macrosocial (institutional or systematic) forms of stigma—what is called *structural stigma*—also disadvantage stigmatized individuals.

Dr. Hatzenbuehler will lead a seminar entitled “Structural Stigma and the Health of Lesbian, Gay, and Bisexual Populations” where he reviews cross-sectional, longitudinal, quasi-experimental, and laboratory studies from his own research group. Together, these studies demonstrate that structural stigma is a risk indicator for psychiatric and physical-health morbidities among lesbian, gay, and bisexual populations. As the field is still in its relative infancy, he will discuss future directions for structural stigma research.

Join us on Thursday, February 26, 2015, from 4:00–5:30 PM, at the Harvard Center for Population and Development Studies, 9 Bow Street, Cambridge. ■

