



PENN PSYCHIATRY PERSPECTIVE



Perelman School of Medicine at the University of Pennsylvania | Department of Psychiatry

Ideas, Suggestions, and News!

We welcome your ideas, suggestions, and news about your activities for stories or announcements in Penn Psychiatry Perspective, the eNewsletter of the University of Pennsylvania Department of Psychiatry. Our goal is to offer useful and interesting news to readers and highlight our many outstanding faculty, programs, and services. Please submit your recommendations to psychweb@mail.med.upenn.edu.

Dwight L. Evans, MD
Ruth Meltzer Professor and Chair

In this Issue

Departmental Goings-On.....1

- Men's and Women's Brains.....1
- Post-Bariatric Surgery.....2
- Sleep and Heart Disease.....3

News and Announcements....3

- In the News.....3
- Leadership Appointments.....5
- Awards and Honors.....5
- Upcoming Events.....6
- Announcements.....6

Departmental Goings On

Why Men's and Women's Brains Work Differently: It's in the Wiring



Ruben C. Gur, PhD and **Raquel E. Gur, MD, PhD** were co-authors of a new study published December 2, 2013 online in the *Proceedings of the National Academy of Sciences* that revealed striking differences in the neural wiring of men and women. Men have greater connectivity from front to back and within one hemisphere, where females have stronger connectivity between the left and right hemispheres. Thus, women's brains are wired to better facilitate communication between the analytical and intuitive modes of information processing, while the men's

brains have stronger links between perception and coordinated action.

The study suggests that the architecture of the brain may help explain "why men excel at certain tasks, and women at others," said study leader Ragini Verma, PhD, Associate Professor of Radiology at Penn. According to a Penn Medicine news release reporting the study, there is behavioral evidence that men on average are more likely better at performing a single task at hand, like bicycling or navigating directions, whereas women have superior memory and social cognition skills, making them more equipped for multitasking and creating solutions that work for a group. Past studies have shown sex differences in the brain, but the neural wiring connecting regions across the whole brain, which have been tied to such cognitive skills, has never been fully shown in a large population, in this case 949 individuals - 521 females and 428 males. To study the brains of the study participants, researchers used diffusion tensor imaging (DTI), a water-based imaging technique that traces and highlights the fiber pathways connecting the different regions of the brain, laying the foundation for a structural connectome or network of the whole brain.

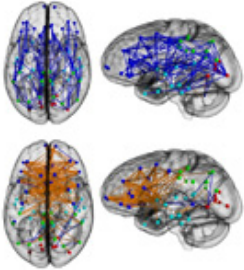
"It's quite striking how complementary the brains of women and men really are," said Dr. Ruben Gur in the Penn Medicine news release. "Detailed connectome maps of the brain will not only help us better understand the differences between how men and women think, but it will also give us more insight into the roots of neuropsychiatric disorders, which are often sex related."

The study was widely covered in the print and electronic media, including the *Philadelphia Inquirer*, *TIME.com*, *Los Angeles Times*, *Atlantic*, *The New Scientist*, *Huffington Post UK*, *Daily Mail*, *The Guardian*, *The Telegraph*, *LiveScience*, *UPI.com*, *The Independent*, *HealthDay News*, *Times of India*, *IrishTimes*, *Sydney Morning Herald*, *LiveMint*, *Agence France Presse*, *The Scientist*, *ABC*

Departmental Goings On

Continued from page 1

Why Men's and Women's Brains Work Differently: It's in the Wiring



Brain networks show increased connectivity from front to back and within one hemisphere in males (upper) and left to right in females (lower).

Credit: Ragini Verma, PhD, Proceedings of the National Academy of Sciences

News Radio, Forbes.com, Wired.com, Slate.com, *Sky News*, *Japan Times*, *Toronto Sun*, *Medical Daily*, *Wall Street Journal*, WSJ Live segment, *The Economist*, MSNBC segment ("The Cycle"), Fox News segment ("Fox and Friends"), *Discover Magazine*, and the *Minneapolis Post*.

Dr. Ruben Gur is Professor of Psychology in Psychiatry. Dr. Raquel Gur is Professor of Psychiatry, Neurology and Radiology, as well as the Karl and Linda Rickels Professor in Psychiatry and Director of the Department of Psychiatry's Neuropsychiatry Section. In addition to Drs. Gur, **Theodore (Ted) D. Satterthwaite, MD** and **Kosha Ruparel, MSE** in the Neuropsychiatry Section were co-authors of the PNAS paper.

View the Penn Medicine news release at - http://www.uphs.upenn.edu/news/News_Releases/2013/12/verma/

Sexual Function and Quality of Life Dramatically Improve in Women Following Bariatric Surgery



David B. Sarwer, PhD was the lead author of the first study to look extensively at sexual function in women who underwent bariatric surgery. The study, appearing in the November 4, 2013 edition of *JAMA Surgery*, found that significant improvements in overall sexual function, most reproductive hormones, and in psychological status were maintained over two years

following surgery. Women reporting the poorest quality of sexual function prior to surgery saw the most dramatic improvements one year after surgery, on par with women who reported the highest quality of sexual function prior to surgery. Following surgery, women reported improvements in all domains of health and weight-related quality of life, as well as improvements in body image, depressive symptoms, and relationship satisfaction.

More than half of women who seek bariatric surgery report signs of sexual dysfunction and, consequentially, psychological stress. "For many people, sex is an important part of quality of life. The massive weight losses typically seen following bariatric surgery are associated with significant improvements in quality of life," said Dr. Sarwer in a Penn Medicine news release. "This is

one of the first studies to show that women also experience improvements in their sexual functioning and satisfaction, as well as significant improvements in their reproductive hormones."

The study was widely covered in the print and electronic media, including *Bloomberg Business Week*, *US News and World Report*, *Philly.com*, *Health.com* (via HealthDay News), *International Business Times*, *Medpage Today*, *Ivanhoe*, *Renal and Urology News*, *Medical Daily*, *Medical News Today*, *Psych Central News*, *CBS Detroit Radio*, *Endocrine Today*, and the *Las Vegas Guardian Express*.

Dr. Sarwer is Professor of Psychology in Psychiatry and Surgery, Director of Clinical Services at the Center for Weight and Eating Disorders, and Director of the Albert J. Stunkard Weight Management Program in the Department of Psychiatry. He was joined in the study by other faculty from the Department of Psychiatry, including **Thomas Wadden, PhD** and **Jacqueline Spitzer, MEd**, in collaboration with experts from the University of North Dakota School of Medicine and Health Sciences, the University of Pittsburgh Medical Center, and New England Research Institutes.

View the Penn Medicine news release at - http://www.uphs.upenn.edu/news/News_Releases/2013/11/sarwer/

Departmental Goings On

Too Little Sleep Linked to Heart Disease Risk



Michael A. Grandner, PhD, Instructor in the Department of Psychiatry, was the lead author on a large U.S. study that showed that people who tended to get less than six hours of sleep nightly were more likely to have high blood pressure, high cholesterol, diabetes, and to be obese. The research is the first to look at differences in risk among racial and ethnic groups, finding

different patterns of strong effect among Black and Hispanic Americans. Dr. Grandner emphasized the importance of this observation in a November 6, 2013 *Reuters Health* article. "This is important, since racial minorities are generally at increased risk of cardiovascular disease, diabetes and obesity," he said. "And if they also tend to have more sleep difficulties, that could be making things worse."

In the study, published in the January 2014 issue of *Sleep Medicine*, researchers divided results from more than 5,000 nationwide respondents into four groups - very short sleepers (less than five hours per night), short sleepers (five to six

hours), seven to eight-hour sleepers, and long sleepers (more than nine hours). Very short and short sleep were both linked to poor health, when compared to seven to eight hours of sleep. Very short sleepers were twice as likely to have high blood pressure and high cholesterol, compared to people who slept around seven to eight hours. Very short sleepers were also 75 percent more likely to have diabetes and 50 percent more likely to be obese. Short sleepers were about 20 percent more likely than normal sleepers to report high blood pressure and obesity. Blacks were most likely to report sleeping less than five hours and very short sleep was most strongly linked to obesity among Blacks.

Dr. Grandner added that sleep and health are likely linked in a two-way relationship. Less sleep may negatively impact health, and certain health conditions like obesity might make sleep more difficult. "Lack of sleep limits your body's ability to keep itself healthy, increasing risk for disease, which puts stress on the body, making sleep harder," he said. "It is likely a cycle like this."

View the November 6, 2013 *Reuters Health* article at - <http://www.reuters.com/article/2013/11/06/us-sleep-heart-risk-idUSBRE9A511K20131106>

In the News

Penn Department of Psychiatry faculty are highly acclaimed experts in their chosen fields, often contacted by local, national, and international media outlets for their knowledge about topics of immediate interest. In this section, we provide just a brief sample of the many recent interactions that our faculty have with the press. For a more complete listing, please visit Penn Psychiatry In the News - <http://www.med.upenn.edu/psych/news.html>.



Treating Insomnia, But Without Medications

In a December 4, 2013 *Chicago Tribune* article, **Philip Gehrman, PhD**, Assistant Professor of Psychology in Psychiatry, touted the treatment benefits of cognitive behavioral therapy for insomnia (CBT-I). "What the studies in general show is that in the short run, while people are in treatment, medication and CBT-I are equally effective," he stated. "But if you look over the long term, CBT-I has much better long-term gains than medication." Dr. Gehrman co-authored a 2012 review article in the journal *BMC Family Practice* that found evidence in the medical literature that CBT-I is more effective in the long run (six months to two years) than sleep medications, with improvements along the lines of 30 to 60 minutes of total sleep time per night.

View the December 4, 2013 *Chicago Tribune* article at - http://articles.chicagotribune.com/2013-12-04/health/sc-health-1204-insomnia-cbt-20131205_1_sleep-medications-insomnia-total-sleep-time

News and Announcements

News and Announcements

In the News

...And More on the Importance of Sleeping Well

Two Department of Psychiatry sleep experts joined another from the Department of Medicine to discuss sleep disorders on a December 2013 segment of "Voices in the Family," a WHYY (Philadelphia) radio talk show. **Michael Grandner, PhD**, Instructor in Psychiatry, **Indira Gurubhagavatula, MD**, Associate Professor of Medicine, and **Philip Gehrman, PhD**, Assistant Professor of Psychology in Psychiatry, joined host Dr. Dan Gottlieb to discuss sleep as a pillar of good health. Upwards of 70 million Americans don't always get the sleep their bodies need. Sleep disruptions are fairly common, from insomnia to sleep apnea. The Penn experts explained that recent research provides evidence that sleep can be improved through treatment and training, and the payoff is enhanced physical and psychological well-being.

Listen to the December 2013 WHYY segment at - <http://whyy.org/cms/voicesinthefamily/sleep-in-heavenly-peace/>

Study Suggests Experience Can be Passed on Through Genes



R. Christopher Pierce, PhD, Professor of Neuroscience in Psychiatry, was quoted in a December 7, 2013 *Washington Post* article about a new epigenetic study from Emory University showing how mice can inherit specific smell memories from their fathers. Researchers found that when a mouse learns to become afraid of a certain odor, his or her pups will be more sensitive to that odor, even though the pups have never encountered it. "When I was in school, this was against Darwin — it was ridiculed," said Dr. Pierce, who was not involved in the study but previously discovered an epigenetic inheritance related to cocaine (see *Penn Psychiatry Perspective*, January 2013). In Dr. Pierce's study, male rats whose fathers were exposed to cocaine chose to ingest less of the drug than those rats whose fathers never took cocaine. Dr. Pierce said that this is an adaptive effect — because cocaine is a toxin, the fathers passed down information to their pups that would help them survive and avoid the substance. Epigenetic markers in the body may help produce this transference of information from father to son, not by changing the DNA but by impacting how DNA sequences are read, thus ultimately influencing behavior. Referring to the evidence in the Emory study, Dr. Pierce stated, "It's a compelling finding. The fact that epigenetic changes happen in mammals is just amazing."

View the December 7, 2013 *Washington Post* article at - http://www.washingtonpost.com/national/health-science/study-finds-that-fear-can-travel-quickly-through-generations-of-mice-dna/2013/12/07/94dc97f2-5e8e-11e3-bc56-c6ca94801fac_story.html

Learning You Have ADHD as an Adult



J. Russell Ramsay, PhD, Associate Professor of Clinical Psychology in Psychiatry and Co-Director of the Adult ADHD Treatment and Research Program in the Department of Psychiatry, was quoted in a December 16, 2013 *Washington Post* article on attention deficit hyperactive disorder (ADHD) in adults. Though typically associated with children, ADHD is also diagnosed in adults, and one in 20 adults potentially suffer from it, the *Post* reported. Dr. Ramsay explained how a trained mental health professional assembles the information required to make a diagnosis. "You put together a tapestry of life," he articulated. "You go through a developmental history looking at functioning in school, in the workplace, in relationships, and that's when you'll hear various examples of difficulties with time management, disorganization, being able to follow through on reasonable plans... that isn't better explained by something else like depression or anxiety."

View the December 16, 2013 *Washington Post* article at - http://www.washingtonpost.com/national/health-science/adhd-about-1-in-5-adults-may-have-a-disorder-usually-associated-with-grade-school/2013/12/13/34634f4a-5b7f-11e3-a49b-90a0e156254b_story.html

News and Announcements

Leadership Appointments

Dr. Raquel Gur Selected as President-Elect of ACNP

Raquel E. Gur, MD, PhD was chosen the President-Elect of the American College of Neuropsychopharmacology (ACNP), and will serve in this position in 2014 before assuming the Presidency in December 2014. Founded in 1961, the ACNP is the nation's premier professional society in brain, behavior, and psychopharmacology research.

Awards and Honors

Regional, National, and International Honors



Dr. O'Brien Selected to Receive Menninger Award from ACP

Charles P. O'Brien, MD, PhD was selected by the American College of Physicians (ACP) to receive the 2014 William C. Menninger Memorial Award for Distinguished Contributions to the Science of Mental Health. Dr. O'Brien will receive this significant honor in April 2014 at the Annual Meeting of the ACP. The award was established in 1967 and was named for Dr. Menninger who was a Governor, Regent, and the first President of the College. Dr. O'Brien joins four other distinguished Penn Psychiatry faculty who have received this very prestigious award - Raquel E. Gur, MD, PhD (2011), Dwight L. Evans, MD (2009), Aaron T. Beck, MD (2007), and Albert J. Stunkard, MD (1980). Dr. O'Brien is the Kenneth E. Appel Professor of Psychiatry and Founder of the Center for Studies of Addiction in the Department of Psychiatry.



Dr. Wolf Receives Teaching Award from APA

Daniel Wolf, MD, PhD received the 2013 Irma Bland Award for Excellence in Teaching Residents from the American Psychiatric Association (APA) in May 2013. According to the APA, the award recognizes "APA members who have made outstanding and sustaining contributions to resident education in psychiatry." Dr. Wolf is Assistant Professor of Psychiatry.

Drs. Satterthwaite and Ortinski Earn ACNP Honors

Theodore (Ted) D. Satterthwaite, MD and **Pavel I. Ortinski, PhD** received Young Investigator Travel Awards from the American College of Neuropsychopharmacology (ACNP). The awards supported their visits to the ACNP's Annual Meeting in Hollywood, Florida in December, 2013, among other benefits. According to the ACNP, these awards allow recipients "an opportunity to attend an outstanding scientific program in clinical and basic research on brain-behavior-drug interactions; become aware of the most recent, and often unpublished, advances in psychopharmacology; and meet and interact with internationally distinguished researchers and scientists." At the ACNP meeting, Dr. Satterthwaite presented work examining how sex differences in brain connectivity and network organization in adolescence relate to patterns of cognition. Dr. Satterthwaite is Assistant Professor of Psychiatry and Dr. Ortinski is Research Assistant Professor of Neurobiology in Psychiatry.



Dr. Jemmott Selected as Fellow of Association for Psychological Science

John B. Jemmott III, PhD was named a Fellow of the Association for Psychological Science (APS) in May 2013. According to the APS, Fellow status is awarded to Association Members who have made "sustained outstanding contributions to the science of psychology in the areas of research, teaching, and/or application." The APS (previously the American Psychological Society) is dedicated to the advancement of scientific psychology and its representation at the national and international levels. It currently has approximately 25,000 members and includes the leading psychological scientists and academics, clinicians, researchers, teachers, and administrators in the field. Dr. Jemmott is the Kenneth B. Clark Professor of Communication and Psychiatry and Director of the Center for Health Behavior and Communication Research in the Annenberg School for Communication and the Perelman School of Medicine.

News and Announcements

Upcoming Events

Department of Psychiatry Grand Rounds

Department of Psychiatry Grand Rounds are held from 12:00 noon to 1:00 pm on the designated dates in the locations indicated. The next lectures are listed below. For more information about Grand Rounds and the 2013-14 schedule, please visit - <http://www.med.upenn.edu/psych/rounds.html>

February 6, 2014

"Rethinking Mental Illness"

Speaker: Thomas R. Insel, MD, Director, National Institute of Mental Health

Location: BRB II/III Auditorium

February 20, 2014

Mood Module

Speaker: Gerard Sanacora, MD, PhD, Professor of Psychiatry, Director, Yale Depression Research Program, Yale University School of Medicine

Location: BRB II/III Auditorium

Announcements

Registration Now Open for Teen Social Anxiety Group

Social anxiety, or intense nervousness in social or performance situations, can interfere with a teen's ability to form friendships, participate in school, and enjoy daily life. The Child & Adolescent OCD, Tic, Trich, and Anxiety Group (COTTAGE) at the University of Pennsylvania is offering a state-of-the-art 14-week group treatment program for teenagers who experience extreme shyness and social anxiety. This program will help them build the skills necessary to manage their anxiety and feel more comfortable in social situations. Click here to learn more about the program or call 215.746.3331 to register. For more information about COTTAGE, please visit <http://www.med.upenn.edu/cottage/>.

Penn Psychosis Evaluation and Recovery Center (Penn PERC)

The recently launched Penn Psychosis Evaluation and Recovery Center offers consultations for diagnosis, treatment, support and skill development for adults and late adolescents (ages 16 and older) who exhibit warning signs of emerging psychosis or early psychosis. To learn more about the many services available or to schedule an appointment, please call 215.746.5900 or visit www.med.upenn.edu/perc.

New Year, New You!

The University of Pennsylvania's Albert J. Stunkard Weight Management Program builds on decades of research expertise to provide the highest quality of weight loss treatment. To learn more about discounts for Penn and UPHS employees, visit the Stunkard Program website at <http://www.med.upenn.edu/weightloss/> or call 215-746-4100 to register for a FREE orientation.