

February 2016 • Issue #464

# AMSTATNEWS

The Membership Magazine of the American Statistical Association • <http://magazine.amstat.org>

# Gender

# Balance

in ASA Activities  
**UPDATE**

## **ALSO:**

Argentine Statistics  
Making Turnaround

NSF Funding for  
Statisticians by  
Directorate



# Appreciating and Promoting the Importance of Statistics Around the World



From left: M. Ataharul Islam, Tamjida Hanfi, Jessica Utts, and Fariduzzaman Rana return from a tour of BRAC-sponsored health, microfinance, and education projects in the Korail slum, Dhaka, Bangladesh. The vice chair of BRAC, the largest NGO in the world, is Dhaka Statistics alumnus Mushtaque Chowdhury, who organized the tour.

Here is a quiz for those of you who are statistics history buffs. What university has a statistics department that was founded in 1950, was visited by the founder's friend R.A. Fisher, has sponsored multiple international conferences, has distinguished alumni around the world, and has an affiliated institute that publishes a statistics journal? If you think the answer is a large public university located on the East Coast or in the Midwest of the United States, then you are about 8,000 miles off base. The answer is the University of Dhaka in Bangladesh, where the department of statistics was founded by Qazi Motahar Husain in 1950 and renamed the department of statistics, biostatistics and informatics in 2008.

I had the privilege of giving a keynote address on behalf of the ASA at the second annual

conference of their alumni association ([www.dusdaa.org](http://www.dusdaa.org)), held at the University of Dhaka at the end of December. I was delighted to learn about their distinguished history and to meet some of their highly accomplished alumni.

Prior to the conference in Bangladesh, I gave a keynote address at the 2015 International Indian Statistical Association Conference (<http://intindstat.org/IISA2015>) in Pune, India. The department of statistics at the Savitribai Phule Pune University has a distinguished history as well. It was founded as a joint mathematics and statistics department in 1953 by statistician V.S. Huzurbazar, who in addition to leaving the legacy of a large statistics department (which separated from mathematics in 1978), has left the legacy of two daughters who are accomplished statisticians!

Both conferences reminded me that statistics truly is an

international discipline (with about 1 out of 9 ASA members living outside the United States), and that the opportunities and challenges for statisticians are similar across the globe. On my last day in Bangladesh, I met with a few dozen Bangladesh statisticians to discuss mutual concerns. I was struck by how similar their concerns are to those I hear elsewhere. How can we revamp statistical education to make sure our students fit with the current job market? How can we provide better mentoring for students and help them publish their work in the best outlets? How can we provide retraining for statisticians who received their education long ago, especially those who are not in academia? How do we balance our interests in theory, applications, data analysis, and computing—without losing sight of either our foundations or our future? How do we help



Jessica Utts





Holding the conference program during the opening ceremony of the International Indian Statistical Association Conference are (from left) D. D. Hanaqal, Jessica Utts, W. N. Gade, Soumendra Lahiri, B. K. Kale, and R. V. Latpate.



Jessica Utts with 2010 ASA President Sastry Pantula (right) and Kazi Md Farhad Mahmud, a member of the Dhaka Conference Organizing Committee

educate the public, government officials, and policymakers about the importance of statistics and the need for reliable data when making decisions? I heard one additional concern: How can we get statisticians more passionate about being involved in the increasingly data-driven efforts to improve conditions in developing countries? I hope to elaborate upon this theme in a future column, but welcome suggestions in the meantime.

At both conferences, I discussed why statistics is important in daily life, and then provided a description—tailored to each audience—of some of the ASA's programs and activities. The more I talked, the more convinced I became that we are too modest about what we have to offer as a profession. In future columns, I plan to highlight some of the outstanding resources available through the ASA and our partner organizations. But, here, I'll focus on two simple examples illustrating why I think statistics can help everyone in their daily lives.

A few months ago, I succumbed to peer pressure and purchased a personal fitness device. One of its features is that it purports to measure how many hours I sleep every night. I receive a weekly report, but it does not provide daily values; rather, it provides an average for the week. Last week's report told me I slept an average of 3 hours and 14 minutes a night. Of course, I know that isn't correct, and I know the explanation, which is that I only wear the device at night about half the time. How the values were obtained is one of the most important considerations in interpreting the results of any data analysis. But are we training our students to think about data quality? Perhaps it's obvious when the results are so disparate from what's expected, but what about when they are not? For instance, what if I wore it 6 out of 7 nights? And what about the emerging plans for having data on things like our driving habits automatically reported to insurance companies? Will those responsible for interpreting the results understand the importance of data quality?

As another example, suppose you are given the opportunity to buy an extended warranty for a new car you are purchasing. Should you buy it? On average, the company wins. But knowledge about individual variability plays an important role. Some consumers will win, and some will lose. Each person needs to figure out the likelihood of falling into those two categories. If

you park in a garage, rarely drive in rough conditions, live far from a dealer (and would prefer to go to a local mechanic), don't have teenagers driving the car, and can afford to fix something if it goes wrong, then you are likely to be a loser if you buy the warranty. Understanding the difference between long-run average (consumers lose) and individual circumstances (some consumers win and some lose) is important in making a decision in this kind of situation. I don't think we are doing a very good job of teaching our students this, though, because when I recently purchased a car, the dealer was amazed that I refused to buy the extended warranty and told me I was the first person in a long time who had refused!

Also highlighted in my talks were some of the many wonderful resources the ASA has made available for promoting the understanding and importance of statistics. Two of these resources that all ASA members should know about are Stats.org ([www.stats.org](http://www.stats.org)), which provides information and examples for journalists and the public to help understand statistics in the news, and This Is Statistics (<http://thisisstatistics.org>), which provides insights about careers in statistics for students and those who help them make career decisions. Promote these, and promote the importance of statistics!

*Jessica Utts*

#### MORE ONLINE

To see photos of the IISA and DUSDAA meetings, visit [www.ics.uci.edu/~jutts/Dec2015Photos](http://www.ics.uci.edu/~jutts/Dec2015Photos).