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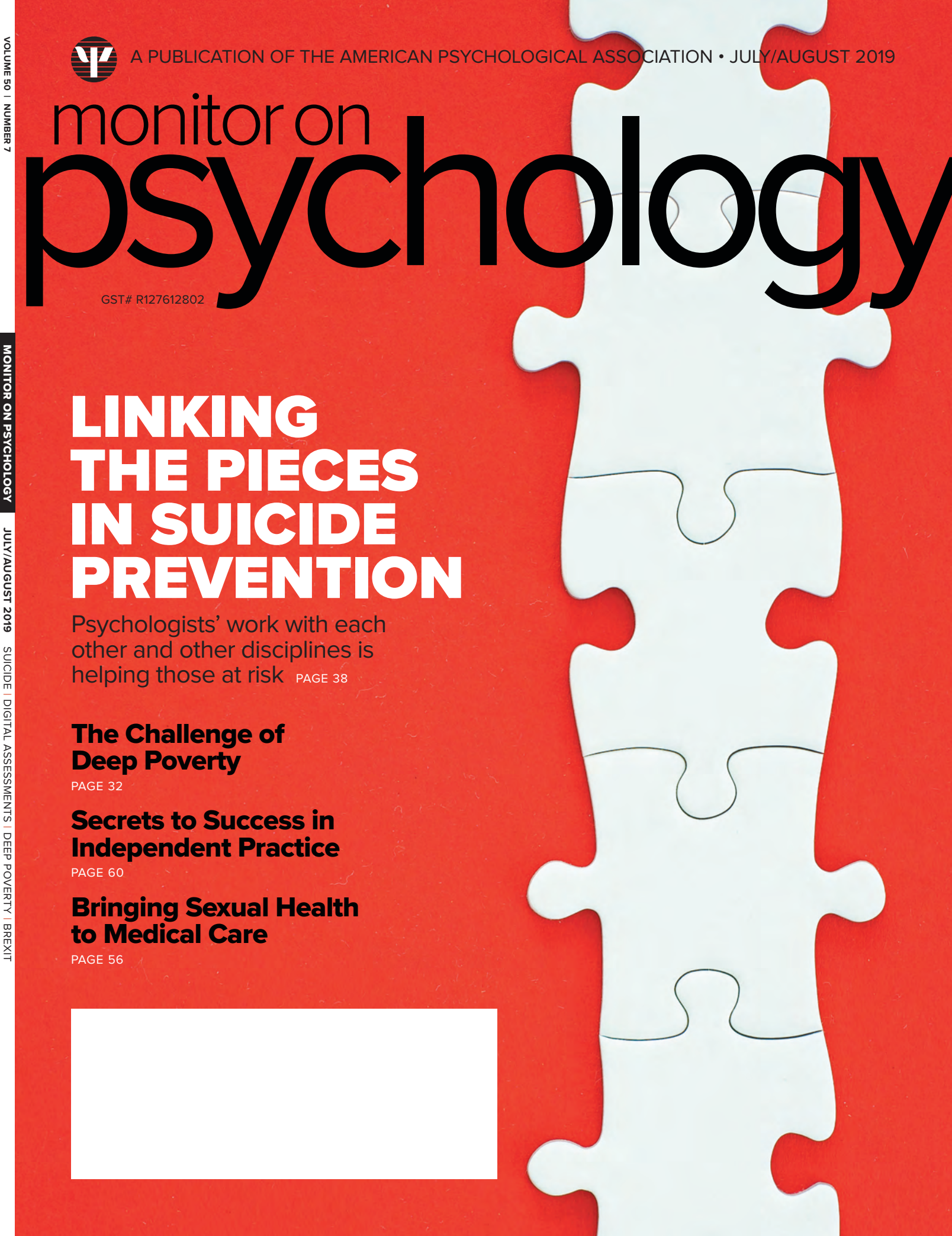
GST# R127612802



LINKING THE PIECES IN SUICIDE PREVENTION

Psychologists' work with each other and other disciplines is helping those at risk PAGE 38

The Challenge of Deep Poverty

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Secrets to Success in Independent Practice

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Bringing Sexual Health to Medical Care

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BPA WORLDWIDE

COVER STORY

BETTER WAYS TO PREVENT SUICIDE

In this issue, we debut a new *Monitor* series, "More Impact Together," which explores the interdependent ways psychologists work together to address society's greatest challenges. In this first installment, we look at the increased suicide rate in the United States and how psychologists are tackling the crisis. Basic scientists are exploring associated brain changes and risk factors; applied scientists are seeking new ways to identify those at risk; clinical researchers are testing new interventions; and clinicians on the front lines are helping deliver those treatments to people who are struggling. *See page 38*

COVER: MARVELENS/GETTY IMAGES

MOVING ASSESSMENT OUT OF THE CLINIC

Technological advances are increasingly moving psychological testing out of the clinic or lab and into people's everyday lives, with assessments embedded in smartphones, games and even watches. This allows clinicians and researchers to gather more data, and more accurate data. But it also presents challenges, including validating these new instruments as well as addressing data security and privacy concerns. *See page 48*

Departments

Brexit and mental health in Britain. Page 22

Do cats know their own names? Page 13

CE CORNER

PATHWAYS FOR ADDRESSING DEEP POVERTY

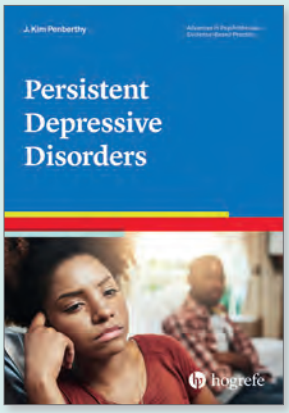
About 18.5 million Americans live in deep poverty—with incomes of less than $12,169.50 per year for a family of four. Now, an APA working group is reviewing the psychological literature to help understand deep poverty's effects and how psychologists can begin to address this grave social ill. *See page 32*

PSYCHOLOGISTS ON THE TEAM

"If someone from the community is trying to access sex therapy, I want all genders, orientations and body types to feel welcome."

Jennifer Vencill, PhD, psychologist at the Mayo Clinic in Rochester, Minnesota. See page 56

The latest Advances in Psychotherapy!

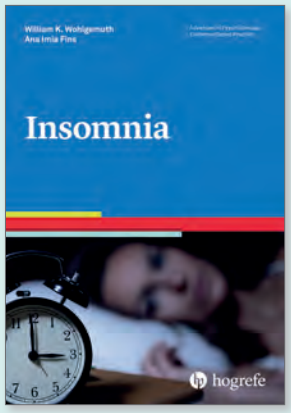


J. Kim Penberthy

Persistent Depressive Disorders

(Advances in Psychotherapy – Evidence-Based Practice – Volume 43)
2019, vi + 106 pp.
US $29.80
ISBN 978-0-88937-505-5

Expert, evidence-based guidance on persistent depressive disorder (PDD) for busy practitioners who need to know how to assess, diagnose, and treat this difficult to identify and potentially life-threatening disorder. The therapies that have the strongest evidence base are outlined, and in particular the cognitive behavioral analysis system of psychotherapy (CBASP), a treatment specifically developed for PDD. Printable tools in the appendices can be used in daily practice.

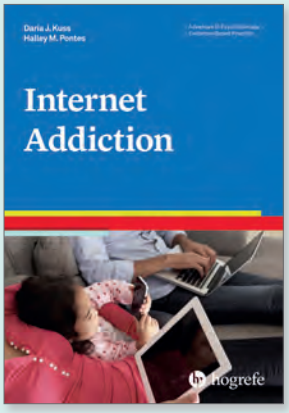


William K. Wohlgemuth / Ana Imia Fins

Insomnia

(Advances in Psychotherapy – Evidence-Based Practice – Volume 42)
2019, viii + 94 pp.
US $29.80
ISBN 978-0-88937-415-7

This concise reference written by leading experts for busy clinicians provides practical and up-to-date advice on current approaches to diagnosis and treatment of insomnia. Professionals and students learn to correctly identify and diagnose insomnia and gain hands-on information on how to carry out treatment with the best evidence base: cognitive behavioral therapy for insomnia (CBT-I). Copyable appendices provide useful resources for clinical practice.

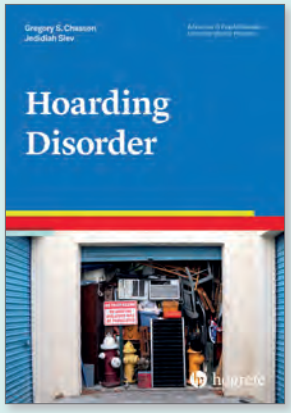


Daria J. Kuss / Halley M. Pontes

Internet Addiction

(Advances in Psychotherapy – Evidence-Based Practice – Volume 41)
2019, iv + 86 pp.
US $29.80
ISBN 978-0-88937-501-7

Internet use is an integral part of our daily lives, but at what point does it become problematic? What are the different kinds of internet addiction? And how can professionals best help clients? This accessible, evidence-based book by leading experts answers these questions by outlining the current assessment and treatment methods for internet addiction. Includes a 12–15 session treatment plan using the method and setting with the best evidence: group CBT, and printable tools for assessment and treatment.



Gregory S. Chasson / Jedidiah Siev

Hoarding Disorder

(Advances in Psychotherapy – Evidence-Based Practice – Volume 40)
2019, viii + 76 pp.
US $29.80
ISBN 978-0-88937-407-2

Hoarding disorder presents particular challenges in therapeutic work, including poor treatment adoption. This evidence-based guide written by leading experts presents the busy practitioner with the latest knowledge on assessment and treatment of hoarding disorder. The reader gains a thorough grounding in the treatment of choice for hoarding – a specific form of CBT interweaved psychosocial approaches to ensure successful treatment. Printable tools help practitioners carry out therapy.

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SEE THE BEST OF PSYCHOLOGY AT APA 2019

Psychological science addresses deep poverty and other critical societal issues

BY ROSIE PHILLIPS DAVIS, PhD, ABPP, APA PRESIDENT

Wes Moore overcame challenges in his early life—living on what he calls the precipice of poverty in Baltimore and the Bronx—and turned the lessons learned from those obstacles into a life of inspiration for others.

Education shifted the trajectory of his life. He is an Afghanistan combat veteran who later became the first African American graduate of Johns Hopkins University to be named a Rhodes scholar. The day his hometown newspaper, the *Baltimore Sun*, published an article announcing the award, it also ran a story about another man named Wes Moore, on trial for a robbery during which a police officer was killed. This stunning contrast sparked Moore's interest in how poverty, community and mentors can shape who we become.

Moore now serves as the CEO of Robin Hood, New York's largest private poverty-fighting organization, exploring the challenges faced by those in underserved communities and the life-changing power of resiliency. As our keynote speaker at APA 2019, he will address how we can work together to move the needle on the critical societal issue of deep poverty—one of my presidential initiatives.

APA President Dr. Rosie Phillips Davis

JOHN DAVID PITTMAN

Members of APA's Deep Poverty Working Group will also provide a closer look at how psychological science is being used to fight deep poverty. They'll unveil the work they have done to help change the narrative, policies and practices around poor people, many of whom have been segregated and blamed for their poverty, to counter the phenomenon of blaming the victim. Please join us to learn how psychologists can get involved and help combat deep poverty. I'm immensely proud of and grateful to the working group chaired by Wendy Williams, PhD. Members include Blake Allen, PhD, Nia Bey-West, PhD, Heather Bullock, PhD, Roberta Downing, PhD, Mesmin Destin, PhD, Rashmita Mistry, PhD, graduate student Kanesha Moore, and APA's Public Interest Directorate staff Keyona King-Tsikata, MPH, and Gabe Twose, PhD.

While at APA 2019, please also watch the winners of the PsycShorts video contest, the focus of my second presidential initiative. Designed to help the public understand that the discipline of psychology rests on a scientific foundation, each video communicates a finding from psychological science in a creative, informative way—and in two minutes or less. We received nearly 200 submissions from around the world and, in Chicago, we'll showcase the best of the best.

In addition to attending these sessions, I encourage you to engage with prominent thought leaders as they share ideas and new findings that inspire action and address deep poverty and many other societal challenges. At APA 2019, become active in the conversation around the issues that matter. ■

WHERE ARE THE ASIAN AMERICAN TRAILBLAZERS?

I was so very excited to see the headline of your recent article on women of color trailblazers. I thought, finally, amazing women getting the credit they deserve and serving as role models for junior scholars out there. But how in the world can you possibly run a story on inclusivity without including Asian American women? There are many who would have been great to profile.

Not only have you missed a huge opportunity, you've sent a message that really perpetuates the very thing you're working against. Very disappointed.

Lisa Kiang, PhD
Wake Forest University

Editor's response: You are right. Although it was certainly not our intention, we failed to ensure the article was fully inclusive of the achievements of Asian American psychological scientists who have helped advance the field for other Asian American women through their significant contributions to science and education. Our goal is to always be inclusive and we promise to do better. As a start, we are doing research now for a future article on the "invisibility" of Asian Americans in certain domains and the stereotypes they confront.

CULTIVATING THE NEXT GENERATION OF PSYCHOLOGISTS

The Monitor *office received this photo of a "future member," along with this note from his loving grandmother:* I've attached a photo of my 11-month-old grandson, Odin Turner Dunphy, who as you can see, is busy reading his mother's subscription of *Monitor on Psychology*. Odin picked up the magazine, without any prompting, and this is what he proceeded to do—looking for what's new in *Monitor on Psychology*.

Ree Dunphy

Catch up on your Monitor *reading—and share it with your kids—by visiting our digital edition at www.apa.org/monitor.*

OUR FAVORITE TWEETS

Re: "Leading the Way" (April)
@ShaunaMCooper So glad to see my mentors and sheroes recognized by #APA. Their collective contributions have forever shaped our scientific and social landscape
@drnabil Love hearing these stories about amazing ethnic minority women psychologists! They have shaped the field of #psychology for the better! #diversity #phdchat #academictwitter

Re: "Renewing the Push for Equality" (April)
@mhill226 This is a good piece on the important and pervasive problem of gender inequity. Was glad to attend a helpful session on this at #sppac2019 and eager to work to tackle the issues on the @TexasChildrens @bcmhouston Gender Equity Committee, using these helpful resources

Re: "How to Mentor Ethically" (April)
@DrSherryPagoto How to be an ethical mentor. Excellent advice from psychologists in @APA_Monitor. #AcademicTwitter

Re: "5 Questions for Arie W. Kruglanski" (April)
@LErdberg Love the plea for space where "people will be accepted, revered and respected for counterviolence activities." #peacebuilding #softsolutionsforhardproblems ■

● **We'd love your feedback.** Please send letters to *Monitor* Editor Lea Winerman at lwinerman@apa.org.

MORE IMPACT TOGETHER

We achieve our greatest success when we act together

BY ARTHUR C. EVANS JR., PhD

In this issue of the *Monitor*, we debut a new series, "More Impact Together," to showcase how we as psychologists can address critical societal issues by working together across our various areas of expertise and across our different—yet interdependent—roles as basic scientists, applied scientists, clinicians, consultants, educators, policy influencers and others. This month's article explores the ways psychologists are responding to the suicide crisis. The key takeaway is that the field of psychology can have the greatest impact when we draw upon our different perspectives, experiences and areas of expertise, as well as those of other disciplines.

To get an appreciation for the breadth of our discipline, you need only look at the wide range of specialized expertise of our 54 divisions in such areas as experimental psychology and cognitive science; educational psychology; clinical psychology; and the psychological study of social issues. While the work we do in our various subfields varies greatly, no one area of our discipline alone can successfully address the complexity of the societal problems we face. For every challenge, we need to bring forth our best skills, best thinking and best science.

APA CEO Dr. Arthur C. Evans Jr.

SCOTT SUCHMAN

It is also the case that a success in one area of psychology is a win for the entire field since all of our boats rise and fall together. When APA's advocacy is effective in increasing reimbursement rates for clinicians or in preventing rate cuts, access to psychological services is increased, highlighting psychology's contributions to health care and raising the visibility of our field for all psychologists. Similarly, when APA helps to secure federal funding for psychological research, it is not only a win for scientists, but a gain for all psychologists because it reflects policymakers' increased recognition of psychology as a valuable scientific resource.

How can we come together in that way? Let's strengthen our communication across our areas of expertise. Our strong psychological science should inform our clinical and applied practice. The real-world experiences of psychologists with their clients—whether individuals or organizations—should inform the research we conduct. Our psychological research, in turn, needs to inform public policy, and the work psychologists do in communities should guide our public policy research.

Let's first remember to think beyond our individual areas of expertise. We can always have more impact together. ■

The Hot List

OPENING MORE DOORS TO CARE

Psychologists will soon be able to practice in nine states even if they are not licensed there—an important step toward getting psychological care to rural residents and other underserved populations. Under the Psychology Interjurisdictional Compact, or **PSYPACT,** psychologists who are licensed in **Arizona, Colorado, Georgia, Illinois, Missouri, Nebraska, Nevada, Oklahoma** and **Utah** will be able to see patients—via telepsychology or in person on a temporary basis—in other compact states without maintaining licensure there. Learn more at **www.asppb.net/page/PsyPACT.**

PLAN YOUR TRIP TO APA 2019 IN CHICAGO

Convention-goers in search of Chicago's off-the-beaten-path museums, best restaurants and other attractions to visit during **APA 2019,** Aug. 8–11, can find curated recommendations, as well as child-care and other travel resources, at **https://convention.apa.org/attend/local-attractions.**

EXPLORE THE INTERSECTION OF TECH AND PSYCHOLOGY

Discover how psychology informs the development and use of artificial intelligence, robotics, biotechnology and much more at **APA's Technology, Mind & Society conference,** Oct. 3–5 in Washington, D.C. Keynote speakers include virtual reality pioneer Skip Rizzo, PhD. Register at **https://tms.apa.org.**

TRAVEL WITH APA TO PORTUGAL

APA's International Learning Partner Program is hosting an educational trip to **Lisbon** and **Porto,** Portugal, Nov. 15–23. Applications are due Aug. 5. Learn more at **https://on.apa.org/Portugal.**

LEARN THE CANDIDATES' GOALS AND PRIORITIES

What do the five **APA presidential candidates** think are the biggest issues facing psychology education and training? Find out at **https://on.apa.org/2021-Election.**

HOW TO VOLUNTEER WHEN DISASTER STRIKES

APA's revamped **Disaster Mental Health Information** website lists the ways psychologists can get training in disaster mental health and psychological first aid, to be part of the response after a hurricane or other emergency. Get started at **https://on.apa.org/DMH.**

CLOCKWISE FROM TOP LEFT: THEMACX, RUSM, GDAGYS, RYZHI/GETTY IMAGES

DID YOU KNOW? **Americans are becoming more open about mental health. Read the data at https://on.apa.org/MH-Survey.**

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In Brief

THE LATEST PEER-REVIEWED STUDIES WITHIN PSYCHOLOGY AND RELATED FIELDS

Good-For-You Food

Children eat less of a food when it's described as unhealthy, finds a study in the *Journal of Experimental Psychology: General*. In a series of six experiments with 225 U.S. children, researchers offered children ages 5 to 9 bowls of blueberry-pear fruit sauce but described them in three different ways: as healthy ("It has a lot of healthy ingredients; it will make your bones and muscles get strong"); unhealthy ("It does not have healthy ingredients; it won't make your bones and muscles get strong"); or neutral ("It has a lot of ingredients; you can buy this food at the store"). When children were offered the healthy and unhealthy options, they ate more of the healthy bowl. When offered the neutral and unhealthy options, the children ate more of the neutral bowl. But when offered the healthy and neutral options, the children ate equal amounts of each, suggesting that their choices were driven by trying to avoid unhealthy foods rather than eat healthy ones.

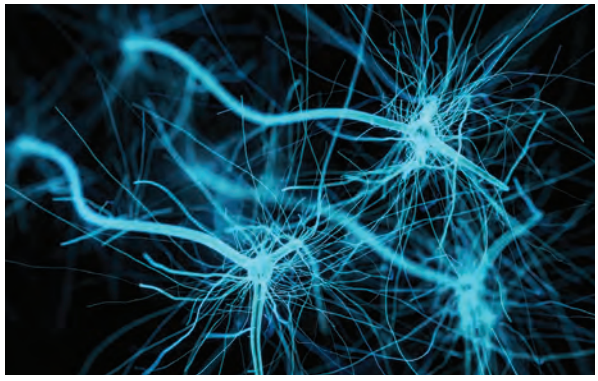
DOI: 10.1037/xge0000588

GRADYREESE/GETTY IMAGES

A LINK BETWEEN PAY AND LGBTQ DISCRIMINATION

U.S. cities with greater gender pay equality also have more progressive laws against sexual orientation-based discrimination, finds a study in *Psychology, Public Policy, and Law*. The researchers analyzed data from the Human Rights Campaign that looked at anti-discrimination laws in 386 U.S. municipalities, and compared those data with U.S. Census Bureau data on the gender pay gap in those areas. Overall, they found that cities with a smaller gender pay gap had more progressive laws against sexual orientation discrimination. The finding held even after controlling for other potentially related variables, such as the cities' religiosity and political climate. The researchers say the finding supports a legal theory that discrimination against lesbians and gay men is related to beliefs in traditional sex roles and to inequality between women and men.

DOI: 10.1037/law0000189



Ketamine may alleviate depression in part by encouraging neuron growth in the brain.

KETAMINE FOR DEPRESSION

A study in *Science* provides insight into how ketamine—the drug newly approved by the Food and Drug Administration to treat depression—works in the brain. Researchers stressed mice by injecting them with a stress hormone or confining them in a small space. Then they administered a dose of ketamine to the mice, which lessened the mice's stress behaviors. Imaging of the animals' brains revealed new dendritic spine growth in the prefrontal cortex 12 hours after receiving the ketamine. But that new growth cannot be solely responsible for the drug's effects, the researchers point out, because the mice's behavior improved

Gender pay equity goes hand-in-hand with progressive laws that protect the rights of gay men and women, suggests one study.

TOP: KOTO_FEJA/GETTY IMAGES; BOTTOM: SPLENDENS/GETTY IMAGES

within three hours—faster than the dendritic spines appeared. However, the dendritic spines might contribute to ensuring the drug's effects last: When the researchers destroyed the new dendritic spines two days after administering ketamine, the mice's stress behaviors returned.

DOI: 10.1126/science.aat8078

THE JOY OF AN INTERCONNECTED LIFE

People who feel a greater sense of "oneness"—who believe that everything in the world is interconnected and interdependent—tend to have greater life satisfaction, finds a study in *Psychology of Religion and Spirituality*. Researchers analyzed data from two online surveys with more than 75,000 adult participants in Germany. They found that oneness beliefs could be distinguished from other constructs such as empathy, social connectedness and connectedness to nature; were stable across time; and were a better predictor of life satisfaction than religious affiliation.

DOI: 10.1037/rel0000259

FELINE FRIENDS

Does your cat know her name? Probably, according to a study in *Scientific Reports*. Researchers in Japan tested 78 cats, both house pets and cats that lived at a "cat café"—a coffee shop where people can interact with resident felines. The researchers videotaped the animals as they heard recordings of either their owner or a stranger saying a series of words. The first four were words similar in length and sound to the cat's name; the fifth word was the name itself. Then the researchers analyzed the videos, coding for signs of feline reaction such as ear moving, tail moving and vocalizing. The researchers found that the cats reacted more strongly to their names than to the other words, whether the speaker was their owner or a stranger. In a follow-up experiment, the household pets who lived with other cats were able to discriminate their own names from the names of the household's other pets, but the cat café cats were not able to do the same.

DOI: 10.1038/s41598-019-40616-4

People who have a greater sense of the interconnectedness of life and the world also have greater life satisfaction.

Most cats that are house pets recognize and respond to their own names.

AN HONEST FACE

Children as young as 5 behave differently toward people because of character judgments they make based solely on the shape of a person's face, finds a study in *Developmental Psychology*. Previous research has shown that adults and children as young as 3 judge others' honesty, competence and dominance/submissiveness based on features like facial width and the distance between the eyes. In four experiments with nearly 350 U.S. children ages 3 to 13, the researchers first confirmed that finding: When looking at paired pictures of faces, children ages 3 and older made the stereotypically expected character judgments of the faces 88% of

TOP: MARTIN-DM/GETTY IMAGES; BOTTOM: ADOGSLIFEPHOTO/GETTY IMAGES

the time. In a follow-up experiment, when asked to choose a gift recipient, children ages 5 and older preferred to give the gift to the person who looked more trustworthy or submissive instead of the person who looked more dishonest or dominant. Children under 5 did not show a face-based gift-giving preference.
DOI: 10.1037/dev0000734

EATING HEALTHY

A brief intervention can reduce teenage boys' consumption of junk food by framing junk food advertising as manipulative corporate marketing, finds research in *Nature Human Behaviour*. Researchers studied 362 eighth graders in Texas. Half of the boys and girls read an exposé-style article about how big food companies try to lure teenagers into buying unhealthy foods. The other half read traditional educational materials about the benefits of healthy eating. Immediately after the intervention, both the boys and the girls in the exposé group had more negative attitudes toward junk food than those in the control group, and this effect lasted for at least three months. Among boys, the intervention also influenced behavior: The boys in the exposé group purchased 31% fewer unhealthy foods and drinks in the school cafeteria over the next three months compared with boys in the control group. No effect on food purchases was observed among girls.
DOI: 10.1038/s41562-019-0586-6

Health-care providers are more likely to misdiagnose African Americans with schizophrenia than other patients.

Convincing teenagers that junk food marketing is manipulative could help them make healthier food choices.

DEPRESSION, SCHIZOPHRENIA AND RACIAL BIAS

African Americans may be more likely to be misdiagnosed with schizophrenia, suggests research in *Psychiatric Services*. Researchers examined the medical records of 1,657 people—599 black and 1,058 non-Latino white—who had been diagnosed with schizophrenia at community behavioral health clinics in New Jersey. The researchers found that the black patients were significantly more likely than the white patients to have screened positive for symptoms of major depression. The researchers concluded that some of the black patients may have been misdiagnosed with schizophrenia because their clinicians did not rule out mood disorders first. By underemphasizing the importance of mood symptoms and overemphasizing psychotic symptoms in black patients, clinicians' diagnoses may be inappropriate in some cases.
DOI: 10.1176/appi.ps.201800223

THE SMELL OF SUCCESS

Sniffing a pleasant odor reduces smokers' urge to light up—a finding that offers a potential treatment for people who are trying to quit, according to a study in the *Journal of Abnormal Psychology*. Researchers asked 232 smokers to bring their favorite brand of cigarette into a lab, light it, extinguish it without smoking it and then rate their urge to take a puff on a scale

TOP: INNOVATEDCAPTURES/GETTY IMAGES; BOTTOM: BPABLO/GETTY IMAGES

from one to 100. Immediately after, the smokers were asked to sniff one of several different types of scents: one of three tobacco scents, one of seven pleasant scents (apple, vanilla, lemon, chocolate, peppermint, lily of the valley or cumin) or a neutral scent. Participants were then asked again to rate their urge to smoke. On average, participants who smelled one of the pleasant scents showed a 19.3-point reduction in the urge to smoke compared with an 11.7-point reduction in those who smelled a tobacco scent and an 11.2-point reduction in those who smelled the neutral scent.

DOI: 10.1037/abn0000431

WORKPLACE WELLNESS

Workplace wellness programs may get employees to exercise more and manage their weight, but they don't necessarily affect other health behaviors or health and wellness outcomes, finds a study in the *Journal of the American Medical Association*. Researchers analyzed employment records, administrative health records, surveys and other measures from 33,000 employees of a large retail company in the United States, comparing employees at 20 work sites that offered a workplace wellness program with those at 140 sites that did not. Overall, employees at the workplace wellness sites reported an 8.3% higher rate of regular exercise and a 13.6% higher rate of actively managing their weight after 18 months. But there were no significant effects on other health outcomes and behaviors (such as body mass index, cholesterol, blood pressure, sleep quality and food choices), medical and pharmaceutical spending measures, or employment outcomes (such as absenteeism and job performance).

DOI: 10.1001/jama.2019.3307

Sniffing a pleasant scent—such as vanilla—could help smokers who are trying to quit.

Workplace wellness programs may not tangibly improve workers' health.

PTSD TREATMENT RESPONSE

Exposure therapy is one of the most commonly used evidence-based treatments for post-traumatic stress disorder (PTSD), but it doesn't work for everyone. Now, a study in *Science Translational Medicine* suggests a

TOP: MAHIR ATES/GETTY IMAGES; BOTTOM: FLAMINGO IMAGES/GETTY IMAGES

brain-imaging biomarker could help distinguish people who are likely to respond well to the therapy from those who won't. In two studies, the researchers used fMRI to scan the brains of 357 total participants, 204 of whom had PTSD. They found that patients who didn't respond to exposure therapy had impaired functional connectivity in the brain's ventral attention network. These patients also performed worse on a verbal memory word learning task. This finding could suggest new avenues to develop targeted treatments for PTSD, the researchers say.

DOI: 10.1126/scitranslmed.aal3236

REPLICATION SUCCESS

Previous research linking the Big Five personality traits to various life outcomes held up under scrutiny in a replication project published in *Psychological Science*. In the new study, researchers asked about 6,000 online participants to complete a 60-item personality measure and take a survey on topics including their careers, relationships, criminal behavior and other characteristics. Seventy-eight associations between personality traits and life outcomes reported in earlier literature were examined, such as the association between higher neuroticism and poorer mental health and between higher conscientiousness and risk of substance abuse. The researchers found that 87% of the previously reported personality-outcome associations replicated, though the effect sizes were smaller in most cases.

DOI: 10.1177/0956797619831612

Teenagers who binge drink may experience greater anxiety later in life.

PREGNANCY AND COGNITION

A woman's history of pregnancy does not significantly affect her cognitive ability later in life, finds a study in *Menopause*. Researchers analyzed data from a longitudinal study of 1,025 women followed in the United States from 1988 to 2016. In all, 77% of the women in the study had been pregnant at least once, with a range from one to 14 pregnancies. The women took a battery of four cognitive tests up to seven times over the course of the study. Aside from a very small reduction in performance on a word recall test among those women who reported having been pregnant at least once, no evidence was found of an effect of pregnancies on cognitive ability. These results suggest that there is no clinically meaningful long-term influence of pregnancy history on age-related change in cognitive function, according to the researchers.

DOI: 10.1097/GME.0000000000001318

Being pregnant does not significantly affect a woman's cognitive abilities later in life.

ADOLESCENT DRINKING

An animal study published in *Biological Psychiatry* suggests why teenagers who binge drink may be more susceptible to anxiety later in life. Researchers exposed rats to alcohol in a pattern designed to mimic human binge-drinking—two days on, two days off—for 14 days during the rats' adolescence, and then let them mature to adulthood without further exposure to alcohol. As adults, those rats were more likely to show anxious behaviors than rats that had never been exposed to alcohol. The binge-drinking rats also had lower levels of Arc, a protein that regulates synaptic development, in the amygdala—a brain region involved in fear responses—as well as fewer neuronal connections in the amygdala.

DOI: 10.1016/j.biopsych.2018.12.021

TRIGGER WARNINGS

Seeing an advance notice of potentially upsetting content does not reduce people's distress over the content, finds a study in *Clinical Psychological Science*. In six experiments with nearly 1,400 college students in New Zealand and online participants, researchers showed participants a graphic video or had them read a graphic story. Half the participants were given an advance warning such as "Trigger Warning: The following video may contain graphic footage of a fatal car crash. You might find this content disturbing." Participants who received a trigger warning reported similar levels of distress to those who did not. This held both for participants who reported having previously experienced a traumatic event and for those who did not.

DOI: 10.1177/2167702619827018

VALUING DIVERSITY PROMOTES HEALTH

Attending a school that values diversity is good for African American teenagers' health, suggests a study in the *Proceedings of the National Academy of Sciences*. Researchers studied 270 eighth graders attending 120 different schools in the Chicago area. They found that students who attended schools that highlighted diversity in their mission statements showed lower levels of inflammatory biomarkers compared with students attending schools that didn't mention diversity in their mission statements. The results held even after controlling for the students' self-reported experiences of discrimination. The researchers suggest that students at schools that value diversity may feel more secure and thus experience less stress, which can lead to less inflammation.

DOI: 10.1073/pnas.1812068116

African American teenagers who attend schools that value diversity appear to be healthier than their peers at schools where differences are not as appreciated.

THE EFFORT OF EMPATHIZING

People try to avoid feeling empathy for others because of the mental and emotional effort it takes, suggests a study in the *Journal of Experimental Psychology: General*. In 11 experiments with more than 1,200 total online participants, researchers

FATCAMERA/GETTY IMAGES

Preteen boys who play team sports have fewer depressive symptoms than peers who don't.

asked participants to choose a card from two virtual decks of photos of people. For one deck, participants were asked to describe the physical characteristics of the person pictured; for the other deck, they were asked to feel empathy for the person. In some of the experiments, the pictures were of refugee children; in others they were of adult faces looking happy or angry. Across all experiments, participants chose from the "empathy" deck just 35% of the time. Afterward, most participants reported that empathy required more effort and that they felt less successful at it than they did at describing physical characteristics.

DOI: 10.1037/xge0000595

TEAM SPORTS

A study of preteen boys and girls in *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* examined the effects of playing team sports on brain structure and depression. Researchers looked at data from 4,191 children, ages 9 to 11, who are participants in the Adolescent Brain Cognitive Development Study. They found that, on average, children who participated in team sports had greater hippocampal volume—as measured by structural magnetic resonance imaging—than those who didn't participate in team sports. Lower hippocampal volume has been associated with depression in adults. The researchers found no association between hippocampal volume and other extracurricular activities, such as music and art. Also, among boys—but not girls—those who played team sports had fewer depressive symptoms than those who didn't, as reported on a parent questionnaire.

DOI: 10.1016/j.bpsc.2019.01.011

People save more money when they feel insecure.

SAVING FOR A RAINY DAY

People are more likely to save money when they feel insecure about themselves and their futures, finds a study in the *Journal of Personality and Social Psychology*. In a series of six experiments with 2,410 total participants in the United States and Israel, researchers explored the relationship between self-image threats—ideas that threaten people's positive views of themselves—and propensity to save. In one experiment, for example, participants played a Sudoku game and were told that they scored in the top, middle or bottom one-third of participants. Then they were asked how much they would save if they were given $1,250. On average, participants who were told that they earned a low score reported that they would save more money than those told they earned a high score. Another study indicated that such an effect was reduced when participants were also induced to think about possible future successes. ■

DOI: 10.1037/pspa0000159

● **For direct links** to the research cited in this section, visit our digital edition at www.apa.org/monitor/digital.

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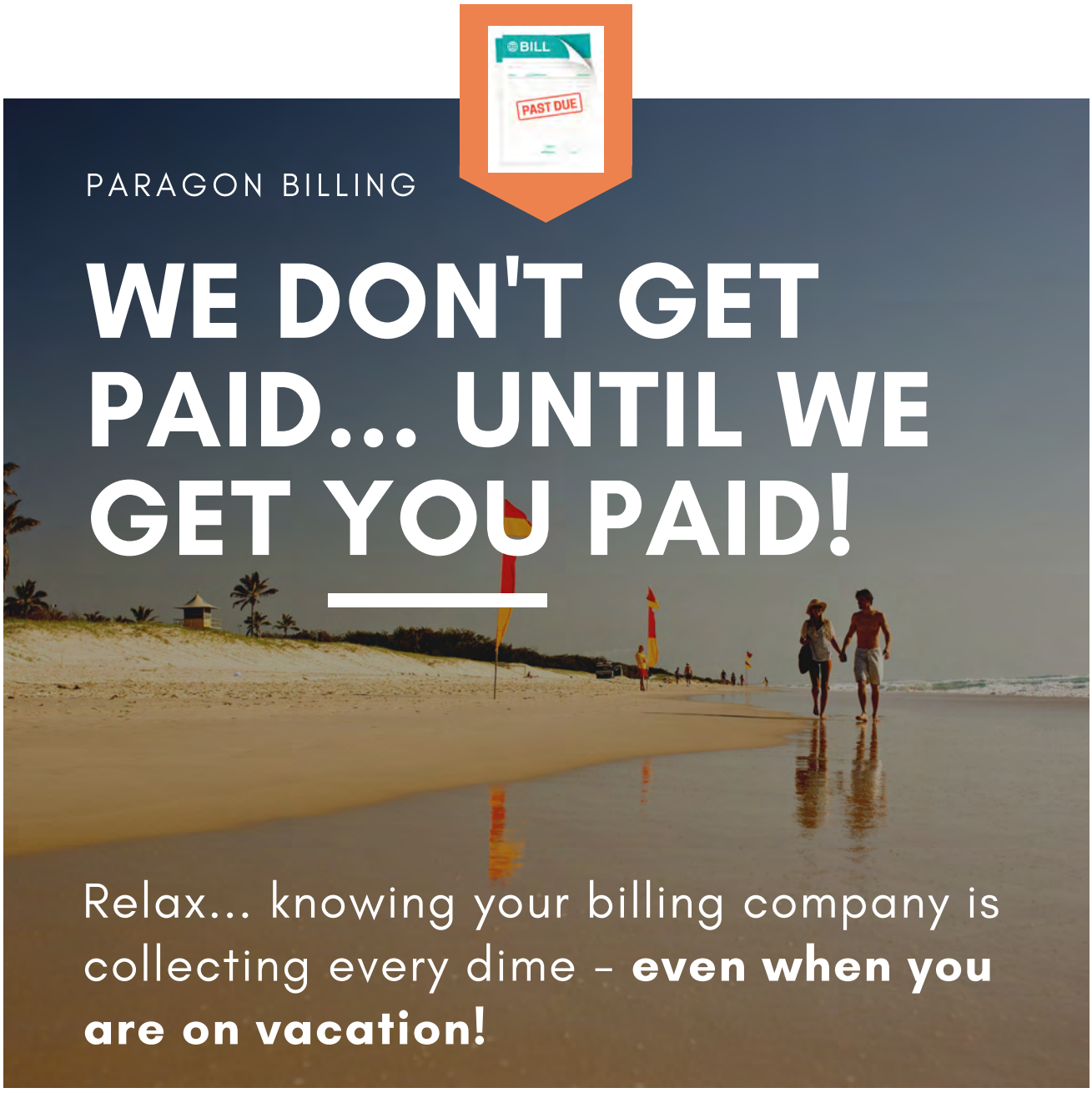

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Datapoint

NEWS ON PSYCHOLOGISTS' EDUCATION AND EMPLOYMENT FROM APA'S CENTER FOR WORKFORCE STUDIES

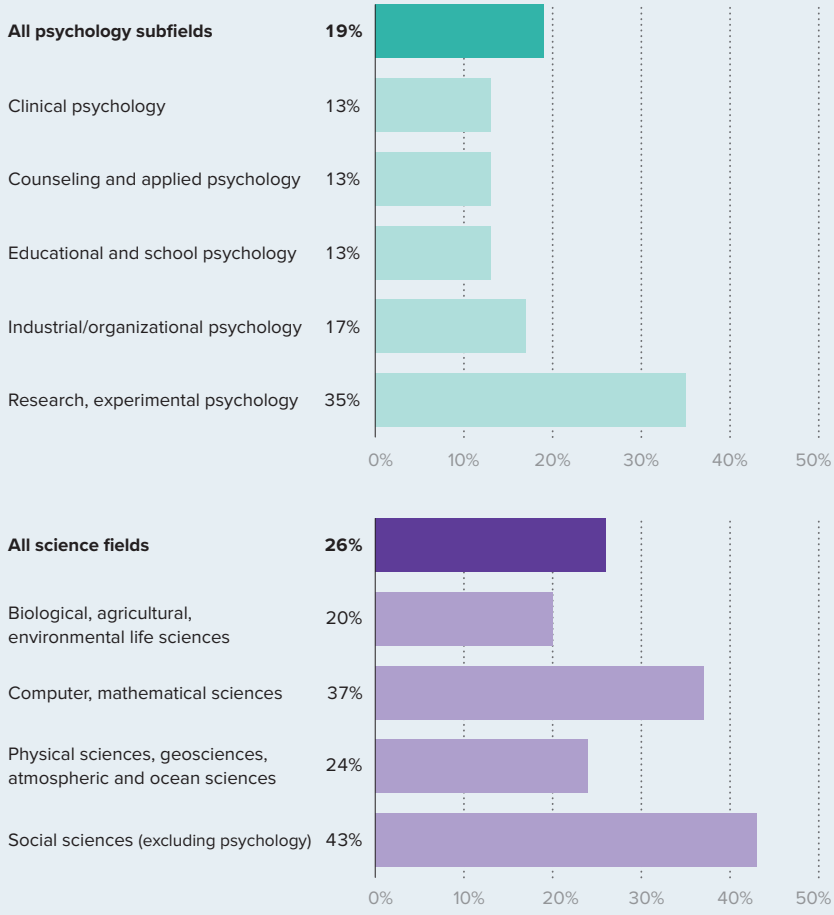
EDUCATING THE NEXT GENERATION

■ Approximately one in five psychologists with a research doctorate work primarily as college and university professors, according to a 2017 survey from the National Center for Science and Engineering Statistics. The survey found that 19% of employed holders of psychology research doctorates reported that the best description of their occupation was post-secondary teachers/professors in science fields.[1]

■ The proportion varied by psychology subfield and was higher in research fields than in health service psychology fields, which typically train psychologists for practitioner roles.[2] Approximately 35% of research and experimental psychology doctorate holders reported themselves as post-secondary teachers in a science field, compared with only 13% of those in educational and school psychology, counseling and applied psychology, and clinical psychology.

■ The proportion across all psychology subfields (19%) was lower than the proportion across research doctorate holders in science fields overall (26%).

Percentage of Doctorate Degree Holders Who Work as Post-secondary Teachers



Source: National Science Foundation, National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2017.

By Peggy Christidis, PhD, Karen Stamm, PhD, Luona Lin, MPP, and Jessica Conroy, BA.
Want more information? See CWS's interactive data tools at https://www.apa.org/workforce/data-tools/index or contact cws@apa.org.

[1]National Science Foundation, National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2017. Retrieved from https://ncsesdata.nsf.gov/doctoratework/2017/index.html (Table 48). A research doctorate requires the completion of a dissertation or equivalent project and is not primarily intended for the practice of a profession. The use of NSF data does not imply NSF endorsement of the research, research methods, or conclusions contained in this report.
[2]Psychology doctorate subfields were formulated and reported by NSF. General psychology and other psychology doctorates were included in "all psychology subfields" but are otherwise not shown here. See https://ncsesdata.nsf.gov/doctoratework/2017/#tabs-2 for more information on how psychology subfields (Table A-2) were defined by NCSES.

BILL WEBSTER

BREXIT BLUES

Psychologists report on an often-overlooked aspect of Brexit: The United Kingdom's divorce from the European Union is causing psychological distress across the country

BY REBECCA A. CLAY

The political turmoil surrounding Brexit—the withdrawal of the United Kingdom from the European Union—is affecting the mental health of U.K. residents. In a poll conducted in March, at the height of the uncertainty about whether Parliament would reach a deal in time for the original Brexit deadline, the U.K.'s Mental Health Foundation found that Brexit was having a big impact on the health of U.K. residents. The survey found that 43% of adults—more than 22 million people—were feeling powerless, 39% were feeling angry and 38% were worried.

"This is regardless of whether you voted to stay or to leave," says psychologist Chiara Lombardo, PhD, the foundation's senior research officer (qualitative). An initial bump in well-being for "Leave" voters immediately after the 2016 referendum has been followed by significant decreases in well-being as the negotiations have dragged on and these voters' expectations for a complete rupture with Europe have gone unfulfilled. While 59% of "Remain" voters reported feeling powerless, for example, more than a third who voted "Leave" felt the same, the poll found.

These emotions are spilling over into other aspects of people's lives. Twelve percent of respondents said Brexit was causing them sleep problems, for instance. Brexit was also causing relationship conflicts, with almost 20% reporting disagreements about Brexit with family members or partners.

Another possible sign that U.K. residents are troubled: The number of antidepressants prescribed in England spiked after the Brexit referendum, according to a report by researchers at King's College London and Harvard University (Vandoros, S., et al., *Journal of Epidemiology & Community Health*, Vol. 73, No. 2, 2018). While the study couldn't prove causation, the authors note, antidepressant prescriptions saw a relative increase of more than 13% compared with other drugs.

And Brexit could further undermine mental health in the U.K. if, as many predict, it plunges the country into a recession, warns stress researcher Brian M. Hughes, PhD, a psychology professor at the National University of Ireland in Galway, who is researching Brexit's impact.

"We know in general terms that recessions have an impact on mental health," says Hughes, pointing to a rise in suicides in the country that coincided with the 2008 recession and the jump in unemployment it caused.

Brexit could also have an impact on physical health, adds Hughes, whose own research focuses on how stress damages the cardiovascular system. In addition to the damage constant physiological arousal can cause, he says, people may use unhealthy strategies such as overeating, not exercising and resorting to nicotine, alcohol or other substances to cope with Brexit-related stress. Plus, medications will likely become more expensive since the U.K. will no longer enjoy the lower costs of trade with fellow EU members. "It's very much a vicious circle," says Hughes.

Grocers, pharmaceutical companies and other organizations have even been stockpiling

Whether they voted to "Leave" or "Remain," Britons are feeling the strain of the country's divisions.

The number of antidepressants prescribed in England spiked after the Brexit referendum, according to researchers at King's College London and Harvard University.

MARK AIRS/IKON IMAGES

supplies. And many individuals have been doing the same. A survey by Kantar Public in January found that a sixth of U.K. residents were either already stockpiling food and medicine or planning to start doing so.

SPECIAL POPULATIONS

Certain groups are facing additional challenges associated with Brexit. Immigrants and ethnic and racial minorities, for example, are experiencing a wave of xenophobia and racism. Part of the motivation for "Leave" voters was a desire to limit immigration. That anti-immigrant, anti-Muslim sentiment is now manifesting itself in hate crime statistics. The U.K.'s Home Office has found that the number of hate crimes reported to the police in England and Wales has more than doubled over the past five years. Race was the motivating factor in more than three-quarters of recent hate crimes. While the Home Office attributes much of the increase to changes in the way police record hate crimes, it also cited a spike in crimes after the Brexit referendum.

At the same time, minorities of all kinds may lose some of the protections they have enjoyed under the EU Charter of Fundamental Rights. The charter, among other protections, prohibits discrimination on the basis of cultural and religious diversity, sexual orientation and other factors, and excising it from British law may leave gaps not covered by domestic laws.

"Discrimination on ethnic grounds perceived by blacks, Asians and minority ethnic individuals following Brexit, combined with existing stigma,

may result in higher rates of mental illness in these groups," says Lombardo.

Workplaces are also feeling the strain, especially because the uncertainties surrounding Brexit make it difficult for organizations to plan, says industrial/organizational psychologist Richard Plenty, PhD, managing director of a company called This Is…. There are concerns about supply shortages and travel difficulties, for example. "And it's outside of everybody's control, which is ironical since the whole thing to start with was to take back control."

In addition to practical difficulties, workplace communication can be difficult, adds Plenty. "You have to be a bit cautious when you're talking to people," he says. "Sometimes you're working with people with very different values, which you may not have realized before."

The nation's young adults—more than 70% of whom voted "Remain" on the referendum—are especially worried about the future, says Ashley Weinberg, PhD, a senior lecturer in psychology at the University of Salford, who chairs a new political psychology section for the British Psychological Society (BPS).

Students may have wanted to travel or live in Europe, opportunities that may no longer be available to them, for example. And for U.K. students who had planned to save money by studying in Germany, Finland or other European countries where tuition is free, that option may no longer be possible. Jobs are another major concern. "I'm telling students to look at a world view rather than one that's European," says Weinberg, who advises students to consider job opportunities in North America, Australia, India and Pakistan. "It's thinking about ways they can build relationships further afield, so they feel their future doesn't have to be stuck in Britain."

THE BIGGER PICTURE

Brexit also threatens the U.K.'s academic landscape as a whole, says Nicola Gale, immediate past president of BPS. "Universities in the U.K. are hugely global these days," she says, noting the number of European and international students and faculty members, grants and research collaborations, and exchange opportunities. "We do want to work on a cross-European basis," says Gale, who represents BPS at the European Federation of Psychologists' Associations and the International Union of Psychological Science.

Residents of Northern Ireland are also on edge as they await a fianl decision on Brexit and its impact on the border between Northern Ireland and the Republic of Ireland, says Tony Cassidy, DPhil, chair-elect of BPS's Northern Ireland Branch.

The 1998 Good Friday Agreement between the U.K. and the Republic of Ireland, which brought peace to Northern Ireland, resulted in an invisible border between the two nations, with people and goods passing freely between them. Brexit could threaten that special status, with a return to checks on travel and goods plus duty taxes on goods.

"Because the Good Friday Agreement is guaranteed by both the Dublin and London governments, the U.K. leaving the EU would require a renegotiation of some form, which could lead to a breakdown in relations," says Cassidy. "Clearly this has the potential to return to the political conflict and likely a return to violence."

The country as a whole is deeply polarized, adds Esther Cohen-Tovée, DClinPsychol, who chairs BPS's division of clinical psychology. "This is already a very wounded country, and things are likely to get worse whatever happens with Brexit," says Cohen-Tovée, director of allied health professions and psychological services at the Northumberland, Tyne & Wear NHS Foundation Trust, which provides National Health Service (NHS) services across the north-east of England. Psychologists should use the same clinical skills they use with clients—listening without judging or insisting they have all the answers—to help create a new narrative of inclusion, she says.

AN OVERTAXED MENTAL HEALTH SYSTEM

"Psychologists can play an important role in supporting people who have suffered as a result of the current uncertainty," agrees Sarb Bajwa, chief executive officer at BPS.

But unfortunately, Brexit may also limit the NHS's ability to support those suffering mental health problems by making it more difficult to recruit and retain psychologists and other mental health

FURTHER READING

How Will Brexit Affect Health Services in the UK? An Updated Evaluation
Fahy, N., et al.
The Lancet,
2019

The Brexit Poll... The Brexit Poll, Part Two
British Psychological Society,
The Psychologist,
2016

professionals from the EU.

EU clinicians currently represent a significant portion of the NHS's workforce. According to a 2018 briefing paper for Parliament, almost 6% of NHS staff in England are EU citizens from outside the U.K. In London, EU citizens represent more than 11% of NHS staff. But they and other staff members are leaving the system. Last year the U.K.'s Department of Health and Social Care revealed that 2,000 mental health clinicians per month were leaving the NHS. As a result, a tenth of mental health positions—more than 22,000 positions—were vacant in mid-2018.

"We've already got significant vacancies for clinical psychologists," says clinical psychologist Richard Pemberton, PhD, who chairs BPS's clinical psychology professional standards unit, explaining that the NHS has long recruited EU psychologists. "People have started to leave, so we're losing them. And people aren't coming; we're getting bad press that this is a bad place for anyone not born here."

Brexit is already causing distress among many EU psychologists who have chosen to stay in the country where they have built careers and formed families. Some may be able to acquire a "settled status" from the U.K. government that will allow them to live and work in the U.K. after it leaves the EU, but they will lose certain rights that they had before Brexit, such as the ability to vote in local elections.

"You're a second-class citizen," says psychologist Emmy van Deurzen, PhD, who came to the United Kingdom from the Netherlands in 1977 and recently got British citizenship. EU citizens are already being denied mortgages and job opportunities because of Brexit-related uncertainty, she says. And some can't stay at all, since settled status is only for those with five years of residence, an employment record and national insurance.

To help, the Existential Academy—a nonprofit group van Deurzen founded—is offering up to 12 online or telephone emotional support sessions with psychologists and other mental health providers to EU psychologists and psychotherapists distressed by the situation.

"People feel terribly betrayed," says van Deurzen. "They came here in good faith and put down roots because they believed it to be safe, then suddenly realized that that was no longer the case." ■

A NEW DEVICE FOR TREATING ADHD IN CHILDREN

The FDA-cleared device produced a meaningful reduction in ADHD symptoms in a clinical trial

BY ZARA GREENBAUM

The first-ever device to treat pediatric attention-deficit hyperactivity disorder (ADHD) received clearance from the U.S. Food and Drug Administration (FDA) in April. The external Trigeminal Nerve Stimulation (eTNS) system offers an alternative treatment option for more than 6 million American children with an ADHD diagnosis.

The current standard of treatment for the disorder involves a combination of medication—typically a stimulant such as an amphetamine—and behavioral therapy, depending on a child's age, say clinical practice guidelines from the American Academy of Pediatrics (AAP).

The eTNS system, designated for use in children ages 7 to 12 under the supervision of a caregiver, is a small electronic device that delivers low-level stimulation to the brain's trigeminal nerve. Each night, electrodes applied to the forehead deliver eight hours of treatment while a child sleeps. Already studied as a potential aid for depression, epilepsy and post-traumatic stress disorder in adults, the eTNS system has now been shown to produce a statistically significant reduction in ADHD symptoms in a clinical trial (*Journal of the American Academy of Child & Adolescent Psychiatry*, Vol. 58, No. 4, 2019).

"This new device offers a safe, nondrug option for treatment of ADHD in pediatric patients through the use of mild nerve stimulation, a first of its kind," says Carlos Peña, PhD, director of the FDA's Division of Neurological and Physical Medicine Devices.

RESEARCH SUPPORT

The FDA provided marketing authorization for the prescription-only device to the biotechnology company NeuroSigma through its "de novo" premarket review pathway, which is used for new low- to moderate-risk devices with no existing market equivalent. Researchers from the University of California, Los Angeles (UCLA), including one clinical and two educational psychologists, conducted the clinical trial with 62 children, ages 8 to 12, who had moderate to severe ADHD. Each participant received four weeks of at-home treatment using either the eTNS system or a placebo device.

The eTNS system

Researchers administered two assessments on a weekly basis: the ADHD-IV Rating Scale (ADHD-RS), a parent questionnaire that evaluates a child's behavior, and the Clinical Global Impressions (CGI) scale, which measures symptom severity.

Compared with the placebo group, children who used the eTNS device showed statistically significant improvements in ADHD symptoms, with average ADHD-RS scores dropping about 31 percent. Children in the placebo group experienced an average decrease of about 18 percent. Slightly over half of participants in the intervention group showed improvement that was clinically meaningful, defined as a score of "much improved" or "very much improved" on the CGI Improvement scale.

The research team also collected electroencephalography (EEG) data before and after administering treatment. Children who used the eTNS system displayed increased activity in

Children with ADHD show symptoms of inattention, such as being easily distracted or forgetful.

the middle and right frontal regions of the brain, which help regulate attention and emotions.

In terms of treatment effect size, the behavioral changes observed are similar to those rendered by nonstimulant medications for ADHD, such as atomoxetine and guanfacine, but less pronounced than the effects of stimulant medications, says psychologist Sandra Loo, PhD, of UCLA's Semel Institute for Neuroscience and Human Behavior, a co-author of the clinical trial.

"There's a great demand for nonpharmacological ADHD treatments, so we're excited about potentially offering empirically supported alternatives," she says, adding that around 30% of children taking stimulants for ADHD experience undesirable side effects—such as weight loss or insomnia—or do not respond to the drugs.

In the present study, more than half of the children using eTNS experienced side effects including fatigue, headache and increased appetite. Compared with the control group, these patients also showed significant changes in weight and pulse, with an average gain of about one kilogram and an increase of 10 beats per minute after four weeks, but no children withdrew from the study due to adverse side effects.

"This study shows that the eTNS device is relatively safe, efficacious and has a lot of promise," says Ronald T. Brown, PhD, a child psychologist and dean of the School of Health Sciences at the University of Nevada, Las Vegas, who was not involved in the clinical trial. "But these are preliminary results with a small number of participants that raise a number of additional questions."

For example, Brown, who was part of the AAP committee that developed the latest treatment guidelines for ADHD, says psychologists need more information about how the new device compares with traditional ADHD treatments, such as stimulant medications and behavior management. He also says it's important to study the durability of the observed effects and whether improvements persist after a limited course of treatment.

FUTURE STUDIES

Loo says her team will conduct more research to better understand the device's utility, including replicating the current findings in a larger sample, extending the participant age range, and assessing the long-term effects of eTNS treatment on ADHD symptoms and brain health. She also wants to delve further into the neural mechanisms underlying the device's effectiveness, which are thought to involve activation of the brain's frontobasal ganglia network, a system involved in inhibitory control and the suppression of motor behaviors.

Her team is performing additional analyses of their data to better understand what factors might predict which patients respond to the eTNS system. They also hope to explore the root of the unexplained increases in weight and pulse observed in the study. Ultimately, says Brown, clinicians are likely to prescribe eTNS treatment if they believe it will improve their patients' functional outcomes—not just reduce ADHD symptoms.

"It's key for us to understand whether this device has effects on academic achievement, behaviors at home and school, and the way children socialize with their peers," he says. ■

LEFT: COURTESY OF NEUROSIGMA; TOP: RIDOFRANZ/GETTY IMAGES

4 QUESTIONS FOR MALCOLM WOODLAND

To improve care for underserved people in Washington, D.C., this clinical psychologist has created a "mini medical school" that encourages black and Latino students to pursue health-care careers

BY STEPHANIE PAPPAS

The nation's capital is a city beset with health disparities based on socioeconomic class and race. Black residents are twice as likely to die of coronary heart disease as white residents, for example, and six times more likely to die of diabetes, according to a Georgetown University report (Georgetown University School of Nursing & Health Studies, 2016). Similar patterns hold for the incidence of cancer and stroke, among other health conditions.

Malcolm Woodland, PhD, is pushing back using one of the community's strongest resources: its youth. Woodland, a clinical psychologist, is the co-founder of Young Doctors DC, a mentoring program for black and Latino high school boys in southeast Washington that aims to encourage these youths to pursue health careers. Participants start the free program in ninth grade, attending Saturday and summer programs and shadowing health professionals in every area of care, from surgery to psychology. The teens, who remain in the program throughout high school, also give back to the community by running health fairs in their neighborhoods.

"It's one thing if I pass a health message to a patient, or if a doctor does," Woodland says. "But it's really different if it's coming from your own kids."

Woodland, who also serves as the deputy director and interim chief psychologist of the Child Guidance Clinic at the Superior Court of the District of Columbia, launched the program with Brent Stephens, MD, and clinical psychologist Adrian Thompson, PhD, in 2013, securing initial funding from the DC Social Innovation Project. To date, 10 boys have graduated from the program, eight of whom have gone on to secondary education. This year's class will graduate five more students, all of whom have been accepted to college.

The *Monitor* asked Woodland about what the students gain from the program, what impact the Young Doctors have had in their community and what comes next.

What does a student's experience in Young Doctors DC look like?

It's a mini medical school. The program generally starts for kids after the summer of their ninth grade year. The kids live on the campus of Howard University for four weeks and come back every summer until they graduate. They spend their mornings in didactic lessons generally taught by psychology

Dr. Malcolm Woodland (center) with Young Doctors DC students (left to right) Henley Gregory, Sean Beach, Reynard Alexander, Henry Chase Gregory, Karl Pilgrim III and Jordan Allen.

SCOTT SUCHMAN

doctoral students and medical students, from public health to anatomy to mental health.

In the afternoons, they'll have writing lab. Rising seniors are working on their college applications, and younger students are working on sharpening their writing skills. On days they're not in writing lab, they shadow health-care professionals, so they're observing surgery, working in a family practice, in the emergency room, or shadowing a forensic mental health expert in court.

During the academic year, on Saturdays, they come back to Howard and engage in some of those didactic lessons. We have a lot of guest speakers from the community. One of the biggest pieces, sprinkled throughout the year, is we go back into communities where the kids come from. We're taking people's blood pressure, testing for vascular disease, taking blood sugar levels and doing a lot of community health work.

What were the challenges in getting Young Doctors DC started?

The big challenge is still there, in that our program is totally free. We didn't want it to be anything else but free because I want it to be available to the kids who are most vulnerable, and who otherwise wouldn't have opportunities. The kids also get a stipend for being in the program in the summer and in the Saturday Academy throughout the year.

One of the biggest difficulties is just funding the program. We have too many applicants for the number of slots we have, yet we don't want to whittle folks off. We want to grab them, engage them and give them the skills that they need.

What impact have the students had?

We once did a health fair in the parking lot of the building where one of our Young Doctors lives, so everyone was coming up to him like, "Hey, son! What are you doing?"

It's nice, because the other kids and parents see the kid in the white jacket with the stethoscope around his neck. He becomes a real healing body who people in the neighborhood go to when something is wrong. That is just not a way that black and brown boys are often understood in their neighborhoods.

We had another young man whose neighbor came to him and told him she wasn't feeling too well. He did a really excellent job helping her. He got me on the phone and he sat with her while she got her physician on the phone, and it turned out there was a problem with her medication.

Another piece is just giving these kids ways to attain their goals. When a 14-year-old says, "I want to be a physician," a lot of times they have no idea what that really means. The Young Doctors really understand now what kind of programs they need to be in, what schools they need to be in. They're really thinking about all the steps they need to take to be competitive.

What are your future plans for the program?

We're always interested in having more people in the program, whether in terms of volunteering or funding and support.

Our goal is to really grow young people and grow that next wave of health-care professionals, but part of this work is making sure these students care for their neighbors. And I want folks to know just how much these young people have to offer. ■

● **For more information,** see www.youngdoctorsdc.org, or reach Dr. Woodland at Malcolm.Woodland@dcsc.gov.

‘I’LL TAKE THE DEAL, IF YOU THINK IT’S BEST’

Attorneys can lead defendants to accept plea deals they don’t really want. Psychologists can help us understand how.

BY JONATHAN P. VALLANO, PhD, UNIVERSITY OF PITTSBURGH AT GREENSBURG, AND LAURA J. SHAMBAUGH, FLORIDA INTERNATIONAL UNIVERSITY

In 2015, Gilberto Garza Jr. was charged with aggravated assault and the possession of and intent to deliver a controlled substance. The prosecution offered Garza a plea deal that included waiving his right to future appeals, which he accepted. But Garza later asked his attorney to appeal his sentence. Garza’s attorney informed him that his appeal would be “problematic” due to the waiver in the plea agreement and did not file an appeal. Garza subsequently filed a claim for ineffective assistance of counsel, arguing that his attorney should have filed an appeal regardless of the waiver.

The Idaho trial and appellate courts both ruled against Garza. However, the U.S. Supreme Court recently reversed the prior courts’ decisions, holding that the attorney’s failure to file an appeal adversely affected Garza despite the waiver, as this waiver does not bar all appeals.

Most criminal cases end in plea bargains—agreements through which defendants plead guilty in exchange for lesser charges and/or more lenient sentences. Yet not much is known about the psychological factors that may affect whether defendants accept plea offers. The *Garza* case raises an important issue: Why do some defendants accept plea offers that they do not wholeheartedly support?

In a 2017 review article in *American Psychologist*, Allison Redlich and colleagues discussed research on how plea offers are framed and how the attorney’s perceived authority may affect defendants’ plea decisions. Framing an issue in terms of gains rather than losses can make decision-makers more risk-averse. In a classic framing study, Daniel Kahneman and Amos Tversky (1981) told participants that an unusual disease was expected to kill 600 people. They then presented participants with two options for combating the disease: Option A, which would save 200 people, and Option B, which had a one-third probability of saving all 600 people, and a two-thirds probability of saving no one. Participants demonstrated a clear preference for Option A, revealing that they were more likely to choose the option framed as a gain rather than risk a potential loss.

Framing research suggests that defendants will be more likely to accept plea offers that are framed as preserving gains (If you accept the deal, you will be *better* off than if you received the *maximum* sentence at trial) rather than risking losses (If you accept the deal, you will be *worse* off than if you received the *lightest* sentence at trial).

Beyond framing, defendants may be more likely to accept a plea offer simply because the deal is presented by an attorney, whom they perceive as an authority figure. Redlich and colleagues noted that authority figures can garner high levels of compliance because some defendants may acquiesce, assuming attorneys “know best.”

The *Garza* case illustrates the importance of attorney-client interactions in defendants’ plea decisions, yet psycholegal research has only scratched the surface on this issue. More field and experimental data are needed regarding attorney-client interactions, including on how attorneys commonly frame plea offers and whether defendants feel compelled to accept any favorably presented offer. Perhaps the high rate of plea deals is rooted in attorneys’ own risk-averse proclivities, which lead them to frame plea offers as gains rather than losses. Further, are attorneys and defendants aware of how these psychological factors may affect their plea decisions? We suspect they’re not (though they might not agree). ■

AT ISSUE

How do attorneys’ discussions of plea deals subtly push defendants toward acceptance?

ROMZICON/THE NOUN PROJECT

● **“Judicial Notebook”** is a project of APA Div. 9 (Society for the Psychological Study of Social Issues).

More than 6% of Americans—some 18.5 million people—live in deep poverty.

CE

CONTINUING EDUCATION PATHWAYS FOR ADDRESSING DEEP POVERTY

BY ZARA GREENBAUM

It may seem impossible for a family of four to survive on just over $12,000 per year or a single person on just over $6,000, but that's what millions of people do every day in the United States. And people who are poor face challenges beyond a lack of resources. They also experience mental and physical health issues at a much higher rate than those living above the poverty line, difficulties that are even worse for those who are extremely poor (Case, A., et al., *American Economic Review,* Vol. 92, No. 5, 2002)—a fact that inspired APA President Rosie Phillips Davis, PhD, ABPP, to tackle deep poverty as her 2019 presidential initiative.

While poverty is bad enough, some 18.5 million Americans—more than 6% of the population and almost half of those living in poverty—live in what is known as deep poverty, with household incomes less than 50% of the poverty threshold, according to the U.S. Census Bureau. For a single person younger than 65, that means living on less than $6,243 per year; for a family of four, less than $12,169.50 (Semega, J.L., et al., U.S. Census Bureau, Current Population Reports, P60-259, 2017).

Deep poverty is hard to exit, say researchers, who add that it's more likely to persist across multiple generations than is poverty as traditionally defined. Over time, extreme material hardship and cumulative disadvantage resulting from problems like poor health care, a weak social safety net and a lack of affordable housing accumulate to create health inequities and restrict educational attainment (McLeod, J., et al., Eds., "Handbook of the Social Psychology of Inequality," 2014).

And over the past two decades, the percentage of Americans living in deep poverty has been on the rise, partly because of welfare reforms passed in 1996 that restrict social services for those who are unemployed (Sherman, A., & Trisi, D., Center on Budget and Policy Priorities, 2014).

Psychologists are increasingly studying, treating and advocating for people living in deep poverty, but there is still a long road ahead.

"Right now, there's a very big role for psychologists to further develop, study and implement interventions that help lift people out of deep poverty," says Sheila Smith, PhD, early childhood director at Columbia University's National Center for Children in Poverty (NCCP). "There's a lot we still have to learn about this population, which until recently hasn't always been well-defined in research"—because of the complexities of studying impoverished populations, which include quantifying poverty's duration and timing.

To help address these issues, an APA working group on deep poverty is reviewing the psychological literature and creating action guides to equip psychologists in research, education and clinical practice with the tools and information needed to understand and begin to address this grave social ill.

"We live in a country that has immense wealth, yet deep poverty exists and persists within our society," says Wendy R. Williams, PhD, professor of psychology and women's and gender studies at Berea College in Kentucky and chair of APA's deep poverty working group. "I would argue that psychologists have a moral imperative to engage in efforts to help rectify this injustice."

POVERTY VERSUS DEEP POVERTY

Researchers have long documented a broad range of health concerns linked to poverty, including increased risk for chronic conditions such as obesity and diabetes and a wide range of mental health concerns. But research on deep poverty is less established, working group members say.

What researchers do know

CE credits: 1

Learning objectives: After reading this article, CE candidates will be able to:

1. Define deep poverty and discuss research on its psychological impacts.

2. Discuss classism in clinical settings and ways to counteract it.

3. Describe possible interventions to help lift people out of deep poverty.

For more information on earning CE credit for this article, go to **www.apa.org/ed/ce/resources/ce-corner.aspx.**

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is that compared with young children above the deep poverty line, children who live in deep poverty perform much worse on composite measures of development that assess curiosity, affection and resiliency, according to data from nationally representative surveys compiled by Smith and her colleagues at the NCCP (Ekono, M., et al., Fact Sheet: Young Children in Deep Poverty, 2016).

The research also found that infants and toddlers from deeply impoverished families were more likely than their age mates from poor and nonpoor families to experience developmental delays, depression and anxiety when a parent was physically or mentally ill. The surveys also showed that adults living in deep poverty experienced more physical and mental health problems and more parenting stress than did adults above the deep poverty line.

"Living in deep poverty creates an enormous amount of physical and psychological stress for parents, making it very hard to function," Smith says. "Over time, this translates into greater risks and vulnerabilities for their children."

Other research findings provide insight into the mental state that can emerge when people lack a critical resource such as money or time. Psychologist Eldar Shafir, PhD, economist Sendhil Mullainathan, PhD, and others found that this state of scarcity can reduce cognitive capacity, making it harder to make smart financial choices (Mani, A., et al., *Science*, Vol. 341, No. 6149, 2013).

"People who don't have enough resources function less well simply because of their circumstances, not because they are inherently less capable," Shafir says.

New research is also challenging psychologists to rethink how social class and its relationship to poverty are incorporated into experimental protocols. For example, when Tyler Watts, PhD, an applied psychology researcher at New York University, and colleagues repeated the seminal "marshmallow test" originated by Walter Mischel, PhD, and colleagues—which found that children who delayed gratification in favor of a larger reward had better life outcomes—they found that the ability to put off immediate pleasure was partly shaped by socioeconomic factors such as a parent's education level or income level (*Psychological Science*, Vol. 29, No. 7, 2018). These new findings suggest that self-control alone can't overcome economic and social disadvantage, Williams says.

"In order to learn how social class, and deep poverty in particular, affects the way we think, behave and make choices, we need to be consistently reporting the social class of our participants," she adds.

The work on class underscores current efforts to better understand how socioeconomic status interacts with other factors to shape mental and behavioral health. To this end, part of the deep poverty working group's task is to complete an extensive review of literature that may include information about deep poverty but is not explicitly labeled as such, including studies of long-term welfare recipients, people who are homeless or people in tribal communities. The goal is to determine what is known about those living in poverty versus deep poverty and to find out where the two groups diverge, as a foundation for future research and interventions.

"It's important for us to clarify what is different about the experience of deep poverty versus poverty more broadly," says Nia West-Bey, PhD, a member of the APA working group on deep poverty and a senior policy analyst at the Center for Law and Social Policy (CLASP), a national nonprofit that advances policy for low-income Americans. "Because if we don't precisely name a problem, it can be hard to know when we've found an effective solution."

REDUCING STIGMA AND CLASSISM

In addition to coping with material deprivation, the deeply poor also face entrenched stigmas, such as the belief that people living in poverty are entirely to blame for their situation, says Laura Smith, PhD, professor of psychology and education at Teachers College, Columbia University.

"Classism affects people in a way that's analogous to the psychological harm that's done by racism—and that can be incredibly damaging," she says.

Psychologists can actively engage in stigma reduction by educating others about the research on poverty, which indicates that social class is a product not of an individual's shortcomings, but rather of a person's life circumstances, says Cindy Juntunen, PhD, dean of the College of Education and Human

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The deeply poor face entrenched stigmas, such as the belief that people living in poverty are entirely to blame for their situation.

Development at the University of North Dakota and chair of the APA Task Force on Developing Guidelines for Psychological Practice With Low-Income and Economically Marginalized Clients. Structural barriers—such as poor-performing schools and limited access to health care—make deep poverty difficult to escape, she says.

"As psychologists, we can counteract the message that people are poor because of their personality or characteristics, when the truth is that income inequality is built into our societal structures and is very hard to overcome," she says.

And clinicians aren't immune to prejudice along class lines. For example, one study found that psychotherapists returned calls to potential clients who were middle-class about three times as often as they responded to help-seekers who were working-class (Kugelmass, H., *Journal of Health and Social Behavior*, Vol. 57, No. 2, 2016).

Clinicians may also make inaccurate assumptions about clients who live in deep poverty, often because they don't understand these clients' everyday realities, Laura Smith adds. Aside from the small fraction of psychologists who accept Medicaid, work in acute care settings or do pro bono work, "many of us have little direct experience working with people who live in extreme poverty, nor were their life circumstances often featured in our textbooks," she says.

Therefore, it's important that psychologists educate themselves about the barriers and situations faced by those living in deep poverty, and consider the resources, opportunities and status that middle- and upper-class Americans often take for granted, Juntunen adds.

One way to do so is to participate in experiential workshops that provide a glimpse of the daily pressures experienced by the deeply poor, such as the Community Action Poverty Simulation, which Juntunen has both attended and administered. For several hours, participants role-play scenarios typical for a family living in poverty, including seeking health care without insurance, finding transportation to work and school and purchasing food with minimal resources.

"Going through an experience where you could feel, even just for a tiny moment, a dim shadow of the hurdles people in poverty face is a powerful reminder of how much distress and pain they can have in their daily lives," Juntunen says. The simulation has been shown to increase empathy and knowledge of the circumstances faced by low-income populations (Strasser, S., et al., *American Journal of Health Education*, Vol. 44, No. 5, 2013).

Psychologists should also bear in mind that the deeply poor may hesitate to speak freely to therapists outside their social class, just as other marginalized clients often seek support from those with shared lived experience, says West-Bey. "In order to build therapeutic relationships effectively, we need to enter these communities with cultural humility and a willingness to learn," she says.

KEY POINTS

1

About 18.5 million Americans live in deep poverty—earning less than $12,169.50 per year for a family of four—and the percentage of Americans living in deep poverty is on the rise.

2

Deep poverty harms the physical and mental health of children and adults, with links to obesity, diabetes, developmental delays, anxiety and depression.

3

Those living in deep poverty face stigma and discrimination from the public and from clinicians. It is important that psychologists educate themselves about the barriers people face to escape deep poverty.

4

Policy changes and advocacy work are crucial to begin reversing the damage done by deep poverty.

Clinical psychologists can better reach clients who are deeply poor by accepting more Medicaid patients, offering services in urban and rural low-income areas, and using telehealth to administer screenings and treatment, she suggests.

Clinicians can also get more creative about the venues in which psychological services are offered. Sheila Smith says that home visits are a key way to reach people who are economically stressed and may lack transportation. Early childhood education programs, often held at local schools and community centers, also offer a convenient space in which to screen parents for depression or other mental health problems.

This approach requires partnering with other professionals, including case managers, social workers and certified peer specialists. "These families are not well-served by a siloed approach," Sheila Smith says, "so it's important to team up with others working in the community and ensure that their efforts are valued to the same extent as our own."

THE BIGGER PICTURE

As valuable as research and traditional psychological services are, some experts stress that policy changes are crucial to begin reversing the damage done by deep poverty.

"Studying people living in deep poverty and helping those who are already bearing up under its damage is important," says Laura Smith, "but it's just as important to engage in preventative advocacy and concrete policy changes that address economic inequities."

One way is to support a higher federal minimum wage, which Laura Smith says is currently too low to enable workers with children to rise above the poverty line (*American Psychologist*, Vol. 70, No. 6, 2015). She also urges

A PRESIDENTIAL PRIORITY

HOW APA IS SPEAKING OUT ON DEEP POVERTY

APA President Rosie Phillips Davis, PhD, ABPP, has outlined three goals for the 2019 deep poverty initiative: change attitudes and perceptions, change practice and change policy. To augment deep poverty working group's ongoing review of research and practice, APA has launched a number of programmatic and advocacy efforts.

■ **Dialogues.** Davis began the year by introducing the initiative in her keynote speech at the 11th Biennial National Multicultural Conference and Summit in Denver. In March, a cross-disciplinary expert panel convened in Washington, D.C., for a National Conversation on Deep Poverty. Panelists, including Davis, Clarence Anthony, MPA, executive director of the advocacy group National League of Cities and former mayor of South Bay, Florida, and others, discussed the causes of, impacts of and possible solutions to deep poverty in the United States.

■ **Events.** APA is also working to host a congressional event on deep poverty and its psychological ramifications; will offer several sessions on the topic during APA 2019 in Chicago, Aug. 8–11; and will observe the International Day for the Eradication of Poverty on Oct. 17.

■ **Policy.** On the policy front, APA has focused on thwarting federal attempts to weaken the social safety net, which have included efforts to implement block grants, stricter work requirements or shorter time limits for health care, nutritional assistance and housing programs. For example, APA opposes an ongoing effort to institute work requirements for SNAP, the Supplemental Nutrition Assistance Program, because of the physical and mental health benefits of the program as well as psychological research suggesting that revoking benefits does not help unemployed people find work.

■ **Advocacy.** APA's advocacy team also supports the Raise the Wage Act, an effort to increase the federal minimum wage to $15 an hour; the Homeless Children and Youth Act, which would provide services for homeless families; and other public policies shown to mitigate the effects of deep poverty. In addition, APA plans to provide a toolkit to help psychologists submit op-eds about deep poverty to their local newspapers.

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Clinical psychologists can better reach clients who are deeply poor by accepting more Medicaid patients and offering services in urban and rural low-income areas.

psychologists to draft briefs and policy statements to inform judicial bodies and legislators on relevant scientific findings, such as Shafir and Mullainathan's research on scarcity. APA's advocacy arm, which promotes a range of policies to help low-income populations, is one venue available to psychologists who wish to do so.

Psychologists are already promoting research-informed policies to improve economic security. In one of the latest efforts, psychologists were among the authors of a 2019 National Academies report that summarizes research and advances policy recommendations that could cut child poverty rates in half within a decade. Citing research on poor children's increased risk of depression, learning disabilities, academic problems and other mental and behavioral health issues, the report concludes that a causal link exists between poverty and numerous negative outcomes for children. The report recommends two policy packages for reducing child poverty, which include tax credits, increased supplemental assistance for food and housing and improved child support (National Academies of Science, Engineering, and Medicine, "A Roadmap to Reducing Child Poverty," 2019).

Another key step is to develop and implement large-scale interventions that address factors that may be caused or exacerbated by deep poverty, such as poor parental mental health. For example, interventions that simultaneously support both children and their parents—known as "two-generation approaches"—appear to be particularly effective in tackling deep poverty. The Child First intervention, for instance, includes a dyadic treatment component that helps parents and children develop strong, nurturing relationships, which Laura Smith says can be challenging for parents whose primary focus is on their family's material survival.

At CLASP, West-Bey has worked with state agencies in Minnesota and Oregon to design, test and implement such policies at the state level. The Family Independence Initiative (FII), which will launch statewide in Oregon in 2019, provides a platform for families living in poverty to build resource-sharing networks and support one another with minimal government involvement.

The FII was informed by and designed using input from families and communities living in extreme poverty, which experts say is an essential part of building effective policies. In line with this thinking, a central focus of APA's deep poverty working group will be to incorporate the perspectives of people with lived experience of deep poverty.

"If you talk to the folks who are closest to the problem, they are also often closest to the solution," West-Bey says. "People in deep poverty have developed a lot of strengths to navigate their situation," she adds. "If more of our policies recognize that, we can make a much bigger difference." ■

FURTHER READING

Considering Carnegie's Legacy in the Time of Trump: A Science and Policy Agenda for Studying Social Class
Williams, W.R.
Journal of Social Issues, 2019

Resources on the Inclusion of Social Class in Psychology Curricula
APA, 2017

In a Land of Dollars: Deep Poverty and Its Consequences
Cuddy, E., et al.
The Brookings Institution, 2015

Psychology, Poverty, and the End of Social Exclusion: Putting Our Practice to Work
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Teachers College Press, 2010


BETTER WAYS TO

MORE IMPACT TOGETHER

In the first of a series, we look at how psychologists in a variety of settings are building on one another's work to address today's most challenging issues. Here is how they are working together to advance the field of suicide prevention.

BY KIRSTEN WEIR

PREVENT SUICIDE

SUICIDE IS THE 10TH-LEADING CAUSE of death in the United States, overall. For people ages 35 to 54, it ranks fourth, and for 10- to 34-year-olds, second. ¶ Over the decades, suicide rates have climbed and fallen and climbed again. Between 1999 and 2017, the suicide rate increased 33%, according to the U.S. Centers for Disease Control and Prevention (CDC) (see March *Monitor,* "Worrying Trends in U.S. Suicide Rates"). Meanwhile, health-care providers still struggle to identify those at risk and to intervene. Yet suicide researchers say that situation is starting to change. ¶ Within the field of psychology,

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experts are bringing their unique skills to bear on the problem of suicide. Basic scientists are exploring brain changes and risk factors associated with suicidal ideation and behavior. Applied scientists are seeking new ways to identify those at risk. Clinical researchers are testing new therapeutic interventions, and clinicians on the front lines are helping deliver those treatments to people who are struggling. Meanwhile, psychologists working in advocacy roles are drawing from the latest research to educate the public and promote policies proven to reduce suicide rates. And many psychologists in the suicide field have skills that extend across other subfields of psychology, enbling them to act simultaneously as clinicians, researchers and educators.

"Our field is unique in the opportunities it provides to engage in all sorts of activities: research, clinical work, teaching, influencing policy. You can do it all in one lifetime," says psychologist Jill Harkavy-Friedman, PhD, vice president of research at the American Foundation for Suicide Prevention (AFSP).

"In the suicide field, psychologists are really partnering across three arms: science, services and policy," adds Joan Asarnow, PhD, a clinical psychologist and professor of psychiatry and biobehavioral sciences at the University of California, Los Angeles's David Geffen School of Medicine, whose work focuses on suicide prevention and interventions in youth. "We need basic science to inform our treatments. And on the other end, we need to find ways to get these [prevention and treatment] approaches into our communities."

To be sure, it's a multidisciplinary effort, involving psychiatrists, emergency room physicians, social workers, public health experts, pediatricians, school counselors, teachers and many others. But psychology is notable for its wide-ranging expertise—and that diverse expertise is a natural fit for the field of suicide prevention.

Increasingly, psychologists are banding together with others both inside and outside the field to tackle the problem of suicide prevention, says Cheryl King, PhD, a psychologist at the University of Michigan whose research focuses on improving suicide-risk assessments and evaluating interventions to reduce risk in youth. When she began her work three decades ago, the research was somewhat piecemeal, she says. No longer. "We were always concluding our sample sizes were too small, our statistical power was too limited, further research was needed. Now there are a lot of big teams working on this," she says. "Psychologists who study suicides are members of a growing community of researchers who often collaborate with others on interdisciplinary research teams."

THE ADVOCATE

"Our field is unique in the opportunities it provides to engage in all sorts of activities: research, clinical work, teaching, influencing policy. You can do it all in one lifetime."

JILL HARKAVY-FRIEDMAN, PhD, AMERICAN FOUNDATION FOR SUICIDE PREVENTION

IMPROVING SUICIDE-RISK PREDICTION

Suicide is an ancient problem, but within psychology, it's a fairly young field. Historically, most suicide research has come from psychiatry departments, since people with suicidal thoughts and behaviors are often hospitalized in psychiatric settings, says Joe Franklin, PhD, an assistant professor of psychology at Florida State University who studies interventions for suicide and self-harm. But over the last three decades or so, more and more psychologists have gotten involved.

One area in which that teamwork is paying off is in the area of suicide-risk prediction. Many risk factors are associated with increased suicide risk, including depression, anxiety, sociodemographic factors and substance use. But not everyone who has depression or uses drugs or alcohol has suicidal thoughts. To better understand risk, Franklin, with his former postdoctoral adviser Matthew Nock, PhD, a professor of psychology at Harvard University, and colleagues analyzed 365 studies of suicide-risk factors over the last half century. "I'm a big proponent of going back to that basic science to ask, 'What do we really know about what causes suicide?'" Franklin says.

Not nearly enough, according to their

analysis. Franklin and his colleagues found that after 50 years of research, prediction of suicidal behavior was still only slightly better than chance (*Psychological Bulletin*, Vol. 143, No. 2, 2017). "We've been moving in circles in suicide research, and we aren't where we want to be in terms of suicide prediction," he says.

Such findings reinforce what clinicians on the ground have long recognized, says King: "Single risk factors just don't predict suicide well." Still, the analysis has been an important and influential finding for the field, and has given a fresh push to efforts to better predict who is at risk.

To better understand how risk factors interact, Franklin and his colleagues applied machine learning to the electronic health records of more than 5,000 adults who had a history of self-injury. They developed an algorithm that predicted suicide attempts based on combinations of risk factors including demographic data, previous diagnoses, medication history and past health-care utilization (Walsh, C.G., et al., *Clinical Psychological Science,* Vol. 5, No. 3, 2017). "Machine learning can take us from near-random guessing to a prediction that's about 80% correct," Franklin says.

THE BASIC RESEARCHER

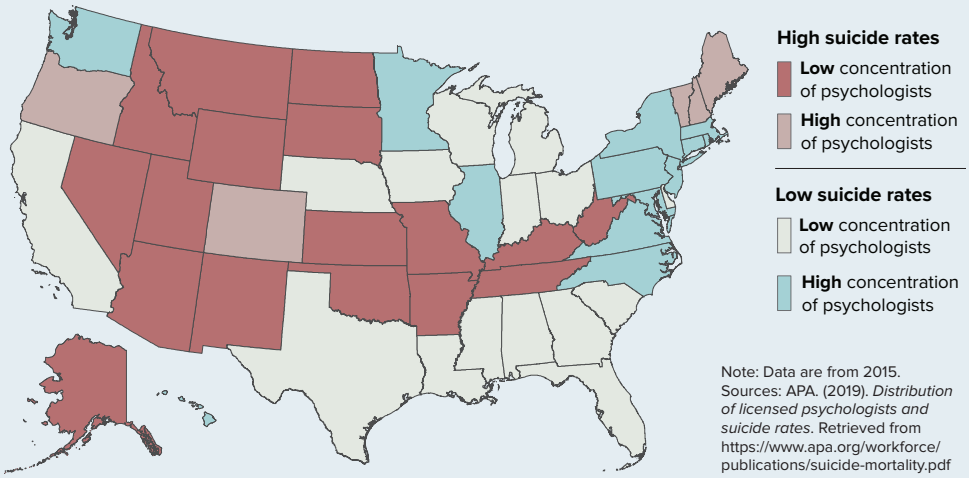
"I'm a big proponent of going back to that basic science to ask, 'What do we really know about what causes suicide?'"

JOE FRANKLIN, PhD, FLORIDA STATE UNIVERSITY

King is also harnessing technology to improve suicide-risk assessment among adolescents. Her team has developed an adaptive screening tool that adjusts to the individual. "The questions posed to youths depend upon their responses to previous questions, so different youths get different sets of questions to get the best prediction possible," she says. In the National Institute of Mental Health (NIMH)-funded Emergency Department Screen for Teens at Risk for Suicide study, King and her collaborators are testing the screening in 14 pediatric emergency departments nationwide. If testing is successful, she plans to work with implementation experts to

Where Psychologists Are Needed Most to Combat Suicide

Data suggest which states could benefit most from more psychologists, more training in suicide prevention, or both. This map shows where suicide rates are higher or lower than the national mean (15.8 suicides per 100,000 population) and where there are fewer or more psychologists than the national mean (29.6 psychologists per 100,000 population).



Note: Data are from 2015.
Sources: APA. (2019). *Distribution of licensed psychologists and suicide rates*. Retrieved from https://www.apa.org/workforce/publications/suicide-mortality.pdf

BILL WEBSTER

put the tool into use. "Our interest is in getting this new teen suicide-risk screen out into the field," she says.

FROM LAB TO CLINIC

Basic research is informing our understanding of suicide in other ways as well, including efforts to understand genetic signatures and brain activity associated with suicidal behaviors. For example, psychologists at Carnegie Mellon University are looking for neurocognitive markers associated with suicidal ideation and attempts. The researchers used fMRI to look at the neural patterns of 17 people with and 17 people without suicidal ideation as they thought about concepts including death, cruelty and praise. Using machine-learning techniques to assess the participants' neural patterns, the researchers were able to determine with 91% accuracy those who had suicidal ideation and those who did not. What's more, among those with suicidal thoughts, the algorithm differentiated with 94% accuracy those who had made suicide attempts from those who had not (Just, M.A., et al., *Nature Human Behaviour,* Vol. 1, 2017).

Elsewhere, psychological scientists are exploring new ways to model suicidal behavior in order to understand what might make someone act on a suicidal impulse. "It's just hard to do experimental suicide research, logistically and ethically," says Franklin. But he and others are beginning to use virtual reality (VR) to test how various factors might affect the likelihood of self-harm. Franklin developed a VR scenario in which people can virtually jump from a height or shoot themselves, and tested it among participants who did not have a history of suicidal thoughts (*Behaviour Research and Therapy,* online 2018). He plans to use the system to study how factors such as social rejection might influence the way people behave in those virtual scenarios. "We can't directly study the causes of suicidal behavior, but we can directly study the causes of virtual suicidal behavior," he says.

At the clinical end of the spectrum, psychologists are also working to improve outcomes for people at risk of suicide. That effort has seen significant advancement in recent years, says psychologist Ivan Miller, PhD, a professor of psychiatry and human behavior at Brown University. "Until about 15 years ago, there really wasn't an awful lot of empirically oriented research directly focused on suicide," he says. "We now have several types of interventions that have been shown to be effective at reducing suicidal behaviors."

Among those effective interventions is one tested by Miller and colleagues. The Emergency Department Safety Assessment and Follow-up Evaluation (ED-SAFE) study tested a suicide intervention in eight hospital emergency departments nationwide. Emergency department staff used a brief screening to assess suicide risk among patients. Those who were flagged as at increased risk received a secondary screening, a self-report safety plan, and the Coping Long Term with Active Suicide Program (CLASP), a values-based suicide prevention program delivered by telephone over the following year. Patients who received the intervention had 30% fewer suicide attempts during that year than patients who received standard emergency department care (*JAMA Psychiatry*, Vol. 74, No. 6, 2017).

The safety planning intervention used in the ED-SAFE study was a paper-and-pencil version delivered by nurses. Face-to-face safety planning has also been shown to be effective as a suicide intervention. One such face-to-face intervention, developed by psychologists Barbara Stanley, PhD, at Columbia University, and Gregory Brown, PhD, at the University of Pennsylvania, and colleagues, is the Safety Planning Intervention (SPI). The SPI involves several steps, including teaching people at risk of suicide to identify personalized warning signs for an impending

THE CLINICAL RESEARCHER

"Until about 15 years ago, there really wasn't an awful lot of empirically oriented research directly focused on suicide. We now have several types of interventions that have been shown to be effective at reducing suicidal behavior." IVAN MILLER, PhD, BROWN UNIVERSITY

suicide crisis, determine coping strategies and pinpoint individuals who can support them in a crisis. Stanley and colleagues tested the SPI in nine emergency departments and found that it reduced suicidal behavior and increased treatment engagement in patients at risk of suicide (*JAMA Psychiatry,* Vol. 75, No. 9, 2018).

Psychologists have played a leading role in developing other evidence-based frameworks to address suicidal thoughts and behaviors, including dialectical behavior therapy (DBT; Linehan, M.M., et al., *JAMA Psychiatry,* Vol. 72, No. 5, 2015) and the collaborative assessment and management of suicidality (CAMS; Jobes, D.A., *Suicide and Life-Threatening Behavior,* Vol. 42, No. 6, 2012). Several versions of cognitive-behavioral therapy (CBT) have also been shown to reduce suicide attempts. Asarnow and colleagues showed that the Safe Alternatives for Teens and Youths (SAFETY) intervention, a family-based treatment informed by CBT and DBT, reduced suicide attempts in high-risk adolescents (*Journal of the American Academy of Child & Adolescent Psychiatry,* Vol. 56, No. 6, 2017).

M. David Rudd, PhD, ABPP, and colleagues demonstrated that even a brief CBT intervention can reduce repeat suicide attempts in military personnel by about 60% (*American Journal of Psychiatry,* Vol. 172, No. 5, 2015). Still, suicide rates among military personnel and veterans have increased over the last decade. One reason, suggests Rudd, is that evidence-based interventions haven't become established very quickly in the majority of clinical settings. "The clinical and scientific fields have undeniably moved forward in the last two decades. There's probably been more movement in the last 15 years than in the previous 50," he says. But evidence-based treatments such as his brief CBT intervention still aren't widely

THE POLICYMAKER

"We closely monitor the research to try to incorporate as much as we can into all of our suicide prevention activities."

RICHARD MCKEON, PhD, SAMHSA

MICHAEL S. WILLIAMSON/THE WASHINGTON POST VIA GETTY IMAGES

A veterans' advocacy group planted flags on the National Mall in Washington, D.C., in 2018 to memorialize veterans who died by suicide.

used in clinical settings, he says. "We need more implementation scientists to get involved as well as policy experts."

INFLUENCING POLICY AND FUNDING

Though progress in that regard is slower than most psychologists would like, many of those in the field say they're optimistic that prevention and intervention efforts are gaining momentum. In 2010, the National Action Alliance for Suicide Prevention launched as a public-private partnership to advance and update the National Strategy for Suicide Prevention, which details goals and objectives for reducing deaths by suicide.

That alliance includes some 250 partners, including major federal agencies such as NIMH, the Substance Abuse and Mental Health Services Administration (SAMHSA), the Department of Defense and the Department of Veterans Affairs. The creation of this partnership and the development of a national strategy have been major steps forward in the effort to reduce deaths by suicide, says Jane L. Pearson, PhD, a psychologist and special adviser to the director on suicide research at NIMH.

One important recent development was the expansion of the CDC's National Violent Death Reporting System, which collects data on deaths by suicide and other violent deaths in the United States. Incredibly, that system wasn't fully funded to collect data from all 50 states until 2018. Without those numbers, it has been hard to paint a complete picture of U.S. suicides, says Pearson. By gathering data on the characteristics and experiences of everyone who dies by suicide, researchers can better understand who is at risk—and find more effective ways to help them, she says.

Having a psychologist such as Pearson involved in NIMH's efforts has been a boon to suicide research, says Asarnow. Meanwhile, psychologists at SAMHSA have been leading the way on suicide prevention services, she adds. That agency oversees the National Suicide Prevention Lifeline, which last year answered more than 2.2 million calls.

SAMHSA also administers the Garrett Lee Smith State/Tribal Youth Suicide Prevention and Early Intervention Grant Program, which provides funding to states and tribes for implementing youth suicide prevention and early intervention strategies in settings such as schools, juvenile justice systems and foster care programs. Richard McKeon, PhD, MPH, a psychologist and chief of the suicide prevention branch at

FURTHER READING

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National Action Alliance for Suicide Prevention, 2018

Comparison of the Safety Planning Intervention With Follow-up vs Usual Care of Suicidal Patients Treated in the Emergency Department
Stanley, B., et al. *JAMA Psychiatry,* 2018

National Action Alliance for Suicide Prevention
https://theactionalliance.org

American Foundation for Suicide Prevention
https://afsp.org

ADVOCACY

APA'S OUTREACH ON SUICIDE PREVENTION

APA supports suicide prevention research and policy through a number of efforts. Recent examples include:

■ **Calling out a public health crisis.** In 2018, the Centers for Disease Control and Prevention reported a 25% increase in suicide rates between 1999 and 2016. APA called for suicide to be recognized as a public health priority that requires a multifaceted public health approach.

■ **Rally for suicide research.** In April 2018, APA joined multiple organizations to co-sponsor the American Foundation for Suicide Prevention's first Rally to Prevent Suicide on the steps of the nation's Capitol.

■ **Support for the Mental Health Telemedicine Expansion Act, H.R. 1301.** APA supports legislation that expands telehealth services for Medicare beneficiaries, allowing them to receive psychotherapy services through telehealth in their own home, with the goal of improving health outcomes for older adults, including those at risk of suicide.

■ **Support for research on gun violence.** Firearms account for just over half of all suicide deaths. APA was one of 14 leading medical and public health groups to join gun violence prevention organization Giffords to urge action

SAMHSA, has worked with the Garrett Lee Smith program since 2005. During that time, he says, research has shown that the program makes a difference. Evaluation studies have found that counties that received those grants had lower rates of youth suicide attempts and deaths by suicide than matched counties that did not receive funding (Garraza, L.G., et al., *JAMA Psychiatry*, Vol. 72, No. 11, 2015).

McKeon says he and his colleagues keep a close eye on the latest science as they determine how best to provide support. When data showed that the impact of the Garrett Lee Smith–funded programs faded over time, for example, SAMHSA increased the amount of funding and extended the length of the grants, hoping that sustained support would make the benefits last. "We closely monitor the research to try to incorporate as much as we can into all of our suicide prevention activities," McKeon says.

Outside of government, psychologists such as Harkavy-Friedman at AFSP are advocating for greater research investment and policies that could reduce deaths by suicide. AFSP lobbied for the expanded National Violent Death Reporting System, for instance. And in her role overseeing the organization's research grant program, Harkavy-Friedman helps support scientists whose work has the potential to inform prevention efforts. "We're always advocating for increased funding for research, but we also want to show that research is having an impact," she says.

THE EDUCATOR

"Exposure is the best teacher. If you're interested in working across fields of psychology, the best thing you can do is invite in people who are sitting in a different place."

JANIS WHITLOCK, PhD, CORNELL UNIVERSITY

REACHING ACROSS THE DIVIDE

From research labs to hospital corridors, from funding agencies to political rallies, psychologists are deeply embedded in efforts to reduce deaths by suicide. Though their roles and backgrounds differ, many of those experts echo the same two major takeaways when describing the current state of their field: First, suicide research has recently made significant strides.

on gun violence. The partners sent a letter to Congress urging members to fund federal research on gun violence through the CDC.

■ **Supporting national suicide programs.** APA has advocated for expanded funding for federal agencies that develop, evaluate and implement suicide prevention and intervention strategies, including the NIH, SAMHSA and the CDC (including CDC's National Center for Injury Prevention and Control).

■ **Preventing suicide deaths in veterans.** APA works in a variety of ways to prevent suicide among veterans, including involvement with the REACH VET program, which analyzes data from veterans' health records to identify those at increased risk for suicide to provide pre-emptive care and support, and advocating for safe gun storage practices among military and veteran populations.

■ **Improving data collection.** APA supported efforts to expand the National Violent Death Reporting System—which tracks both suicides and homicides—including co-hosting a congressional briefing with the Injury and Violence Prevention Network in 2015. In 2018, the system was successfully expanded to all 50 states.

MORE IMPACT TOGETHER

In this new *Monitor* series, we explore how psychologists address some of society's greatest challenges through the work they do in their distinct—yet interdependent—roles as researchers, practitioners, applied experts, educators, advocates and more. Up next month: How psychology is informing the debate over immigration and family separation.

But second, there's still a lot of work to be done.

"We've found some things that work, and we're starting to get more clues about how to prevent suicide. But we need more researchers looking at this," Pearson says.

And the best way to accomplish that? Just start, says psychologist Janis Whitlock, PhD, a research scientist and associate director for teaching and training at the Bronfenbrenner Center for Translational Research at Cornell University. Whitlock's own research focuses on self-injury, which is a risk factor for suicide. And in her teaching role, she trains other scientists to translate their research into practice. "Exposure is the best teacher. If you're interested in working across fields of psychology, the best thing you can do is invite in people who are sitting in a different place," she says.

Whitlock recommends that when psychologists are reaching out to form those collaborations, they should start with a lot of questions—and be open to hearing the answers. "When researchers want to start working across fields, the biggest mistake is that they assume people think like them. They go in with their road map and start charting things out in a linear way. But the best way to cultivate relationships is to ask questions, listen and integrate everybody's perspective," she says. "You have to learn to take different perspectives: how to wear the policymaker hat or the practitioner hat. That's not intuitive for most researchers."

Though it might not come naturally, it's well worth the effort, says Mitch Prinstein, PhD, ABPP, a distinguished professor of psychology and neuroscience at the University of North Carolina at Chapel Hill who studies adolescent depression and self-injury. "The field of psychology is unique in our ability to move science from the lab to providers' offices, and even into legislative efforts," he says. "Psychology can make an enormous difference by working together across science, practice and policy. Together, our work can truly save lives." ■

INTERDEPENDENT ROLES

TACKLING SUICIDE FROM MANY ANGLES

Psychologists apply their expertise to the problem of suicide from many angles, including:

■ **Basic science.** Researchers explore topics such as genetic susceptibility, brain changes and other complex risk factors associated with suicidal thoughts and behaviors, using tools such as neuroimaging, virtual reality and machine learning.

■ **Applied science.** Psychological scientists design tools such as digital apps and screening methods to assess suicidal thoughts, and new interventions to help those at risk.

■ **Clinical research.** Clinician-scientists bridge the gap between the clinic and the community to test new screening tools and interventions in real-world settings.

■ **Clinicians.** Clinical psychologists treat patients with suicidal thoughts in both inpatient and outpatient settings. They use therapeutic frameworks such as safety planning, dialectical behavior therapy and the collaborative assessment and management of suicidality.

■ **Educators.** Psychology faculty train the next generation of researchers and clinicians in suicide prevention, and they also educate the public about suicide.

■ **Policy influencers.** Psychologists in advocacy roles draw from the latest research to lobby policymakers for legislation to reduce deaths by suicide. This legislation provides funding for suicide research and prevention programs.

MOVING ASSESSMENT OUT OF THE CLINIC

Wearables, gaming, virtual reality and other rapidly developing technologies enable psychologists to gather information in real-life settings

BY REBECCA A. CLAY

PETER HOWELL/GETYY IMAGES

Technological advances are increasingly moving psychological testing out of the clinic or lab and into people's everyday lives, allowing clinicians and researchers to gather multiple data points rather than just a periodic snapshot when people come into their offices. ¶ Of course, psychological and neuropsychological assessments have been going digital for decades now. But the new and evolving assessment technologies go far beyond traditional tests delivered via paper or computer screen. Psychologists are developing assessments embedded in smartphones, games, virtual environments, even watches. They're using these mobile forms of digital monitoring to assess suicidality and other problems. And they're using "big data" drawn from such assessments to explore the possibilities of just-in-time interventions that provide support to people when and wherever they need it (see "Trends Report: Technology Is Revolutionizing Practice," *Monitor,* November 2017).

These new kinds of mobile assessments have many advantages. "One is just the vast amount of data you can get compared to what you can get from someone with a paper-and-pencil test," says Thomas Parsons, PhD, who directs the University of North Texas's Computational Neuropsychology and Simulation Lab.

Digital assessments can also be more accurate, he says—for example, they can measure people's real-life functioning instead of how well they perform in a psychologist's office or research lab and allow comparison of their functioning with their own past results rather than with those of a generalized population that shares their demographic characteristics.

Of course, there are still challenges as this quickly evolving field develops, says Justin B. Miller, PhD, ABPP/CN, who directs the neuropsychology program at the Cleveland Clinic Lou Ruvo Center for Brain Health in Las Vegas. Concerns include the pressing need to validate and create norms for these new instruments; data security and privacy issues; and the fast pace of technology itself, which can quickly render advances obsolete. Another problem is some psychologists' reluctance to adopt new technology, says Miller, owing to both inertia and fears of being replaced by computers (*Archives of Clinical Neuropsychology*, Vol. 32, No. 5, 2017).

But these changes in assessment methods are coming, whether psychologists want them or not, says Miller. "Often concerns are raised that older people aren't comfortable with technology," he says. "The challenge is that as the younger population ages, they're going to be equally unfamiliar with paper-and-pencil testing." Here's a look at what's coming:

■ **Smartphone assessments.** Smartphone-based apps continue to be a major trend. While commercially available products focus on providing stress relief and other instant interventions, researchers are now exploring ways to use smartphones as assessment tools.

These mobile tools can give psychologists a more accurate picture of the problems they're trying to assess, says psychologist Martin Sliwinski, PhD, who directs the Center for Healthy Aging at Penn State University. He is researching and developing an app in partnership

APA is hosting **Technology, Mind & Society,** an interdisciplinary conference exploring interactions between humans and technology, on Oct. 3–5 in Washington, D.C. Continuing education is offered. For more information, visit https://tms.apa.org.

with a company called Sage Bionetworks that delivers brief tests of cognitive functioning that older people can take as they go about their everyday lives. He and his colleagues have found that averaging the results of these real-world brief assessments is just as psychometrically reliable as assessments made in more controlled environments (*Assessment*, Vol. 25, No. 1, 2018).

Assessing people in a lab or clinic can affect their performance just like "white coat syndrome" can increase people's blood pressure at doctors' offices, says Sliwinski. Plus, mobile assessment eliminates the problem of a research participant or a patient having a bad day. "A bad night's sleep or stress can impact performance," says Sliwinski. "If we distribute assessment across multiple times, we can average those things out."

Mobile assessments can also provide different kinds of data than are possible to collect in a clinician's office, says Christine Vinci, PhD, an assistant member at the Moffitt Cancer Center in Tampa, Florida (*Addictive Behaviors*, Vol. 83, 2018). In her research on smoking cessation, participants wear sensors that assess their stress levels through physiological readings of such variables as heart rate and breathing patterns and even record the distinctive hand-to-mouth gestures of smoking; the sensors then transmit the data through participants' smartphones. "This eliminates the need to have participants come in person to the clinic for these types of assessments," says Vinci. There's even technology that allows clinicians to monitor how much people are smoking, says Vinci, who notes that other researchers ask participants to blow into carbon monoxide monitors attached to their phones to verify that they're not smoking, while cameras ensure that they're not giving their phones to nonsmoking friends.

YACOBCHUK/GETTY IMAGES

MOBILE ASSESSMENTS CAN PROVIDE DIFFERENT KINDS OF DATA THAN ARE POSSIBLE TO COLLECT IN A CLINICIAN'S OFFICE.

■ **Wearables.** The use of watches, clothing and other wearable assessment devices is continuing to grow and is now moving beyond tracking physical data—like steps taken or hours slept—to assessing psychological states (see "Can an App Change Your Mood?" *Monitor,* January 2018). Consumers can already track their emotional states with the Feel Wristband, and their heart rates, breathing, sleep and other physiological measures with the Spire Health Tag, which clips to clothes, for example.

Now psychologists are working to make wearables useful for clinical purposes. MHS Assessments, a company that publishes assessments for use in clinical, educational, research and other settings, has partnered with a company called Revibe Technologies to produce a watch-like focus tracker for use by individuals with difficulties maintaining focus and attention, such as those with attention-deficit hyperactivity disorder (ADHD). A vibration sent every seven to 10 minutes during a prescheduled period of time prompts wearers to tap the device to note whether they're on

or off task, and motion sensors track how much the person is fidgeting. The device learns the wearer's individual patterns and changes the vibrations sent to reflect his or her attention span and prevent habituation. For psychologists assessing ADHD, the objective, real-life data provided by the device supplements traditional assessments, says MHS chief executive officer Hazel Wheldon, who adds that it can be part of a treatment plan as well as an assessment method.

Such devices are spreading into other assessment areas. Clothing with embedded sensors is allowing sport psychologists to gather data on heart rate and other physiological factors that can affect performance, for example. Wearables combining heart rate data with GPS data can help psychologists identify particular locations that can trigger panic attacks, adds psychologist Lindsay Ayearst, PhD, principal scientific adviser at MHS.

■ **Games.** Embedding assessments within games provides another way to gather data in more natural environments. One example is a game called Rumble's Quest in which primary-school children help a character called Rumble find his way home, all while being assessed for self-regulation and other measures of social and emotional well-being. Players enter a mythical world where they meet Rumble, who asks questions that assess major domains of middle childhood well-being, such as self-regulation, attachment to school and social confidence. Rumble also guides children through a set of interactive tasks that assess inhibitory control and other elements of executive functioning.

"This narrative approach provides an authentic mechanism for children to respond in a way that feels natural and meaningful, while contextual relevance increases motivation and engagement," says Jamin Day, PhD, a postdoctoral research fellow at the University of Newcastle in Callaghan, Australia, who described the game in a review paper with his colleagues (*Clinical Child and Family Psychology Review*, Vol. 22, No. 1, 2019).

Traditionally, schools remove children from their classrooms for monitored assessment, says Day. "That's resource and time intensive," he says. With a game like Rumble's Quest, test administrators can assess entire classes as part of students' routine activities. The goal is to provide assessment data that can identify targets for prevention and early intervention. "Although you can drill down to individual students as well, what you're getting is a sense of how a class or school overall is doing," says Day. "It's really about aiding service planning."

Games with embedded assessments can also target individuals. Psychologist Rachel Flynn, PhD, of Northwestern University's Feinberg School of Medicine and colleagues have looked at one game-based assessment's potential for monitoring attention in children (*Journal of Autism and Developmental Disorders*, Vol. 49, No. 5, 2019). A feasibility study of the digital game at a summer camp for children with special needs showed that it demonstrated good reliability, producing stable results over the eight sessions of monitoring. The game also showed promise when it came to validity, with results from the game-based assessment strongly associated with results from a validated measure of attention called the Test of Variables of Attention (T.O.V.A.). Plus, exit questionnaires revealed that the children thought the assessment was fun.

■ **Virtual reality.** Assessments can also be incorporated into familiar everyday environments via virtual reality. For example, Parsons developed an assessment embedded in a virtual reality grocery store to assess memory problems in older people. In a feasibility study of the tool, he and colleague Michael Barnett, PhD, of the University of Texas at Tyler, found that participants preferred it over paper-and-pencil assessments (*Journal of Alzheimer's Disease*, Vol. 59, No. 4, 2017). "This test is really assessing real-world functioning," says Parsons. For instance, users must remember to pick up certain items and to drop off a prescription, and then remember where they parked their car in the virtual parking lot.

These kinds of virtual environments allow psychologists to introduce elements that would be impossible to assess in a traditional clinic setting, says neuropsychologist Tyler Duffield, PhD, an assistant professor of family medicine at Oregon Health and Science University, who is collaborating with Parsons on the virtual grocery store as well as on a virtual school. Both

FURTHER READING

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Monitor, July/August 2018

Introduction to the Special Issue: Are Modern Neuropsychological Assessment Methods Really "Modern"? Reflections on the Current Neuropsychological Test Armamentarium
Marcopulos, B., & Łojek, E.
The Clinical Neuropsychologist, 2019

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The American Journal of Drug and Alcohol Abuse, 2018

MILAN MARKOVIC/GETTY IMAGES

One study used a virtual reality grocery store shopping trip to assess memory problems in older adults.

environments allow them to see how real-world distractions, social interactions and stress influence attention, response time or memory. With a virtual classroom, for instance, assessors can see how students respond to avatars passing them in the hallway or react to being excluded from playground fun.

These virtual environments may also increase the sensitivity of some neuropsychological testing, especially when the problem being assessed is subtle, such as a mild traumatic brain injury, says Duffield. Assessment technologies now under development, such as eye trackers and actigraphy, which quantifies people's movement, will eventually produce even more data from these virtual environments. "We will have a much deeper understanding of some of these neurological conditions," says Duffield.

First, however, there needs to be much more research comparing virtual reality assessments with traditional assessments, says Duffield (*Child Neuropsychology*, Vol. 24, No. 8, 2018). Companies creating new products don't always make scientific rigor a priority or perform proper validation and norming work before commercializing their products, he says. Studies can be underpowered or not fully describe the hardware being used.

■ **Digital phenotyping.** This assessment approach consists of collecting data both passively via GPS, movement trackers and other smartphone sensors and actively via periodic self-reports, then using that information to create phenotypes, or different categorizations of thought and behavior patterns. With traditional assessments, there's just one data point, explains Evan Kleiman, PhD, an assistant professor of psychology at Rutgers University. With digital phenotyping, a smartphone collects data throughout the day in real-world contexts. Take thoughts of suicide, for example. In a traditional assessment, psychologists ask people to reflect on the past month and report on their suicidal thoughts over that time period. "The problem is that suicidal thinking varies too much," says Kleiman. "One day might represent the most severe day or just an average one."

In a recent study, Kleiman and colleagues used data collected four times a day from adults with past-year suicide attempts and psychiatric inpatients with suicidal ideation or attempts. From that data, they were able to develop five phenotypes of suicidal thinking, with the most at-risk group being those who reported high levels of suicidal thinking and low levels of variation in such thoughts (*Depression and Anxiety*, Vol. 35, No. 7, 2018).

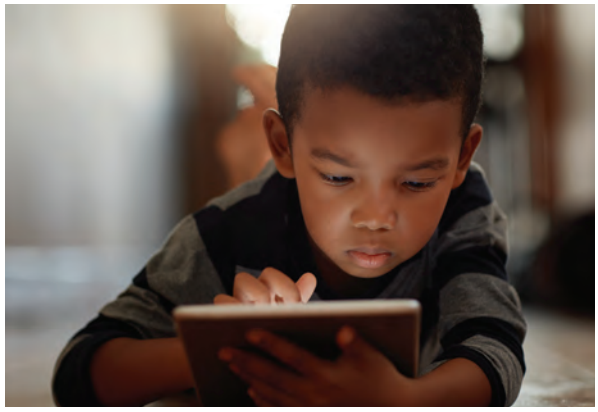
Digital phenotyping has the potential to help identify people who need treatment, says Thomas R. Insel, MD, who directed the National Institute of Mental Health before co-founding a healthcare innovation company called Mindstrong (*World Psychiatry*, Vol. 17, No. 3, 2018). By using smartphones to monitor where individuals are, what they're saying and doing and how they're typing on their phones, psychologists could one day use digital phenotyping to identify those who need care or are in danger of relapse. Slowed activity and a preponderance of use of the first-person singular could be signs of depression, for instance. But before digital phenotyping

can come into its own as a clinical tool, adds Insel, ethical challenges—such as the potential for harmful surveillance and the need for data protection—must be resolved.

APA's Committee on Human Research is considering convening a multidisciplinary working group to explore such issues, says Sangeeta Panicker, PhD, director of research ethics at APA. The goal would be to consider whether—and how—the ubiquity of mobile and digital technology in everyday life as well as its increased use in research are affecting the ethical framework of research with human participants.

■ **Big data.** In the Couple Mobile Sensing Project, Adela Timmons, PhD, and Gayla Margolin, PhD, use smartphones and wearable biosensors to collect a huge amount of data on couples' interactions, including their heart rates, physical activity, proximity to each other, location, vocal pitch, even the frequency with which they use emotion-laden words (*Social Psychological and Personality Science*, Vol. 8, No. 5, 2017). By collecting these data, Timmons hopes to get a more accurate picture of couples' conflicts, what triggers them and what helps resolve them. The only problem: the sheer quantity of data.

"We're collecting a lot more data than we can actually make use of and sense of," says Timmons, an assistant professor of clinical and quantitative psychology at Florida International University's Center for Children and Families in Miami. To overcome that challenge, Timmons is working on a machine learning algorithm to predict and detect conflict. The goal is to use the assessment data to guide the development and delivery of individualized, just-in-time interventions—for example, a meditation exercise delivered by smartphone—that can reach people when and wherever they need them.



Games with embedded assessments can help clinicians and teachers monitor self-regulation and other aspects of children's social and emotional well-being.

PEOPLE IMAGES/GETTY IMAGES

REMAINING CHALLENGES

To realize the full potential of these new digital assessment methods, many challenges must be addressed, says psychologist Laura Germine, PhD, technical director of the McLean Institute for Technology in Psychiatry at McLean Hospital in Boston and an assistant professor of psychiatry at Harvard Medical School (*The Clinical Neuropsychologist*, Vol. 33, No. 2, 2019).

One major challenge posed by digital assessment is the variability introduced by differences in hardware and software. The age and model of various devices can affect how quickly they can capture input, for example. "These are factors that are going to affect scores in ways that look like cognitive function but are actually artifacts of device type," says Germine.

Another source of variability is people's familiarity with the devices being used in assessment. Rapid technological evolution is another challenge, with assessments and their norms quickly becoming obsolete. "Most assessments—particularly those that rely on controlled stimuli and measurement of reaction time—cannot be built in a platform-independent form," says Germine. "The idea of a platform-independent format … is never 100% achievable."

To help overcome these and other challenges, Parsons and his colleagues have outlined parameters for developing and using the new technologies, described software and hardware factors that can affect computerized assessments and laid out best practices for minimizing errors (*The Clinical Neuropsychologist*, Vol. 32, No. 1, 2018).

As for psychologists' own fears about digital assessment, says Miller, clinicians should rest assured that such tests will supplement—rather than replace—their own expertise.

"A lot of people think technology will be the end of us," he says. But just as radiologists discovered when automated image reading was introduced, psychologists will find that digital assessment will increase demand for their services by identifying and allowing triage of the patients who need more intensive follow-up now, he predicts. Says Miller, "This technology will change the role of the clinician—not replace the clinician." ■

Career

NEW IDEAS FOR PSYCHOLOGISTS WHO WANT TO ENHANCE THEIR SKILLS AND ADVANCE THEIR CAREERS

STOCKVISUAL/GETTY IMAGES

HELPING MEDICAL TEAMS TREAT SEXUAL ISSUES

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Building a Successful Independent Practice

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How to Maximize Your LinkedIn Presence

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A Psychologist at Microsoft

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NORMALIZING SEXUAL HEALTH IN MEDICAL CARE

Jennifer Vencill is part of an internal medicine team that helps women overcome physical and psychological barriers to sexual intimacy

BY HEATHER STRINGER

When Lisa* was diagnosed with vulvar cancer at age 42, she and her husband knew their ability to maintain sexual intimacy would be tested as Lisa had multiple surgeries to keep the cancer at bay. With patience and diligence, though, they were able to enjoy sex in between more than a dozen surgeries. But five years later, they encountered what seemed like an impossible barrier: The cancer had spread to Lisa's primary means of sexual pleasure, her clitoris. She descended into a deep depression after her clitoris was surgically removed, and soon after she started chemotherapy and radiation treatment, which triggered early menopause symptoms, including vaginal dryness and atrophy.

Lisa's oncologist at the Mayo Clinic in Rochester, Minnesota, knew Lisa needed support for the physical and psychological changes she was experiencing, so she referred her to Mayo's Menopause and Women's Sexual Health Clinic. There, a team consisting of internal medicine physicians, nurses, physical therapists and psychologist Jennifer Vencill, PhD, collaborate to help patients work through deeply personal issues like sexual pain, low libido and inability to orgasm. These conditions can be a result of menopause, cancer treatment or diseases such as multiple sclerosis.

Lisa was eager for the support. "I felt like surgeons looked at me and said, 'The cancer is in remission and you look great,' but at home my affectionate husband had stopped hugging and kissing me because he knew I was still in so much pain from the cancer treatment," she says. "The internal medicine team looked at the whole picture. They wanted me to still be able to be intimate with my husband."

Lisa started to learn about options like hormone replacement therapy and pelvic floor physical therapy that could reduce the pain during sexual intercourse, but these strategies were only part of the solution, says Laura Meihofer, DPT, one of the physical therapists in the clinic. "We see a significant connection between the mind and body, and there is only so much I can do to help patients within my scope of practice," she says. "Dr. Vencill is able to step in and identify the experiences and beliefs that may be preventing the patient from making progress."

A SAFE PLACE AND PRACTICAL SUPPORT

Conversations with Vencill helped Lisa and her husband discover that neither of them was enjoying vaginal intercourse because the cancer treatment had changed Lisa's physiology so dramatically. Vencill suggested other forms of sexual intimacy, including anal intercourse—the thought of which made Lisa uncomfortable initially. But slowly she was able to consider the idea. Vencill offered practical tips and provided a safe place for Lisa to share reservations and questions, and the couple started making progress. "I feel like we are back to the type of intimacy we enjoyed before my depression started," Lisa says.

Like Lisa, many patients see Vencill after standard interventions such as hormone replacement therapy or vaginal moisturizers have not solved their problems with intimacy; often their sexual desire has plummeted and their anxiety about touch has increased. Vencill helps such patients disentangle the connection between

*Last name withheld to protect the patient's privacy.

DEAN RIGGOTT

touch and pain and address complex psychological issues such as trauma, gender identity, religious beliefs and cultural expectations that may be affecting intimacy.

As Vencill is the only psychologist on a team of six physicians, four nurse educators, four physical therapists, a physician assistant, a nurse practitioner and a psychiatric nurse specialist, her colleagues rely heavily on her expertise in sex therapy. "Dr. Vencill's role is critical because she helps people feel comfortable sharing more details about their situation," says Carol Kuhle, DO, MPH, a physician on the team since 2013. "She's also qualified to see both partners, which is invaluable because at the core this is an issue between a couple."

CONSEQUENCES OF A SEX-NEGATIVE CULTURE

Vencill began considering a psychology career focused on human sexuality as an undergraduate at Christopher Newport University in Virginia, where she was simultaneously intrigued by classes on the subject and saddened after witnessing the experiences of college friends who felt ashamed of their early sexual experiences.

"I saw friends dating for the first time and exploring sexuality, and I watched how negatively this went for most people because they had no one to talk to about their concerns, questions or what to expect," Vencill says. "In general, we are not given permission or taught to talk about sexuality in a healthy way in this culture."

Many patients come to Dr. Jennifer Vencill after standard interventions such as hormone replacement therapy have not solved their problems with intimacy.

During her senior year, Vencill talked to one of her undergraduate psychology professors about building a career specializing in human sexuality, and she learned that this path was uncommon but possible with careful planning. Vencill searched for graduate schools and found what she was looking for in Texas Tech University's counseling psychology program,

where she partnered with Sheila Garos, PhD, to study topics such as the role of appearance anxiety and depression in female sexual functioning. During practicum experiences, Vencill also discovered a niche providing therapy to patients within the LGBTQ community.

"I saw students who were sexual and gender minorities and unable to come out because they were afraid of the backlash," says Vencill, who came out more publicly herself as bisexual in graduate school. "I had many clients who had been disowned or kicked out of family homes."

After earning her PhD, Vencill started a postdoctoral fellowship at the University of Minnesota Medical School's program on human sexuality, where she taught classes, conducted research and worked with patients who had a variety of sexual health concerns. The two-year experience helped her land her first job as an assistant professor in the program and complete the requirements needed to earn certification in sex therapy through the American Association of Sexuality Educators, Counselors and Therapists. Though she enjoyed the role, she couldn't pass up the chance to work at the Mayo Clinic when she was recruited for the position in 2018 by a former colleague. "I was very attracted to the opportunity to work at such a highly ranked hospital where I could learn from many of the top healthcare providers and specialists in their fields," says Vencill.

The clinicians there share insights about patients with one another throughout the day and also meet monthly to discuss difficult cases and topics that affect the team. The cases may include patients who are struggling with treatment recommendations or not progressing because of fear, anxiety, sexual shame or partner issues.

During these interactions, Vencill's experience with LGBTQ health has guided colleagues as they treat an increasing number of sexually diverse patients. "Dr. Vencill has helped me learn how to avoid microaggressions and structure my treatment in a way that is supportive of their needs," says Meihofer. In the past, for example, when patients talked about pain with anal sex, Meihofer shied away from the topic. Vencill has helped her become more knowledgeable about products and practical steps that can help her leverage physical therapy techniques to treat patients who desire pain-free sex outside of traditional penile-vaginal intercourse.

When Vencill saw the clinic's brochure about ideal pelvic floor positioning during intercourse, she pointed out that all the images represented heterosexual sex. Now the clinic is revamping the brochure. She also noticed that the name of the clinic, which includes the phrase "Women's Sexual Health," could alienate transgender individuals. "If someone from the community is trying to access sex therapy, I want all genders, orientations and body types to feel welcome," she says.

Working on an interprofessional team has also deepened Vencill's understanding of the biological processes related to sexual health, which "makes me a more effective therapist to my patients," she says. Now she knows when to encourage patients to check in with providers who may have unknowingly prescribed medications that can have sexual side effects, and how to address health concerns about different products.

"There is a common cultural misconception that using vaginal estrogen products containing hormones will elevate the patient's cancer risk," says Vencill. But these products provide hormones locally—only to the vulva and vaginal tissues—rather than circulating throughout the body, and are safe for many women to use, she says.

BUILDING BODY CONFIDENCE

Vencill also works to facilitate stronger communication between providers and patients. Nurse educators often introduce patients to vibrators or vaginal dilators as part of medical treatment, but if patients' expressions or questions suggest that they are uncomfortable with these products, the nurses refer them to Vencill. "Sometimes people have so much anxiety that they can't really absorb all the information I am sharing with them," says Ginny Hartert, RN.

In some cases, trauma is the source of the anxiety. "I've had patients who did not tell the doctor about experiences with molestation, rape or traumatic medical procedures, but this came up during physical therapy," says Meihofer. Other

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PEOPLE IMAGES/GETTY IMAGES

Dr. Vencill teaches medical students and residents about the importance of sexual health, and how to take a thorough and inclusive sexual health history.

times they tell her about partners who don't believe in foreplay or want the patient to engage in painful intercourse. "We can hand these cases to Dr. Vencill and may need to pause physical therapy treatment until she works with them."

Often, anxiety is rooted in the fear of pain during intercourse, which can lead to an association between intimacy and pain. Many patients have suffered for years under the assumption that intercourse is supposed to be painful or that there is no treatment for pain, says Vencill. She explains to patients that penetration doesn't have to be the primary goal of sexual intimacy. "I urge patients to start by creating a 'menu' of pain-free activities that create physical and emotional intimacy without sending the patient into panic mode, like holding hands or lying naked next to one another," Vencill says.

A number of patients are also unfamiliar with the basics of sexual physical anatomy, such as the location of the clitoris, vagina and urethra. Vencill educates people in a shame-free environment and inspires body confidence, says Meihofer. "So, when they talk to partners or a physical therapist, they can use the right terms without being embarrassed that they were never taught to explore their sexual anatomy."

Vencill also helps many patients understand the difference between responsive and spontaneous sexual behavior. Spontaneous desire—random sexual thoughts and urges that are usually hormonally driven—is often emphasized in American culture yet tends to decline with age, which leaves many people believing that sexual intimacy disappears during and after menopause, says Vencill. Patients learn that sexual desire is also possible in response to stimulation like touch. "This form of intimacy requires communication, patience and a change in how we frame sexual desire, but if mindfulness is developed within this framework, intimacy can be cultivated," she says.

INFLUENCING MEDICAL STUDENTS

While Vencill is part of a team that witnesses the value of sexual health daily, most health-care providers are not privy to this reality. To help medical students and residents become more aware of this aspect of care, Vencill teaches a session during the gynecology rotation that covers how to take a thorough and inclusive sexual health history. First-year medical students also regularly shadow her during patient visits.

"Health-care providers often feel nervous about asking patients about sexual health because they worry about offending people or facing questions they won't know how to answer," says Vencill. "But as providers we need to model that this is an important part of health and nothing to be ashamed of."

Although patients may not answer questions about sexual functioning the first time, research has shown that having a health-care provider ask about sexual health increases the likelihood that patients will reach out for care if a problem occurs in the future, says Vencill.

"So often I see a light bulb go off when patients realize that there are treatments for a lot of their sexual health concerns," Vencill says. "They start to understand that this is a normal aspect of health and intimately connected to their well-being." ■

● **"Psychologists on the Team"** is a regular feature in which the *Monitor* explores the work of psychologists on interprofessional teams.

LAUNCH. GROW. THRIVE.

Established solo and group practitioners share their secrets to success in independent practice

BY AMY NOVOTNEY | PHOTOGRAPHY BY ANDAR SAWYERS

Less than a year after Lauren Behrman, PhD, completed her doctoral degree in clinical psychology, she owned her own private practice. It wasn't much at first. She started off by seeing clients, mainly children and adolescents, on nights and weekends in her supervisor's office while working part-time as a school psychologist in Nassau County, New York. Now, 34 years later, she manages a thriving full-time solo practice with three locations, and she continues to love her work. Much of her success can be attributed to her willingness to take risks and think creatively about her practice—skills she did not learn in graduate school or on internship, at least in any formal sense.

"I did everything by the seat of my pants those first few years, picking up ideas from the different clinics and institutional settings I'd worked in during graduate school," recalls Behrman. That lack of information is one of the reasons she co-founded The Practice Institute, which is dedicated to helping mental health professionals build ethically responsible, thriving practices.

To help others sidestep such steep learning curves and build flourishing practices of their own, Behrman and other established practitioners share 11 keys to independent practice success.

1 THINK LIKE AN ENTREPRENEUR Counseling and forensic psychologist Charmain Jackman, PhD, says she gets her best private-practice inspirations from the business world, particularly when it comes to marketing and branding her services. "A corporate workshop I attended early in my career taught me the importance of seeing myself as a brand," says Jackman, who in addition to running a part-time clinical, forensic and business development practice serves as the dean of health and wellness for the Boston Arts Academy.

She consults with psychologists who want to launch their own practices about the importance of determining their core values, honing the image they want to project and then developing a mission statement that sets them apart from the crowd. "We don't often think like that in psychology," she says.

This brand-building strategy has worked well for Frank Gaskill, PhD, co-founder and managing partner of Southeast Psych, a group practice serving adults, children and adolescents with locations in Charlotte, North Carolina, and Nashville, Tennessee. His team decided that one of the practice's core values should be creating a fun and enjoyable atmosphere for patients. Gaskill and the clinicians who work at the practice value spontaneity, humor and enjoyment of life, and those values are reflected in everything the practice does, from the way the waiting room is decorated to the videos they post on their website.

2 DETERMINE YOUR SPECIALTY AND AUGMENT YOUR TRAINING In graduate school and early in your career, think about the populations you most enjoy and are best at treating, experts advise. Shortly after graduate school, Behrman decided to focus on serving children and adolescents. She launched her practice after fine-tuning her abilities with four years of postdoctoral training in child, adolescent and family therapy. As her practice grew, she saw a need for help among families experiencing divorce, so she sought training in high-conflict co-parent counseling and parent coordination. Such

services continue to be in high demand, and providing them helps her stand out from other child and family-focused mental health practitioners. To promote her expertise and help even more families, she co-authored a book, "Loving Your Children More Than You Hate Each Other" (New Harbinger, 2018), with her husband, psychologist Jeffrey Zimmerman, PhD, ABPP, on how to parent as a divorced couple, and she leads workshops with him on how to recover after divorce.

3 ADD UNEXPECTED SERVICES Sometimes expanding your practice means offering a service that your patients need but don't expect to find in a psychologist's office. After Gaskill realized how much he and others in his practice were recommending certain books to their clients and families, they created mini bookstores in their reception areas. Now, each of Southeast Psych's locations has a full bookstore that stocks the therapists' most recommended books.

Creating a fun and welcoming atmosphere is one of the core values at Southeast Psych, a group practice with locations in Charlotte, North Carolina, and Nashville co-founded by Dr. Frank Gaskill.

Four years ago, in response to client demand, clinicians at Alvord, Baker & Associates, LLC, a psychotherapy practice with two locations in Maryland serving adults and children, began offering a weeklong "Cool, Confident and Courageous Kids Camp" for children with severe social anxiety and selective mutism. The summer camp, modeled after a program developed by child psychologist Steven Kurtz, PhD, ABPP, is designed to boost children's confidence and skills before the start of a new school

year, says Mary Alvord, PhD, director of the practice.

"The response we received to the camp led us to now offer specialty groups for this population," Alvord says. "Seeking out needs and providing specialized evidence-based skills has really helped expand our practice in so many ways."

4 BE RESPONSIVE Alvord also credits her success to the value she places on being approachable and doing what she says she's going to do, whether with clients or outside sources. "When you call people back and collaborate with them, they remember that," she says.

She emphasizes that message with her clinicians, instilling the importance of returning potential client calls as soon as possible, for example. She also encourages her clinicians to keep primary-care physicians, psychiatrists, pediatricians, teachers and school counselors in the loop throughout a client's treatment process, both to ensure integrated care and to strengthen ties with potential referral sources.

5 CREATE A WELCOMING ATMOSPHERE When Gaskill and his colleagues opened their doors in 2000, they offered a waiting-room benefit that generated excitement among his young patients: video games they could play before their appointments. When the movie "Inside Out," was released, the clinicians designed different interactive stations throughout the practice to enable children to better understand each of the emotions the movie featured: joy, sadness, disgust, fear and anger. Today, both of Southeast Psych's locations have waiting areas decked out with life-size Disney princesses and "Star Wars" characters in addition to the video games. They also provide complimentary coffee, tea and snacks. All of these perks get people talking and draw in new clients, Gaskill says.

"We designed it to be an experience that you walk away from and feel like you just have to tell someone about," he says.

It's not just about making it an enjoyable experience for clients, Gaskill adds. Southeast Psych invites friends and colleagues from outside the practice to a gathering every fourth Wednesday of the month.

6 FINE-TUNE YOUR OFFICE DESIGN Natural light is a big mood booster, so interior designers suggest that when possible, therapists should incorporate windows or skylights into their clients' view during therapy sessions. If your office lacks windows, they suggest using floor and table lamps with soft lighting—or better still, lightbulbs that simulate natural light—rather than overhead fluorescent lighting, to promote a feeling of comfort and coziness.

Bringing nature into the office with plants or artwork of natural settings can also enhance the healing quality of a space. One study showed that among office workers, a view of nature out a window was associated with lower stress and higher job satisfaction (*Scandinavian Journal of Forest Research,* Vol. 22, No. 3, 2007). (For more design principles for practitioners, see "Healing by Design" in the March 2017 *Monitor*.)

Gaskill and his team produce psychology podcasts and videos for the public in Southeast Psych's in-house recording studio.

Southeast Psych's waiting rooms feature bookstores stocked with the therapists' most recommended titles.

7 MAKE IT EASY FOR PEOPLE TO FIND YOU

In our technology-centric society, an active social media presence is becoming a must for private practitioners looking to increase their client bases, says clinical psychologist and New York private practitioner Chloe Carmichael, PhD.

Creating a Facebook page for your practice is free and can be a great way to connect with potential clients, provide more information about yourself and your practice, and help you come across as more approachable, she says. Once you have a page set up for your practice, investing even a small amount of money into a Facebook ad or simply paying extra to "boost" a post on your page will increase your exposure. "Even spending just $3 a day for a Facebook ad to run for five days, you could reach a pretty decent swath of people, and you could set it up to be targeted specifically to your area," says Carmichael, who provides an online course for those looking to enhance their private practices at www.profitablepractices.net.

It's also important to keep your website updated—and to blog often. "So many psychologists underestimate the importance of having a blog section on their website," she says. Blogging regularly improves your website's search engine optimization, ensuring your website pops up closer to the top of a search when someone in your area is looking for a mental health professional. Just as important, blogging creates immediate rapport with potential clients.

"I've had so many clients come in and say, 'I read your blog about such-and-such,' and that's why I reached out to make an appointment," she says. (See "Is Your Website Outdated?" in the February 2018 *Monitor* for more tips on using technology to reach more clients.)

8 REACH OUT TO THE MEDIA

Carmichael also encourages practitioners to sign up for daily emails listing active media contribution opportunities from www.HelpAReporterOut.com. Anytime a topic pops up around your area of expertise, submit a three- to five-sentence quote to the media outlet, she says.

"Getting quoted by the media increases your credibility, and, in my opinion, can lead a client to expect to pay more for your services, because by virtue of the fact that you have a lot of eyeballs on you, you're likely in higher demand," Carmichael says. Even if the quote you submit doesn't end up being used in a reporter's piece, it's a good idea to keep a record of all the material you've submitted for quotes because you can use that material for your own blog posts.

Gaskill and others at Southeast Psych have taken the matter into their own hands by starting their own media websites, ShrinkTank.com and Psychbytes.com. With contributions from psychologists all over the world, ShrinkTank offers articles, videos and podcasts on pop culture-based content with a psychological spin. With thousands of followers on social media, the websites have helped Southeast Psych build a wider audience and allowed for a greater understanding by the public of how psychology is intertwined in so many aspects of our lives.

9 ACCLIMATE AND ACCOMMODATE

Alvord notes that one of the reasons her practice has grown so much is that she and her co-founder have always prided themselves on being flexible and trying new things. If a family has a scheduling conflict or is available only one day of the week at a certain time, the practice works with the family to make sure the child can be seen by a therapist. When their wait list has gotten too long, they've hired more clinicians. And they don't require their group therapy clients to see someone within their practice for individual therapy.

"We open our groups up to the entire community, and if someone is seeing an individual therapist somewhere else, we encourage them to continue with that therapist and we collaborate with them," she says.

10 DON'T SHY AWAY FROM RAISING FEES

Many therapists hate talking about money—especially with clients, Carmichael says. But the reality is that when therapists aren't comfortable financially themselves, they may take on any client just to supplement their income—even if they don't have training in the type of services the client needs. Cash-strapped practitioners may also forgo getting quality supervision or other continuing education for themselves, moves that threaten their ability to stay up to date on the latest evidence-based treatments.

Figurines in Gaskill's office put young patients at ease.

"Therapists are just better-positioned to offer good therapy when they're not feeling financially compromised," she says.

Alvord and Carmichael both suggest making annual

fee increases a standard part of every client agreement. Alvord notes that in her practice, the increase occurs on May 1 each year, and they start printing an automated message on the bottom of clients' bills starting March 1, reminding them of the upcoming increase.

11 SERVE THE COMMUNITY Accepting speaking requests and providing free talks in the community are another way to bring in more patients. Last year, Gaskill and his colleagues from Southeast Psych's Southpark office in North Carolina gave nearly 300 talks, on everything from parenting a child with autism to how to manage stress.

The practice also offers more than 100 one-minute practical online videos for parents on its Psychbytes website. These "Psych in 60" clips offer insights on a wide range of parenting concerns, including teaching table manners and how to talk to your teenager about marijuana.

"When we say we're popularizing psychology, it's not a gimmick—it's just what our passion has always been," Gaskill says. "If we get referrals as a result, fine, and if not, we've made a good friend."

Alvord agrees, adding that her practice has been facilitating monthly Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) parent support meetings pro bono for the past nine years.

In addition, she has founded a nonprofit charity, Resilience Across Borders Inc., to sustain the work started by the practice in providing Resilience Builder Program® groups in disadvantaged schools across the Washington, D.C., metro area. The nonprofit hopes to increase access to mental health care.

"In many ways, Resilience Across Borders furthers the mission of the practice—to disseminate evidence-based practices in multiple settings—and also helps reach populations that the practice does not," says Alvord. ■

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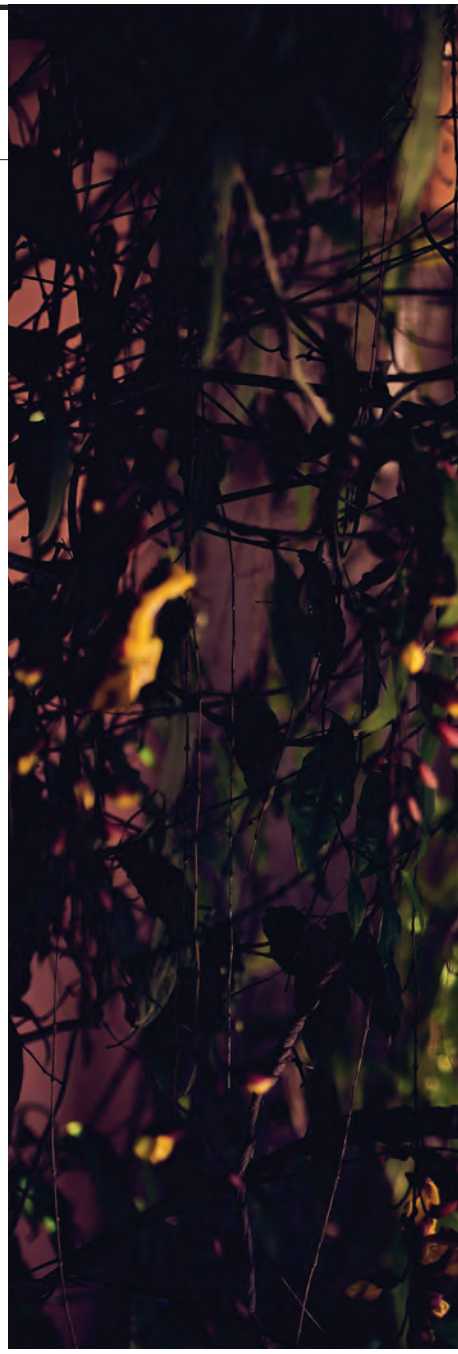
THE EMOTIONAL LIVES OF CAREGIVERS

The Social Gerontology and Health Lab at the Yale School of Public Health explores the emotional dynamics at play when older adults become their spouses' caregivers

BY CHRIS PALMER



More than 28 million people in the United States provide care for chronically ill, disabled or older family members during any given year, according to a 2015 report from the National Alliance for Caregiving. Roughly one in 10 of them cares for a spouse. It can be a full-time job: On average, caregiving spouses spend 44.6 hours per week attending to their loved ones' needs.

As more people live long enough to experience multiple health issues and dependency, chances are good that at some point many of us will spend long hours either taking care of or being cared for by our partners.

While the statistics on older adults tending to their spouses have been closely tracked for many years, the physical and psychological impacts on such couples of providing that care are less well documented. What happens to a couple's emotional relationship when one partner turns caregiver? What factors help protect a happy, satisfying union? How does caring for a spouse affect the caregiver's health? These are just some of the questions that drive the research of the Social Gerontology and Health Lab, helmed by Joan Monin, PhD, a psychologist and associate professor at the Yale School of Public Health.

"Joan's lab is on the cutting edge of trying to understand how to improve the emotional lives of caregivers in an evidence-based way," says Monin's longtime collaborator Becca Levy, PhD, also a psychologist at the Yale School of Public Health. "She's really advanced this field of research that has traditionally been much more anecdotal by applying rigorous experimental and survey methodologies to examine important topics."

Over the past decade, the research coming out of Monin's lab strongly suggests that caregivers' perspectives are a huge factor in determining how they fare. "All caregivers experience emotional distress to some extent," Monin says. "Those who can remain positive and effectively regulate their feelings in response to stressful circumstances tend to suffer less."

Recently, she has turned her attention to developing interventions to help caregivers do just that. "In many cases, we've already figured out what works—helping people build resilience and mutual understanding with their partners," Monin says. "It's now time to give families the tools they need to thrive."

RESEARCH FOCI

The Social Gerontology and Health Lab is exploring:

1. **The physical and emotional impacts of caregiving duties in older spouses**
2. **The characteristics of caregiving spouses that serve to maintain healthy relationships**
3. **Interventions that can help build resilience and mutual understanding in caregiving dyads**

THREE LABS IN THREE RIVERS

Monin first became interested in the field as an undergraduate student at the University of Rochester when she took a course on emotion and close-relationship processes from Harry Reis, PhD, who is often

MURILO FOLGOSI/PEXELS

credited as an early pioneer in the field of relationship science. "That class really opened my eyes. I just couldn't believe that someone could actually have a job where they got to think about how relationships work and why and how people express their emotions to one another," Monin says. "I kind of fell in love with social psychology at that point."

She then worked as an undergraduate research assistant with developmental psychologist Patrick Davies, PhD, on a study of how marital conflict affects children's emotional development. Her introduction to studying emotion expression in close relationships came in graduate school, at Carnegie Mellon University, where she worked in the lab of psychologist Margaret Clark, PhD, another leader in personal relationship studies. Their early work together focused on the function of emotion expression as a way to communicate needs or satisfaction of needs. Together they would later investigate emotional expression in caregiving spouses, finding that caregivers (particularly caregiving wives) were less stressed when care recipients were willing to express more interpersonal emotions, such as compassion or guilt, to their partners (*Emotion*, Vol. 9, No. 1, 2009).

The Monin lab investigates what happens to a couple's emotional relationship when one partner becomes the other's caregiver.

When Clark left for another position, Monin moved across the hall to the lab of psychologist Brooke Feeney, PhD, where she focused her dissertation studies on how young adults respond to their partners' expression of anxiety. Among Monin's discoveries were that when anxiously attached people witness their romantic partners going through stressful situations, they perceive greater anxiety in their partners, feel more distressed in response to their partners' anxiety and are less effective caregivers (*Personal Relationships*, Vol. 19, No. 3, 2012).

Immediately after wrapping up her doctorate, Monin began studying caregiving again, but this time in older adults. She accepted a postdoctoral research fellowship with Richard Schulz, PhD, a University of Pittsburgh gerontologist who studies older adult caregiving. Her three-year collaboration with Schulz produced more than a dozen publications, on topics ranging from spouses' reactions to perceived suffering in their loved ones to interpersonal emotion expression in the context of caring for those with Alzheimer's disease.

"Rich had done all of this work creating and evaluating multicomponent interventions for caregivers to support mainly instrumental needs," Monin says. "But there was still little focus on the emotional aspects of the relationship between the caregiver and the care recipient, especially in terms of how caregivers deal with witnessing a partner suffering on a daily basis."

One study Monin conducted in Schulz's lab revealed that spouses' blood pressure and heart rate increased significantly when watching and talking about their partners' suffering, relative to watching a stranger's suffering (*Journal of Gerontology: Series B*, Vol. 65B, No. 2, 2010). "Overall, we found it's not so much the act of having to give care day in, day out that's burdensome for caregivers; it's seeing your partner suffering and not being able to do anything about it that takes an emotional and physical toll," Monin says.

Another study found that how caregivers make sense of their partners' suffering impacts caregivers' well-being. When talking about a time when their partners were suffering, caregiving spouses who used more positive emotion words and more cognitive processing words—such as *think*, *realize* and *because*—had lower heart rate reactivity, which suggests that thinking about the bigger picture and positive aspects of their lives with their partners made caregivers feel less stressed (*Psychology and Aging*, Vol. 27, No. 4, 2012).

Dr. Joan Monin, bottom row, second from left, and her team.

COURTESY OF THE SOCIAL GERONTOLOGY AND HEALTH LAB

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DELVING DEEPLY INTO THE DYAD

Following her postdoctoral work with Schulz, Monin was hired by the Yale School of Public Health, opening the Social Gerontology and Health Lab in 2010. Her initial studies focused on learning how people care for themselves as they witness their partners in chronic pain. She discovered that caregivers who actively try to understand what they're feeling when witnessing their partners' pain—for example, sadness, anguish and helplessness—tend to experience less stress than caregivers who become engrossed in thinking about their partners' pain.

Monin then began to delve more deeply into the caregiver-care recipient dyad by exploring how older spouses with multiple chronic physical and mental conditions both provide care to and receive care from each other. Using large epidemiological data sets, she found that a spouse's frailty and depressive symptoms (*Journal*

FRED FROESE/GETTY IMAGES

A Monin lab study focuses on the dynamics between adult children and their parents with early-stage dementia.

of the American Geriatric Society, Vol. 64, No. 4, 2016), as well as their physical activity levels (*Stress & Health*, Vol. 32, No. 3, 2016), were predictive of these same qualities in their partners. In a study performed in her lab, she had couples engage in role-playing exercises to experimentally manipulate which spouse—just the wife, just the husband or both—received social support from his or her partner. She discovered that men benefit more from receiving support than women do. Also, mutual support provided no additional benefits to either men or women. "Like a number of other studies using survey methods, we saw that men tend to be more emotionally supported by their wives and may receive more comfort from marriage," Monin says.

A recent finding from Monin's lab that has garnered considerable media attention is her team's genetic analysis of the oxytocin receptor, which has been associated with characteristics such as trust, empathy and social skills. She found that marital satisfaction is higher if at least one partner was born with a version of the receptor called the GG genotype, a correlation that was mediated by measurements of attachment security (*PLOS ONE*, Vol. 14, No. 2, 2019). "There's been a news story in almost every language," Monin laughs. "It's not a finding that directly relates to caregiving, but it does tell us about the emotional lives of older adult couples, with implications for caregiving. And it's one of those findings where people get really excited and wonder, 'Do I have the GG genotype?'"

"It's not so much the act of having to give care day in, day out that's burdensome for caregivers; it's seeing your partner suffering and not being able to do anything about it that takes an emotional and physical toll."

JOAN MONIN, PhD, YALE SCHOOL OF PUBLIC HEALTH

Monin's research tackles other issues of aging beyond caregiving. She has published frequently with colleagues across several academic disciplines at Yale University, including epidemiologists and geriatricians. "I like doing work where you're bouncing ideas off other people," says Monin, whose lab consists of one doctoral student she co-advises as well as four MPH thesis students, three research assistants and three undergraduate students.

Among her most frequent collaborators is Levy, with whom Monin has studied stigma associated with aging. Their analysis of a large archive of American books, magazines and newspapers—some 400 million words in all—showed that negative perceptions of older adults have been rising over the past 200 years (Ng, R., et al., *PLOS ONE*, Vol. 10, No. 2, 2015). Other studies with her Yale colleagues have focused on elder abuse, caregiving related to essential tremor and the mental health of veterans.

THE TIME TO INTERVENE IS NOW

After almost 10 years doing basic social psychology research on caregiving relationships, Monin says she's eager to translate her

findings into interventions that can help people. The first place she has started is with Alzheimer's disease. "That period right after diagnosis is really scary for people as they wonder what's going to happen," Monin says. "This worry can really damage a relationship in those early days."

With support from the National Institute on Aging (NIA), which has funded most of her previous research, Monin is collaborating with New York University and University of Hamburg psychologist Gabriele Oettingen, PhD, to implement a program called the Wish, Outcome, Obstacle, Plan, or WOOP, intervention. WOOP is a mental strategy for inducing behavioral change via a four-step process in which participants specify a health, relationship or career wish or goal, the desired outcome, potential obstacles, and a plan to achieve the goal. WOOP has helped study participants in specific populations increase healthy behaviors, including physical activity in stroke patients and self-care in diabetes patients.

Now, Monin is studying whether WOOP can help couples manage the distress that can occur after an Alzheimer's diagnosis when symptoms, such as asking the same question over and over again, are starting to emerge. In this case, the wish might be to respond calmly when the partner asks a question repeatedly; the outcome might be for both partners to feel respected and happy; the obstacle might be feeling impatient; and the plan might be to take a deep breath, take the partner's perspective and then answer the question.

With another grant from NIA, Monin is also studying the dynamics between adult children and their parents with early-stage dementia. Guided by attachment theory, this project will be the first to focus on how the parent and child's relationship early in life affects how well the adult child embraces the caregiving role. "This can be really challenging for some people to become their parent's caregiver because it's a total role reversal and can be affected by their history together," Monin says. The goal of the project is to develop an intervention that protects the emotional health of both the parents and their adult children who are their primary caregivers.

"There's been so much focus on drugs to alleviate dementia symptoms, and many resources developed to help provide instrumental care," Monin says. "We want to be able to help people nurture the well-being of their relationships through these tough times." ■

● **"Lab Work"** illuminates the work of psychologists in research labs. To read previous installments, go to www.apa.org/monitor/digital and search for "Lab Work."

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LINKEDIN PROFILES THAT GET NOTICED

Psychologist-specific advice from online marketing experts on how to maximize your LinkedIn presence

BY ZARA GREENBAUM

With nearly 600 million users in 200 countries, LinkedIn has become the world's most widely used resource for professional networking. Last year, 77% of recruiters used the website to find job candidates, according to a Jobvite survey of 805 recruiters nationwide.

"If you're not on LinkedIn, you are invisible to recruiters," says Laura Viehmyer, who has more than 35 years of experience as a human resources executive and now runs Viehmyer Consulting Group, a private résumé and career counseling practice. "Don't underestimate the importance of this tool."

Optimizing your profile is more important than ever. Research by psychologists shows that profiles that are longer, have more connections and include a photo are favored by employers (*Personnel Psychology*, 2018).

"Use the platform as an additional marketing tool that tells your story beyond what's on your resume," says Marshall Brown, career coach and CEO of Marshall Brown & Associates. "That's what will separate you from your competition."

So, how can psychologists best use LinkedIn to showcase their strengths and expand their professional networks and client lists? Here's advice from consultants and online marketing experts on how to get noticed on LinkedIn.

■ **Choose your target audience.** Start by considering the people you want to reach, and write with that group in mind, says Daniel Wendler, a psychology doctoral student at George Fox University and founder of MarketingForTherapists.org. Do you aim to attract recruiters, employers, research collaborators or potential new clients?

"Your LinkedIn profile may look very different if you're seeking employment, searching for research collaborators or hiring a research assistant," he says.

Psychologists with different professional goals should tailor their content accordingly. A researcher might emphasize his or her writing ability, data-analysis experience, communication skills and attention to detail, says Brown, while practitioners should showcase clinical expertise and welcome potential clients.

For example, practitioners might include a statement along the lines of "As a therapist, my goal is to help you overcome whatever challenge life has thrown your way," followed by a list of their clinical focus areas, says Kyler Shumway, a psychology doctoral student at George Fox University and search engine optimization director for MarketingForTherapists.org.

As for psychologists seeking corporate jobs, "there's room for creativity on your LinkedIn profile," says Alan De Back, a career counselor with Alan De Back Learning & Communications. Such profiles should include less detail about research papers and more references to career aspirations, measurable accomplishments and skills you have that are in demand in the industry. Those pursuing jobs in academia, on the other hand, should use more traditional language and formatting, favoring a chronological

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Wendler, D.
CreateSpace Independent Publishing, 2016

Simple Steps to a Complete LinkedIn Profile
Bronzan, A.
LinkedIn Official Blog, 2012

Writing Powerful LinkedIn Profiles
APA, 2019

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list of experience and a more formal writing style reminiscent of a curriculum vitae (CV).

Regardless of your career goals, Brown recommends writing in the first person as a way to sound more approachable rather than using the third-person voice typical of résumés. And if you're looking for a job, be sure to let recruiters know by adjusting your job-seeking preferences under LinkedIn's settings.

■ **Write a captivating headline and summary.** A LinkedIn headline, like a newspaper headline, helps viewers decide whether your profile is worth exploring. Rather than using your current job title, De Back recommends choosing a tagline that's more aspirational: Showcase the value you offer, and succinctly tell readers what you're hoping to gain. For example, Shumway uses the headline "Psychology Intern at Baylor Scott & White Health; Public Speaker; Author" and has received numerous invitations through LinkedIn to speak publicly about bullying, mental health and autism.

The summary, located just below the headline, "is basically the cover letter for your LinkedIn profile," says Wendler. He recommends writing with one target reader in mind—a publisher, recruiter or fellow researcher, for instance. "When that person reaches the end of your summary, they should want to call you."

■ **Use a professional photo.** Profiles with photos receive up to 21 times more views and 36 times more messages than those without photos, according to LinkedIn. Brown recommends using a head-and-shoulders shot taken by a professional photographer.

LinkedIn's search algorithm prioritizes profiles that have multiple jobs, schools and five or more skills.

For psychologists who seek academic appointments, research positions or industry jobs, a traditional head shot like the faculty photos on university websites is especially important. Practitioners, on the other hand, should aim for photos that project their warmth, supportiveness and approachability. "Clinicians should use every aspect of their profile, including the photo, to begin building an emotional connection with their viewers," Shumway says. He suggests smiling and adopting a neutral posture, rather than leaning forward.

■ **Complete your entire profile.** Your headline, summary and photo are key for capturing readers' attention. But don't stop there. "A lot of people skimp on their educational and work experience backgrounds," De Back says, but LinkedIn's search algorithm prioritizes profiles that include multiple jobs, schools and five or more skills.

Recruiters and colleagues who have already seen your résumé or CV are expecting more than your professional and educational experiences on your LinkedIn profile, says Viehmyer. So, include your conference posters, videos of research talks and links to publications.

Even little details, such as adding a customized background—a word cloud that highlights your interests, for example—or endorsements from your network, can set you apart from the millions of LinkedIn users with incomplete profiles.

■ **Grow your network.** Connecting with other LinkedIn members improves searchability and shows others that you are active in your field or specialty area. "A robust number of connections is great," De Back says, though he recommends prioritizing the quality of connections over quantity—your network should primarily include people you know, admire or hope to work with.

He also suggests following groups of interest to make new connections. Psychologists who seek applied psychology positions, for instance, might use a professional organization in their field—such as a local association of user experience researchers—to identify contacts for informational interviews. The affiliations feature on LinkedIn presents another networking opportunity—users should link to member organizations such as APA and their alma mater's alumni association.

■ **Stay active on the platform.** Experts agree it's crucial to use LinkedIn regularly, but Brown says inactivity is one of the most common mistakes he sees. In 2018, only 44% of members used the platform monthly, according to Apptopia, a company that tracks website and software usage.

Psychologists who neglect their profiles even for a month can easily miss out on key job or research opportunities. For example, a researcher who fails to list a new publication may miss opportunities for media coverage or cross-disciplinary collaborations.

A good rule of thumb is to check in weekly, post updates on any new professional experiences monthly and update your profile at least every six months, says De Back. Even for those who haven't changed jobs, regular updates are a good way to alert others to new research interests, publications and accomplishments. ■

NEW CE OPPORTUNITIES FOR PSYCHOLOGISTS

Psychologists will soon be able to tap a wealth of new interprofessional continuing-education offerings

BY TORI DEANGELIS

As a new associate member of Joint Accreditation for Interprofessional Continuing Education, APA is joining representatives from medicine, nursing, pharmacy and other fields in overseeing the accreditation of organizations that offer interprofessional continuing education, including the Mayo Clinic, Boston Children's Hospital and the Federal Bureau of Prisons' Health Services Division.

The development—which promises to significantly increase the number and quality of continuing-education (CE) offerings that psychologists have access to—is a boon for the field, for individual psychologists who work in these settings and for health care as a whole, says Greg Neimeyer, PhD, director of APA's Office of Continuing Education in Psychology.

APA representatives will function as members of the interprofessional accreditation team that reviews applicants for the Joint Accreditation program. As more organizations become jointly accredited, psychologists employed in those settings will have expanded opportunities to receive, play a part in and get credit for team-based CE. "It's a fabulous opportunity for us to break out of the silo that has kept us apart from mainstream health care and contribute to something larger than us," Neimeyer says.

As APA and other professions work to develop and improve the CE offerings of participating organizations and applicants, the most important criterion is that they are team-based—designed so that all relevant players in a given training topic are fully involved. That's important for health-care professionals and for patients, says Kathy Chappell, PhD, RN, senior vice president at the American Nurses Credentialing Center, one of the program's three founding organizations.

APA's joining of the Joint Accreditation program is a vital step toward improving health communication.

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"There's a lot of evidence showing that when the health-care team isn't working together, medical errors can occur and patients lose out," Chappell says.

As a new APA reviewer for Joint Accreditation and a pediatric psychologist who's worked collaboratively with other professions at the Medical University of South Carolina, Susan J. Simonian, PhD, ABPP, says the program is a vital step toward improving health communication and patient care.

"APA's role with Joint Accreditation will help to formalize this kind of team-based education," Simonian says, "and support psychologists to receive, promote and develop quality CE that includes an evidence-based psychological perspective." ■

● **The list of organizations** accredited by Joint Accreditation for Interprofessional Continuing Education is available at www.jointaccreditation.org/accredited-providers.

THE ETHICS OF INNOVATION

At Microsoft, Arathi Sethumadhavan conducts research to fuel responsible design of new technologies

BY ZARA GREENBAUM

Most product teams launch new technologies without fully considering their impact on humans, a practice that Arathi Sethumadhavan, PhD, says can lead to serious problems. As senior design research manager on Microsoft's ethics and society team, Sethumadhavan is always thinking about the societal implications of new technologies, particularly artificial intelligence.

"I work on a team that helps drive ethical and responsible innovation, keeping in mind key ethical principles such as inclusiveness, meaningful human control, privacy and transparency," she says.

Sethumadhavan completed her doctorate in experimental psychology, with a specialization in human factors, at Texas Tech University in 2009. Then, she worked for the medical device company Medtronic, where she helped lead user research for several products, including the world's smallest pacemaker. Since 2018, she has worked with Microsoft teams that create new artificial intelligence and mixed reality technologies—displays that combine virtual and real imagery.

The *Monitor* spoke to Sethumadhavan about her role.

What do you and your team do at Microsoft?

The ethics and society team is part of Microsoft's Cloud and Artificial Intelligence division. Our goal is to help scale technology in a responsible fashion by thinking through the implications that the technology can have on people and society.

The kinds of questions that we think about when we design products include What are the harms we foresee with the technology? Would the technology perpetuate unwanted biases or stereotypes? What concerns will customers have about the data that are being collected about them? Are users of the system able to understand how the system makes decisions? I lead user research for this team, so I work with an interdisciplinary group of project managers, designers and product developers to make sure that we are developing technology in a responsible fashion.

What are some of the ethical values you consider?

Microsoft has defined six ethical principles: inclusiveness, fairness, privacy and security, transparency, reliability and accountability. Whenever I start a new project, I analyze the product space and do primary research to answer questions about each of these ethical pillars. Then, I work with the design team to translate the research insights into design recommendations and product prototypes.

For example, take the principle of inclusiveness. For one product designed to enhance team productivity, our goal was to consider how to make the new technology more inclusive for introverted individuals. My job was to dig into what exactly it means to be an introvert. We live in an extremely gregarious society, where generally speaking, extroversion is rewarded. But that does not mean that introverts have lesser capabilities.

So, I did a lot of research to understand: What are the brain differences between introverts and extroverts? What stimulates introverts? What are the unique skills and capabilities that they have that extroverts don't possess? And how can we capitalize on those unique strengths and abilities through designing better technology? My research revealed that introverts experience more productivity gains when they are given time to reflect. We used this premise to propose design features that were not originally considered by the product team.

In my research, I'm always trying to capture diverse perspectives that traditional product development teams often forget to consider. For example, I work with vulnerable populations—including individuals with speech impairments and people who identify as LGBTQ—to make sure their perspectives are captured during product design.

How did you come to work at Microsoft?

I actually applied for a different job at Microsoft, as the user research lead for the Office Media Group, where I conducted research for applications such as Paint 3D and Stream. But after two

BROOKE FITTS

Dr. Arathi Sethumadhavan's team works to consider the impact that Microsoft's new technologies will have on people and society.

months I was reassigned to the ethics and society team, which was formed last August. Lucky for me, I love ambiguity and I love randomness. I joined that team and we started with one big product engagement, then a few small ones came along, and the team continued to grow. Now, I have the opportunity to build my own team and work on a spectrum of interesting projects.

What inspired you to work in ethics and how did you gain the necessary experience for this role?

My PhD is in experimental psychology with a specialization in human factors. During graduate school, I studied how humans and automated systems work together. I examined how air traffic controller performance and situation awareness are affected by varying degrees of automated assistance. I found that when working with high degrees of automation, it took air traffic controllers significantly longer to detect upcoming collisions in their airspace after an automation failure occurred. Highly automated systems tend to leave controllers out of the decision-making loop, making it harder for them to take over manual control.

Ten years later, this problem still exists. Self-driving cars, for instance, take control away from the human—but what happens when the automation fails? It's important to have a regard for human skills, instead of designing technology that leaves leftover tasks to humans.

After graduation, I got into health care, where I worked in product development for about nine years. When I moved to Microsoft and ultimately joined the ethics and society team, everything seemed to align. I've always been passionate about human-centered design versus centering technology products around technological capabilities.

So, now in my job, I get to think about the same issue I studied in

graduate school—how do humans and technology interact—but with a much broader lens that considers an individual's place in society. For instance, one of the spaces that I work in is virtual and augmented reality. Virtual reality allows us to immerse ourselves in fabricated worlds, completely leaving the real world behind. Mixed reality, often called augmented reality, lets us alter or augment the "real world" while carrying on with our day-to-day lives.

Applications of both of these technologies are changing the world, societies and individuals in profound ways. For example, studies have shown that a user's avatar's appearance in a virtual world can impact harassment. People can even lose their sense of identity and begin to mimic the avatars they assume in these virtual environments. So it is important to think about not just the benefits but also the risks and ethical concerns of these powerful technologies.

What have you found to be most gratifying about this job? Most difficult?

I'm a curious person, and every project that I touch is very different from the others, so I'm constantly learning about new spaces and thinking through new ethical challenges. It's also very gratifying to do foundational research that can provide core insights that influence product design and ultimately impact society.

Microsoft is a technology leader, so if we don't do what's right, who will? The company's mission is to empower everyone on the planet to achieve more. To do that well, we need to think about ethics. As psychologists and user researchers, my team is working to understand users' needs and incorporate their point of view into product design, which I believe is so pivotal.

What's difficult is also fun: All of these products are phenomenally interesting and also phenomenally new. We can discuss ethical theories and philosophies all day long, but that's not going to have any tangible impact on product development unless we break it down to what ethics means in this setting. Who would be the most impacted if we create the technology in this way? How do we ensure that it's fair to everyone? Can people understand how the technology makes decisions? Does the technology exclude certain people? We have to actually think through these problems. There is no formula, so we have to be able to navigate through that ambiguity. That's the most difficult thing, but it also makes this work extremely interesting.

Do you have any advice for psychologists interested in working in this field?

I do the hiring for my team, and the core skills I look for are a strong background in qualitative and quantitative user research, advanced statistics and human factors methodology—someone who has advanced degrees in experimental psychology, cognitive psychology or human factors.

Psychologists who want to work in product development should also know a variety of different user research techniques, including how to conduct interviews, focus groups, usability testing and large sample-size surveys, as well as how to use statistics to analyze the data collected. But most important, I look for strong written and verbal communicators who can think critically. ■

● Interested in the intersection of psychology and technology? Check out APA's **2019 Technology, Mind & Society** conference, to be held Oct. 3–5, in Washington, D.C. Learn more at https://tms.apa.org.


Barbera


Davis


Wilson


Newcombe


Chun

PSYCHOLOGISTS IN THE NEWS

The American Society of Healthcare Publication Editors has presented psychologist **Eleanor Feldman Barbera, PhD,** with a bronze award for her psychology and aging column "The World According to Dr. El," which runs in *McKnight's Long-Term Care News,* a magazine for health-care professionals. Barbera, a consulting psychologist in New York City–area nursing homes, writes about important mental health issues in long-term care.

APA has named **Dawnavan S. Davis, PhD,** as its first chief diversity officer. Davis is responsible for infusing diversity and inclusion throughout the association's work and for guiding and evaluating diversity-related activities in keeping with APA's strategic priorities, policies and guidelines. Davis was previously the assistant vice president of community health at MedStar Health in Columbia, Maryland, where she developed the organization's first diversity and inclusion strategic plan.

The International OCD Foundation has presented its 2019 Service Award to **Reid Wilson, PhD,** for his commitment to the care of people with obsessive-compulsive disorder (OCD). Wilson is the director of the Anxiety Disorders Treatment Center in Chapel Hill, North Carolina, where he runs intensive treatment groups for people with OCD and a free website on OCD and other anxiety disorders. He designed American Airlines' first national program for fearful fliers.

Four psychologists have been elected to the National Academy of Sciences: **Martin S. Banks, PhD,** University of California, Berkeley; **Robert B. Cialdini, PhD,** Arizona State University; **Gordon Logan, PhD,** Vanderbilt University (foreign associate member); and **Linda Smith, PhD,** Indiana University Bloomington. Election to the academy—one of the highest honors for a scientist—is based on distinguished and continuing achievements in original research.

The Society of Experimental Psychologists has presented its Howard Crosby Warren Medal to **Nora S. Newcombe, PhD,** of Temple University. The award for extraordinary achievement in experimental psychology recognizes Newcombe's research on spatial development and the development of episodic and autobiographical memory. Newcombe is the Laura H. Carnell Professor of Psychology at Temple and an associate editor for *Cognitive Psychology* and *Cognitive Research: Principles and Implications.*

Marvin M. Chun, PhD, the dean of Yale College, has won the Ho-Am Prize for Science, an award sponsored by Samsung that honors the scientific accomplishments of individuals of Korean heritage. Chun was recognized for his achievements in cognitive neuroscience. His laboratory at Yale uses fMRI to study visual attention, memory, perception, decision-making and performance.

The American Academy of Arts and Sciences' Social and Developmental Psychology and Education section has elected 11 new fellows: **Stephen J. Ceci, PhD,** Cornell University; **Jennifer Crocker, PhD,** Ohio State University; **Michele J. Gelfand, PhD,** University of Maryland; **Susan R. Goldman, PhD,** University of Illinois at Chicago; **Keith J. Holyoak, PhD,** University of California, Los Angeles; **Mark Johnson, PhD,** University of Cambridge; **Brenda Major, PhD,** University of California, Santa Barbara; **Roy D. Pea, DPhil,** Stanford University; **Margaret Beale Spencer, PhD,** University of Chicago; **John T. Wixted, PhD,** University of California, San Diego; and **Hirokazu Yoshikawa, PhD,** New York University. Fellows are chosen for their exceptional scholarship, innovation and leadership. Once elected, they work on interdisciplinary projects to promote the public good. ■

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BY TORI DEANGELIS

HOW THE WORLD VIEWS IMMIGRANTS

More people worldwide see immigrants as a blessing than a burden—but a large influx of asylum seekers can erode that support

56%

Median percentage of people worldwide who said immigrants make their **countries stronger,** according to a 2018 Pew Research Center survey of 18 countries that host half the world's migrants. However, people in European countries that received **a large influx of asylum seekers** in 2015—including Greece, Germany and Italy—were **7%** to **9%** less likely to endorse this view in 2018 than they were in 2014, when Pew last conducted this survey.

38%

Median percentage of people in the countries surveyed who said immigrants are a **burden** on their countries.

49%

Median percentage of people who felt immigrants want to **remain distinct** rather than adopt their new country's customs and way of life.

45%

Median percentage of people who said immigrants want to **adopt their customs** and way of life. That includes **75%** of those in Japan, **54%** in the United States, **33%** in Germany, **19%** in Greece and **10%** in Italy.

Source: Around the World, More Say Immigrants Are a Strength Than a Burden. Pew Research Center survey, 2018. Available at: www.pewglobal.org/2019/03/14/around-the-world-more-say-immigrants-are-a-strength-than-a-burden.

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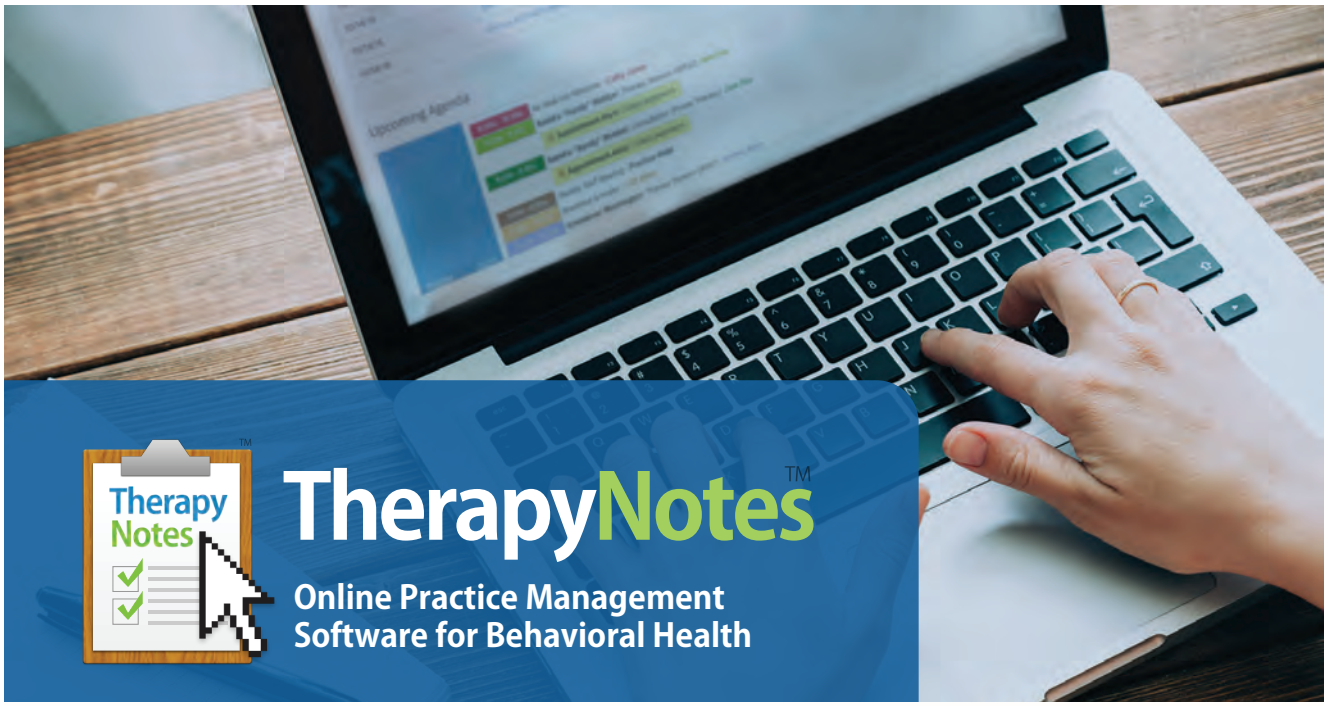

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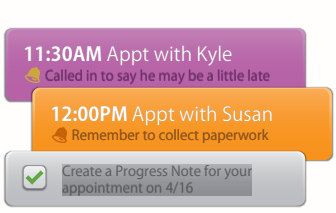

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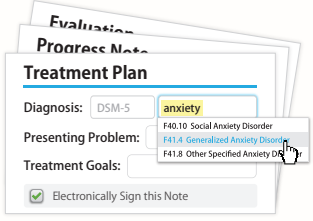

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