



# BOW STREET BULLETIN

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

[www.hsph.harvard.edu/cpds](http://www.hsph.harvard.edu/cpds) • Spring/Summer 2013



## Look on the Bright Side—It’s Better for Your Health

*Laura Kubzansky explores the effects of stress, optimism and resilience on health*

If you’re standing at a newsstand or the supermarket checkout counter, odds are you’ll see at least one magazine headline claiming to have identified the treasured path to stress reduction and personal happiness. Clearly the prevalence of such cover stories indicates our nation’s preoccupation with stress and negative attitudes. Now, thanks to the research being done by Harvard School of Public Health (HSPH) Professor Laura Kubzansky and her colleagues, it’s clear that America’s quest for less stress and more smiles is actually very important. As her work indicates, stress levels and emotional states have an impact on physical health.



Laura Kubzansky

Kubzansky, a newly tenured professor of social and behavioral sciences and a Harvard Center for Population and Development Studies (Pop Center) faculty member, is a leader in investigating the connections between stress, emotions and health. She’s also been occupied with the issues of resilience and social disparities, in part to determine what educational policies and coping mechanisms might better equip people to deal with certain negative forces in their lives.

### People, performance, point of view

Kubzansky’s background is in psychology, and her career has been built around her genuine interest in people and the forces that affect performance. “I really like people. I’d find it really dry to only focus on research and never interact with people in a meaningful way.”

For her doctoral dissertation in the mid-90’s, Kubzansky theorized that stress in and of itself doesn’t impact performance; it also depends on how one views a particular

situation. If the situation is perceived as something bad and anxiety-provoking, then stress amplifies that bad feeling and leads to a bad result. But if a situation is perceived as interesting and challenging, stress can actually enhance performance.

As she continued down this course of study, Kubzansky realized that she had been looking at the short-term, acute effects of stress and emotion. She began to wonder about the long-term effects that have more profound implications for people’s health.

To better prepare herself to investigate such questions, Kubzansky sought to augment her training in psychology with a more systematic training in health. She came to the HSPH as a postdoctoral student and earned an MPH. This provided the background in biology, biostatistics, and epidemiology that informs her work today and further led to the creation of her Society and Health Psychophysiology Lab, where some of her data is collected.

### A shift in focus

Kubzansky’s early work concerned the effects of mental health on physical health—always considering both positive and negative impacts. While investigating the repercussions of anxiety, depression and distress, she also assessed whether positive functioning enhanced health.

“I spent a lot of my career focused on the stress side of things, on the problems,” says Kubzansky, “Does depression cause heart disease? Does anxiety increase risk for asthma? It’s always been easier to get people to pay attention to questions like that.”

But as she has always seen it, looking at what goes wrong is only going to give you half the picture. It’s as important, if not more important, to understand what goes right, and why. In the last five years, she has played a part in what has become a change in the zeitgeist. “Now people in our field are more interested in resilience and why things work when they work, and what we could do to put that into play more systematically,” Kubzansky explains. “If you are in a public health prevention model, the goal is to keep

*continues on page 3*

### INSIDE THIS ISSUE

- 1 Stress and Health
- 2 News Briefs
- 4 Childhood Nutrition in Rwanda

# BOW STREET BULLETIN

THE HARVARD UNIVERSITY CENTER FOR POPULATION AND DEVELOPMENT STUDIES

## DIRECTOR

**Lisa Berkman, Ph.D.**, Thomas D. Cabot Professor of Public Policy, Epidemiology, and Population and International Health, HSPH

## ASSOCIATE DIRECTOR

**David Canning, Ph.D.**, Richard Saltonstall Professor of Population Sciences, HSPH

## FACULTY STEERING COMMITTEE

**David Bloom, Ph.D.**, Clarence James Gamble Professor of Economics and Demography, HSPH

**Peter Bol, Ph.D.**, Charles H. Carswell Professor of Eastern Asian Languages and Civilization, and Director of the Center for Geographical Analysis, Harvard

**Amitabh Chandra, Ph.D.**, Professor of Public Policy, Kennedy School of Government

**David Cutler, Ph.D.**, Otto Eckstein Professor of Applied Economics, Dept of Economics, Harvard

**Matthew Gillman, M.D., S.M.**, Professor of Ambulatory Care and Prevention, Harvard Medical School

**Kenneth Hill, Ph.D.**, Professor of the Practice of Public Health, Department of Global Health and Population, HSPH

**Gary King, Ph.D.**, Albert J. Weatherhead III University Professor, and Director of the Institute for Quantitative Social Science, Harvard

**Rob Sampson, Ph.D.**, Henry Ford II Professor of the Social Sciences, Harvard

**Mark A. Schuster, MD, PhD**, Chief, Division of General Pediatrics, Children's Hospital Boston, and William Berenberg Professor of Pediatrics, HMS

**SV Subramanian, Ph.D.**, Professor of Population Health and Geography, HSPH

**Mary Waters, Ph.D., M.E.** Zukerman Professor of Sociology, Department of Sociology, Harvard

**Jorge Dominguez (ex officio), Ph.D.**, Antonio Madero Professor of Mexican and Latin American Politics and Economics in the Department of Government, Vice Provost for International Affairs in The Office of the Provost, Harvard

## BOW STREET BULLETIN EDITORIAL STAFF

Editor/Writer: Michelle Choate  
Co-Editor and Contributing Writer: Laura Price  
Photo Credits: Suzi Camarata, pgs. 1 & 4,  
Kris Snibbe, Harvard Gazette, p.2

Bow Street Bulletin welcomes suggestions.  
Please contact us at:  
popcenter@hsph.harvard.edu



"Like" us on Facebook and learn more about our latest projects, researchers, and events, plus media hits, photos, and opinions.  
[www.facebook.com/HarvardPopCenter](http://www.facebook.com/HarvardPopCenter)

## News Briefs:

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

### New arrivals:

■ Pop Center Research Core Director **Jocelyn Finlay** welcomed twins, Charlotte and Arthur, on March 19.

■ **Emily O'Donnell**, Pop Center research assistant, welcomed a baby boy, Caleb, on May 2.

■ **Meghan Perdue** has joined the Pop Center as a project coordinator.

### Awards:

■ **Mariana Arcaya**, research scientist at the Pop Center, has been awarded a Yerby Postdoctoral Fellowship through the Harvard School of Public Health.

■ **David Hurtado**, research assistant at the Pop Center, has also been awarded a Yerby Postdoctoral Fellowship through the Harvard School of Public Health.



Pop Center faculty member and HSPH Assistant Professor of International Health Economics **Günther Fink** (right) was one of the highlighted panelists at the March 29 HSPH symposium, "Defeating Malaria: From the Genes to the Globe."

### Moving on:

■ Current Bell Fellow **Hiram Beltran-Sanchez** will join the department of sociology at the University of Wisconsin Madison as a research scientist in August.

■ **Esther Friedman**, RWJF Health & Society Scholar, has accepted a position as associate social scientist at RAND Corporation. She departs for Santa Monica, CA, this summer.

■ **Maria Glymour**, assistant professor of society and behavioral sciences at HSPH and Pop Center faculty member, will become an associate professor in the department of epidemiology and bio-statistics at University of California San Francisco.

■ This fall, **Jennifer Karas Montez**, RWJF Health & Society Scholar, becomes an assistant professor of sociology at Case Western Reserve University.

### Recent Pop Center Seed Grant Awardees:

■ The Effect of Family Planning on Fertility, Reproductive Health and Economic Development in Uganda. (PI: David Canning, Richard Saltonstall Professor of Population Sciences and professor of economics and international health, Harvard School of Public Health)

■ Disease Burden and Early Childhood Development: A Birth Cohort Study in the Brazilian Amazon. (PI: Marcia C. Castro, associate professor of demography, Harvard School of Public Health)

■ Measurement Errors in Estimating Universal Financial Risk Protection Using Household Surveys in Developing Countries: The Effects of Survey Design and Implementation. (PI: Chunling Lu, assistant professor of medicine and of global health and social medicine, Harvard Medical School)

■ Tracing the Early Life Origins of Social Isolation and Loneliness in Later Life. (PI: Mark McGovern, Program on the Global Demography of Aging Postdoctoral Fellow, Harvard Center for Population and Development Studies)

■ The Social Consequences of Job Loss at Older Ages. (PI: Clemens Noelke, Bell Postdoctoral Fellow, Harvard Center for Population and Development Studies)

■ Work Now, Marry Later: Textile Workers in India. (PI: Rohini Pande, Mohammed Kamal Professor of Public Policy, Harvard Kennedy School)

■ Time Use among Retirees in the French GAZEL Cohort: Description, Life Course Predictors, and Health Associations. (PI: Erika Sabbath, Research Fellow, Harvard Center for Population and Development Studies)

things going well, not only to prevent them from going downhill.”

### Can “the love hormone” help?

Some of Kubzansky’s recent research into resilience has involved studying the impact of oxytocin (otherwise known as “the love hormone”) on subjective and biological stress response.

Oxytocin—the hormone involved in initiating labor and lactation—is understood as playing a key role in social recognition and the social bonding process. Out of this understanding has come the notion that oxytocin might also be biologically protective, that it could reduce stress response and provide some of the health benefits of social relationships.

To study this theory, Kubzansky put volunteers under intense lab stressors (e.g., asking them to speak on an obscure topic before an audience with only five minutes to prepare) and monitored cardiac indices to see their biological reactions. Half of the volunteers were given oxytocin; the other half got a placebo.

The general findings of the study were complicated. As Kubzansky explains, “The picture that is emerging with oxytocin, which is congruent with what we found, is that it actually makes people a little more open to the situation that they are in; their barriers are down. This makes sense when it comes to bonding; you have to be willing to approach, not defend or run in order to create relationships. However, if a situation is unpleasant or dangerous and you are open and unguarded, it could make things worse and intensify bad feelings.”

### Social disparities and health

Much of Kubzansky’s latest work focuses on how stress and resilience may help us understand social disparities in health. Explains Kubzansky, “If you think stress is socially patterned and there are people who are, by nature of the social environment they live in, more likely to experience stress more frequently at more high intensity, then that’s one explanation for why those folks have worse health on average.”

By the same token, if you think resilience is also patterned—meaning the

people who are more resilient may have more social or knowledge resources—then that’s another potential explanation for why you see social disparities in health.

“All of this work is done in a social disparities umbrella, to try to say it’s not accidental who has more stress or resilience; these things are also patterned,” explains Kubzansky. “Just saying to someone, ‘Don’t worry, be happy’ is fairly useless, because there are good reasons for why people are worried, or for why they haven’t developed appropriate resources for enhancing resilience.”

### Can happy mean healthy?

Kubzansky and colleagues are looking at a relatively limited set of resilience-related resources at the moment, but have several ideas about where their research could go. For now, they are examining some of the psychological factors that facilitate better health, such as optimism. “Optimism is an attribute that enables people to be very goal-directed and believe in themselves,” says Kubzansky. Her research has found that people who are optimistic are more future-oriented and goal-directed. “People who are more optimistic tend to have more positive emotions. We are conducting research to see if attributes like that promote health.”

Kubzansky is doing more epidemiological work to determine if the association between optimism and health really exists. At this point, she’s looked at life satisfaction, optimism, and positive affect (a general sense of positive feelings) to see if these factors are associated with reduced risk of a variety of outcomes. To date, she has found that all of these things are strongly associated with reduced risk of heart disease, hypertension and diabetes. “These are rigorous epidemic studies that take into account all kinds of potential confounding, including depression,” says Kubzansky. “We want to be able to say that it’s not just that people aren’t depressed, but that they’re getting other benefits from being optimistic.”

Kubzansky also wants to understand if the effects are primarily because optimism reduces biological stress activation or if there are other biological or behavioral processes that optimistic people bring on line. For example, does being optimistic make people

more willing to engage in physical activity and other behaviors associated with promoting good health?

While most people tend to think of optimism as an inbred personality trait, Kubzansky’s research has revealed otherwise: Optimism is patterned strongly by educational attainment. Through her research, she’s found that the more education people have had, the more optimistic they are. This insight suggests that education provides an array of resources or reserves that enable people to better meet the challenges they encounter, and optimism may be one of these tools. In contrast, with limited education, people may feel stuck in a situation where they don’t believe they can succeed and can’t develop these tools and resources.

### Spreading knowledge and optimism

Despite her challenging workload, Kubzansky counts mentoring as one of her most important duties as an academic. For years she has trained graduate students and postdoctoral fellows from many disciplines and in March was appointed associate site director of the Robert Wood Johnson Foundation Health & Society Scholars Program based at the Pop Center. And clearly her efforts have been noticed; she received the HSPH’s Roger L. Nichols Excellence in Teaching Award in 2010 and was recognized by her postdoctoral fellows with the 2011 Outstanding Mentor Award.

“Mentoring is something I really love to do,” she says. “One of the reasons I got into academia is because part of the mission is to train and teach. My father was an academic and beloved for his teaching, and I’m sure that had an effect on my thinking about it.”

Kubzansky finds that working with students also enhances her perspective on her own work. “Hearing about how they’re thinking is the way I get fresh insights into the work.”

This give and take is clearly good for Kubzansky, her students, and for the work they do—and ensures that well-trained minds will continue to gain new understanding in the areas of stress and health.

As Kubzansky puts it, “I like the idea of bringing in the next generation.” ■

# HMS Economist to Study the Role of Community-Based Health Insurance Programs on Childhood Nutrition in Developing Countries

As an economist working on global health, Chunling Lu is interested in evaluating the role of health care financing in improving child health in resource-poor settings. Lu, an assistant professor of medicine and of global health and social medicine at Harvard Medical School and a Pop Center faculty member, was recently awarded a \$150,000 grant from the Charles H. Hood Foundation to undertake a study that will investigate the role of *Mutuelles* (a community-based health insurance program in Rwanda) in promoting the production and utilization of nutritional and medical care for under-five children and improving under-five children's nutrition status.



Chunling Lu

“This study was motivated by the increased global effort to improve early childhood nutrition (reflected in the first United Nations Millennium Development Goal) to halve the proportion of people who suffer from hunger between 1990 and 2005,” says Lu. “It was also spurred by our observation of two disturbing empirical trends over the past decades: Slow progress in reducing underweight prevalence among under-five children in areas such as sub-Saharan Africa, and widened malnutrition disparities across countries and among sub-national social and economic groups. The on-going food and financial crises make the situation worse.”

## The risks of poor nutrition

Poor nutrition in early childhood is associated with high risk of disease and death in childhood, poor health as an adult, reduced adult income, and the poverty cycle. More than one-third of children under age five in developing countries—estimated at 200 million in total—have

stunted growth. In sub-Saharan Africa, the prevalence of stunting, which is an indicator of chronic malnutrition, has been rising over the past decade.

Current nutrition interventions for under-five children in developing countries include providing education, food and micronutrients, and hygiene and treatment services to children

## Searching for solutions

Designing a payment scheme that could provide sufficient funding for sustaining nutrition programs and promoting access to nutritional care is crucial for reducing child malnutrition in these resource-poor settings. The goal of Lu's study is to determine the impact that a community financing approach, like the one utilized by *Mutuelles*, can have in promoting nutrition care for under-five children in Rwanda.

Using nationally representative population-based surveys—including the Rwanda Demographic Health Survey and the National Health Facility Survey—Lu's project is divided into two separate studies with two specific aims: to examine the relationship between the *Mutuelles* risk pooling fund received by health facilities and the level of their production of nutrition and child care, and to assess the effect of *Mutuelles* coverage on under-five children's utilization of nutrition and medical care and their nutritional status.

“Evidence suggests that the most effective interventions are those with regular financial support via integration into existing local health systems,” says Lu. “Without sufficient funds, interventions are not able to sustain.”

She hopes the results of her study will clarify the value of *Mutuelles* and bring to light additional forms of intervention that can advance the nutritional and medical health of under-five children in developing nations. ■



## Harvard Center for Population and Development Studies

Harvard School of Public Health  
9 Bow Street  
Cambridge, MA 02138