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monitor on

psychology

GST# R127612802

TOP TRENDS TO WATCH IN 2020

HOW PSYCHOLOGY IS
CHANGING—AND HOW
PSYCHOLOGISTS ARE
CHANGING THE WORLD

PAGE 38

**Combating Suicide
Among Veterans and
Service Members**

PAGE 32

**Working With Interpreters
to Better Serve Patients**

PAGE 90



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SOCIAL MEDIA ETHICS WITH DR. BEN CALDWELL



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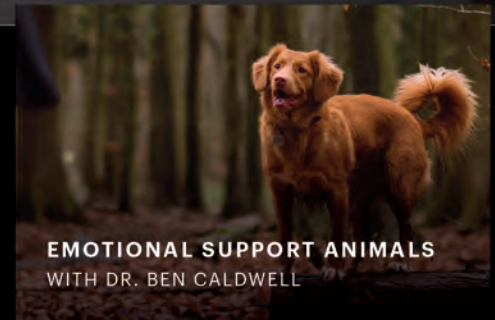


THERAPY WITH LGBTQ CLIENTS WITH JAMES GUAY, LMFT



"Clarification of terms and
difference between LGBTQ
friendly and affirming."

MICHELE PUTINI, MA, MFT



EMOTIONAL SUPPORT ANIMALS WITH DR. BEN CALDWELL



"The informations is concise,
clear, and useful, and presented
in a very engaging way."

TONY DAVIS, MFT



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CONTRIBUTING WRITERS Deborah Bailey, Sophie Bethune, Zara Greenbaum, Charlotte Huff,
Amy Novotney, Nicole Owings-Fonner, Chris Palmer,
Stephanie Pappas, Heather Stringer, Kirsten Weir

ART AND DESIGN

ART DIRECTOR Michele Chu

DESIGN CONSULTANT Jerry Sealy

PRODUCTION MANAGER Peter S. Kovacs

APA MEDIA AND EVENT SALES

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COVER STORY

10 TRENDS TO WATCH IN 2020

Psychologists are raising their voices and sharing their expertise on some of the country's most pressing issues, including gun violence and climate change. Meanwhile, the field is becoming more diverse, and technology is changing our research, teaching and practice.

Find out more about what's in store for psychology in 2020. *See page 38*



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CE CORNER

STOPPING MILITARY AND VETERAN SUICIDES

On average, 17 U.S. veterans die by suicide every day, and the suicide rate is also rising among active-duty troops. Now, psychologists within and outside the Department of Veterans Affairs and Department of Defense are working to expand screening and evaluation programs and develop effective interventions. *See page 32*



REPLICABILITY

“Of all the steps toward transparency that researchers can take, sharing data is one of the most beneficial, but also one of the most fear inducing.”

Morton Ann Gernsbacher, PhD, University of Wisconsin–Madison. *See page 86*

Optimists
live longer.
Page 14





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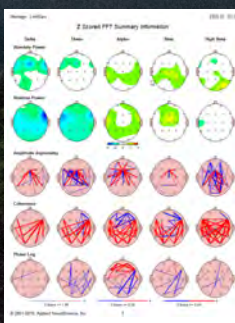
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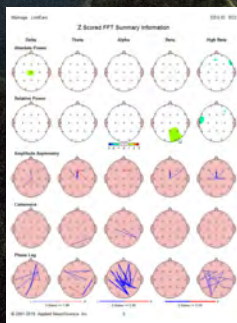
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CHILDHOOD
NEGLECT

Before Neuromodulation

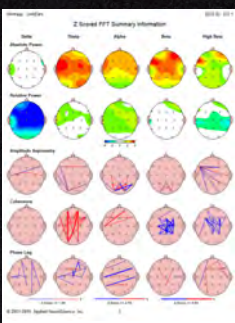


After Five Sessions and
Two Weeks Later

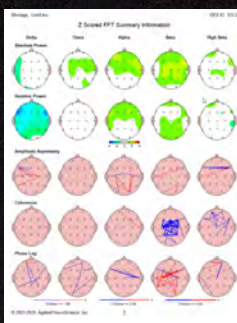


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SURVIVOR

Before Neuromodulation



After Seven Sessions and
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2020: A TIME FOR COLLECTIVE IMPACT

Let's join together to implement APA's strategic plan—a process that will likely be challenging, invigorating, frustrating and rewarding

BY SANDRA L. SHULLMAN, PhD, APA PRESIDENT

As 2020 APA president, I am taking a somewhat different approach to the presidency. Let me explain. The traditional role of APA president has been to identify and enact a set of personally generated initiatives—a very reasonable approach in the past. However, we now have a robust set of APA strategic goals to accomplish, so I'm calling on you to be leaders with me this year—to help our association, discipline and profession focus primarily on the strategic plan that our entire membership co-created. I need your input to begin accomplishing the plan's four strategic priorities:

- Use psychology to make a positive impact on critical societal issues.
- Prepare the discipline and profession of psychology for the future.
- Elevate the public's understanding of, regard for and use of psychology.
- Strengthen APA's standing as an authoritative voice for psychology.

These goals are ambitious, ambiguous and aspirational, suggesting that

there are many routes to fulfilling them. That means no one person or leader can or should determine how to enact them. Rather, we need to work together to support, drive and achieve them, recognizing that they will probably change and evolve over time.

Those of you who know me are probably not surprised at the direction I am taking as president. Much of my work as an applied psychologist has been to help people develop leadership skills under ambiguous circumstances—embracing uncertainty while moving boldly into a future that we ourselves help create. (For interested psychologists, I will make leadership development opportunities available this year—stay tuned.)

So, instead of beginning with my personal initiatives and creating groups to fulfill them, this year I'll be meeting with leaders, members and colleagues inside and outside of our discipline to spur thinking on how we want to start fulfilling our strategic goals. I'll communicate with you about those ideas, projects, plans and emerging initiatives, and I'll seek your input for developing them further.

APA and our field have many challenging, confounding, exciting and important issues to address in our 128th year. Pooling our collective talents, we can elevate psychology's impact and serve the public in new and creative ways. ■



APA President
Dr. Sandra L. Shullman

● Send your thoughts and ideas about APA's strategic plan to strategicplan@apa.org, or to me directly at sshullman@apaboard.org.

KIRK IRWIN

Feedback

OUR FAVORITE TWEETS

Re: "More Impact Together: Confronting the Climate Crisis" (November)

@Sander_vdLinden Important piece in the @APA Monitor today from Kirsten Weir on how psychologists (of all stripes) can confront the climate crisis! Featuring joint work with @YaleClimateComm and the great @MattGoldberg100 on the importance of having climate conversations

Re: "Serving the Armed Forces" (November)

@APADiv19 Thank you @APA_Monitor for the excellent article on military psychologists!

Re: "Changing the World From the Classroom" (November)

@afineburg A whole article in the Nov

2019 @APA_Monitor on action teaching! Starts off with cool activity to teach about income inequality using Monopoly...

Re: "The Future of Remote Work" (October)

@IanAtkinsFWIW Good article in @APA from @zaraabrams looking at the latest on remote work and with interesting notes on how to maximize the efficiency and productivity of teams that are geographically dispersed.

Re: "From the CEO: Psychology's Power to Create Healthier Workplaces" (October)

@jnhook Thanks to @ArthurCEvans for your leadership. This article is a great overview of a number of important efforts that @APA is undertaking. ■

● We'd love your feedback. Send letters to Editor Lea Winerman at lwinerman@apa.org.

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A GLOBAL EFFORT ON CLIMATE CHANGE

Psychologists' expertise in human behavior is essential to addressing this escalating worldwide threat

BY ARTHUR C. EVANS JR., PhD

In mid-November, I joined leaders of the world's psychological associations to launch a critical initiative combating climate change. Given that the climate crisis is largely caused by human behavior, we as psychologists are well positioned to apply our science to help prevent climate change and mitigate its adverse impacts.

At the first International Summit on Psychology and Global Health, in Lisbon, Portugal, Nov. 14–16, cohosted by APA and the Order of Portuguese Psychologists, the president of Portugal and representatives of 43 psychological associations from five continents gathered to discuss this global challenge, which demands a global response. Together, we signed a proclamation laying out our intent to, among other aims:

- Inform our members and the public about the climate crisis.
- Encourage our members and other mental health leaders to be vocal advocates in this area.
- Increase the availability of services and interventions, especially for

vulnerable populations.

■ Encourage governmental, educational, health and corporate leaders to draw upon psychological science in developing climate policy.

As you can see in this issue of the *Monitor*, our third annual Trends Report, psychologists are already contributing to this work (see page 48). They are writing and reviewing material for the upcoming sixth assessment of the United Nations Intergovernmental Panel on Climate Change, which will influence climate policy worldwide. Psychologists are also working directly with national and local governments and corporate leaders to apply behavioral science to climate communication and policy efforts by, for example, crafting more effective messaging campaigns to promote energy-efficient and sustainable behaviors. With more contributions like these, we can help address this complex, seemingly intractable issue. The summit provides a launching pad for psychological associations around the world to work together on climate change, building on and amplifying our previous efforts.

I hope our coverage of psychologists' roles in climate change and other important issues in this Trends Report inspires your work. Our discipline is critical for addressing many of the societal problems facing our nation and our world. ■



● **Read more** about the international summit at www.apa.org/news/apa/2019/climate-change-resolution.

The Hot List

NEW TOOL FOR TEACHING RESEARCH

Bring research ethics and data analysis alive for your students with **PsycLearn™: Research Methods**—APA's new interactive digital curriculum to aid undergraduate teaching. APA used research on the efficacy of repetition and recall in learning to design the digital textbook alternative, which features interactive activities, writing prompts, videos and quizzes that test students' understanding of the material. PsycLearn™ also helps instructors monitor student progress. Sign up for a free trial at digitallearning.apa.org/psyc-learn. APA will debut digital curricula on social psychology and statistics later this year.



HOW TO ERADICATE YOUR STUDENT DEBT

A new APA video explains the ins and outs of the federal **Public Service Loan Forgiveness Program** for student debt relief in five minutes, to help applicants avoid the common pitfalls of ineligibility. Watch it at <https://on.apa.org/PSLF-video>.

NEW GUIDE FOR TRANSGENDER TEENS

The new Magination Press book **"Trans+: Love, Sex, Romance, and Being You"** answers questions about gender, mental health, transitioning, sex and more for teens who are transgender, nonbinary, gender-nonconforming or gender-fluid. Find it at <https://on.apa.org/Trans-book>.



NEW WAYS TO BE A BETTER LEADER

Develop proven leadership skills through APA's second annual **Emerging Leaders in Psychology Academy**, a series of 10 online courses and interactive discussion boards designed to help you transition to leadership roles. Registration opens Jan. 15 at <https://pages.apa.org/emerging-leaders>.

MEET YOUR NEXT APA PRESIDENT

Members have elected **Jennifer F. Kelly, PhD, ABPP**, as APA's 2021 president. Kelly is the director of the Atlanta Center for



Behavioral Medicine in Atlanta and has a long history of APA leadership, service and advocacy work. Share your priorities with her at jkelly@apaboard.org.

DID YOU KNOW?

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In Brief

THE LATEST PEER-REVIEWED STUDIES WITHIN PSYCHOLOGY AND RELATED FIELDS

Increase Your Motivation by Sharing Your Goals

People are more committed to their goals when they share them with people they perceive as having higher status than themselves, according to research in the *Journal of Applied Psychology*. In one study, researchers surveyed 429 people online about their career goals and found that their commitment to attaining those goals was higher if they had told (or planned to tell) a higher-status individual about the goals. In another study, the researchers asked 171 undergraduate students at a university in the United States to complete a simple computer-based task. Then, after setting a goal

for a second round of the same task, participants who had shared their goal with a higher-status lab assistant (a PhD student dressed in a suit) reported more commitment to achieving the goal—and performed better—than those who had told a lower-status assistant (a casually dressed community college student). Participants who shared their goal with the lower-status assistant performed no better than those who told no one about their goal. The researchers hypothesize that sharing a goal with someone whose opinion is valued makes it harder to abandon the goal. DOI: 10.1037/apl0000441



RANDI EYE/GETTY IMAGES



BIG SISTERS BOOST LANGUAGE

Children who have older sisters have better language skills than those with older brothers, according to a study in *Psychological Science*. Researchers analyzed data from a French cohort study, which followed children and their mothers from before birth through age 11. The researchers assessed the language skills of 1,276 children in the study, including 547 who had older brothers or sisters, at ages 2, 3, and 5 to 6. On average, children who had older siblings had worse language skills than those who didn't. However, children with older sisters had better language skills than those

with older brothers. Further, the language skills of children with older sisters were no better or worse than those of children with no older siblings. No effects of the size of the age difference between siblings were observed.
DOI: 10.1177/0956797619861436

CITY VERSUS COUNTRY

Growing up in an industrialized society may allow people to develop more risk tolerance and greater future orientation, according to research in the *Journal of Experimental Psychology: General*. In an initial study, researchers investigated Shuar children living in a forager-horticulturalist society in Amazonian Ecuador, as well

Children with big sisters have better language skills than those with older brothers.

as children from developed areas of India, Argentina and the United States. The researchers offered the children (ranging in age from 4 to 18 years, average age 10) a single piece of candy on the spot or up to five pieces if they waited until the next day. The Shuar children chose the single piece of candy that was available immediately more often than did the children from the other countries. Further, when offered a single candy or a 1 in 6 chance to receive up to five candies, the Shuar children were more risk averse than the other children, usually taking the sure bet of receiving a single candy. In a second study, the researchers compared

the performance of Shuar children living in the forager-horticulturalist society with that of other Shuar children who lived closer to cities. The former group performed as did the Shuar children in the first study, while the latter group performed similarly to the children from the other countries. The researchers suggest that industrialization provides buffers—such as storable food and money—that enable future-oriented and risk-tolerant behaviors and that such buffers are less available in forager-horticulturalist societies.

DOI: 10.1037/xge0000675

RACE, SCHOOL SHOOTINGS AND VIDEO GAMES

School shootings are more likely to be blamed on violent video games when the perpetrators are white than when they are African American, suggests a study in *Psychology of Popular Media Culture*. Researchers analyzed 204,796 news articles about 204 mass shootings in the United States over 40 years and found that video games were 8.35 times more likely to be cited as a possible inciting factor when the shooter was white than when the shooter was African American. In another experiment with 169 college students (88% white), researchers found that participants who read a mock newspaper article about a school shooting with a photo of a white shooter were more likely to blame video games than those who saw the same article with a photo of an African American shooter.

DOI: 10.1037/ppm0000255



People are more likely to blame violent video games for a school shooting when the shooter is white rather than African American.

A genetic risk for depression is tied to greater risk for other physical and mental health conditions.

DEPRESSION DRIVES DISEASES

People who have greater genetic risk for major depressive disorder (MDD) are also at greater risk for at least 22 other conditions, including anxiety and sleep disorders as well as asthma, coronary heart disease and gastrointestinal disorders, according to a study in *Molecular Psychiatry*. Researchers analyzed data in the UK Biobank repository from 337,536 middle-aged and older participants from the United Kingdom. Their analysis of

genetic and health data indicates that MDD has a causal influence on the development of the other conditions. The researchers say these findings point to the importance of early detection and treatment of MDD and of the need to consider comorbid conditions when treating patients with MDD.

DOI: 10.1038/s41380-019-0486-1

WHAT'S BEHIND EXTREME PARTISANSHIP?

Strongly held beliefs on both sides of the political spectrum are related to cognitive inflexibility, suggests a study in the *Journal of Experimental Psychology: General*. Researchers asked 743 U.S. citizens to complete neuropsychological tests measuring cognitive rigidity and flexibility. They found that participants who were extremely attached to either the Democratic Party or the Republican Party displayed greater mental rigidity on the cognitive tests





than those who were moderately or weakly attached to a political party. The team also found that self-described Independents displayed greater cognitive flexibility than Democrats and Republicans.

DOI: 10.1037/xge0000661

JUST BE KIND

Men and women around the globe put kindness at the top of the list when ranking the characteristics that they value most in a hypothetical ideal long-term partner, according to a study in the *Journal of Personality*. Researchers asked 2,477 college students from Australia, Hong Kong, Malaysia, Norway, Singapore and the United Kingdom to allocate points to eight attributes in a potential partner: chastity, creativity, desire for children, humor, good financial prospects, kindness, physical attractiveness and religiosity. Universally, the most desired trait was kindness. After that, men favored physical

attractiveness, while women favored good financial prospects. The least important characteristics across all countries were creativity, chastity and religiosity.

DOI: 10.1111/jopy.12514

LOOK ON THE BRIGHT SIDE

Optimistic people may live 15% longer than pessimists, according to a study in the *Proceedings of the National Academy of Sciences*. Researchers analyzed questionnaire data from two longitudinal studies in the United States:



When imagining an ideal long-term partner, both men and women value kindness above all other traits.

Optimists live longer than pessimists, possibly because optimism reduces stress.

one with 69,744 women and another with 1,429 men. After controlling for health conditions, diet, exercise and demographic characteristics, the researchers found the most optimistic women (the top 25%) lived an average of 14.9% longer than their least optimistic peers (the bottom 25%). The most optimistic men lived 10.9% longer than their least optimistic peers, on average. The researchers suggest an optimistic mindset may reduce stress and promote healthy behaviors.

DOI: 10.1073/pnas.1900712116

VIRTUOUS CYCLE

People's self-esteem and the quality of their relationships are closely intertwined, according to a meta-analysis in the *Journal of Personality and Social Psychology*. In an effort to resolve inconsistencies in previous evidence, researchers examined 53 longitudinal studies with 47,676 participants from 10 countries, published between 1992 and 2016, that examined the effect of social relationships on self-esteem, and vice versa, over time. The researchers found that the quality of social relationships (including social support and social acceptance) influenced levels of self-esteem in people across ages 4 to 76. They also found effects of the same size in the reverse direction. Further work is needed to determine whether the effects of relationships accumulate over the life span or whether certain relationships become particularly important at certain ages, according to the researchers.

DOI: 10.1037/pspp0000265

BROADENING THE SPECTRUM

The sizes of group differences between people diagnosed with autism and those without autism have decreased on various measures over the past two decades, according to a study in *JAMA Psychiatry*. Researchers reviewed 11 meta-analyses published between 1966 and 2019, with data drawn from 27,723 individuals from around the world. Overall, the meta-analyses covered data on five psychosocial dimensions (emotion recognition, theory of mind, cognitive flexibility, planning and inhibition) and two neurological dimensions (event-related potentials and brain volume). On all dimensions, group differences between individuals with and without autism have declined since about the year 2000. The researchers suggest that this shift is due to changes in

diagnostic criteria and practices during this period. By contrast, in a similar study of schizophrenia, the researchers found no changes in the sizes of group differences between those with and without the condition over the last several decades.

DOI: 10.1001/jamapsychiatry.2019.1956

SOCIAL MEDIA STRESS

When social networking sites cause stress among their users, some users log off, but others engage in more social networking activities to cope with the stress, according to a study in *Information Systems Journal*. Researchers surveyed 444 Facebook users in the European Union about their social networking habits. They found that users engaged in two general strategies when the use of the platform caused stress: While some users distracted themselves

When social media gets stressful, not everyone logs off—some people simply switch to a different social media activity.

with activities outside of social media use, others switched to other activities within Facebook such as chatting with friends or scanning news feeds. This switching strategy was more prevalent among those users who used the site more regularly.

DOI: 10.1111/isj.12253

KEEPING IT REAL

Using politically incorrect speech can make a political candidate seem more authentic, but only when the target of such speech is not a group to which the listener is sympathetic, suggests a study in the *Journal of Personality and Social Psychology*. Across several experiments with 1,022 online participants, researchers found that using politically incorrect language (such as referring to undocumented immigrants as “illegals”) made a communicator appear authentic



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among self-identified moderate conservatives but cold among self-identified moderate liberals. However, in a fourth experiment with 801 online participants, these effects were reversed when conservatives felt sympathy toward the group targeted with politically incorrect language, such as poor whites who were called “white trash.”

DOI: 10.1037/pspi0000206

HOW DID YOU MEET?

Heterosexual couples are now more likely to have met their romantic partners online than through personal connections, according to research in the *Proceedings of the National Academy of Sciences*. In a pair of surveys of 5,421 heterosexual couples in the United States, 2% of those who

met in 1995 found one another on the internet. That number rose to 5% of those who met in 2000 and to 20% of those who met in 2010. The most recent numbers, from 2017, indicate that 39% of couples met online, while 38% met through friends, co-workers or family (with others meeting at bars, school, church, etc.).

DOI: 10.1073/pnas.1908630116

TIME-OUTS ARE OK

Using time-outs to discipline children does not harm them or their relationships with their parents, suggests a study in the *Journal of Developmental & Behavioral Pediatrics*. Researchers analyzed longitudinal data from 1,387 U.S. children enrolled in Head Start programs. The data

Nearly 4 in 10 heterosexual couples now meet online, more than any other way.

revealed that by the time a child reached age 3, 28% of parents had employed the time-out strategy. The researchers used parent questionnaires, in-lab observations and videotaped interactions when the children were 3, in pre-kindergarten and in fifth grade to assess their mental health, social skills and feelings about their parents. They found no differences in levels of anxiety and depression, self-control, rule-breaking or child negativity toward their parents between children whose parents used time-outs and children whose parents did not. In contrast, children whose parents used physical punishment were more aggressive than children whose parents did not.

DOI: 10.1097/DBP.0000000000000725

THE PILL, TEENS AND DEPRESSION

Women who used oral contraceptive pills as teenagers are at increased risk of depression in early adulthood, according to a study in *The Journal of Child Psychology and Psychiatry*. Researchers analyzed data from a population-representative survey of 1,236 women (ages 20 to 39, mean age of 29) in the United States and controlled for factors that have previously been proposed to explain the relationship between oral contraceptive use and depression risk. These include age of onset of menstruation, age of first sexual intercourse and current oral contraceptive use. The researchers found that women who self-reported first using oral contraceptives as teenagers had a 1.7 times higher likelihood of clinical depression in adulthood than women who started using oral contraceptives as adults. Women who had used oral contraceptives as teens were three times more likely to be clinically depressed than women who had never used them.

DOI: 10.1111/jcpp.13115

A WINDOW INTO ALZHEIMER'S RISK

The magnitude of pupil dilation during a memory task—a marker of cognitive effort—is associated with increased genetic risk for Alzheimer's disease, suggests a study in *Neurobiology of Aging*. In previously published work, researchers reported that adults with mild cognitive impairment, often a precursor to Alzheimer's, displayed greater pupil dilation during a memory task than cognitively normal individuals. In a



new study with 539 cognitively normal men, the same researchers found that those showing greater pupil dilation while performing the memory task were more likely to have genes linked to increased Alzheimer's risk. The researchers suggest that measurement of pupil dilation could serve as a low-cost, noninvasive screening method for early identification of people at increased genetic risk for Alzheimer's disease.

DOI: 10.1016/j.neurobiolaging.2019.09.001

COMING OFF OPIOIDS

Patients who discontinued their use of opioids for pain management were more likely to die of an overdose in subsequent years than were patients who continued to take prescription opioids, according to a study in the *Journal of General Internal Medicine*. Researchers investigated a cohort of 572 patients (average age 55) with chronic pain enrolled in an opioid registry of a primary care clinic in Washington state.

Women who start using oral contraception as teens are more likely to develop depression as adults.

Pupil dilation during cognitive tasks could be a biomarker for Alzheimer's risk.



Chronic opioid therapy was discontinued by 344 patients. During the five-year study period, 119 registry patients died, 21 of whom were definitive or possible drug overdoses. Of those 21 overdose deaths, 17 were patients who had discontinued opioid therapy at the clinic (but may have obtained opioids elsewhere) and four were patients who had continued to receive opioid therapy at the clinic. The researchers suggest that multimodal pain management and treatment of opioid use disorder may be needed to help wean patients off opioids successfully.

DOI: 10.1007/s11606-019-05301-2

SOCIAL MEDIA AND MENTAL HEALTH

Adolescents who spend more than three hours per day on social media are more likely to report high levels of mental health and behavioral problems than adolescents who spend less or no time on social media, according to a study in *JAMA Psychiatry*. Researchers recruited a nationally representative sample of 6,595 U.S. adolescents ages 12 to 15 for the study, which was conducted from 2013 to 2016. The researchers asked the participants how much time they spent on social media: Fewer than 17% of adolescents reported not using social media at all, while 20% reported using social media three or more hours per day. In a second wave of the study a year later, participants self-reported a variety of symptoms. The researchers found that those adolescents who reported spending more than three hours

per day on social media in the first wave showed an increased likelihood of reporting anxiety, depression, aggression and defiance, among other symptoms, in the second wave.

DOI: 10.1001/jamapsychiatry.2019.2325

OVERWHELMED PARENT, AT-RISK CHILD

Parents who are experiencing burnout may have thoughts of escaping their families and an increased risk of neglect and violence toward their children, suggests research in *Clinical Psychological Science*. In one study, researchers asked 557 French-speaking parents in Europe to complete three online surveys, spaced about six months apart, assessing their level of burnout, escape ideation, the degree to which they neglected their children's needs and their tendency to engage in verbal, psychological or physical violence, including slapping and spanking. The researchers found

strong associations between burnout and each of the three variables—escape ideation, parental neglect and parental violence—at each of the three time points. A second study assessing 822 parents in the United Kingdom yielded similar results.

DOI: 10.1177/2167702619858430

THERE'S NO 'GAY GENE'

The largest genetic study of sexual orientation to date revealed that multiple gene loci are associated with same-sex sexual behavior. Among them are five gene loci that each show statistically significant associations on their own with same-sex sexual behavior. The genome-wide association study, published in *Science*, was conducted with 493,001 participants from the United States, the United Kingdom and Sweden. In the aggregate, the entire set of identified gene loci accounted for between 8% and 25% of the variance in female and male same-sex sexual behavior. As noted by the

Several gene loci are statistically associated with same-sex sexual behavior, but genetic testing by itself cannot predict sexual orientation.

researchers, the study indicates that genetic testing by itself cannot be used to reliably predict whether a person will engage in same-sex sexual behavior.

DOI: 10.1126/science.aat7693

NEATLY WRAPPED

When recipients open a gift, they generally like it less when the giver has wrapped it neatly as opposed to sloppily, according to a study in the *Journal of Consumer Psychology*. Researchers in the United States presented 180 students with either a desirable gift (a mug emblazoned with the logo of their favorite basketball team) or an undesirable gift (a mug with a rival team logo), wrapped either sloppily or neatly. They found that recipients set higher expectations for neatly wrapped gifts, making it harder for the gifts to meet expectations and thus resulting in disappointment once they were unwrapped. In contrast, recipients had low expectations for sloppily wrapped gifts, and so they were happy when the gifts exceeded those expectations. However, in another online experiment with 261 participants imagining receiving a hypothetical gift, the researchers found that when the gift-giver was an acquaintance instead of a friend, wrapping neatness was used as a cue about the status of the ambiguous relationship, rather than the quality of the gift—so in this case, tidy wrapping led recipients to like the gift more. ■

DOI: 10.1002/jcpy.1140



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

Datapoint

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

WHICH STATES HAVE THE MOST LICENSED PSYCHOLOGISTS?

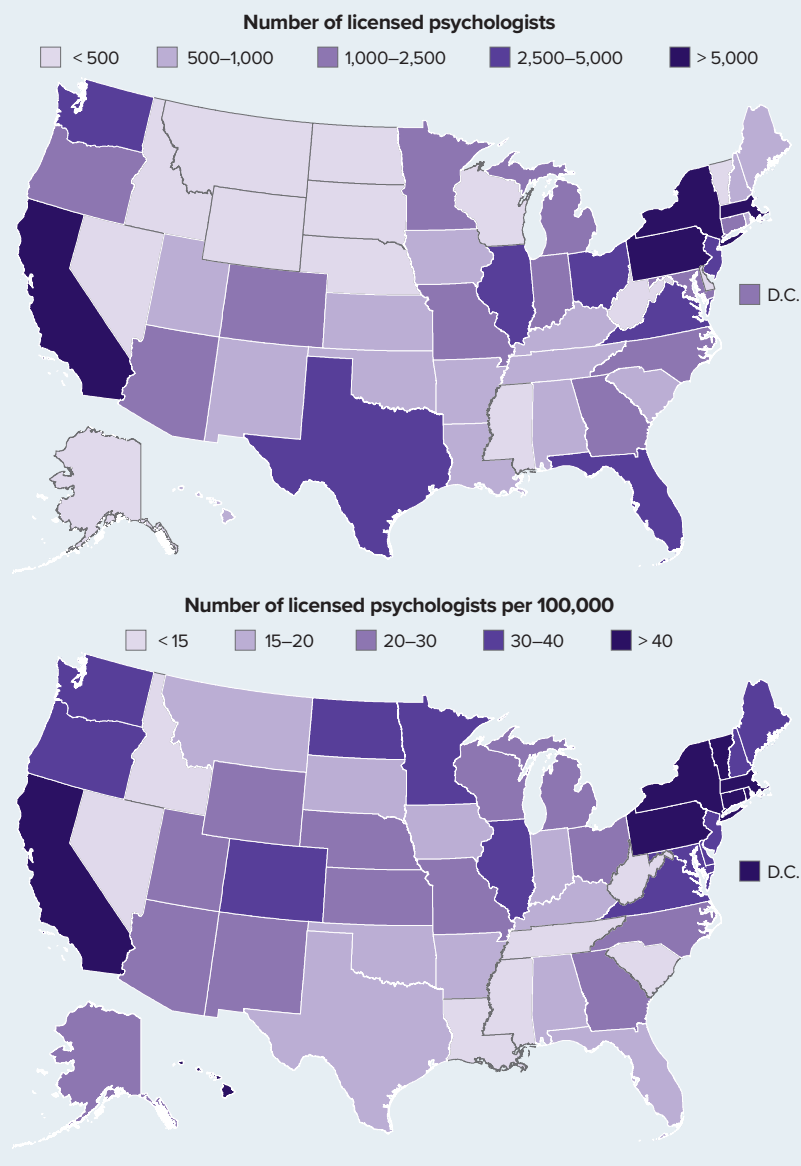
In 2018, there were approximately 102,000 active doctoral-level licensed psychologists in the United States—about 31.3 licensed psychologists per 100,000 people.¹

■ California (16,900), New York (13,470) and Massachusetts (5,660) had the most licensed psychologists, while South Dakota (160), Wyoming (170) and Alaska (170) had the fewest.

■ The District of Columbia (144.1), Massachusetts (81.9) and New York (68.9) had the most licensed psychologists per 100,000 people, while South Carolina (11.5), West Virginia (11.8) and Mississippi (12.1) had the fewest.

¹The National Center for the Analysis of Healthcare Data's Enhanced State Licensure data was utilized as the primary source for the number of actively licensed psychologists. Only doctoral-level psychologists with active licenses were included. Records from the state licensing boards were deduplicated based on name, address, phone number and email. Psychologists with a single license were counted in the state where the license was issued. Psychologists with multiple licenses were counted in the reported address state of the license with a more recent license issue date. Population estimates were from U.S. Census Bureau (2018). 2018 National and State Population Estimates (www.census.gov/newsroom/press-kits/2018/pop-estimates-national-state.html).

Number and Concentration of Active Doctoral-Level Licensed Psychologists, 2018



By Luona Lin, MPP, Jessica Conroy, BA, and Peggy Christidis, PhD

Want more information? See CWS's interactive data tools: www.apa.org/workforce/data-tools/index or contact cws@apa.org.

AMERICANS ARE STRESSED ABOUT THE PRESIDENTIAL ELECTION

Health care, mass shootings and immigration are also causing significant stress, a new APA survey finds

BY SOPHIE BETHUNE

A year before the 2020 presidential election, Americans report various issues in the news as significant sources of stress, including health care, mass shootings and the election itself, according to a new Stress in America™ survey by APA. More than half of U.S. adults (56%) identify the 2020 presidential election as a significant stressor, an increase from the 52% of adults who reported the presidential election as a significant source of stress when asked in

the months leading up to the 2016 contest.

The Stress in America survey was conducted between Aug. 1 and Sept. 3, 2019, by the Harris Poll among 3,617 adults living in the United States.

According to the survey, around 7 in 10 adults (69%) say that health care is a significant source of stress—nearly equal to the 71% who say mass shootings are a significant source of stress. Among adults who experience stress about health care at least sometimes (47%),

The survey found that 71% of Americans say mass shootings are a significant source of stress.

the cost of health care is the most commonly cited source of that stress (64%). Adults with private insurance (71%) are more likely than those with public insurance (53%) to say the cost of health care causes them stress. More than half of adults overall (55%) worry that they will not be able to pay for health-care services they may need in the future.

Mass shootings are the most common source of stress cited by U.S. adults in 2019, with more than 7 in 10 adults (71%) saying mass shootings are a significant source of stress in their lives. This is an increase from 2018, when more than 6 in 10 adults (62%) said mass shootings were a significant source of stress. By demographic, Hispanic adults are most likely to say mass shootings are a significant source of stress (84%), followed by black (79%), Asian (77%), Native American (71%) and white (66%) adults.

Stress related to climate change/global warming has increased significantly since 2018 (56% in 2019 vs. 51% in 2018). And more adults are reporting that widespread sexual harassment causes them stress today than said the same in 2018 (45% in 2019 vs. 39% in 2018).

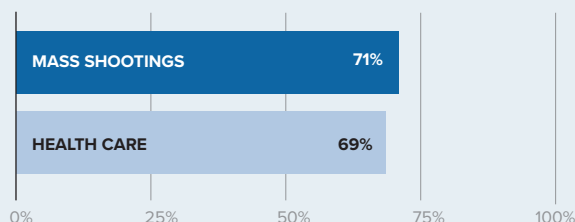
“There is a lot of uncertainty in our world right now—from mass shootings to climate change. This survey shows us that more Americans are saying these issues are causing them stress,” says Arthur C. Evans Jr., PhD, APA’s chief executive officer. “Research shows us that over time, prolonged feelings of anxiety and stress can affect our overall physical and mental health. Psychologists can help



ALVAREZ/GETTY IMAGES

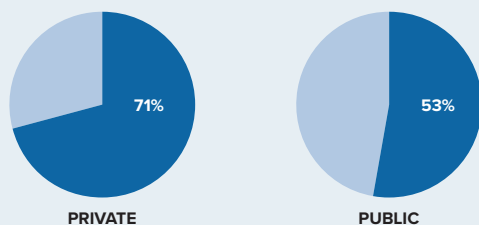
Major Sources of Stress

About 7 in 10 Americans are stressed about mass shootings, and a nearly equal proportion are stressed about health care



Stress About the Cost of Health Care*

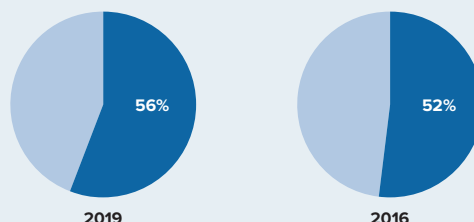
About 7 in 10 Americans with private insurance are stressed about the cost of health care, as are 53% with public insurance



*among those who stress about health care at least sometimes

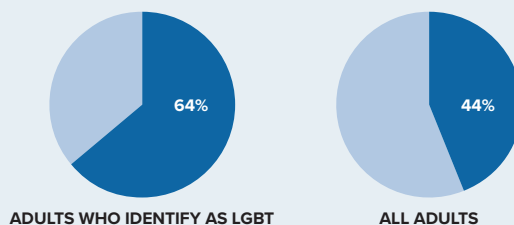
The 2020 Election

More U.S. adults feel stressed about the 2020 presidential election now than ahead of the last presidential election in 2016



The Toll of Discrimination

Nearly two-thirds of LGBT adults and 44% of all U.S. adults say discrimination interferes with having a full and productive life



people develop the tools that they need to better manage their stress.”

IMMIGRATION AND DISCRIMINATION

Immigration is cited as a stressor by nearly half of adults (48%), with Hispanic adults most likely to identify it as a stressor (66%), followed by Asian (52%), Native American (48%), black (46%) and white (43%) adults.

Discrimination is another stressor that has become more prevalent in recent years (25% in 2019 vs. 24% in 2018, 21% in 2017, 20% in 2016 and 20% in 2015). In 2019, the majority of people of color (63%) say that discrimination has hindered

them from having a full and productive life, with a similar proportion of LGBT adults (64%) expressing the same sentiment.

When looking at the responses of people of color, the 2019 results represent a significant increase from 2015, the last time this set of questions was asked, when less than half (49%) said that discrimination prevented them from having a full and productive life.

“This survey shows us that current events affect Americans differently, with people of color more likely to say they feel stressed about health care, immigration and discrimination,” says Evans. “While these are import-

ant societal issues that need to be addressed, the results also reinforce the need to have more open conversations about the impact of stress and stress management, especially with groups that are experiencing high levels of stress.”

While average reported stress levels remain constant compared with 2018 (4.9 in 2019 and 4.9 in 2018 on a scale of 1 to 10, where 1 is “little or no stress” and 10 is “a great deal of stress”), there continues to be a generational difference, with Gen Z adults reporting the highest average stress level (5.8), followed by Gen Xers (5.5), millennials (5.4), baby boomers (4.2) and older adults (3.0). ■

● To read the full Stress in America report, download graphics or view the full methodology, visit www.stressinamerica.org.

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NEW CODES AND BETTER REIMBURSEMENT

Practitioners need to use new billing codes for health behavior assessment and intervention services. The good news is that they should expect an increase in their Medicare reimbursement.

BY NICOLE OWINGS-FONNER, MA

As of Jan. 1, psychologists need to use new Current Procedural Terminology (CPT®) codes when billing all third-party payers for health behavior assessment and intervention (HBAI) services. The new codes have increased values that put them in line with the Medicare payments for psychotherapy services.

Psychologists use HBAI codes when billing for services that help patients cope with or manage physical health conditions. Such services include minimizing psychological and/or psychosocial barriers to recovery, improving patient adherence to medical treatment and helping patients manage their symptoms and adjust to a physical illness.

A single, untimed code will now be used to report health behavior assessment and reassessment (similar to CPT code 90791, psychiatric diagnostic evaluation). In addition, the new intervention service codes include a stand-alone 30-minute base code that describes the primary service, as well as a 15-minute add-on code that describes additional work and time associated with the primary service.

Key points for using the new HBAI codes:

- HBAI codes are not used for mental health services. They require a physical health diagnosis from the International Classification of Diseases-10 to be the primary diagnosis, not a Diagnostic and Statistical Manual of Mental Disorders diagnosis code.

- HBAI codes and psychotherapy codes cannot be billed on the same date of service.

- Add-on codes should never be reported by themselves. They must be reported with the primary service base code.

- Claims for services provided in 2019 but submitted in 2020 should be filed using the old health and behavior codes (96150–96155).

- While all third-party payers require the use of the new codes for services provided on or after Jan. 1, reimbursement payments may be delayed while the new codes are added to the computerized claims processing systems. ■

● **For more information**, visit www.apaservices.org/practice/reimbursement/health-codes.



THE NEW CODES

Health behavior assessment and reassessment services are reported using an untimed code: **96156**. Health behavior intervention services are reported using a base code for the first 30 minutes of performing the primary intervention service, and a 15-minute add-on code—which can be reported in multiple units—to report beyond the first 30 minutes required to complete the intervention service. (A + indicates an add-on code that can only be reported on a claim form with the corresponding base code.)

- **96158 & +96159**: Intervention service provided to an individual.

- **96164 & +96165**: Intervention service provided to a group of two or more patients.

- **96167 & +96168**: Intervention service provided to a family with the patient present.

- **96170 & +96171**: Intervention service provided to a family without the patient present.

Note: Services offered when the patient is not present are not typically covered by Medicare.

A HOME FOR AMERICAN ARAB, MIDDLE EASTERN AND NORTH AFRICAN PSYCHOLOGY

A new association supports this culturally and religiously diverse population

BY DEBORAH BAILEY

As a psychology graduate student at Southern Illinois University 15 years ago, Germine Awad, PhD, searched for others in psychology who shared her Egyptian American background. She discovered and became active in APA's Div. 45 (Society for the Psychological Study of Culture, Ethnicity and Race), but even within that group, she seldom encountered another Middle Eastern or North African (MENA) psychologist.

"I just wanted so badly to meet someone who was Arab/MENA and see myself reflected in somebody who had made it in psychology," she says. "But we were invisible in all of these spaces."

Eventually, Awad began to find other MENA American psychologists through APA conventions. They created informal networks to share their research ideas and practice insights, as well as their professional and personal challenges, though they dreamed of having a more formal presence in psychology.

Now that dream is realized. Awad is a founding board member of the American Arab, Middle Eastern, and North African Psychological Association

(AMENA-Psy) with Mona Amer, PhD, and Nabil El-Ghoroury, PhD. It officially launched in 2017, and Awad serves as its first treasurer.

"This population has been left out of the discourse for many years," says Amer, past president of AMENA-Psy and chair of the psychology department at the American University in Cairo. "It was really important to establish this organization so that we can have a voice, be more visible and work toward supporting these communities."

INCREASED VISIBILITY

AMENA-Psy has two aims: to expand and support the MENA American psychologist workforce and to foster the well-being of Arab, Middle Eastern and North African people who live in the United States and Canada. Those communities are religiously and culturally diverse and include, for example, people of Egyptian, Iranian, Iraqi, Lebanese, Moroccan, Palestinian, Somali, Syrian and Turkish descent.

Although research on the mental health needs of these people is expanding, it is still woefully inadequate, according to an analysis of MENA schol-

arship in the "Handbook of Arab American Psychology" by Amer and Awad.

When Bahaur Amini, a third-year counseling psychology graduate student at the University of Kansas, was writing her master's thesis on divorce among Iranian Americans, she struggled to find enough relevant studies in the literature to complete the work.

"Students pursuing psychology graduate degrees are facing similar challenges today that Dr. Awad faced before," says Amini. She joined AMENA-Psy to connect with others who share her research interests and to advocate for MENA American well-being.

One advocacy priority for MENA American psychologists is improving how the United States collects demographic information about race and ethnicity. The U.S. Census Bureau categorizes MENA people as "white," which has led to an undercounting of the population, says Awad. That has far-reaching implications—making it difficult for psychologists and others to identify educational and health disparities that need intervention, for example. Moreover, most demographic forms,

RESOURCES

Ethnic-minority psychological associations include:

American Arab, Middle Eastern and, North African Psychological Association
www.amenapsy.org

Asian American Psychological Association
<https://aapaonline.org>

Association of Black Psychologists
www.abpsi.org

National Latinx Psychological Association
www.nlpa.ws

Society of Indian Psychologists
(American Indian and Alaska Native)
www.aiansip.org



SABRY KHALED

including APA's, use the Census Bureau's categorization.

"These categories trickle down," adds Amer. "We don't have categorization listed in, for example, journal article statistics. Our invisibility is a major detriment to the development of scholarship, practice and advocacy within our field because it's difficult to identify and collaborate with other people who have

similar interests or come from similar backgrounds."

While an effort to include a MENA category on the 2020 census failed, the form will allow people to write in ancestry information for the first time.

A SENSE OF BELONGING

AMENA-Psy welcomes all psychologists and psychology students, whether they have a

MENA background or just want to connect with others who are working with the community.

Like other ethnic-minority psychological associations, AMENA-Psy is invited to send a nonvoting member to APA's Council of Representatives to contribute to council discussions. AMENA-Psy plans to work toward having a MENA American representative in other groups that promote diversity in psychology and to advocate for the collection of demographic data on MENA psychologists.

Among its member benefits, AMENA-Psy offers annual awards and a list of resources on its website, including books, course syllabi and scholarly articles. Leaders are also planning a referral database of qualified mental health practitioners, a mentoring program and a database of potential thesis and dissertation advisers for MENA graduate students. One day, they hope to host their own conference.

Meanwhile, members collaborate and share experiences on the association's discussion list. Some of the issues they discuss include finding referrals for clients, research gaps and professional opportunities. It's also a place to find a sense of belonging, says AMENA-Psy President Ayse S. Ikizler, PhD, an assistant psychology professor at St. Mary's College of Maryland who conducts research on how discrimination affects the mental health of MENA Americans.

"This association gives me a sense of hope that my research is going to continue to be seen as valid and important," she says. ■

Dr. Mona Amer says the new association aims to expand and support the MENA American psychologist workforce.

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*The doctoral internships and postdoctoral residency training programs at Kaiser Permanente, Northern California are accredited by the American Psychological Association. Contact APA, Office of Program Consultation & Accreditation at 750 1st St, NE, Washington, DC 20002-4242. 202-336-5979, apaaccred@apa.org.

4 QUESTIONS FOR JANNA HENNING

The Adler University professor and clinician says psychologists who work with survivors of trauma need more support themselves

BY TORI DEANGELIS

Day after day, many practicing psychologists treat people who have experienced severe trauma and loss, including survivors of abuse, victims of mass shootings and patients facing premature death.

While this work can be extremely rewarding, it can also take a toll, otherwise known as vicarious traumatization, compassion fatigue or secondary traumatic stress, says Janna Henning, PsyD, a professor of clinical psychology at Adler University in Chicago and founder of its traumatic stress psychology program. “I have come to believe there is an almost inevitable impact on therapists who regularly hear stories of human suffering,” she says.

Unfortunately, the mental health field has tended to underplay the impact this stress has on providers, adds Henning, who is also co-chair of the Education and Training Committee for APA Div. 56 (Trauma Psychology). Most training programs don’t delve into the issue, and few health-care systems attend sufficiently to provider well-being. Plus, there’s the false yet pervasive notion that good practitioners should be able to handle any traumatic material that clients may share.

To address this gap in trauma-provider care, Henning favors a comprehensive approach to vicarious traumatization—an approach she is taking as head of a new wellness-focused program for practitioners, part

of the Bridgepoint Psychology Center in Chicago. The program is helping mental health professionals develop more personalized and effective strategies to limit vicarious traumatization, and then build this support into their daily lives.

“We need to be healthy ourselves if we’re going to be able to provide safe and effective therapy to others,” Henning says.

The *Monitor* asked her about vicarious traumatization among providers and better ways to address it.

What is vicarious traumatization?

In therapy, providers who work with trauma survivors listen deeply and attempt to “feel with” our clients as they describe the details of terrible events, such as intentional human wrongdoing, hatred, violence, oppression, life-threatening illnesses and more. In these moments of deep engagement, we let down our guard a little, and our own previously held beliefs and reactions are vulnerable to change.

The result can be vicarious traumatization, a term coined in the 1990s by psychologists Lisa McCann, PhD, Laurie Pearlman, PhD, and Karen Saakvitne, PhD. It refers to permanent changes in therapists that can result from chronic exposure to clients’ trauma narratives. While more research is needed to clearly define and document this phenomenon, it has been noted regularly in research and clinical reports. It is related to compassion fatigue, a type of clinical burnout that includes physical, emotional, and spiritual pain and exhaustion.

What are some symptoms of vicarious traumatization among therapists?

Therapists can experience changes on all levels—in their emotional states, meaning systems and behaviors. They may experience reduced feelings of trust, safety, hope, joy and self-esteem, as well as numbing or intense emotional reactions.

Because vicarious traumatization affects therapists’ beliefs, responses, insights and judgment, its negative effects are most often reflected in our



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Conversation

personal and professional relationships. For example, emotional numbing may cause us to pull back from loved ones, feel diminished empathy for clients and colleagues, and even end or destroy relationships. These altered emotional responses and heightened feelings of vulnerability can lead to chronic illness or to abusive or unprofessional behavior with colleagues, students or clients—for example, lashing out or expecting them to help us meet our emotional needs. Understanding these issues matters a great deal if we want to help therapists preserve their health, avoid unethical behavior and stay in the field for as long as possible.

What are the gaps in addressing vicarious traumatization in training and practice?

The message we get in graduate school and in practice is that vicarious traumatization is preventable—that it probably won't happen if you're professionally competent. And if it does, it's probably because you did something wrong as a therapist, such as being too empathically engaged with your clients.

Meanwhile, common recommendations for preventing or managing vicarious traumatization—like taking a vacation or getting a massage—tend to be geared toward those who are white, affluent, able-bodied and young or middle-aged. These recommendations don't necessarily fit well for people of differing cultural, ethnic or socioeconomic backgrounds, who might find it more restorative to engage in activities within their own spiritual, religious or cultural traditions.

Training may also neglect to foster our “compassion satisfaction,” or the joy and meaning derived from helping others. While we need to understand more about this phenomenon, research shows it can be fostered through social support, a sense of commitment and the ability to view change as an opportunity.

How do you think the psychology field can better address vicarious traumatization?

What's missing is a spectrum of care to prevent and address vicarious traumatization. That's the approach I'm taking with my program in Chicago for mental health professionals who work with clients who have survived trauma. It includes several components, including training in evidence-based approaches that providers may not have received in graduate school; access to individual therapy with therapists who understand trauma-related work and its effects; and consulting with heads of mental health agencies about how to make their practices healthier for providers, for instance, by creating practical, sustainable wellness initiatives and addressing workload concerns.

One novel aspect of the program is helping professionals determine their own self-care strategies and then create plans for repeatable activities that fit into their daily routines—activities such as focused journaling, restorative yoga or whatever they decide is beneficial for them. To help them with this, we provide one-on-one meetings to help them create and maintain these plans—as well as self-care workshops that provide support from other psychologists.

Although our field has known about vicarious traumatization for 25 years, we're still telling students and clinicians that they need to take care of themselves, while adding increasingly demanding research projects, clinical experiences and caseloads to schedules that are already overloaded. We need to honestly address the systemic pressures that feed these issues—in academia, training agencies, at APA and at the political level.

The impact of trauma, stress and oppression on our clients is not likely to change. Our only option is to change the systems that surround us, which in turn will allow us to better serve our clients and keep ourselves healthy. ■

WHAT IS FAIR COMPENSATION?

Cy-près settlements allow awards in class-action lawsuits to go to charities rather than individuals. What can psychology tell us about whether this is fair to the victims?

BY JENNIFER PAHRE, JD, JENNIFER K. ROBBENOLT, JD, PhD,
AND LESLEY WEXLER, JD, UNIVERSITY OF ILLINOIS COLLEGE OF LAW

In 2010, plaintiff Paloma Gaos sued Google in a class-action lawsuit, alleging that Google violated users' privacy by transmitting information about their searches to third parties—a violation of the Stored Communications Act—because when a user clicked on a search result, Google sent information about the search terms to the host of that website.

The parties negotiated a settlement that required Google to disclose information on its website about this practice and to pay \$8.5 million. No money, however, would go to the 129 million class members (Google users) whose privacy had been violated. Because each member would only have been entitled to 4 cents, distributing the money to them was not practical. Instead, the district court approved a cy-près award that sent the funds to a set of institutions studying internet privacy.

"Cy prè" is a legal term derived from a French phrase that means "as near as possible." In class-action lawsuits where individual compensation is not possible, the legal remedy permits funds to go to charities related to the plaintiffs' injuries instead. One question raised in such cases is: How tightly must a particular charity's objectives relate to the injuries at issue in order to qualify for cy-près money? In the case of the Google privacy lawsuit, class members objected to the cy-près settlement, arguing that it was not "fair, reasonable, and adequate." The district court approved the settlement, however, finding that the recipients of the funds were sufficiently connected to and capable of furthering the interests of the class. The U.S. Supreme Court agreed to review the case in 2018, but it ultimately declined to resolve the substantive questions about the appropriateness of the cy-près award (*Frank v. Gaos*, 2019).

The questions raised by cy-près awards could be

informed by social scientific work that has explored the range of interests that motivate plaintiffs in civil litigation. These motivating interests include financial compensation, but also such considerations as obtaining information, telling their story, confirmation by the court of a relevant rule and its violation, and behavioral or institutional change that will prevent future harm.

In considering whether cy-près relief is appropriate, then, one might consider how the proposed cy-près remedy fulfills one or more of these goals. It is possible that a cy-près remedy could satisfy at least some plaintiffs' needs and provide an approximate remedy for their harm, even in the absence of direct compensation. For example, if plaintiffs desire reform, then a cy-près recipient that works for harm prevention or supports institutional change might further plaintiffs' need to turn a bad outcome into an opportunity for improvement. At the same time, financial compensation is important to plaintiffs as well. Courts, therefore, must be careful about turning too quickly to cy-près remedies, particularly to the exclusion of individual compensation.

Similarly, reparation is often a process that happens over time. Cy-près remedies, therefore, that comprise ongoing efforts at amends-making or that create enduring solutions to the underlying problems are more likely to be satisfying than one-time acts or events. Parties may also value having a role in the determination of the appropriate remedy. This might mean that mechanisms to allow plaintiffs to voice their interests and preferences about potential cy-près recipients could be a useful part of the negotiation process. ■



AT ISSUE
Does a class-action settlement that sends the money to charity rather than directly to those harmed address those victims' needs?

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

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U.S. Dept. of Health and Human Services, Public Health Service, Treating Tobacco Use and Dependence
Clinical Practice Guideline 2008 Update

Treating Tobacco use is an Important Part of Mental Health Treatment

Six Things Every Health Care Provider Should Know

Providers who treat people with mental health conditions have an important role to play in their patients' ability to quit using tobacco products. Here are six things that every provider should know:

1. Providing smoking cessation treatment is an important part of mental health treatment.

Providers who treat people with mental health conditions are well positioned to help patients successfully quit tobacco use and enjoy the mental, emotional, and physical benefits of a tobacco-free life. Smoking cessation treatments work.

2. Medicaid reimburses for counseling and covers FDA-approved smoking cessation medications, including over-the-counter therapies with a fiscal order.

Medicaid will cover repeated treatment and prescriptions because it can take multiple attempts before patients quit successfully. Medicaid covers nicotine replacement therapies (NRT) – patch, gum, lozenge, inhaler and nasal spray; and two non-nicotine oral medications (pills) – bupropion SR (brand names Zyban or Wellbutrin) and varenicline (brand name Chantix).

3. People with mental health conditions smoke at rates that are at least two times higher than the general population.¹

They may also smoke more heavily and frequently, compared to those without mental health conditions. The Centers for Disease Control and Prevention estimates that nearly one third (31%) of all cigarettes consumed in the United States are smoked by people with mental health conditions.¹

4. The high rates of smoking among people with mental health conditions have devastating health consequences.

Smoking-related diseases such as cardiovascular disease, lung disease, and cancer are among the most common causes of death among adults with mental health conditions.² Despite the heavy disease burden, a US national survey of mental health treatment facilities found that only about one-quarter provided services to help patients quit smoking.³

5. Many smokers with mental health conditions want to and are able to quit smoking.⁴

Research has shown that adult smokers with mental health conditions—like other smokers—want to quit, can quit, and benefit from proven smoking cessation treatments.⁵

6. Quitting smoking will not interfere with mental health recovery and may have mental health benefits.

Smoking is not an effective mental health treatment strategy. On the contrary, smoking is associated with poor clinical outcomes, such as greater depressive symptoms, greater likelihood of psychiatric hospitalization, and increased suicidal behavior.⁴

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Suicide rates among active military and veterans have been climbing. Now the Department of Defense and Department of Veterans Affairs are developing innovative programs to combat that rise.



CE

CONTINUING EDUCATION STOPPING SUICIDE IN THE MILITARY

BY AMY NOVOTNEY

Approximately 17 U.S. veterans die by suicide every day—a rate that is about 1.5 times that of nonveterans after adjusting for differences in age and sex, according to the Department of Veterans Affairs (VA) 2019 *National Veteran Suicide Prevention Annual Report*. Among active-duty U.S. troops, suicide rates remain about on par with that of the nonmilitary U.S. population—but both are on the rise. In August, the Department of Defense (DOD) announced that 325 active duty soldiers, sailors, airmen and Marines died by suicide in 2018—40 more than in 2017 and the highest number since the department began collecting suicide data in 2001. “Nobody really knows why suicide rates continue to climb,” says Craig Bryan, PsyD, ABPP, executive director of the National Center for Veterans

Studies at the University of Utah.

Many blame demographics—85% of the military is male, and men die by suicide more often than women. “But we also know that even female service members and veterans die by suicide at a higher rate than nonveterans and nonservice members,” Bryan says. In fact, according to 2017 data from the 2019 VA suicide prevention annual report, after adjusting for age, the suicide rate for women veterans was 2.2 times greater than the suicide rate for nonveteran women.

In addition to demographics, factors such as insomnia, depression, anxiety, sexual victimization, gun ownership and substance use disorders also appear to contribute to suicide risk among service members and veterans. Older veterans may also be coping with aging, stress or lingering effects stemming from their military service that have never been addressed, while many recently discharged veterans have trouble with their relationships or their transitions back to civilian life.

Now, psychologists across the country—both within and outside the DOD and the VA—are leading efforts to improve suicide risk assessment as well as conducting research to better understand and prevent military and veteran suicide. They’re also developing and piloting interventions, at both individual and community levels, to help respond to this deadly issue.

EXPANDING SCREENING AND EVALUATION

Last August, the VA and the DOD released a joint revised Clinical Practice Guideline for the Assessment and Management of Patients at Risk for Suicide. The guideline, based on the best available evidence, was developed by a multidisciplinary work group that included primary-care physicians, psychiatrists, pharmacists, nurse practitioners, nurses and social workers, as well as psychologists.

One of its evidence-based recommendations is to integrate screening for suicide risk into all clinical settings—something the VA’s Office of Mental Health and Suicide Prevention is already working to do.

The VA began universal screening for suicide risk in all primary-care settings in October 2018, and since then more than 3.8 million veterans have been screened for suicide. “It’s become one of the largest implementations of a standardized screening and evaluation process in a health-care system,” says Lisa Brenner, PhD, ABPP, a rehabilitation psychologist and director of the VA Rocky Mountain Mental Illness Research Education and Clinical Center, who has been involved in the universal screening process.

The screening and evaluation protocol has three parts: First, a primary screening for suicide risk using the Patient Health Questionnaire-9 is typically conducted by a registered nurse in the primary-care setting. If that screening is

CE credits: 1

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

1. Describe the efforts of the VA and the DOD around screening for and evaluation of suicide risk among service members and veterans.
 2. Discuss the most promising interventions to date in terms of reducing suicide among this population.
 3. Evaluate the areas still in need of additional efforts, including helping veterans who do not seek care through the VA.
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positive, the nurse will provide a warm handoff to the primary-care provider or to a licensed independent practitioner to conduct a secondary screening using the Columbia-Suicide Severity Rating Scale. If the secondary screening is positive, the primary-care provider can conduct a comprehensive suicide risk evaluation or may facilitate a handoff to other mental health staff working in the primary-care clinic to conduct the evaluation.

Another novel strategy deployed by the VA to identify those at risk is REACH VET, a computer-based statistical risk program that flags veterans based on their electronic health records. The aim of the program is to allow for preemptive care and support for veterans, in some cases before an individual even has suicidal thoughts. Once a veteran is identified by REACH VET, the veteran's VA mental health specialist or primary-care clinician calls to check up on him or her and conduct an additional evaluation to determine if enhanced care is needed. REACH VET was implemented at all VA facilities nationally in 2017, and early results suggest it's having a positive impact on veterans. Program evaluators have seen more health and mental health-care appointments made, a decline in missed appointments, fewer inpatient mental health admissions and lower all-cause mortality, Brenner says.

PROMISING INTERVENTIONS

After those at risk for suicide are identified, the next step is offering efficacious interventions. Over the past 10 years, researchers have

found that cognitive-behavioral therapy (CBT) and other evidence-based interventions can reduce suicidal thoughts and behavior among at-risk veterans (*Archives of Suicide Research*, Vol. 20, No. 4, 2016). But a limitation to these psychotherapy approaches is that they require multiple sessions and cannot be easily implemented in acute care settings, says psychologist Gregory Brown, PhD, director of the Center for the Prevention of Suicide, a professor of psychiatry at the University of Pennsylvania, and the lead author of one such study.

"Emergency departments, for example, frequently function as the primary or sole point of contact with the health-care system for suicidal individuals—and this contact often occurs either immediately following a suicide attempt or when suicidal thoughts escalate and the individual feels in danger of acting on these thoughts," Brown notes.

In an effort to get more immediate care to these patients, Brown and Barbara Stanley, PhD, a medical psychology professor at Columbia University, co-developed a 20- to 40-minute intervention called the Safety Planning Intervention, designed to provide patients with coping strategies, reduce their access to potential suicide methods such as firearms and lethal medications, and help them establish follow-up treatment. A study piloting the protocol at nine VA hospital emergency departments found that patients who received this intervention were 45% less likely to attempt suicide in the six months after being discharged

with a safety plan than were veterans who were simply referred for follow-up care (*JAMA Psychiatry*, Vol. 75, No. 9, 2018). Since this pilot study, the VA has been adopting and deploying the program in VA hospital emergency rooms nationwide.

Other promising VA and DOD suicide prevention interventions focus on technology to help patients at risk for suicide. A smartphone app developed by psychologists at DHA Connected Health (formerly the National Center for Telehealth & Technology), a branch of the Defense Health Agency, has shown preliminary success in increasing veterans' ability to cope with unpleasant thoughts and emotions. The Virtual Hope Box app is modeled on a CBT technique that uses a physical box containing things that remind patients of positive experiences, reasons for living, people who care about them or coping resources. In the app, users can upload personally meaningful photos, videos, songs and quotes; complete puzzles, relaxation exercises and guided meditations; and access coping tools, including self-created cards and a phone contact list (*Psychiatric Services*, Vol. 68, No. 4, 2017).

One of the most important aspects of suicide prevention among service members and veterans is ensuring ongoing access to mental health care for service members—particularly during times of transition, when suicide risk can be higher, says Navy Captain Carrie Kennedy, PhD, division chief of the Psychological Health Center of Excellence. Kennedy says one way the military is working to make sure service

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In 2018, 325 active duty military members died by suicide.

members have ongoing access to quality mental health care is through its inTransition program, which offers specialized coaching and assistance in finding a new mental health provider for active-duty service members, National Guard members, reservists and veterans. The program was created to ensure a warm handoff between mental health providers when military members are relocating to another assignment, returning from deployment, transitioning from active duty to reserve duty or vice versa, and preparing to leave military service.

“During the first several months after an individual separates from the military, there is an increased risk to psychological health,” says Kennedy, who is also the Navy’s clinical psychology specialty leader. That’s why inTransition targets service members receiving psychological care in the 12 months prior to their military transition—to help them set up care with a VA or other civilian mental

health provider when they’re home. All service members and veterans are eligible for the program, and inTransition will find any service member or veteran local care, even in the absence of VA eligibility or ability to pay, Kennedy says. While the program is just beginning to measure outcomes, Kennedy says that findings show an increase in recent veterans successfully transitioning to new mental health care providers.

FOCUSING ON LETHAL MEANS SAFETY

While much of the VA’s and the DOD’s efforts around preventing suicide focus on identifying and treating mental health issues, some suicide experts also point to the availability of lethal means, such as firearms, as an important piece of the puzzle. Research shows that approximately 70% of military suicides involve firearms, compared with around 50% of suicides in the U.S. general population.

KEY POINTS

1

The Department of Veterans Affairs recommends integrating screening for suicide risk into all clinical settings and is working to do so throughout its health-care system.

2

Interventions to reduce suicide risk include programs to develop a safety plan for emergency room patients and to connect military members to psychological care at moments of career transition.

3

Psychologists are also working to understand how to support veterans in their communities who are receiving care outside of VA health-care settings.

“What we know about the military that’s unique is that they’re more likely to own firearms and know how to use them, and that they’re more likely to use firearms for the purpose of suicidal behavior as compared with the general population,” Bryan says.

In one study, for example, he and his colleagues examined the firearm storage practices of more than 1,600 active duty military personnel between 2015 and 2018 at military primary-care clinics across the United States. They found that nearly 36% of participants reported having a firearm in or around their homes, but less than a third of those with firearms said their weapons were safely stored, and nearly half indicated their firearms were either loaded and unlocked or not safely stored. Bryan says more effort is needed to encourage members of the military and veterans to safely store their firearms, and findings from nonmilitary populations suggest this is one way to reduce suicide risk.

“Locking up a gun won’t prevent an argument with a spouse or intense overwhelming stress, but it could reduce the likelihood of that circumstance resulting in a death,” Bryan says.

To that end, Bryan and his team, as well as individuals within the Veterans Health Administration, are working to educate clinicians who work with service members and veterans about the importance of asking about firearms in the home and whether they are safely stored—and educating patients about having a friend restrict their access to those firearms during stressful times.

USING COMMUNITIES AS SUPPORT

Other psychologists are looking to prevent military suicides by getting outside of military-based clinics. According to the 2019 *National Veteran Suicide Prevention Annual Report*, from 2016 to 2017, the suicide rate of veterans receiving recent VA care increased by 1.3%, whereas the suicide rate among veterans who were not receiving recent VA care increased by 11.8%, after adjusting for population differences by age and sex.

“Only about a third of U.S. veterans come to the VA for health care, so we need to ensure that prevention is going beyond the VA health-care setting,” says Gloria Workman, PhD, ABPP, director of research and evaluation suicide prevention with the VA’s Office of Mental Health and Suicide Prevention.

Additional state and local community engagement is one

goal of a presidential task force, created in March and dubbed the President’s Roadmap to Empower Veterans and End a National Tragedy of Suicide, or PREVENTS. President Donald Trump appointed psychologist Barbara Van Dahlen, PhD, founder of the nonprofit group Give an Hour, to head the task force, which will look for ways to speed up information collection, better coordinate federal and state resources, provide increased outreach and information on available VA services, and discuss lethal means safety.

Another effort to better understand the role communities play in preventing suicide is Operation Deep Dive—a four-year research study conducted by the nonprofit America’s Warrior Partnership in collaboration with the University of Alabama and funded by the Bristol-Myers Squibb Foundation. Conducted in 14 communities across the country, the study is

FURTHER READING

Reducing Suicide Among U.S. Veterans: Implications From RAND Research

Tanielian, T.
RAND Corporation
2019

Community Provider Toolkit, U.S. Department of Veterans Affairs

www.mentalhealth.va.gov/communityproviders

Long-Term Outcomes of Military Service: The Health and Well-Being of Aging Veterans

Spiro, A., et al. (Eds.)
APA, 2018

examining the community-based factors involved in suicide among veterans, and has developed a “sociocultural death investigation” tool to be used by researchers in conducting interviews with family members, colleagues, friends and other loved ones of deceased veterans to better understand the lives of veterans who recently died by suicide or self-harm. The goal is to identify opportunities for prevention before a veteran enters a crisis situation, says Phillip Smith, PhD, a psychology professor at the University of South Alabama who is working on the Operation Deep Dive study.

“Operation Deep Dive is really trying to understand not so much the specific mental health concerns of veterans but is looking instead at where in the community might there be prevention points where we can divert an individual who is on the trajectory to death by suicide to a different path,” he says. ■

ADVOCACY

APA’S EFFORTS TO REDUCE MILITARY SUICIDE

APA has long been committed to the mental health and well-being of military personnel, veterans and their families. The association’s priorities include preventing suicide and promoting well-being by enhancing the quality, continuity and integration of care, says Heather O’Beirne Kelly, PhD, the director of APA’s military and veterans health policy. In 2019, APA submitted testimony to the U.S. Senate Subcommittee on Military Construction, Veterans Affairs, and Related Agencies urging

Congress to provide funds in 2020 for the Department of Veterans Affairs to continue extending throughout its system two data-based suicide prevention programs with promising results: its **REACH VET screening system**, which is based on predictive analytics, and its **Safety Planning Intervention**, involving hospital emergency department follow-up protocols.

The association has also brought APA member experts on veterans and suicide prevention to Washington, D.C., to speak directly to policymakers,

and has endorsed bills addressing the issue of suicide in the military such as S. 785, the **Commander John Scott Hannon Veterans Mental Health Care Improvement Act of 2019**, which is dedicated to improving mental health care provided by the VA, with a specific focus on suicide prevention.

“Suicide is so hard to affect in terms of numbers, so when you find something that works, it’s so important to expand it to the entire VA health-care system as quickly as possible,” Kelly says.

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Please visit NeuroStar.com for full safety and Prescribing Information.

1. Neuronetics Inc. Data on file.
2. Carpenter LL, et al. (2012). *Depress Anxiety* 29(7):587-596.
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SPECIAL REPORT

10 TOP TRENDS FOR 2020



Psychologists are raising their voices and sharing their expertise on some of the country's most pressing issues, including gun violence and climate change. Meanwhile, the field is becoming more diverse, and technology is changing our research, teaching and practice. Find out more about what's in store for psychology in 2020.

Psychology is taking a comprehensive public health approach to addressing this crisis

By TORI DEANGELIS

1 Each year, firearms claim the lives of some 40,000 Americans through homicides, suicides, mass shootings and accidents, according to the Centers for Disease Control and Prevention (CDC). And those numbers are rising: Between 2014 and 2017, gun deaths increased by 16%, while six of the nation's 10 deadliest mass shootings have occurred over the past 10 years.

Through a range of efforts—in the community, in the media and in research—psychologists have escalated their work on gun violence prevention.

“APA and psychology are working on a number of fronts to help move the gun violence debate beyond political arguments and into the realm of public health and safety,” says APA CEO Arthur C. Evans Jr., PhD. “Psychologists are prepared to rise to this challenge using our best science, data and practice, and to collaborate with others to make these efforts even more effective.”

Psychologists' gun violence prevention efforts rely on evidence-based arguments to underscore that:

■ **Gun violence should be treated as a public health problem.** Like other public health epidemics—for example, tobacco use and car accidents—gun violence is best addressed through public health interventions. That's because this approach is apolitical, based on science and data, designed to foster population-level health and tailored to specific



People attend a candlelight vigil on Aug. 7, 2019, at a makeshift memorial honoring victims of a mass shooting that left 22 people dead in El Paso, Texas.



PUBLIC SAFETY

RAISING OUR VOICES ON GUN VIOLENCE

MARIO TAMAYO/GETTY IMAGES

subpopulations, says clinical and forensic psychologist and attorney Robert Kinscherff, JD, PhD, of William James College. “An evidence-based public health approach allows us to specify what is likely to work, under what circumstances and with what populations,” he says.

■ **Suicides are the most common form of gun violence** (61%), followed by homicides (35%). Contrary to public opinion, mass shootings are extremely rare, comprising less than 1% of all gun-related deaths in the United States. Collectively, these factors suggest the importance of designing and funding interventions accordingly, Kinscherff and other psychologists say.

■ **Mental illness alone does not predict gun violence.** Studies show that mental illness accounts for only a small percentage of gun violence, and that people with serious mental illness are much more likely to be victims than perpetrators of such attacks.

IN THE MEDIA

Psychologists have been particularly vocal in the media about the need for commonsense gun violence prevention policies. In 2019 alone, APA officials and experts were quoted in thousands of news reports about the science of gun violence and the need for greater protections, including on CNN and in *The New York Times*. More than 2,800 news articles—potentially reaching more than 4 billion people—referred to APA’s position on gun violence.

As just one example, a statement on mass shootings by 2019



“Saying that mental illness causes mass shootings is a simplistic argument, and it’s inaccurate. We must focus on the full range of factors that contribute to mass shootings...such as bigotry and hatred.”

ROSIE PHILLIPS DAVIS, PhD, ABPP, APA 2019 PRESIDENT

APA CEO Dr. Arthur C. Evans Jr., center left, speaks with other gun violence prevention experts at the APA 2019 main stage event on gun violence.

APA President Rosie Phillips Davis, PhD, ABPP, was cited by more than 300 news outlets. In August, she appeared on CNN to discuss the need to stop inaccurately blaming the nation’s gun violence crisis on mental illness—and to conduct more research into the more significant factors behind mass shootings, including fear, bigotry and social division.

“Saying that mental illness causes mass shootings is a simplistic argument, and it’s inaccurate,” she said. “We must focus on the full range of factors that contribute to mass shootings ... such as bigotry and hatred.”

APA also made gun violence

prevention a priority at APA 2019 in Chicago during a powerful main stage event (see <https://convention.apa.org/2019-video>), which was followed by a town hall in which psychologists shared their ideas for addressing this major societal challenge. “When we act boldly, when we are truthful, people listen,” said Evans. “The time for waiting is over.”

To better understand how Americans are responding to gun violence, in August APA commissioned a Harris Poll. A full 71% of Americans said that mass shootings are a significant source of stress in their lives, and a third said fear prevents them from



going to certain places or events.

The findings—widely cited in the media—“sent an important message to policymakers that such tragedies have demonstrable impacts on our nation’s mental and physical health,” says APA Chief Advocacy Officer Katherine B. McGuire.

APA has also been advancing advocacy positions on Capitol Hill. Last year, APA supported congressional efforts to increase funding for research on gun violence prevention and for background checks, and sponsored congressional briefings on the damaging effects of gun violence on schools and communities. To amplify its message, APA joined forces with groups such as Giffords: Courage to Fight Gun Violence, the Violence Prevention Network and the American Academy of Pediatrics.

“It’s going to take a diverse group of organizations working together to put a stop to these senseless tragedies,” McGuire says, “and psychology needs

to be at the forefront of these discussions.”

RESEARCH MOMENTUM

One of the critical strides forward on gun violence prevention has taken place on the research front. Since 1996, research on gun violence had been forestalled under the Dickey Amendment, a rider to that year’s appropriations bill that disallowed the funding of any CDC-sponsored research related to gun violence that could be used for advocacy purposes. That finally changed in 2018, when Congress gave the CDC authority to resume such studies as long as they were not specifically advocating for gun control. Now, several important research projects are underway. Among them is work by Northwestern University Feinberg School of Medicine psychologist Linda A. Teplin, PhD. She has received funding from the U.S. Department of Justice and the National Institute of Child Health and Human Development to extend the work of her Northwestern Juvenile Project, which has looked at mental health needs and outcomes of about 2,000 youth since they first entered the juvenile justice system in the late 1990s. The new research will investigate how participants’ firearm use as adolescents influenced their involvement with firearms during adulthood, as well as how parents’ firearm involvement during their own adolescence affects that of their teenage children.

Psychologists are working on a range of other projects related to gun violence, such as:

FURTHER READING

APA Policy and Action on Gun Violence

www.apa.org/advocacy/gun-violence

Preventing Gun Violence

www.apa.org/advocacy/gun-violence/misperceptions.pdf

Gun Violence: Prediction, Prevention, and Policy

www.apa.org/pubs/info/reports/gun-violence-prevention

■ **A review** of 49 studies assessing the psychological effects of 15 mass shootings, which was conducted by psychologist Sarah R. Lowe, PhD, of the Yale School of Public Health, and Sandro Galea, MD, of the Boston University School of Public Health. Those most likely to experience depression, anxiety and post-traumatic stress disorder in the wake of a mass shooting were female, had previous psychiatric symptoms, were close to the attack, knew people who died in the attack and had low levels of social support, characteristics suggesting future areas for intervention (*Trauma, Violence, & Abuse*, Vol. 18, No. 1, 2017).

■ **A longitudinal analysis** of 663 young Texas adults by Yu Lu, PhD, and Jeff R. Temple, PhD, of the University of Texas Medical Branch. It found that access to guns is a much stronger predictor of dangerous gun behavior than most mental health conditions, including depression, anxiety, post-traumatic stress disorder and borderline personality disorder (*Preventive Medicine*, Vol. 121, 2019).

As psychologists keep working in this complex and politicized area, a public health framework will continue to serve as a valuable guide, Kinscherff underscores.

“If we take an evidence-based public health approach and weigh that against people’s assertions of interests or even rights,” he says, “then we can have a real conversation about what’s really at stake here.” ■

Psychologists are key to a global movement by governments and major health organizations to devote more attention, resources and political commitment to improving mental health in low-resource countries

By KIRSTEN WEIR

2 All too often, countries with the fewest mental health providers also have the most stressors, including violence, poverty, forced migration, social unrest and political instability. According to the World Health Organization (WHO), even though mental health and substance use disorders are the top cause of disability worldwide, only a quarter of the people who need mental health services get them.

“Mental disorders are the most neglected of the global health problems,” says Vikram Patel, MBBS, PhD, a psychiatrist and professor of global health and social medicine at Harvard Medical School.

That’s slowly changing as the field of global mental health gains prominence. Psychologists are among the health-care professionals working to improve mental health in parts of the world touched by poverty, disaster and war. To close the mental health treatment gap, they’re training community health workers to deliver psychosocial interventions and developing new models for delivering care in low- and middle-income regions.

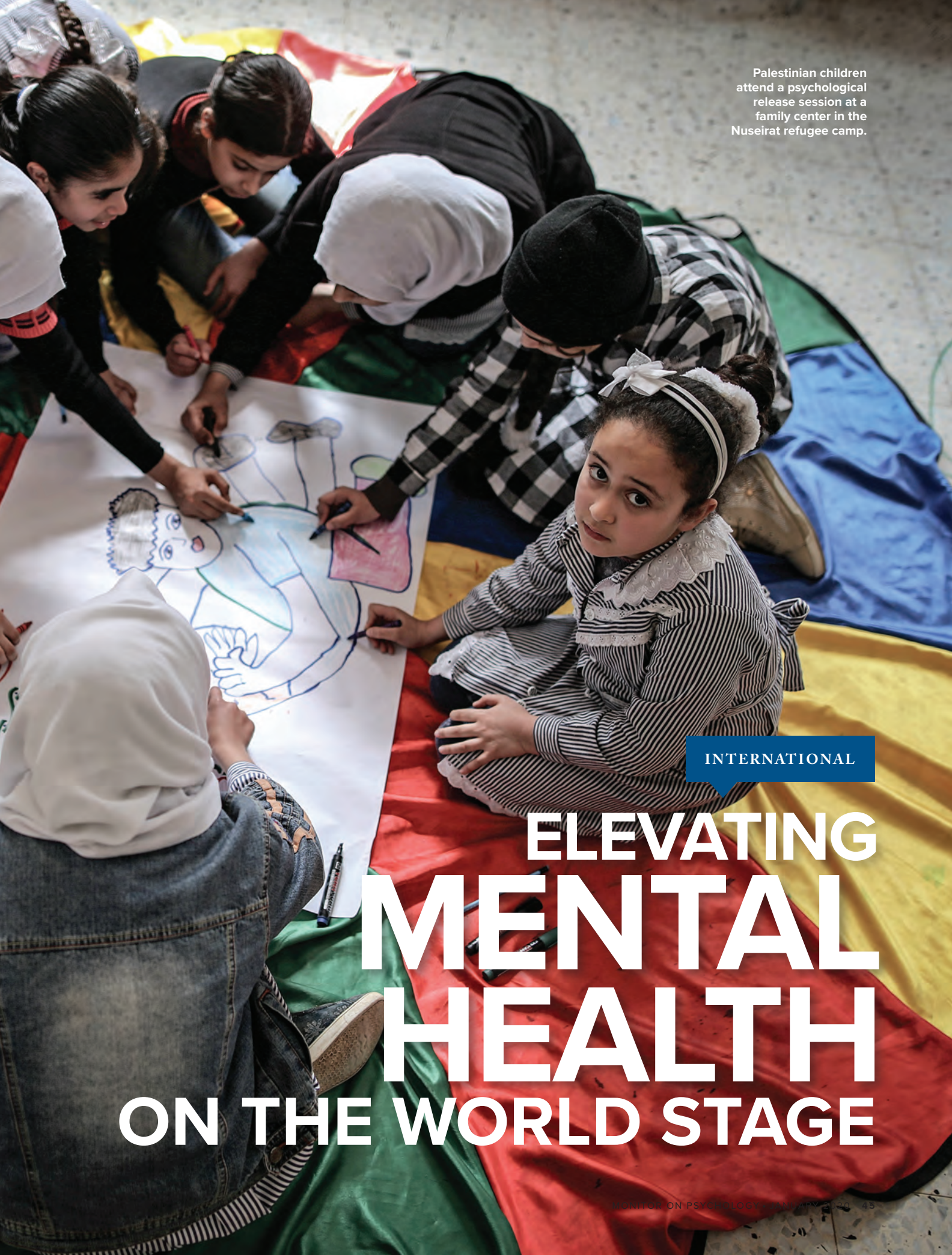
“In the last few years, evidence-based treatments [in global mental health] have been scaling up and gaining steam,” says Deepa Rao, PhD, a clinical psychologist, professor and associate director of the global mental health program at the University of Washington in Seattle. “There are a lot of success stories.”

EXPANDING ACCESS TO CARE

The global mental health field got a big boost in 2013, when WHO launched the first global mental health action plan with the support of health ministers worldwide. “That plan was a landmark,” says psychiatrist Shekhar Saxena, MD, formerly of WHO and now a professor of global mental



WISSAM NASSAR/PICTURE ALLIANCE VIA GETTY IMAGES



Palestinian children
attend a psychological
release session at a
family center in the
Nuseirat refugee camp.

INTERNATIONAL

ELEVATING MENTAL HEALTH ON THE WORLD STAGE

health at the Harvard T.H. Chan School of Public Health. Since then, there's been an uptick in attention, resources and political commitment devoted to global mental health, he adds.

The field is undoubtedly interdisciplinary, but psychologists are essential to many of these efforts. Groups including WHO and the U.S. National Institute of Mental Health (NIMH) are spearheading many interventions on the ground, nonprofits such as United for Global Mental Health provide advocacy and funding support, and academic scientists are making strides on the research side, Saxena says. One of the most important developments has been the finding that lay health workers can be trained to deliver sophisticated psychological interventions to improve mental health, says Brian J. Hall, PhD, a clinical psychologist and global mental health researcher at the University of Macau in China. "People without extensive and specialist training in psychology are delivering interventions to members of their own community. This innovation expands access to care."

In a systematic review of 27 trials, Patel and colleagues found that psychological treatments delivered by community health workers or peers in primary-care settings had moderate to strong effects in reducing the burden of mood disorders in low- and middle-income countries (Singla, D.R., *Annual Review of Clinical Psychology*, Vol. 13, No. 1, 2017).

When health workers can deliver treatments for common problems such as depression, anxiety and post-traumatic



Lay health workers are being trained to deliver psychological care to reach more patients and free up specialists for more complex problems.

stress disorder, they reach more patients—and free up the few mental health specialists to address more complex problems. "We're not talking about substituting psychologists, but extending mental health care to people who aren't getting any care," Patel says.

SCALING UP

Now, organizations and governments are working to expand the availability of such interven-

tions. NIMH has established 10 "Scale-Up Hubs" to study how to expand the reach of mental health care and foster evidence-based mental health policy in low-resource settings.

Rao, for example, is a principal investigator within the southern Africa hub. With psychologists Inge Petersen, PhD, at the University of KwaZulu-Natal, and Arvin Bhana, PhD, at the South African Medical Research



Integrating mental and physical health care not only improves mental health, it also helps people with chronic illness engage in care and adhere to medications.

Council, she is training nurses and other health-care workers in primary-care settings in South Africa to deliver cognitive-behavioral therapies to treat depression in people with diabetes, HIV and other chronic diseases. Integrating mental and physical health care not only improves mental health, it also helps people with chronic illness engage in care and adhere to medications, Rao says. “We’re trying to build a sustainable model where psychotherapy is the norm in treatment.”

In another example of an NIMH-funded scale-up project, psychologist Kimberly Hoagwood, PhD, at New York University Grossman School of Medicine, and colleagues are studying family group interventions for children with disruptive behaviors in several African countries, comparing the effectiveness of group programs led by family peers versus community health workers (Kivumbi, A., et al., *BMC Psychiatry*, Vol. 19, No. 1, 2019).

Global mental health professionals are also trying to make mental health care more accessible by distilling interventions down to their essential components and finding ways to deliver them in as few sessions as possible. “There’s a big push to understand how short we can get these treatments and what the key mechanisms of action are,” says Laura Murray, PhD, a psychologist and professor in the department of mental health and international health at the Johns Hopkins Bloomberg School of Public Health.

Mental health problems often

go hand in hand with poverty, interpersonal violence and substance use, Murray notes, so it’s more efficient to target multiple problems at once. She and her colleagues developed a multi-problem approach called the Common Elements Treatment Approach (CETA), which can be customized to address symptoms of depression, anxiety and traumatic stress, as well as substance use and violence. It’s usually delivered in eight sessions but can be made longer or briefer as needed. In initial trials, Murray and her team found CETA effective in Ethiopia, Iraq, Thailand and Zambia, among other countries (*Cognitive and Behavioral Practice*, Vol. 21, No. 2, 2014; *Global Mental Health*, Vol. 5, article e16, 2018). The intervention is now being rolled out and evaluated in other locales. “One rarely ever sees one mental health problem alone,” she says. “We developed CETA to address multiple problems.”

CULTURAL SENSITIVITY

While Western psychotherapies often form the basis of mental health treatment programs, global mental health workers take care to adapt them in culturally sensitive ways. Health workers using a tool like cognitive reprocessing—in which people learn to identify and reframe unhelpful thoughts—might have to take a storytelling approach in some African countries or draw on biblical examples in religious communities. Whereas psychologists help local providers understand the core elements of a psychotherapeutic intervention, local

FURTHER READING

Psychological Treatments for the World: Lessons From Low- and Middle-Income Countries

Singla, D.R., et al.
Annual Review of Clinical Psychology
2017

Challenges and Opportunities in Global Mental Health: A Research-to-Practice Perspective

Wainberg, M.L., et al.
Current Psychiatry Reports, 2017

Rethinking the Service Delivery System of Psychological Interventions in Low and Middle Income Countries

Murray, L.K., & Jordans, M.J.D.
BMC Psychiatry
2016

Action on Mental Health Needs Global Cooperation

Collins, P.Y., & Saxena, S.
Nature, 2016

World Health Organization Mental Health Action Plan 2013–20

team members take the lead on shaping those elements for their population. “You don’t have to invent entirely new treatments to be culturally sensitive, but you have to be flexible and adjust the implementation,” Murray says. Psychologists have a lot to offer the field, says Hall, who is working with WHO to culturally adapt and test digital mental health innovations for migrant workers in China and Chinese adults. But to excel, he adds, psychologists need to practice cultural humility and embrace working in multidisciplinary settings with psychiatrists, primary-care physicians, public health experts and other health-care workers from different cultures and backgrounds.

Most opportunities for global mental health training at U.S. institutions are found in departments of public health, and aren’t always well integrated into psychology training, says Murray. But more psychologists are getting involved, and dedicated training opportunities are helping them dive in—including the APA–International Union of Psychological Science (IUPsyS) Global Mental Health Fellowship, which provides an opportunity for a psychologist to contribute to the work of WHO’s Department of Mental Health and Substance Abuse for one year.

And psychologists’ contributions to the emerging field are vital—in research, diagnostics, training, treatment and policy advice, says Saxena. “Psychologists can and should play a very large role in global mental health.” ■

By ZARA GREENBAUM

3 Concerns about climate change have grown into a full-fledged social movement, spurring climate activism worldwide and opening opportunities for virtually every discipline to address the crisis.

Psychologists are among those stepping up to heed the call—through their work with the United Nations, policymakers, corporations and community groups—relying on psychological science to inform educational campaigns and behavior change efforts. They are aiding in both mitigation efforts to curb the causes of climate change and adaptation strategies for adjusting to its impacts.

“We are all going to be affected by this problem,” says Susan Clayton, PhD, professor of psychology and environmental studies and chair of the psychology department at The College of Wooster in Ohio. “As psychologists, there are ways for us to apply our professional skills and make a difference—and doing so can be extremely gratifying.”

A CRITICAL REPORT

In one of their most far-reaching efforts, psychologists are on the international team of experts developing the sixth U.N. Intergovernmental Panel on Climate Change (IPCC) assessment report, which will inform climate change policies worldwide. In the IPCC’s massive international network of authors—including climatologists, economists and environmental scientists—psychologists are more involved than ever before. While just one psychologist contributed to the IPCC’s fifth report, at least five are authors on the upcoming document.

For example, as one of several lead authors on a chapter covering how climate change affects health and well-being, Clayton is summarizing the extensive literature on how the climate problem may threaten people’s mental health.

SHAUN/GETTY IMAGES



INCREASING ACTION ON CLIMATE CHANGE

As the human toll of climate change becomes clearer, psychologists are working with the United Nations, national and local governments, and private companies to understand, mitigate and adapt to the crisis

The climate crisis is a threat to people's mental health, with natural disasters and rising temperatures leading to increases in anxiety, stress, trauma and more.

A fire truck heads toward flames during the Kincade Fire near Geyserville, California, on Oct. 24, 2019. Climate change is contributing to an increase in the frequency of catastrophic fires like this one.





JOSH EDELSON/AFP VIA GETTY IMAGES

She has identified three potential causes of such harm. First, scientists now know that climate change increases the risk of major natural disasters such as hurricanes, floods and wildfires—and psychological research shows that such disasters lead to increases in post-traumatic stress disorder, depression, anxiety and domestic abuse (Mental Health in Emergencies, World Health Organization, 2019).

Second, more gradual changes associated with climate change can also worsen mental and behavioral health. Increasing temperatures, for instance, have been associated with poor cognitive performance (Laurent, J.G.C., *PLOS Medicine*, Vol. 15, No. 7, 2018) and mental health problems (Obradovich, N., *PNAS*, Vol. 115, No. 43, 2018), while rising sea levels and changing precipitation patterns may force people to migrate, leading to additional stress and trauma.

Finally, psychologists are beginning to explore whether simply knowing about climate change can cause psychological distress such as anxiety or ecologically driven grief (Cunsolo, A., *Nature Climate Change*, Vol. 8, 2018)—and may even alter personal decisions such as whether to have children. Though concrete evidence is still limited, more than half of the 3,458 American adults who completed APA's 2018 Stress in America survey said they feel stress about climate change.

"People have this idea that climate change will impact the poles, but they're less aware of the effects it will have on our



Climate scientists and policymakers have become increasingly aware of the importance of studying human factors in climate change risk and mitigation.



Brian Bon assesses the damage in Panama City, Florida, after Hurricane Michael made landfall along Florida's Panhandle on Oct. 10, 2018.

mental health and our stress levels," says Janet Swim, PhD, professor of psychology at Pennsylvania State University and a contributing author on the upcoming IPCC report. "Talking about those outcomes seems to motivate people across the political spectrum and may lead to a better overall response."

CHANGE FROM WITHIN

In addition to their expanded efforts on the IPCC report, psychologists are increasingly

working with government agencies to craft effective climate change mitigation policies. The Welsh government, for example, has partnered with Lorraine Whitmarsh, PhD, professor of environmental psychology at Cardiff University in Wales and director of the U.K. Centre for Climate Change & Social Transformations, and applied insights from her research to better engage citizens on issues surrounding climate change.

Whitmarsh found that

narratives emphasizing family values and the community benefits of reducing emissions, as well as messages that came from friends and family members, were most effective in stimulating behavior change. For conservatives, messages promoting frugality and national energy sufficiency were particularly effective—and the Welsh government used such insights to shape its climate change engagement strategy (*Global Environmental Change*, Vol. 42, 2017).

Psychologists are working with municipalities, as well. Amanda Carrico, PhD, a psychologist and assistant professor in the environmental studies program at the University of Colorado Boulder, for example, worked with the Metropolitan Planning Organization in Nashville, Tennessee, on a campaign aimed at minimizing air pollution and its health risks. Insights from her research on motor vehicle idling, an environmental behavior she found to be more malleable than such actions as carpooling or taking public transportation, have also informed behavior change campaigns in multiple cities.

Others are partnering with energy companies to apply research insights on a larger scale. Psychologists already know that providing feedback can aid behavior change, but P. Wesley Schultz, PhD, professor of psychology at California State University San Marcos, also found that including a normative frame—for instance, comparing a customer's energy or water consumption to that

of similar households in the neighborhood—triggers particularly durable behavior change (*Environment and Behavior*, Vol. 48, No. 5, 2016). Now, utility companies around the world include such insights on monthly bills sent to tens of millions of customers.

To begin coordinating such efforts internationally, APA partnered with the Order of Portuguese Psychologists to co-convene the International Summit on Psychology and Global Health: Climate Change, held in Lisbon in November. Leaders from more than 40 psychological associations convened for presentations on the psychology of climate change and working sessions geared toward developing tools, advocacy statements and media messaging around psychologists' growing role in climate change prevention, mitigation and adaptation.

Opportunities also exist in the private sector—for instance, through greening the supply chains of major corporations. Swim says consumers are increasingly concerned with the impacts of their consumption and are often willing to pay more for items produced responsibly, but they need to know whom to trust. Psychologists can help by studying how consumers establish trust in the context of climate change mitigation, the kinds of information they use to assess companies' sustainability efforts and how they conceptualize their own impact.

Schultz, for instance, has partnered with Keurig to help the company develop and market a recyclable container for

its single-use coffee pods. He's studying customer behavior—for instance, whether people prefer to recycle pods through a mail-back, drop-off or curbside recycling program—to inform the new product's development.

FURTHER READING

Meta-Analyses of Factors Motivating Climate Change Adaptation Behavior

van Valkengoed, A.M., & Steg, L.
Nature Climate Change
2019

Meta-Analysis of Pro-Environmental Behaviour Spillover

Maki, A., et al.
Nature Sustainability
2019

Special Issue: Climate Change and the Human Factor

International Journal of Applied Psychoanalytic Studies
2019

Mental Health and Our Changing Climate

APA and ecoAmerica
2017

FUTURE DIRECTIONS

One essential way psychology can contribute to addressing the climate crisis is by gaining a more nuanced understanding of behavior change and applying such insights to policies and messaging that drive significant and sustained change, says Ezra Markowitz, PhD, associate professor of environmental decision-making at the University of Massachusetts Amherst and president of APA's Div. 34 (Society for Environmental, Population and Conservation Psychology).


For example, Carrico is exploring whether conservation behaviors are maintained over weeks, months and years following an intervention. Schultz, Whitmarsh and others are exploring the concept of behavioral spillover—does changing one behavior shift how people act in other domains—for instance, if people plan to recycle items, will they consume more? And how might the popular practice of nudging individual behaviors change how people view the larger problem of climate change?

"These are new areas that are becoming increasingly important to explore," Markowitz says, "now that climate change is the background against which all sorts of decisions are going to be made for decades to come." ■



USER EXPERIENCE

DESIGNING PEOPLE- FRIENDLY TECHNOLOGY



Demand for “UX” psychologists is increasing as industries of all kinds work to improve how people interact with products and services

By TORI DEANGELIS

4 Anyone who’s tried navigating a poorly marked hospital wing, a cluttered website or a seemingly endless phone tree can appreciate the value of designing systems and products with the user in mind.

That’s where psychologists involved in user-experience (UX) research come in.

Their job is to make interactions in these domains as easy, safe, intuitive and enjoyable as possible, employing psychological knowledge to design and test products and systems to enhance users’ satisfaction.

“It’s all about understanding how people think about, perceive and behave in the world, and designing products and systems that match that,” says Colton Turner, PhD, a human factors specialist at Priority Designs, a product development consultancy in Columbus, Ohio.

This skill set is becoming increasingly hot, as more and more organizations, institutions and companies see the importance of providing a good experience for their customers, says psychologist Barbara Chaparro, PhD, head of the Research in User eXperience (RUX) Lab at Embry-Riddle Aeronautical University in Daytona Beach, Florida.

“It’s no longer just big tech companies that are hiring these people—it’s everybody,” Chaparro says. “There’s a growing awareness that it’s important to understand end users in whatever products [companies] are creating.”

UX jobs can now be found in nearly every arena, including technology, academia, education and medicine, adds psychologist Susan Weinschenk, PhD, chief executive officer of The Team W, a UX consulting firm in Wisconsin. Her clients include Target, Best Buy, the Walt Disney Company and other Fortune 500 companies, as well as government entities including the European Commission, medical facilities such as the Mayo Clinic, colleges, universities and more. “The work is so interesting, and so much fun, and I think it’s really useful to our clients,” she says.

“Cognition, perception, sensation, motivation, attention, emotion—all of it comes into play in this work. It’s all about understanding people.”

BARBARA CHAPARRO, PhD, EMBRY-RIDDLE AERONAUTICAL UNIVERSITY RESEARCH IN USER EXPERIENCE LAB

While not all UX practitioners have degrees in psychology—they come from areas as diverse as visual design, computer programming and interaction design—a psychology background, particularly in human factors, is a significant advantage, Chaparro adds. In fact, UX is considered a subspecialty of human factors, which applies knowledge of human capabilities to the design of systems, processes and products. UX, meanwhile, focuses specifically on the end users’

experience with a product or system, and includes measures of their attitudes and emotions, she explains.

Thanks to their training, many psychologists enter UX positions as researchers rather than designers, applying their extensive knowledge of human capabilities and propensities to user testing, Chaparro adds.

“Cognition, perception, sensation, motivation, attention, emotion—all of it comes into play in this work,” she says. “It’s all about understanding people.”

With their deep knowledge of human behavior, UX psychologists can improve people’s interactions with almost any product or service.

PRODUCT DEVELOPMENT AND SYSTEMS DESIGN

UX psychologists can facilitate people’s ability to easily, safely and pleasurably use almost any conceivable product. At Priority Designs, for example, Turner evaluates home goods, medical devices, sporting goods, construction equipment, hardware and soft goods—items such as soft luggage and carrying cases—both for in-house designers and for external clients.

His first step in any project is talking with designers, engineers or project managers to learn about the initial product design or prototype and to glean ideas about the intended customer base. In evaluating the design of medical devices, for example, Turner focuses on the users’ unique needs and challenges, such as cognitive, physical or environmental limitations that



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may impact their ability to use the device safely and efficiently. Next, he gathers data on potential users, which often means conducting surveys and interviews. This may include on-site visits to get a sense of users' task demands—for example, those of nurses who will be using the device in a hospital setting. Finally, he tests prototypes with potential users and shares the resulting information with designers and engineers, who refine the design based on his findings.

In a similar vein, Mikki Phan, PhD, heads a research team at Google that helps to design high-tech products

like smart speakers and smart thermostats. Drawing on her UX and human factors backgrounds, Phan and her team evaluate these products in terms of task difficulty, the time it takes to complete a task and other usability factors.

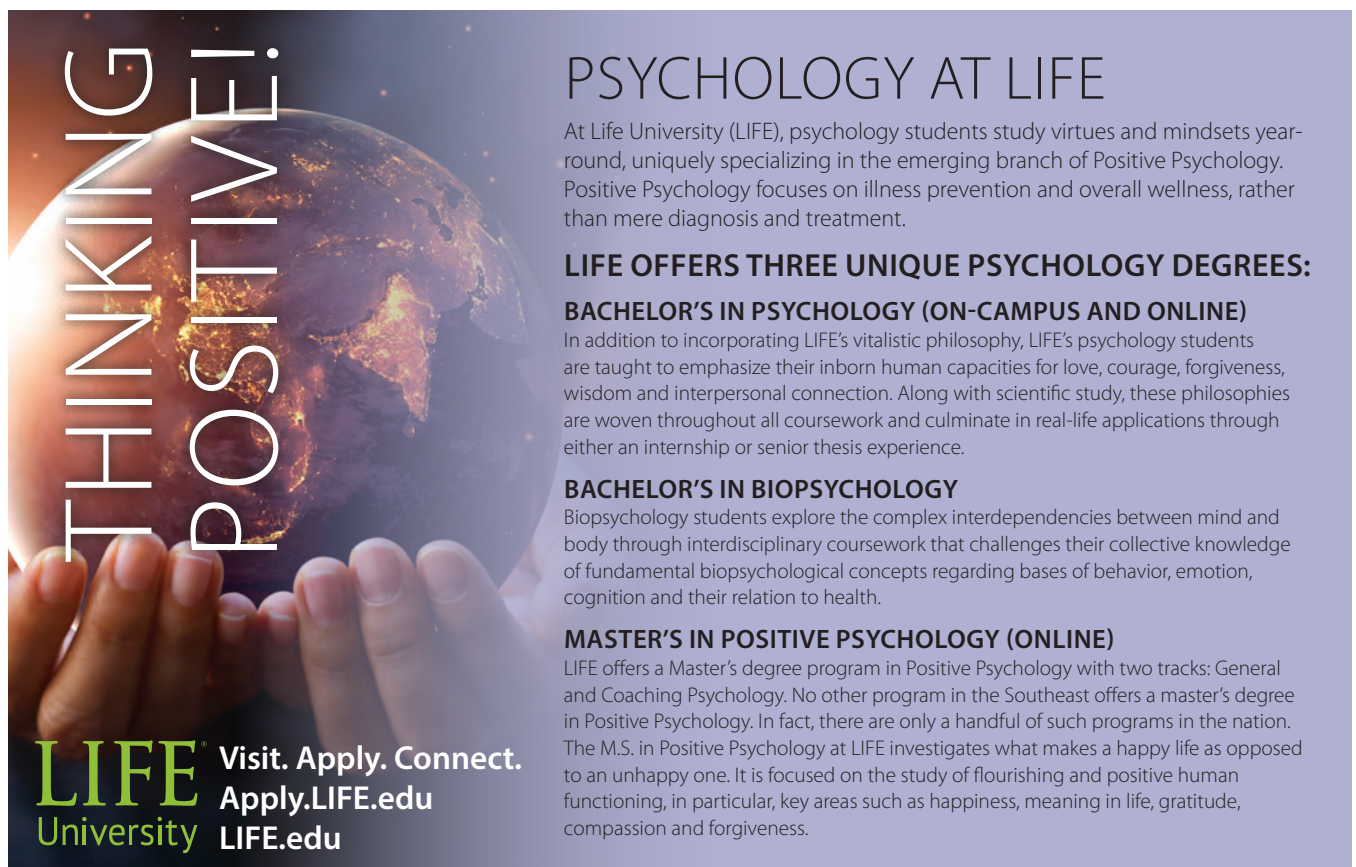
"Smart-home devices are a fast-growing tech area," she says, "but there are still a lot of research gaps in how to make these devices 'smarter' and integrate more seamlessly into people's daily routines. So, the area is ripe for UX and human factors researchers to contribute our knowledge and experience."

Another growing arena for

UX practitioners is working within or for systems. At Children's Mercy Hospital in Kansas City, Missouri, for example, Sarah Fouquet, PhD, works as a human factors scientist and program director, helping to address UX issues affecting the hospital's two diverse user groups: pediatric patients and their families, and hospital staff. Her projects have included helping to reconfigure an emergency room to create better flow for medical personnel working in a tight, chaotic space and testing the user-friendliness of electronic medical forms with providers and patients.

In one such project, Fouquet and her team had physicians complete a new computerized medical form in the presence of staff who were playing the role of patients and their families. Physicians were frustrated at having to divide their attention between their computers and patients, she found, and the staff playing the patient/family role picked up on that. As a result of this feedback, the hospital is rethinking the form's design and including the opportunity to fill in some of the form outside of the patient's room.

"You can design the world's greatest form," says



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LIFE offers a Master's degree program in Positive Psychology with two tracks: General and Coaching Psychology. No other program in the Southeast offers a master's degree in Positive Psychology. In fact, there are only a handful of such programs in the nation. The M.S. in Positive Psychology at LIFE investigates what makes a happy life as opposed to an unhappy one. It is focused on the study of flourishing and positive human functioning, in particular, key areas such as happiness, meaning in life, gratitude, compassion and forgiveness.

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Fouquet, “but if it frustrates providers and alienates patients, it’s not going to be a great experience for anyone.”

In another systems-related project, Weinschenk is helping a community college address a growing concern for many institutions of higher education: how to retain students. One way to do this, she finds, is by making the student experience easier and more enjoyable. To this end, Weinschenk is helping the college develop a system-wide strategy to incorporate UX into the wide range of projects and services that students access, including software apps to sign up for

classes and a website with detailed descriptions of course offerings. Her overall goal is to infuse a UX mindset throughout the college. “I’m not just helping them do one little thing,” she says. “I’m opening them up to the idea that this is something important for the organization as a whole.”

A BOOM AREA

UX psychologists find the work gratifying because they can use their psychology background to work on interesting projects that reduce people’s frustration and enhance their enjoyment and safety—often while earning a

great living, says Weinschenk. According to the job-review site Glassdoor, the average base pay for a UX researcher is \$93,152. And there’s no shortage of these jobs: In October alone, the employment site Indeed posted 4,400 UX researcher jobs and 8,998 UX designer jobs.

And the area is only likely to keep burgeoning, Chaparro predicts, as more and more companies become interested in what she calls the “end-to-end” experience—the user experience from start to finish.

“It’s no longer just, ‘Is our store arranged correctly, or does our website have the right information on it?’”

she says. “It’s more about the whole process: ‘How did the customer hear about it? How did they first get to it?’” Growth is also expected in the medical field, as the need for safer, more user-friendly equipment and systems continues to expand, she and others say.

The bottom line: UX is a fortuitous job domain that combines identifying universal, ongoing needs and finding new and creative solutions for them.

“The way I think of it is, if people ever stop using things, UX will go away,” Turner says. “And I don’t think people will ever stop using things.” ■



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Today's psychology graduate students are more racially and ethnically diverse, admission to PhD programs is more competitive and master's degrees in industrial-organizational psychology are hot

By DEBORAH BAILEY

5 Efforts to recruit diverse students into psychology look promising: The percentage of racial- and ethnic-minority psychology graduate students grew from 27% in the 2006–07 academic year to 35% in 2016–17, with increases for every ethnic-minority category tracked, according to a new analysis of data from APA's annual Graduate Study in Psychology survey of psychology graduate programs.

The largest increases were for students who identified as Hispanic or multiethnic, and master's students were slightly more diverse than doctoral students. Moreover, about 40% of first-year psychology students identified as a racial or ethnic minority.

"Greater diversity in the field translates into more perspectives informing our research and clinical work," says Zewelangi Serpell, PhD, director of graduate studies in psychology at Virginia Commonwealth University.

But while diversity is increasing overall, the APA data also reveal some gaps. For example, although blacks make up 13% of the U.S. population, they account for only about 5% of the psychology workforce and 10% of psychology students. The ratio of psychologists and Hispanics is even more uneven: While Hispanics make up 18% of the population, they represent only 4% of the psychology workforce and 12% of psychology students.

Among the factors driving the increased diversity are the diversity competency adopted in 2002 by the National Council of Schools and Programs of Professional Psychology (NCSPP) and APA's adoption of diversity as a guiding principle for programs starting in 2009. "They help programs to be intentional and explicit in their strategies to recruit and support diverse students," says Amy Mezulis, PhD, chair of Seattle Pacific University's clinical psychology department. APA also provides resources about diversity issues in graduate education at www.apa.org/education/grad/diversity.

Individual programs and faculty are also working to bring in more diverse students. "If we say that diversity and inclusion are important



The largest increases in diversity of psychology students were among those who identified as Hispanic or multiethnic.

ELEMENTS DIGITAL/UNSPLASH



DIVERSITY

ENTICING NEW FACES TO THE FIELD

and we want to increase diversity, we have to really be intentional about it,” says Enrica Ruggs, PhD, an assistant professor of management and the director of the Center for Workplace Diversity and Inclusion at the University of Memphis. “That means going to places and trying to recruit students that may not otherwise know about psychology.”

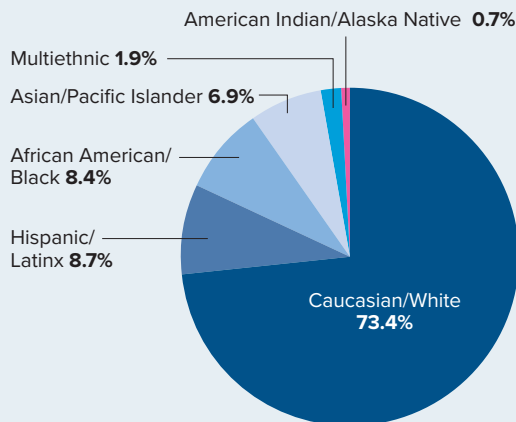
Some program directors are reaching out to historically black colleges and universities, Hispanic-serving institutions and other diverse undergraduate programs. Also key is ensuring that undergraduate students get the mentoring and advice they need to apply for graduate school.

Other efforts include holistic admission procedures that use multiple indicators rather than focusing on just GRE scores, hiring faculty who are diverse themselves or otherwise invested in diversity and staying connected with diverse alumni after they graduate. “They can help recruit new applicants, offer insights for current students and build connections to support each other as they grow in their careers,” says Georita Marie Frierson, PhD, dean of the D’Youville College School of Arts, Sciences and Education in Buffalo, New York.

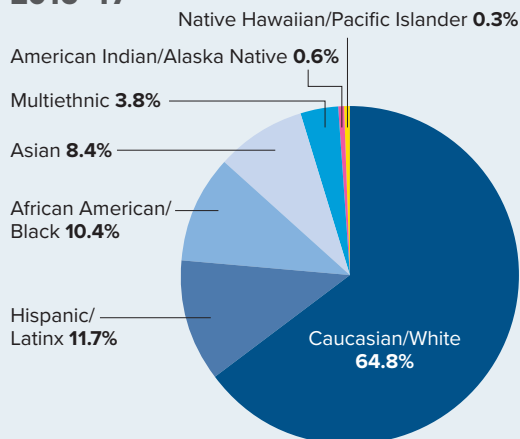
Indeed, these new psychologists are changing the field’s makeup. Between 2007 and 2016, the percentage of psychologists who were racial or ethnic minorities almost doubled—from 9% to 16%, according to APA’s Center for Workforce Studies.

Race/Ethnicity of Psychology Graduate Students

2006–07



2016–17



Between 2007 and 2016, the percentage of psychologists who were racial or ethnic minorities almost doubled—from 9% to 16%, according to APA’s Center for Workforce Studies.



MORE COMPETITION

A surprising finding of the APA survey analysis is that it’s become harder to get accepted into a psychology doctoral program: Acceptance rates dropped between the 2003–04 and 2015–16 academic years in most psychology subfields.

Those rates reflect a larger trend in the social and behavioral sciences, which is the second most selective field of doctoral study, trailing only business, according to the Council of Graduate Schools.

Cognitive psychology saw the biggest increase in competitiveness, going from a 20% to a 13% acceptance rate for doctoral programs, while clinical psychology doctoral acceptance rates dropped from 16% to 13%, likely driven by a 20% increase in applications.

But not all subfields followed this pattern. The acceptance rate to clinical PsyD programs has been level since 2004–05. During this time, the median number of applications to clinical PsyD programs decreased. “While it’s not unusual for applications to decline during a strong economy, possible causes include student concerns about financing their education, since PsyD candidates do not have the same funding opportunities available to PhD candidates,” says NCSPP President Francine Conway, PhD.

More recently, the median number of enrolled students has also decreased for clinical PsyD programs, which could indicate that programs are choosing to have smaller class sizes to preserve the high quality

of their training, says Conway, who is also dean of the Rutgers Graduate School of Applied and Professional Psychology.

MASTER'S I/O DEGREES IN DEMAND

Applications to master's-level industrial-organizational (I/O) psychology programs have increased, while the median number of master's program applications for most other subfields has been flat or declined.

For the 2016–17 academic year, master's I/O programs had more applications than any other subfield and the acceptance rate (39%) was the second most selective, after clinical psychology master's programs (38%). The I/O acceptance rate has held

steady for at least four years, but it is notably more competitive than in 2008–09, when the acceptance rate was 50%.

Meanwhile, the number of I/O programs and enrollments have grown to meet the demand. There are 28% more master's and doctoral programs listed in the APA Div. 14 (Society for Industrial and Organizational Psychology) program directory than 10 years ago.

Ruggs credits the increased interest in master's-level I/O degrees to the doors the degree can open, including the ability to find a job and interesting work, as well as good pay: The median annual salary for I/O psychologists in management is \$111,270, according to May 2018 estimates

FURTHER READING

More application, acceptance and enrollment data at www.apa.org/education/grad/survey-data

Graduate Enrollment and Degrees 2008 to 2018, Council of Graduate Schools
cgsnet.org/graduate-enrollment-and-degrees

from the Bureau of Labor Statistics, which includes both master's- and doctoral-level workers in this category.

"It's an area of psychology that has immediate application to business," says I/O psychologist Joe Allen, PhD, of the University of Utah. "That's resulted in a growing awareness, where organizations that previously didn't know about I/O are now actively recruiting I/O psychologists." ■

● The 2019 edition of **Graduate Study in Psychology** included data reported by 1,473 psychology master's and doctoral programs. The data include applications in 2015–16 for enrollment in 2017. Psychology departments reported race and ethnicity data for more than 45,000 students and gender for more than 50,000 students.



CLARK AND COMPANY/GETTY IMAGES

GENDER STATS

WOMEN STILL OUTNUMBER MEN IN PSYCHOLOGY

While racial and ethnic diversity is increasing, gender diversity is not, according to an analysis of data from APA's annual Graduate Study in Psychology survey of master's and doctoral psychology programs. About three-quarters of students are female, a constant over the past 15 years. In the 2017–18 academic year:

- About 78% of students in health-service psychology subfields, such as clinical counseling and school psychology, were female.
- About 65% of students in research subfields, such as experimental and social psychology, were female.
- Psychology is more female than the average, according to the Council of Graduate Schools. Across all fields, 60% of master's students and 54% of doctoral students in 2016–17 were women.

Large health systems increasingly recognize that weaving psychologists' expertise into services improves care and saves money

By CHARLOTTE HUFF

6 In a trend that has the power to significantly improve patient care, health systems are becoming more proactive about identifying patients' behavioral health needs earlier on, investing in strategies ranging from providing apps and telemedicine to promoting more routine screening during primary-care visits.

The best efforts, say proponents, treat emerging behavioral health issues before they reach the level of a clinical diagnosis.

"Providers are recognizing the significant benefit, obviously on behalf of the patients but also from an operations and financial perspective, of addressing behavioral health issues and really treating the whole person," says Joseph Miller, PhD, who chairs the American Hospital Association's Section for Psychiatric and Substance Abuse Services. It means, for example, if a patient has anxiety and a chronic cardiac condition, they can get treatment to improve both, potentially shortening their hospital stay, he says.

Treating someone for a physical condition who also has a behavioral health condition can double or triple the bill, according to a 2014 report that Milliman Inc. prepared for the American Psychiatric Association. If behavioral health services were to be fully integrated with physical treatment, the savings to the American health-care system could be vast—\$26 billion to \$48 billion annually, the firm calculated.

At this point, that level of integration remains a steep climb given the chronic shortage of mental health providers. One federal analysis projected a shortage of as many as 57,490 psychologists by 2025. According to data from the National Council for Behavioral Health and the Cohen Veterans Network, nearly 4 in 10 Americans report waiting longer than a week to get mental health treatment.



If behavioral health services were to be fully integrated with physical treatment, the savings to the American health-care system could be vast—\$26 billion to \$48 billion annually.

SDI PRODUCTIONS/GETTY IMAGES

A photograph of a female doctor with dark hair, smiling warmly. She has a blue stethoscope around her neck and is wearing a dark grey sleeveless top. In the background, the profile of a male patient is visible, looking towards her. The overall tone is positive and professional.

BEHAVIORAL HEALTH

IMPROVING CARE

WHILE SAVING MONEY

INNOVATIVE SOLUTIONS

But health organizations are striving to intervene sooner, bringing behavioral health services closer to the patient, and sometimes into the patient's home. In 2019, Northern California-based Livongo Health, which has developed technology to assist people with better managing diabetes and other physical conditions, acquired Denver-based myStrength. That company's web- and mobile-based behavioral health-care platform, created with input from psychologists, already was contracting with more than 120 health organizations, including hospital systems.

Meanwhile, more health systems are working to flag behavioral health or substance use concerns during physical checkups. In one example, New Jersey's Hackensack Meridian Health partnered with Cooper University Health Care to launch a pediatric psychiatry collaborative that now includes more than 500 pediatricians statewide. When those pediatricians identify a potential concern, they have a network of psychologists and other clinicians to which they can immediately refer that patient.

Moving forward, some of the best potential for return on investment will likely stem from such efforts to more frequently tap psychologists' expertise to help better manage depression, anxiety and other mental health challenges that can sabotage physical conditions such as diabetes, says Stephen Gillaspay, PhD, APA's senior director

for the Office of Health Care Financing.

"We've got great treatments," Gillaspay says. "The problem is that a lot of times the patients aren't too compliant with those treatments. I think that there's going to be an increasing role for psychologists to work with medical teams to improve compliance, which then improves their outcomes," such as fewer emergency room visits, he says.

Moreover, he adds: "There are psychological and behavioral processes that can impact your medical management that don't have to meet criteria for a mental health diagnosis," such as low-level anxiety undercutting diabetes control. "I think that is the sweet spot."

CATCHING SUBCLINICAL ISSUES

Cherokee Health Systems, which has blended behavioral health with primary care for years, emphasizes immediate follow-up. If a health provider identifies a potential behavioral health or substance use concern, the goal is to get the patient a further assessment during that same visit, says Parinda Khatri, PhD, chief clinical officer at the Knoxville, Tennessee-based nonprofit health organization, which treated 69,000 patients in 2018.

"If they have to wait a day or the next week, that is a fail in our mind," Khatri says. Not only might some patients be unable to return for the follow-up visit, she says, but the interventional window might have closed by then.

"Particularly with substance misuse," she says. "When someone is ready, they're ready. And

they may not feel the same way the next day. You have to optimize that opportunity."

Cherokee Health was among the systems that shared return-on-investment results in an American Hospital Association report about behavioral health initiatives published in 2019. Their behavioral health co-management with primary care, they reported, reduced emergency department visits by 68%. The report also describes the investment payoff at other facilities, including at Yale New Haven Psychiatric Hospital in Connecticut and Utah's Intermountain Healthcare.

Since its acquisition by Livongo, myStrength has added roughly 20 more health organizations to its client roster, says Scott Cousino, myStrength's co-founder and Livongo's senior vice president of behavioral health. Several psychologists were consulted in the creation and expansion of the various components available to users through the digital platform, including personalized assessments and various behavioral management and motivational tools.

The inherent privacy that virtual behavioral support provides might reach individuals struggling with a subclinical issue—such as overmedicating a bit with alcohol—who might not otherwise seek out care, Cousino says. (myStrength's data show that more than 65% of users aren't currently seeing a therapist.) Through its virtual platform, myStrength also promotes the benefits of therapy, including with psychologists, he says. And when a user is believed

Health systems are moving toward providing more timely interventions before a patient feels forced to seek out costly emergency care.

to be at elevated risk, based on the platform's periodic mood tracking and assessments, they're encouraged to seek out a mental health clinician.

BRINGING CARE CLOSER

Providing more timely interventions before a patient feels forced to seek out costly emergency care is where health systems are moving, says Miller, who is also vice president of behavioral health-care transformation services at Hackensack Meridian. Not only does that save money, but frequently it's better for the

patient, he says. "Probably the worst place to be in the midst of a behavioral health crisis is an emergency room."

In 2019, Hackensack Meridian opened an urgent care center with expanded behavioral health services after its own data found that nearly half of patients with behavioral issues didn't require an emergency department level of care, Miller says. Patients will receive a medical screening first to check, for instance, that the symptoms of a possible panic attack are not those of a heart attack, he says.

As of fall 2018, the state-funded pediatric psychiatry collaborative that Hackensack Meridian launched has already screened more than 130,000 children and referred 7,120 for further assessment or treatment. Some of the most common concerns include anxiety, depression and attention-deficit disorders. When children are believed to be on the autism spectrum, psychologists can provide additional testing.

Despite encouraging progress in innovation, reimbursement remains a sticking point, particularly for nontraditional interventions, whether that's touching base by phone or even a text exchange. Also, since a diagnosis is typically required, there's no payment for steps taken to avert a subclinical issue before it worsens, Khatri adds.

But some progress has been achieved recently, in the form of higher reimbursement through the health behavior assessment and intervention codes. APA advocated for those payments to be raised to a comparable level to psychotherapy services, federal officials agreed and the changes went into effect Jan. 1 (see article on page 23).

If those higher rates hold, psychologists will be better compensated for their role in improving compliance for patients with diabetes, hypertension or another medical condition, even if that patient doesn't have a mental health diagnosis, Gillaspay says. "That should open up the door and make it easier for psychologists to do that work even in a fee-for-service market," he says. ■

"Providers are recognizing the significant benefit ... of addressing behavioral health issues and really treating the whole person."

JOSEPH MILLER, PhD, AMERICAN HOSPITAL ASSOCIATION SECTION
FOR PSYCHIATRIC AND SUBSTANCE ABUSE SERVICES




GROWTH AREAS

ANSWERING THE DEMAND FOR SERVICES

Underserved communities are driving a heightened need for health-service psychologists

By DEBORAH BAILEY



7 New data from APA's Center for Workforce Studies (CWS) project that by 2030, the national demand for psychologists will increase by about 6%, to 101,000 full-time

positions. In particular, demand is projected to increase for services with:

- Patients in hospitals, where overall population growth combined with increasing numbers of older adults will increase hospital stays.
- Hispanic populations, which are expected to grow from about 18% of the U.S. population to about 21%.
- Older adults, who will account for about 1 in every 5 U.S. residents, according to the U.S. Census Bureau.
- Americans living in southern states, for whom there are already fewer psychologists per person than in other geographic populations.

"We can have the right numbers of psychologists, but they also need to be in the right geographic areas, in the right work settings, and have the appropriate training to serve diverse populations and health needs," says Karen Stamm, PhD, director of CWS.

The opportunity for psychologists could be even greater if some of the barriers that underserved communities face were reduced, Stamm adds. For example, the CWS projects that as many as 25,000 more psychologists could be needed by

2030 if racial and ethnic minorities used services at the same rate as the non-Hispanic white population.

GROWTH IN HOSPITALS

By 2030, hospitals are projected to have more inpatient visits, resulting in a 26% increase in psychologist positions from 2015—the largest projected increase of any psychologist work setting.

Also driving that increase is hospital administrators' growing recognition of the behavioral and mental health aspects of health conditions that psychologists can address, from cardiac problems to substance use disorders, says Paul Kettlewell, PhD, ABPP, director of pediatric psychology and integrated behavioral health/primary care at Geisinger Health System in Pennsylvania. Geisinger has expanded the role of psychologists in specialty-care settings, including cardiology, sleep medicine and pediatric gastroenterology, and has added psychologists to primary-care teams.

"There are compelling reasons why integrated health-care systems like Geisinger, the Mayo Clinic, Cleveland Clinic and Intermountain Healthcare believe that behavioral health is critical to their system of care," Kettlewell says.

Meanwhile, as health-care systems look for ways to improve the overall health of their populations, new leadership opportunities for psychologists are emerging, adds Jared Skillings, PhD, ABPP, APA's chief of professional practice.

"These are areas that have

By 2030, hospitals are projected to have more inpatient visits, resulting in a 26% increase in psychologist positions from 2015—the largest projected increase of any psychologist work setting.



been historically filled by physicians and businesspeople that in fact more appropriately ought to be filled by psychologists," he says. "It's a new opportunity for psychologists to demonstrate the high-level, broad skill set we have."

CULTURAL AND LANGUAGE NEEDS

The demand for bilingual and culturally competent psychological services for Hispanic Americans—defined as those with Spanish-speaking ancestry—will grow 30% by 2030, CWS projects. "It's crucial for psychologists to better reach underserved populations," says Skillings.

Yet, he points out, Hispanic Americans already struggle to find mental and behavioral health care, even in culturally diverse areas. Only 5.5% of psychologists can provide services in Spanish, and only 4.4% of psychologists are Hispanic. "The needs are dire," says Lydia P. Buki, PhD, an associate professor and training director for the University of Miami's counseling psychology program. The program's bilingual training clinic serves more than 120 Latinx clients annually. (For others, see the June 2018 *Monitor* article

FURTHER READING

APA Psychologist Workforce Projections
www.apa.org/workforce/publications/supply-demand

CWS Data Tool: State-Level Maps for Psychologist Workforce Projections, 2015–30
www.apa.org/workforce/data-tools/interactive-state-level

"Spanish-Speaking Psychologists in Demand.")

To grow the workforce, it's essential to capture students early in their education, says Claudette Antuña, PsyD, MHSA, LICSW, a psychologist in Washington state who frequently works with immigrants. For example, we need more young Americans to learn Spanish and develop a deeper appreciation of other cultures, and at the same time, mental health professions could improve their outreach to Hispanic high school and undergraduate students to consider mental health careers, she and other psychologists say.

OLDER ADULTS

The number of Americans 65 and older is projected to grow by 34% between 2015 and 2030—and by 2035, older adults will outnumber children for the first time in U.S. history, according to the U.S. Census Bureau. As a result, by 2030, the demand for psychologists will increase by 40% for adults ages 65 to 74 and by 71% for adults over 75.

And that demand could be even higher. The middle-aged adults who will become older adults in the next 15 years have a higher prevalence of behavioral health problems and are more

familiar with and use behavioral health services more often than today's older adults, according to a paper led by Jennifer Moye, PhD, of the VA Boston Healthcare System and Harvard Medical School (*Training and Education in Professional Psychology*, Vol. 13, No. 1, 2019).

So far, the prospects for meeting that demand are not encouraging. A 2015 APA survey found that early career psychologists reported feeling less competent to work with older adults than other diverse populations, and only about 2% of psychologists say geropsychology is their primary or secondary specialty.

Graduate and undergraduate students who want to investigate such careers should visit

APA's Exploring Careers in Aging road map, an online resource developed by APA's Committee on Aging.

THE SOUTH

The U.S. Census Bureau defines the American South as the area from Texas to Delaware. According to the latest data available (2015), CWS estimates that the South had 22 psychologists per 100,000 people. By comparison, the Northeast averaged 49.

The South also includes the three states with the lowest proportion of psychologists: Mississippi, South Carolina and Louisiana. But even in southern states with more psychologists, such as Maryland, they aren't evenly distributed: About 40% of Maryland's counties are

The demand for bilingual and culturally competent psychological services for Hispanic Americans—defined as those with Spanish-speaking ancestry—will grow 30% by 2030.

partially or wholly designated as mental health professional shortage areas by the U.S. Health Resources and Services Administration.

One of the best ways to bring health-service psychologists to a state is by offering graduate training and internships to them, psychologists say. For example, in the Rio Grande Valley of Texas, psychologist Joseph McCoy, PhD, and colleagues worked with the Texas Psychological Association and the Hogg Foundation to develop an internship consortium that led to an APA-accredited internship at the University of Texas Health Science Center at Tyler. Other psychologists are coming to rural areas thanks to the Public Service Loan Forgiveness Program, which forgives certain kinds of loans when participants work in public service jobs for 10 years, and the National Health Service Corps, which brings mental health professionals to shortage areas in exchange for up to \$50,000 in loan repayment.

In addition, a report from the South Carolina Institute of Medicine and Public Health recommends retaining psychologists and other behavioral health providers by improving reimbursement rates and offering more competitive pay for those working in public and community-based organizations.

"Everyone in our state should have access to the type of care they need when they need it—regardless of the health issue or their ZIP code," says Kester S. Freeman Jr., the institute's executive director. ■



MENTAL HEALTH

PROVIDING CARE IN INNOVATIVE WAYS

As more people get mental health services via apps and telehealth, psychologists are working to ensure their quality

By STEPHANIE PAPPAS

8 Four out of five Americans own a smartphone—and many now use these ubiquitous devices not just for communication and endless distraction but as tools for improving their mental health.

There are up to 20,000 apps for mental health on the market, and many of the most popular have millions of users. Headspace, for example, a mindfulness and sleep app that leads users through a series of guided meditations and has been studied as a treatment for stress-based chronic diseases, reached 1 million paying users in 2018; a free version of the app has been downloaded by nearly 60 million people.

The bottom line: Whether through consumer apps or telehealth services, consumers are turning smartphones into pocket therapists. Experts hope that digital mental health will increase access to mental health care, but that outcome is by no means guaranteed: The field is still grappling with complex issues of usability, efficacy and data privacy.

“One of the main trends we see is that there is very little relationship between credibility and the user experience,” says Stephen Schueller, PhD, a psychologist at the University of California, Irvine. “Apps with good credibility often have bad user experience, and apps that have good user experience often have little credibility.”

Mindfulness and other mental health apps have seen a huge surge, with up to 20,000 mental health apps on the market and millions of users on the most popular ones.



Schueller is the executive director of the website PsyberGuide (psyberguide.org), a project of the non-profit organization One Mind, which rates mental health apps on scientific credibility, user experience and transparency of data-handling. The rankings reveal a gulf between academics researching effective treatments and designers who know their way around creating a pleasing interface, Schueller says. “We as researchers need to work better with people who can help us build good experiences, and companies that develop these apps with good experiences should do better work to get some support behind their apps,” he says.

Digital mental health applications need to keep users engaged to be effective, says Megan Jones Bell, PsyD, the chief scientific officer at Headspace and an adjunct clinical assistant professor at Stanford University—and in the consumer world, there’s no one checking up on users to make sure they’re adhering to treatment. This means that companies must not only base their apps on evidence-based strategies, they also must test that their specific vehicle of delivery works.

“You could have the best therapy in the world, but if people don’t actually get a meaningful dose, it doesn’t matter,” she says. “You need to invest in that extra step of third-party validation.”

Mental health technology also shows huge promise not just for treatment, but for data collection and assessment as well,



“Ideally, the goal of these apps is to extend our reach, potentially reduce burden on practicing clinicians and allow some of the work to be done outside of session.”

MATTHEW CARPER, PhD, BROWN UNIVERSITY WARREN ALPERT MEDICAL SCHOOL



says Matthew Carper, PhD, a psychologist and postdoctoral researcher at Brown University’s Warren Alpert Medical School. And many apps are designed to be used in conjunction with traditional mental health care. In particular, Carper says, wearables and sensors are continually improving and can provide granular, long-term data on

sleep, exercise, social contact and other lifestyle factors. Apps that prompt users to enter information about their moods several times a day can be particularly useful for clinicians, Carper says. “It basically allows us to assess things in a more accurate way as they’re happening and reduces that retrospective recall bias that we deal with in self-reports.”

POPULATION DISPARITIES

Evidence is starting to drive quality among mental health technologies, Schueller says, and more health-care systems are diving in. Headspace's subsidiary Headspace Health is now working with health-care systems and insurance companies to develop apps for treating stress-based chronic diseases. But there are population disparities in the development of this tech, Schueller and his colleagues have found (*Current Treatment Options in Psychiatry*, Vol. 6, No. 3, 2019). The most common users, he says, are middle-aged white women—the same group most likely to use traditional therapy.

“A lot of these apps are still designed for white people, who are the majority,” he says. “It would be nice to see more development of apps for specific underserved marginalized populations that are traditionally left out of mental health services.”

As digital mental health expands, privacy, data-handling and regulation are becoming major issues. A study of the 36 top-ranked apps for depression and smoking cessation led by Kit Huckvale, PhD, a mobile health researcher at Australia's non-profit Black Dog Institute, found that more than three-quarters of them transmitted data to Facebook or Google. Only 12 revealed this fact in their privacy policies (*JAMA Network Open*, Vol. 2, No. 4, 2019). (For more on psychologists' work on privacy, see “Pioneering New Ways to Protect Privacy” page 76.)

The U.S. Food and Drug Administration (FDA) has

Some wearables and sensors are designed to be used in conjunction with traditional mental health care, and can provide data on sleep, exercise, social contact and other lifestyle factors.

moved into regulating a subset of medical apps that it deems potentially risky, and it approved its first mental health app in 2018. The app, reSET, was designed by Pear Therapeutics to improve retention in outpatient substance use treatment. However, mental health tech remains largely unregulated. Clinicians hoping to use technology in their practices should seek out apps and tools that have been vetted in peer-reviewed journals, Carper says. The journal *Cognitive and Behavioral Practice* runs a series of multimedia “field tests” of mental health apps that can be helpful, he says. APA Services Inc.'s *Good Practice* magazine and *Practice Update* newsletter also recently launched columns evaluating mental health apps. Finally, clinicians should strive to understand the apps their patients might be using and be willing to recommend high-quality options.

“Ideally,” Carper says, “the goal of these apps is to extend our reach, potentially reduce burden on practicing clinicians and allow some of the work to be done outside of session.”

NEW TELEHEALTH OPPORTUNITIES

While technology has not yet brought about a revolution in access to mental health care, more medical systems are signing on to telehealth in hopes of reaching populations who can't easily access care. According to the American Hospital Association, 76% of hospitals now connect with patients via telehealth, up from 35% in 2010. For mental health professionals,

2019 ushered in one of the most far-reaching developments that will increase the use of telepsychology: Twelve states signed on to the Psychology Interjurisdictional Compact (PSYPACT), an agreement that allows licensed psychologists to deliver telepsychology services across state lines in participating states. Those states are Arizona, Colorado, Delaware, Georgia, Illinois, Missouri, Nebraska, Nevada, New Hampshire, Oklahoma, Texas and Utah.

As more states sign on to PSYPACT, it could be a huge boon for patients in need of specialty services, says Kimberly Anderson, PhD, the director of psychology at The Center for Eating Disorders at Sheppard Pratt in Towson, Maryland. Teletherapy allows practitioners to virtually participate in family meals and meal preparation in the client's home environment. “We can be in their kitchen, in their dining room, and it's so much easier and convenient for everyone,” she says.

A review of research by Anderson and her colleague Laura Sproch, PhD, found that for eating disorders, telehealth's efficacy, therapeutic alliance, satisfaction and safety are similar to those provided by in-person therapy (*Psychiatric Clinics*, Vol. 42, No. 2, 2019). More comparisons of telehealth and in-person therapy are needed to understand when telehealth works and with whom, Anderson says, but that research is happening as telehealth grows. “I honestly think everyone is going to be doing it soon,” she says. ■



TECHNOLOGY

PIONEERING NEW WAYS TO PROTECT PRIVACY

Psychologists are developing new strategies to protect users' personal data *By* **HEATHER STRINGER**

9 With more of psychologists' work going digital, the chances of inadvertently revealing people's private information is also escalating. Social media, smartphones, GPS tracking systems, wearable cameras and other tools allow researchers to collect real-time data that was previously unavailable, such as an individual's movements, moods or sleeping patterns. At the same time, patients are using smartphone apps for monitoring and treating conditions including depression, substance use disorders, obesity and schizophrenia—but few read the terms and conditions to understand whether their data are protected.

Now, a growing number of psychologists are tackling these digital privacy challenges. “We need to be thoughtful about the potential

downstream repercussions,” says Camille Nebeker, EdD, MS, an associate professor in the department of family medicine and public health and director of the Research Center for Optimal Digital Ethics Health (ReCODE Health) at the University of California, San Diego, who is among the psychologists taking the lead on privacy protection in psychology research. “My goal is to get people to start talking about the issues and support one another to improve the current practices.”

UNINFORMED CONSENT

A study by Nebeker and her colleagues sheds light on how researchers can inadvertently unmask personal details. In a search for articles published on PubMed in 2015 and 2016 that included the words “Twitter” and either “read,” “coded” or “content,” they found that

72% quoted at least one participant's tweet, and the researchers could identify the participant by searching online for the quoted content 84% of the time. Significantly, only one study had obtained consent from participants to disclose identifying information (*npj Digital Medicine*, Vol. 1, 2018).

The lack of informed consent may come as a surprise, but publicly available data like Twitter posts often can be accessed and used by researchers without obtaining a prospective ethics board review, says Nebeker. And even institutional review boards (IRBs) may not always know how to proceed when reviewing such studies. "Digital technologies introduced novel ethical complexities that may be unfamiliar to researchers and the IRBs," Nebeker says. In a recent study, her team learned that IRBs were uncertain about how to evaluate digital research and they wanted more support (*AJOB Empirical Bioethics*, Vol. 8, No. 4, 2017). Meanwhile, other countries are grappling with similar challenges, and the European Union recently passed the General Data Protection Regulation (GDPR), which gives study participants the right to know what personal information is being collected and whether it's being shared with others.

As it became increasingly clear to Nebeker that both researchers and IRBs needed more guidance, she obtained funding from the Robert Wood Johnson Foundation to create the Connected and Open Research Ethics (CORE) initiative within ReCODE Health.



"Most apps are either not disclosing their privacy policies or they do not follow their own policies. And if they have a policy, it's usually written at a college reading level that is far above the average reading level of most users."

JOHN TOROUS, MD, MBI, BETH ISRAEL DEACONESS MEDICAL CENTER



APA's Ethics Code addresses digital privacy by encouraging psychologists to protect people's confidential information.

Nebeker and her colleagues conducted focus groups with IRB members, study participants and scientists throughout the country to better understand how to support these stakeholders. The meetings informed the design of the CORE website, which includes resources like a checklist to help researchers ensure that they are protecting study participants who are sharing personal data (*Translational Behavioral*

Medicine, 2019). The checklist highlights items to consider, such as whether informed consent forms clearly describe what personal information will be collected, which data will be shared and with whom. The CORE platform also includes a Q&A forum for its members and a library where researchers can share samples of IRB-approved protocols and consent forms they've developed to foster

KYLE GLENN/UNSPLASH

ethical digital health research.

APA's Ethics Code also addresses digital privacy by cautioning psychologists to take reasonable precautions to protect confidential information obtained through or stored in any medium (Section 4). Also, psychologists who offer "services, products or information via electronic transmission" should inform clients or patients of the risks of privacy and limits of confidentiality, according to the ethics code.

PRIVACY AND APPS

The explosion of mental health apps for people with conditions such as depression, anxiety or schizophrenia has also undermined the confidentiality of personal data, an issue of particular concern to clinicians.

"The privacy policies usually state that the apps are just a health and wellness product, so they are not subject to the same privacy regulations as a medical device product," says John Torous, MD, MBI, director of the digital psychiatry division at Beth Israel Deaconess Medical Center in Massachusetts.

He studied the privacy policies of apps geared to help a particularly vulnerable population: people with dementia. He found that 46% of the 72 apps he studied had a privacy policy, but only 4% promised not to sell the data to third parties (*American Journal of Geriatric Psychiatry*, Vol. 25, No. 8, 2017). "Most apps are either not disclosing their privacy policies or they do not follow their own policies," he says. "And if they have a policy, it's usually written

at a college reading level that is far above the average reading level of most users."

The U.S. Department of Veterans Affairs (VA) is one organization that has developed short, readable privacy policies that protect personal data on its mental health apps. "I steer a lot of patients to VA apps because they promise not to share data and only use anonymized information for internal analytics, and the user can easily opt out of this," says Torous. For example, the privacy policy for VA mobile apps—such as Mood Coach, ACT Coach or PTSD Coach—states that "no data that could be used to identify you is sent to VA or third parties," and that any information entered into the app, such as names, phone numbers, addresses, images or music cannot be accessed, stored or shared by the VA. The policy also explains that mobile apps collect anonymous information about how people use it to help the VA make improvements, but that this information cannot be linked to any personal information.

Behavioral health apps also often ask people to respond to open-ended questions, and that can increase the risk of participant identification, says Danielle Ramo, PhD, an associate professor of psychiatry at the University of California, San Francisco, who is creating an app to help college students struggling with loneliness. While there are a lot of benefits to asking open-ended questions, she says, answers with identifying information can create problems for participants and others. If

FURTHER READING

How Scientists Can Take the Lead in Establishing Ethical Practices for Social Media Research

Pagoto, S., & Nebeker, C.
Journal of the American Medical Association
2018

Assessment of the Data Sharing and Privacy Practices of Smartphone Apps for Depression and Smoking Cessation

Huckvale, K., et al.
JAMA Network Open
2019

Technology to Support Aging in Place: Older Adults' Perspectives

Wang, S., et al.
Healthcare
2019

the app she is developing asked, "What was your experience with a social challenge?" and a participant expressed frustration with certain individuals on campus, this could have negative consequences, she says. To reduce risk, Ramo's research team limited the number of open-ended questions in the app and instead used interactive choice features. For example, participants could select how they were feeling on a colorful grid rather than answer an open-ended question about how they were feeling.

Attention to such privacy issues is critical, says Sherry Pagoto, PhD, a professor in the department of allied health services and director of the Center for mHealth and Social Media at the University of Connecticut, who delivers behavioral health interventions using private Facebook groups in her research on obesity, among other areas. She developed an informed consent document that details the social media platform's privacy limitations. "We made it clear that other people in the group can see what they post, and that Facebook has access to anything they post," she says. "This is important for people who are sharing sensitive details about binge eating or mental health issues" (*JMIR mHealth and uHealth*, Vol. 6, No. 6, 2018). Overall, she says, psychology researchers need to ask themselves how they could possibly be violating privacy. "If one researcher has a significant [digital privacy] breach, then we risk losing the faith of the public and access to social media platforms for the long term." ■

10

Long gone are the days of chalkboards and overhead projectors. Today's psychology faculty have a wealth of technological tools to choose from, including virtual and

augmented reality devices that bring lessons to life and sophisticated software for grading, detecting plagiarism and hosting virtual classrooms.

"Technology has reshaped human cognition—for better or worse—in terms of how we perceive, remember and learn," says Richard Harnish, PhD, professor of psychology at Penn State New Kensington and co-editor of "The Use of Technology in Teaching and Learning," an e-book released by APA's Div. 2 (Society for the Teaching of Psychology). "Faculty need to recognize its impact and adjust accordingly."

NEW REALITIES IN ACADEMIA

One of the most promising additions to education has been virtual reality (VR) technology, which research shows can fully immerse the viewer in a virtual experience and increase his or her empathy (Schutte, N.S., *Motivation and Emotion*, Vol. 41, No. 6, 2017). "VR gives people a sense of what it's like to be in someone else's shoes, which is the low-hanging fruit for psychologists," says Mina Johnson-Glenberg, PhD, research professor of psychology at Arizona State University and founder of Embodied Games LLC, a company that uses VR and motion capture to create science education content.

At Stanford University, psychologist Jeremy Bailenson, PhD, founding director of the Virtual Human Interaction Lab, says he uses VR in the classroom "the same way any teacher would use a field trip. VR field trips have all of the assets of an actual field trip—going to special places specifically chosen for teachable moments—but they also allow for the impossible."

To enable students to understand serious mental illness more deeply, psychologists at the Australian College of Applied Psychology, for example, have designed a VR simulation to help students experience the type of auditory and visual hallucinations that people with schizophrenia often face. A study of the simulation found that students and other participants displayed increased

ADRIAN DEWEERDT/UNSPLASH



A man with a beard and mustache is wearing a black VR headset. He is looking slightly to the right. The background is a plain, light-colored wall.

EDUCATION

GOING HIGH TECH IN ACADEMIA

New technologies are improving psychology education, easing faculty's administrative burden and helping researchers share their findings more broadly

By ZARA GREENBAUM

Using virtual reality in classrooms is helping students gain a deeper understanding of phobias, serious mental illness and more.

knowledge and empathy toward those with the disorder in a post-test (Formosa, N.J., *Australian Journal of Psychology*, Vol. 70, No. 1, 2018). Other educational simulations have used virtual spiders to teach students about phobias, and amplified sounds in a library setting to mimic the experience of a person with attention-deficit hyperactivity disorder (ADHD).

To make educational applications of VR as useful in the classroom as they can be, Johnson-Glenberg is also developing a tool to help instructors evaluate the usefulness of VR applications for teaching. Known as the Quality of Education in VR Rubric, or QUIVRR, the tool helps teachers assess the content and mechanics within a VR experience.

“People are creating VR tools that look great, but there’s not always an added value in terms of pedagogy,” Johnson-Glenberg says.

Meanwhile, Tyler Ard, PhD, assistant professor of research neurology at the University of Southern California’s Mark and Mary Stevens Neuroimaging and Informatics Institute, is exploring another frontier: augmented reality (AR). Ard and his team, which includes psychologists, neuroscientists and computer scientists, have developed Schol-AR, a smartphone app that allows users to aim their phones’ cameras at an image in a textbook, journal article or conference poster and pull up supplementary visuals, including 3D images, animations and interactive components. For example, a reading on an fMRI



Technology is changing the way psychology faculty manage their courses, including how they deliver lectures, grade exams and even identify plagiarism.



New conferencing software allows remote students to experience a near replication of discussion that occurs in a classroom.

might include an embedded animation of a 3D brain that users can manually manipulate to view regions of heightened neural activity.

OTHER TOOLS FOR TEACHING

Technology is also changing the way psychology faculty manage their courses, including how they deliver lectures, grade exams and even identify plagiarism.

Those who teach online or hybrid courses, which combine in-person and online learning, are using asynchronous

conferencing software that enables a near replication of the discussion that occurs in a traditional classroom. As students watch recorded lectures at different times throughout the day, they add video questions and comments, which are synced with the lecture video to facilitate ongoing discussions. “It’s a huge improvement over message boards,” says Beth Doll, PhD, professor of educational psychology at the University of Nebraska–Lincoln.

Also in use are “virtual presence systems,” otherwise known



as videoconferencing robots, which give remote students an enhanced presence in classrooms and meetings. Remote students can control the robots, which help them stay engaged in hybrid courses through high-quality audio, 360-degree video and wheels. They're also useful for faculty who perform practical observations—for example, of students in Doll's school psychology professional program—because they allow instructors to evaluate students as they administer tests and deliver psychological services but don't trigger the kind of behavioral changes in students that occur when a supervisor sits in the room. "Growth occurs more rapidly because we can give students very specific feedback, but the coaching is much less intrusive," says Doll.

When it comes to grading exams, scantrons are being replaced by ZipGrade, a smartphone and tablet app that allows instructors to create custom bubble sheets, scan completed sheets with their smartphones and immediately obtain test scores. ZipGrade also calculates the correlation between students' responses to a given question and how they performed on the test overall to help instructors evaluate the efficacy of each question.

As for detecting plagiarism, Turnitin—which checks submitted assignments against online sources and its own database—is still the primary resource used by most institutions, but an upcoming program called Google Assignments, currently being tested, performs a similar function for free. By automatically running assignments submitted via Google Docs through a Google search, the new tool may be a time and money saver for faculty, especially because Google Docs offers integration with popular course management systems such as Canvas.

PROMOTING RESEARCH

Psychologists in academia are also reimagining how to summarize and share research findings. Online social networks, including Twitter and ResearchGate, are increasingly being used for sharing research findings quickly with professional networks. A survey conducted by the Pew Research Center found that nearly half of American Association for the Advancement of Science members use social media to discuss science and follow new

discoveries (How Scientists Engage the Public, 2015), while institutions such as the Mayo Clinic now consider social media activities when making decisions about academic appointments and promotions.

APA's Thank a Scientist initiative, an annual weeklong Twitter campaign that recognizes the contributions of influential psychologists, has gained significant traction since its launch in 2017. More than 100 other scientific and educational organizations have now joined the appreciation effort.

Other psychologists are finding creative ways to promote evidence-based practices in an online environment. Helping Give Away Psychological Science (HGAPS), founded by Eric Youngstrom, PhD, professor of psychology at the University of North Carolina at Chapel Hill, partners with Wikipedia to create and revise entries on psychological research. Since HGAPS launched in 2015, its hundreds of Wikipedia pages have been viewed more than 100 million times.

"The future of sharing information with nonexperts involves identifying partners in the online space that already have significant traction," says Andres De Los Reyes, PhD, immediate past chair of the APA Board of Educational Affairs and professor of psychology at the University of Maryland, College Park. "Wikipedia and other popular online networks allow content we've created in other spaces to scale up to the masses in a way that we could never do on our own." ■

RESOURCES

The Use of Technology in Teaching and Learning

Harnish, R.J., et al.
(Eds.)
APA Div. 2
(Society for the Teaching of Psychology)
2018

Technology for Academics blog

Frantz, S.
2019

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HOW TO WORK WITH AN INTERPRETER

Practical and ethical
issues to consider
when working in
translation

PAGE 90

Teaching Your Students to
Embrace Open Science PAGE 86

A Lab That Studies Animal Minds—
to Understand Our Own PAGE 94

HOW TO TEACH REPLICABILITY

Students intuitively embrace open science and transparent research principles. Here's how to help the next generation of psychologists put those principles into practice.

BY CHRIS PALMER

In recent years, psychology, like many areas of science, has faced a credibility problem, as scientists and the public have realized that many common research practices can lead to a literature that includes questionable or nonreproducible findings. What has come out of these discussions are a set of practices—including preregistering studies and sharing one's materials and data with other scientists—designed to make research more transparent and replicable (see sidebar).

These open science practices may be new, but for many students, they seem intuitively appealing. “My undergraduates believe research transparency is the way science has always been done,” says Morton Ann Gernsbacher, PhD, a professor of psychology at the University of Wisconsin–Madison, who gave a workshop on teaching research transparency at APA 2019 in Chicago. It's important to reinforce those beliefs early, she says, because for open science practices to become mainstream, they need to be taught to the next generation of psychologists and other scientists. Psychology faculty share their advice on how to integrate open science into teaching and mentoring.

1 START EARLY It's important to talk about transparency to students at every level, even to introductory psychology students, most of whom will not become scientists, says Julia Strand, PhD, an assistant professor of psychology at Carleton College who teaches a course called “Psychology's Credibility Revolution.” Even nonscientists “are going to spend the rest of their lives evaluating scientific claims,” Strand says. “Having a sense of how scientists collect their data and the flexibility that they have in reporting enables students to be more critical consumers of scientific information.”

2 ASSIGN READINGS ON REPLICATION A simple way to introduce open science practices is to read papers related to replication issues with your students as part of a seminar course or ongoing lab meetings. Strand suggests incorporating review papers (e.g., Simmons, J.P., *Psychological Science*, Vol. 22, No. 11, 2011 and Flake, J.K., *PsyArXiv*, 2019) at first rather than research papers, which may require familiarity with specific methods and analytic techniques. Once students become familiar with transparency topics, you can point

Teaching students how—and why—to share their data is an important step toward ensuring more replicable research results.

out places in the research process where bias could enter and discuss how to combat these biases.

3 LEAD BY EXAMPLE For more advanced undergraduate research assistants and graduate students, work together to preregister a study or submit a registered report. In addition to engaging students with the mechanisms of transparent research, another benefit to preregistering studies—which involves writing the introduction and methods section before collecting data—is that it relieves the burden of writing those sections later. Meanwhile, registering reports—which involves submitting for peer review a research plan to a journal before collecting the data—does even more to facilitate students' progress and careers because as soon as the research plan has been accepted, students can list it on their resumes and graduate school applications. The Center for Open Science maintains a growing list of more than 200 journals that accept registered reports.

4 TEACH STUDENTS HOW TO SHARE DATA “Of all the steps toward transparency that researchers can take, sharing



data is one of the most beneficial, but also one of the most fear inducing,” Gernsbacher says. To overcome the anxiety she feels about sharing her own data, Gernsbacher asks colleagues to check it for errors before making it public—and does the same for them. She eases students into this practice by requiring them to share their data—collected as part of a graduate student thesis or undergraduate class-based project—with other students, who in turn have to analyze the data and attempt to draw the same conclusions as the student who shared the data with them. Gernsbacher also recommends helping students apply Creative Commons licenses to their research materials, such as visual stimuli and computer codes. Creative Commons licensing allows researchers, including students, to specify whether, where and when their materials can be copied, distributed or altered.

5 PLUG STUDENTS INTO THE NETWORK There are now multiple ways to plug into open science communities online, and Twitter is one of the most effective, according to Strand. “There is active and spirited discussion about open science on Twitter,” she says. “We have found it to be very effective for staying up to date with issues and advancements, discovering new papers, getting rapid answers to questions and networking.” Research transparency is also the subject of numerous blogs, such as the one hosted by the Berkeley Initiative for Transparency in the Social Sciences, and podcasts, such as The Black

Goat and ReproducibiliTea. In addition, attending the Society for the Improvement of Psychological Science's annual meeting and related meetups at other conferences can be an important source of information and network building around research transparency.

6 TEACH A TRANSPARENCY COURSE In addition to working open science principles

into existing psychology coursework, some schools are also developing specific classes on the topic. In spring 2019, Benjamin Le, PhD, a professor of psychology at Haverford College, taught the inaugural session of his course "Open Science and Inclusive Psychology," one of the first of its kind for undergraduates. Le and his students tackled case studies of debunked findings,

explored p-hacking (trying lots of analyses until you get a significant effect) and other tricks that game the research process and discussed the influence that pressure to publish has on research outcomes. "This was the most fulfilling course I've ever taught," Le says. "Seeing students' eyes light up when realizing studies in the intro psych canon may be flawed, and helping them

OPEN SCIENCE

WAYS TO EMBRACE TRANSPARENCY

Many psychologists are embracing a set of open research practices designed to produce more replicable results. They include:

■ Preregistering experiments.

Preregistration involves creating a time-stamped document with your hypotheses, research design and analysis plans (Nosek, B.A., *PNAS*, Vol. 115, No. 11, 2018). Projects can be preregistered on platforms such as AsPredicted.org and the Open Science Framework, which is run by the Center for Open Science. When the paper is published, a link to the preregistration can be included in the published article, enabling reviewers, editors and readers to see that you haven't engaged in questionable practices like p-hacking (trying lots of analyses until you get a significant effect) or HARKing (hypothesizing after results are known). "Basically, you have evidence that you called your shots ahead of time," says Julia Strand, PhD, an assistant professor of psychology at Carleton College. The Center for Open Science



partnered with APA in 2017 to offer open science badges to authors, create an APA data repository and designate a preferred preprint server for APA journal articles. APA also recently updated its Journal Article Reporting Standards to include guidance on preregistering studies (Appelbaum, M., *American Psychologist*, Vol. 73, No. 1, 2018).

■ Submitting registered reports.

Registered reports do everything that preregistration does and more. You submit your detailed research plan to a journal before collecting any data, the submission undergoes peer review and, if approved, the paper is accepted in principle. "The reviewer

basically asks, 'Is this an interesting question? Is it methodologically sound?'" says Benjamin Le, PhD, a professor of psychology at Haverford College. "And if so, it doesn't matter whether the results support the hypothesis or not." This agnostic attitude toward outcomes has made way for more studies with neg-

ative results; null findings account for more than half of registered report publications, compared with just 5% to 20% of general literature publications across all fields (Allen, C., *PLOS Biology*, Vol. 17, No. 5, 2019).

■ Sharing data, code and materials.

Transparency in your research extends beyond saying in advance what you're going to do. It also means showing your work. The best way to do that is to upload your data to one of many open access platforms. You can also share custom code you wrote to analyze the data as well as other materials you used in the experiment that can help others replicate your findings.

understand how they can make science better, was really rewarding.”

7 PAVE THE WAY After you’ve shown students the path to open science practices, help them along it. In a 2018 *Trends in Cognitive Sciences* article, Gernsbacher suggested emphasizing research transparency when you’re on search committees that are drafting job announcements or evaluating candidates. She also advised telling graduate students when they’re on the tenure-track job market to highlight their research transparency bona fides in their cover letters and annotate their vitae to indicate which of their studies were preregistered or used open access materials and data. Then, encourage your institution to reward transparency during academic promotion and tenure evaluation. When researchers are rewarded for these practices, their habits will trickle down to trainees, Gernsbacher says.

8 OVERCOME YOUR OWN HANG-UPS If you’re having a hard time with transparency in your own research, do some self-introspection, says Strand. A concern that psychologists often cite for not getting on board with transparent research practices is the perception that they take too much time. “In my experience, that’s just not true,” Strand says. “They just

change where you invest the time. Rather than figuring out how I’m going to analyze my data after I collect it, I just make the plan before.”

Another common worry is the fear of making mistakes and being “found out.” “That’s a valid fear that you can pretty easily get around by asking colleagues to proof your materials before making them public,” Gernsbacher says. Strand agrees and offers a lesson that she thinks all budding psychologists should hear. “As scientists, we should not be in the business of hiding when we’re wrong,” she says. “We should be looking for ways to be less wrong, but if we are wrong, it should be out there so that other people can find it. That helps make science self-correcting.” ■

FURTHER READING

False-Positive Citations

Simmons, J.P., et al.
Perspectives on Psychological Science
2018

Rewarding Research Transparency

Gernsbacher, M.A.
Trends in Cognitive Sciences
2018

Publishing Open, Reproducible Research With Undergraduates

Strand, J.F. & Brown, V.A.
Frontiers in Psychology
2019

Reproducibility and Replicability in Science
National Academies Press
2019

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IN OTHER WORDS

Psychologists increasingly work with interpreters to provide services to those who speak other languages or are hearing impaired. Here are the practical and ethical issues to consider.

BY AMY NOVOTNEY

Consider this scenario: You've been asked to provide cognitive-behavioral therapy for anxiety to an 11-year-old whose mother uses American Sign Language (ASL) to communicate. You can sign the alphabet, but you're having trouble communicating with the mother about her daughter's progress in therapy. Can you ask the mother to bring her sister to treatment sessions to act as an interpreter?

Or this case: A woman who recently emigrated from Vietnam and speaks little English seeks your help for depression. You don't speak Vietnamese and the idea of finding, arranging for and paying an interpreter seems challenging. Should you tell her you're not able to help?

Such questions are more common than ever as the U.S. population becomes increasingly diverse and more people seek out psychotherapy, neuropsychology assessments and other psychological services. Legally, psychologists have an obligation to provide effective auxiliary aids and services to deaf and hard of hearing patients or their family members. They must also provide free language access services to limited English proficient

patients if they receive Medicare, Medicaid or reimbursement from federal health programs. But even psychologists who are not required to provide free interpretation services say their patients reap great benefits from the use of an interpreter.

"A trained interpreter will help with not just the interpretation, but will also help the examiner understand mannerisms, cultural practices, expectations, slang and body language," says Adriana M. Strutt, PhD, director of BCM Cerebro, a Spanish outpatient neuropsychology service at Baylor College of Medicine. "There is a health disparity in psychology and neuropsychology, and providing interpreter services is only the first step toward providing equitable care."

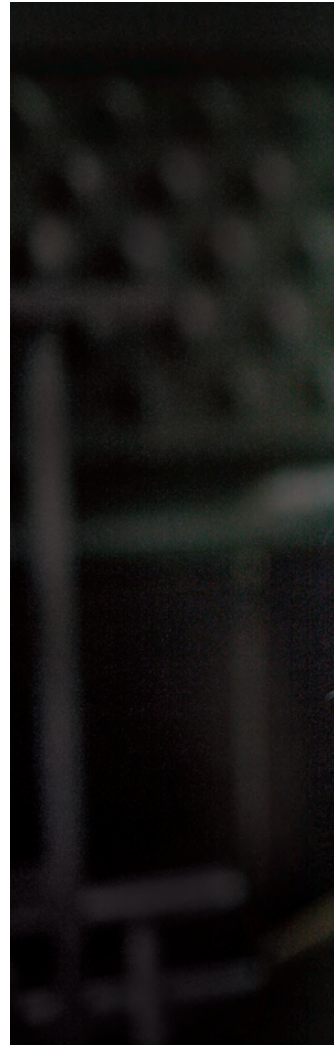
How do you find a trained interpreter? Here's some advice to help sort out your options and responsibilities.

■ **Understand the services available.** Today's health-care providers can choose from several types of interpreter services: on-site, over-the-phone and video remote interpreting. Each modality comes with pros and cons, so practitioners should

evaluate them based on their own needs and the needs of their patients, says Maggie Butler, PhD, director of APA's Office on Disability Issues in Psychology. For example, on-site interpreters can be a wonderful option, but they can also be more expensive for practitioners since they may charge for travel time and parking expenses in addition to interpretation services.

And, depending on the location of the provider and patient, it may not always be feasible to find a qualified interpreter in your area. "What if you have a patient who speaks Farsi in Mississippi?" points out Antonio E. Puente, PhD, a bilingual clinical neuropsychologist and past-president of APA. "How many Farsi-speaking interpreters are there in Mississippi?"

In such cases, you may be better off using over-the-phone or video remote interpreting, offered through companies such as LanguageLine Solutions, InDemand Interpreting and others. This can be a less expensive option than a face-to-face interpreter, but it can also come with technological challenges. For example, a poor video connection or a weak Wi-Fi signal can be worse than no connec-





tion at all. Further, it can be easy to miss nonverbal cues from patients, experts say.

■ **Know your state laws regarding interpreters.** Federal regulations and guidance do not require interpreters to be licensed or certified. However, some states do require the use of certified interpreters. Two national organizations in the United States provide formal certification of medical interpreters: the National Board

of Certification for Medical Interpreters and the Certification Commission for Healthcare Interpreters. Whenever possible, clinicians and health systems should seek to use the services of interpreters who are certified by these organizations—but even these interpreters often have limited training in mental health issues, experts advise.

■ **Know where to find an interpreter.** Some institutions already have a contract with a

language access company such as LanguageLine Solutions or InDemand Interpreting, so practitioners should consider using an interpreter through their organization's already vetted resource. Freelance interpreters can also be found through the Registry of Interpreters for the Deaf and the American Translators Association (ATA). To search for an interpreter by language and specialty, go to the ATA directory of interpreters and translators at www.atanet.org/onlinedirectories/search_advanced.php.

■ **Hire a proven interpreter.** Be sure any interpreter you work with has been assessed for professional skills, demonstrates a high level of proficiency in at least two languages, has the training and experience to interpret with skill and accuracy, and adheres to the National Code of Ethics and Standards of Practice of the National Council on Interpreting in Health Care.

It's also important for practitioners to find someone who has experience or training in interpreting for a psychologist or neuropsychologist, says Strutt. "Patients can cry, become upset or unsure of what is happening as a result of cognitive issues, so we always take time to meet with the interpreter before the testing session begins to gauge their level of knowledge around psychological issues, as well as their comfort level with handling emotional reactions," she says. To get a sense for an interpreter's skill in this area, find out about their previous experiences and ask directly during screening interviews, Strutt recommends.

On-site interpreters are a good option for some patients but can cost more than video remote services.

■ **Be mindful of patient privacy protections.** Keep in mind that the interpreter is a third party who will have access to the patient's private, confidential information. This has patient privacy protection implications under both state and federal law. In most states, for example, you will need to obtain the patient's consent prior to bringing the interpreter into a therapy session or testing assessment. In addition, psychologists who are subject to HIPAA will have to sign a business associate agreement (BAA) with the interpreter, unless the interpreter works for the prac-

tice, for example, as a bilingual employee, a contract interpreter on staff or a volunteer, or is a patient's family member, friend or another person identified by the patient as his or her interpreter. The BAA is a written contract that specifies the interpreter's responsibilities to appropriately safeguard the patient's confidential information.

■ **Discuss the ground rules.** It's also important to go over your expectations with an interpreter, emphasizing the importance of translating only what the provider says—and all of what

the patient shares. In particular, interpreters need to be primed not to smooth over incoherence or discontinuity in speech, or to assist patients with better understanding cognitive tasks when it comes to assessments.

"The most important thing, regardless of whether it's sign language or a different spoken language, is to make sure interpreters understand that by helping clients who may be cognitively impaired, they may be increasing the possibility of a misdiagnosis and negatively impacting the course of treatment," Strutt says.

Psychologists should frequently debrief with interpreters after patient sessions to ensure they agree on what the patient said—verbally and nonverbally.

REIMBURSEMENT

HOW TO PAY FOR TRANSLATION SERVICES

One of the biggest complaints from practitioners related to the use of interpreters is the cost of providing these services, says Maggie Butler, PhD, director of APA's Office on Disability Issues in Psychology. To help offset the costs of offering American Sign Language interpreting and other accessibility services, the IRS offers a tax benefit to small businesses who report expenses related to providing access to people with disabilities. Under the **Disabled Access Credit**, you are able to deduct a portion of what you pay for property and upgrades to your business—including interpretation services. These deductions come as a nonrefundable tax credit for 50% of qualified expenditures.

In some cases, the cost of interpreter services—for limited English proficient and deaf and hard of

hearing patients—will be reimbursed or covered by a patient's federally funded medical insurance. In at least 14 states and the District of Columbia, **Medicaid** and the **Children's Health Insurance Program** reimburse providers or language service agencies for the cost of interpreter services. And as Antonio E. Puente, PhD, a bilingual clinical neuropsychologist and past-president of APA, notes, practitioners who properly document their use of an interpreter may use an interactive **complexity code—90785**—to get a bonus on their reimbursement for that therapy session or testing assessment to help defray some of the costs.

When using a **face-to-face interpreter** provided through a language-translation service, costs generally range from \$45 to \$150 per hour, often with a two-hour minimum. Costs may vary, however,

depending on the language involved. For example, in an area where many Spanish-language interpreters are available, the cost is often lower than in areas where few are available.

Using **telephonic language services** to provide language assistance is typically the least expensive option, with typical costs in the range of \$1.25 to \$3 per minute, depending on the time you need an interpreter and the language. Costs of **video remote interpreting (VRI)**—which can involve expenses for equipment and for the interpreter service—vary widely depending on whether a practice simply uses a laptop or desktop computer or a more sophisticated setup using cameras, speakers and microphones. VRI services cost as little as \$1.95 per minute to as much as \$3.49 per minute, sometimes with a minimum number of minutes per session.



■ **Know your limits.** Even if you have some background in ASL or the language your patient speaks, don't assume you will be fine without a qualified interpreter. "Practitioners must complete a formal program to demonstrate they have mastered the language," Butler says. One of the most popular programs is a 40-hour course entitled Bridging the Gap. "Simply taking a class or two in a given language isn't going to cut it, and you'll end up working outside your scope of practice."

■ **Don't rely on family.** While using a patient's family member or close friend to help interpret can often be an appealing—and less expensive—option, it comes with many downsides, Puente says. "Not only are they not certified or trained as an interpreter, but using a family member also introduces all kinds of biases," he says. It can also push the

boundaries of confidentiality and cause the patient to not share as much as they should with the therapist—because of the family member's presence.

Using nonprofessionals may also be against the law in some cases: Several states, including California and New York, have forbidden the use of children as interpreters in health care.

■ **Take the time to debrief.** After each therapy or testing session, compare notes with the interpreter. Some things can get lost in translation, so working together to go over test scoring or discussing details of a story a patient shared can ensure everyone is on the same page.

"Often the interpreter is writing things down in the patient's native language and will leave out nuances or small chunks of information when they relay it back to me in the session," Strutt says. These small

details can make a significant difference when you are assessing a patient's cognitive ability or progress in therapy, she notes.

Also keep in mind that interpreters may have experienced traumatic events similar to those reported by patients and may have their emotions triggered when hearing patients' experiences. Debriefing with the psychologist afterward can help, and it also allows the psychologist to ensure the interpreter has a support system available.

■ **Get patient feedback.**

Clinicians can become so dependent on an interpreter that they may not be gauging the nuances that are being communicated, says Danielle Previ, PhD, a deaf clinical psychologist who provides neuropsychological assessments at Baltimore's Kennedy Krieger Institute. That's why it's important to make sure your patient fully understands what's being communicated during their sessions by frequently asking them for feedback on the interpreter through written evaluations in their native language.

It's also important to realize that patients may not know that they have the right to complain about an interpreter, who may inadvertently cross boundaries by chatting too personally or using an inappropriate signing style, for example.

"Providing them with a survey to complete asking about the therapy process and specifically their experience will help identify if adjustments are needed for interpreting services," Butler says. ■

RESOURCES

APA's DisABILITY Resources Toolbox (DART)

www.apa.org/pi/disability/dart

American Translators Association
ATAnet.org

Medical Interpreters in Outpatient Practice

Jacobs, B., et al.
Annals of Family Medicine
2018

WHAT ANIMAL MINDS CAN TELL US ABOUT OUR OWN

The Cognitive Evolution Group at the University of Michigan takes a comparative approach to primate research to understand where complex cognition comes from

BY KIRSTEN WEIR

Can a chimpanzee cook you dinner? It sounds like a sitcom setup, but Alexandra Rosati, PhD, an assistant professor of psychology and anthropology who heads the Cognitive Evolution Group at the University of Michigan, realized the question might reveal clues about the evolution of the human mind.

“Cooking is thought to be a major evolutionary shift in the human species,” Rosati explains. According to the hypothesis proposed by Harvard University primatologist Richard Wrangham, PhD, embracing a cooked diet allowed our pre-*Homo sapiens* human ancestors to extract more energy from food, thereby growing bigger brains and evolving into the species we are today. But that hypothesis hinges on the idea that cooking was adopted early in human evolution—a theory that remains contested. “We thought that psychology could bring a new line of evidence to this evolutionary idea,” Rosati says.

Cooking is a complex behavior that requires multiple cognitive abilities, including the preference for cooked food over raw, the patience to wait for food to cook, a causal

understanding that a cooking device can transform raw food into cooked, the willingness to hand over valued food with the expectation that it will return in a more delicious form later and the ability to plan ahead by saving raw food to cook later instead of eating it right away. With her University of Michigan psychology colleague Felix Warneken, PhD, Rosati performed a series of experiments using a homemade faux chimpanzee “microwave,” a covered bowl in which researchers could surreptitiously swap slices of raw potato for cooked potato. They found the chimps demonstrated all the cooking-related cognitive abilities they tested (*Proceedings of the Royal Society B*, Vol. 282, No. 1809, 2015).

“If chimps can do it, our early human ancestors probably could do these things, too,” Rosati says—a finding that adds another piece of support to Wrangham’s cooking hypothesis. “This experiment lets us see how a set of psychological abilities can, potentially, let an animal move into a new evolutionary niche,” she adds.

Rosati’s research is part anthropology and part evo-

RESEARCH FOCI

The Cognitive Evolution Group is:

- 1 Exploring how variation in cognitive abilities relates to different species’ natural history
- 2 Studying cognitive development and aging in monkeys and apes to understand human evolution
- 3 Researching the cognitive skills primates use to make decisions in their environments
- 4 Investigating how a species’ social context shapes decision-making



lutionary biology. But her lab is situated in the psychology department, and she couldn’t tackle existential questions about the evolution of human thinking without leaning heavily on psychological science. “My overarching research goal is to understand where complex human cognition comes from, and more generally, how cognition evolves at all,” she says. “By combining ideas from psychology, about how the mind works, with ideas from anthropology, about what the mind is for, we can come up with entirely new things to study—things that perhaps nobody would have thought of otherwise.”



LEMURS, APES AND HUMANS

Rosati has an undergraduate degree in psychology from Harvard University and earned her PhD in evolutionary anthropology, with a certificate in cognitive neuroscience, from Duke University in 2012. She spent two years as an assistant professor at Harvard before moving her lab to Michigan in 2017. As a fairly new arrival, she's still growing her lab—she currently advises two graduate students and one postdoc.

“People sometimes wonder why we do this work with animals. But it’s a unique opportunity to explore how other

minds work, how they see the world and what that can tell us about the evolution of the human mind,” says second-year PhD student Averill Cantwell.

Rosati’s team takes a comparative approach, studying a variety of primate species from lemurs (the most primitive of the living primates, and the most distantly related genetically to humans) to apes (our closest living genetic cousins in the animal kingdom). Rather than keep animals on campus, Rosati and her students travel to them, studying free-ranging primate populations in sanctuaries, parks and research centers in the United States, Europe and Africa. That model

By comparing bonobos (pictured) with their sister species, chimpanzees, Dr. Alexandra Rosati aims to elucidate how environmental factors influence cognitive evolution.

allows them to study a more diverse range of animals in situations that mimic their natural physical and social environments. “That’s important, since we want to understand how cognition works in complex real-world environments,” Rosati says.

To do that, she and her team design experimental tasks that are fun for the primates, like playing with “lottery” machines from which different types of fruits will fall (De Petrillo, F., *Evolution and Human Behavior*, Vol. 40, No. 5, 2019). The animals choose whether to participate, getting rewards like banana slices when they play and freely wandering away from a task when they’ve had enough. “We try to design fun problem-solving games that also serve as a kind of enrichment for the animals, in the same way a developmental psychologist designs tasks that a baby wants to do,” Rosati says.

In fact, many of her methods borrow from developmental psychology. Like human babies, chimps and monkeys can’t fill out surveys or answer questions. Instead, the researchers rely on methods such as gaze-following to track an animal’s attention and using looking time as a marker of surprise.

MAKING DECISIONS

One theme in Rosati’s research is studying how and why animals make the decisions they do. The research is inspired, in part, by findings from behavioral economics that show humans make some strange choices. We favor short-term consumption over long-term investments, for

example, and arbitrarily assign greater value to products based on popularity and status. Our primate cousins can help us better understand those quirks. “Animals don’t use money or credit cards, but they do have to make a lot of decisions about value when foraging for food or looking for mates,” Rosati says. “We’ve been exploring the hypothesis that even though some of our human biases look irrational from an economic perspective, they might actually be quite rational from a biological perspective.”

In one example, she compared chimpanzees with their sister species, bonobos. Though similar in many ways, the two apes live very different lives. Chimps have evolved to feed on higher-calorie foods that are more difficult to come by: hard-to-find fruits, nuts that require cracking and ants that they must “fish” for with sticks inserted into the ants’ nests. Bonobos eat fruit but rely more heavily on plentiful vegetation, and unlike chimps, they’ve never been seen using tools in the wild. Those differences play out in the two species’ decision-making behaviors, as Rosati described in a recent review article (*Trends in Cognitive Sciences*, Vol. 21, No. 9, 2017). Chimps, she found, are more patient than bonobos, have better spatial memory and are more willing to take big risks in hopes of big payouts. What looks irrational in one environment seems perfectly logical in another.

What about us? People, Rosati found, tend to look more like chimps in their risk-taking behavior—suggesting that our

species might have evolved in an environment similar to the one chimps evolved in, she says. Indeed, human hunter-gatherers today often forage for high-risk, high-reward food (such as hunting for meat and gathering honey). Yet Rosati also found that while humans are chimplike when making decisions about food rewards or prizes, they’re more risk averse when money is at stake. That suggests there might be something evolutionarily novel about money, she says—and that different psychological processes might be involved when we’re thinking about concrete versus abstract rewards (*Evolution and Human Behavior*, Vol. 37, No. 2, 2016). It’s a finding that could have implications for anyone who studies behavioral economics. “Studies that use money as a reward might not be capturing the full picture of how humans make decisions,” she says.

FRIENDS AND FRUITS

It might seem obvious that an animal’s physical environment would influence its evolutionary path. Yet much research on primate and human cognition has focused on the role of living

in complex social groups, Rosati says. To fully understand how the human mind came to be, she argues, scientists should consider how social and ecological pressures work in tandem.

Lemurs make excellent subjects for that, says Francesca De Petrillo, PhD, a postdoctoral researcher of Rosati’s who is now based at the Institute for Advanced Study in Toulouse, France. All types of lemurs share a single common ancestor, but some lemur species live in complex social groups, while others have much looser social affiliations. Some graze on readily available leaves, while others eat fruit, a more cognitively demanding food source that requires finding fruits, determining whether they’re ripe and, if not, waiting until they’re ready to pick.

In one ongoing project based at the Duke Lemur Center at Duke University, De Petrillo is comparing the leaf-eating Coquerel’s sifaka lemur with the fruit-eating red ruffed lemur to determine whether each species is capable of logical inference—that is, if they can use information they’re given about where food is located to deduce new information about the location of hidden foods. “We want to understand how ecology, and especially diet, may have shaped their cognition,” she says.

In other work, Rosati’s team is zeroing in on the social side of the equation. In a number of studies, she has compared a population of free-ranging rhesus macaques in Cayo Santiago, Puerto Rico, with Barbary macaques living in a forested

Dr. Alexandra Rosati (left) and graduate student Averill Cantwell do field research in Republic of Congo.



COURTESY OF DR. ALEXANDRA ROSATI



Some lemur species live in complex social groups, while others do not.

park in the United Kingdom. Rhesus macaques are aggressive and despotic, Rosati says. Closely related Barbary macaques are much more socially tolerant and generally have a calmer temperament.

Rosati and Laurie Santos, PhD, a professor of psychology at Yale University, compared the two species to test how their divergent social systems might have influenced their social cognitive skills. They found that as juveniles, both species engage in similar rates of gaze following—turning to look at the things other members of their troops are looking at. Barbary macaques continue that behavior into old age. But by adulthood, rhesus macaques engage in gaze-following much less often (*Animal Behaviour*, Vol. 130, 2017). “The more tolerant Barbary macaques remain interested in these social cues over their life span. But for the intolerant rhesus macaques, once they reach maturity, that’s not in their bag of tricks anymore,” Rosati says.

LIVING LONG AND LIVING WELL

Looking across the life span is another recurring theme in Rosati’s work. One common way to understand human cognition is to explore how it develops in infants and children, she notes. Another is to look to our primate cousins to understand the evolutionary roots of cognition. Rosati wants to do both. “We’re combining those approaches to look at how cognition, behavior and physiology change across the life span,” Rosati says.

Even without modern medicine, humans can easily live past 70. Wild chimps tend to die by age 50, and macaques live just half that long. “Why is it that we’re living so long, and what can that tell us about human cognition and behavior?” Rosati asks.

In one new project, she and her colleagues are studying aging in chimpanzees. Partnering with scientists who study wild chimps, they are drawing from socio-emotional selectivity theory—a psychological theory that main-

tains that as humans age, they hone their social networks and invest in more emotionally meaningful relationships and goals—to predict how wild chimps might behave over their life spans.

“We’re trying to bridge the kinds of controlled experiments we’re doing in these sanctuaries and parks with the kinds of observational techniques that are used in the wild,” she says.

The chimpanzee work is funded by the National Institute on Aging, while other projects are largely supported by the National Science Foundation. And in 2019, Rosati was awarded a prestigious Sloan Research Fellowship in neuroscience, a two-year, \$70,000 award that is helping her to dig more deeply into the origins of complex thinking.

Rosati is driven to answer fundamental questions about the evolution of cognition. She’s also thankful that her work allows her to support animal welfare. The sanctuaries where she does much of her research care for animals orphaned by hunting and the pet trade, and she serves as a technical adviser to the Pan African Sanctuary Alliance, an association of wildlife sanctuaries across 13 African nations. “Through our research, we’re able to support organizations that are playing a crucial role in primate conservation and law enforcement,” she says. “It’s a privilege to study these animals, and we need to put their welfare and well-being first.” ■

FURTHER READING

The Evolutionary Roots of Human Decision Making

Santos, L.R., & Rosati, A.G. *Annual Review of Psychology* 2015

Chimpanzee Cooperation Is Fast and Independent From Self-Control

Rosati, A.G., et al. *Psychological Science* 2018

Ecological Rationality: Convergent Decision-Making in Apes and Capuchins

De Petrillo, F., & Rosati, A.G. *Behavioural Processes* 2019

Flexible Gaze-Following in Rhesus Monkeys

Bettie, R., & Rosati, A.G. *Animal Cognition* 2019

● “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.”



Rastogi



Hartley



Samanez-Larkin



Gilovich



Barbosa-Leiker

PSYCHOLOGISTS IN THE NEWS

Meera Rastogi, PhD, ATR-BC, is this year's recipient of the National Alliance on Mental Illness Lucille Pederson Hardgrove Exemplary Educator Award. Rastogi, a professor of psychology at the University of Cincinnati Clermont College, was recognized for involving her students in service at the HOPE Community Center for Mental Wellness, which offers programs to aid with mental health and substance abuse recovery. Rastogi directs the center's art therapy program and her students work with participants at the center each week for class credit.

The Society of Neuroeconomics has presented Early Career Awards to **Catherine Alexandra Hartley, PhD**, and **Gregory Samanez-Larkin, PhD**. Hartley is an assistant professor of psychology and neural science at New York University and Samanez-Larkin is an assistant professor of psychology and neuroscience at Duke University. The prize honors their research on how development and aging affect motivation, learning and decision-making across the life span.

Cornell University has named **Thomas Gilovich, PhD**, a Stephen H. Weiss Presidential Fellow, an honor for tenured

faculty with a long record of effective and enthusiastic undergraduate- and graduate-level teaching. Fellow faculty nominated Gilovich, a professor and psychology department chair, for inspiring students to use what they learn in class to improve their lives and for helping them become critical thinkers.

Celestina Barbosa-Leiker, PhD, is a YWCA of Spokane, Washington 2019 Woman of Achievement for Science, Technology and Environment. Barbosa-Leiker was recognized for her health leadership roles at Washington State University (WSU). She is an executive associate dean and vice chancellor for research for WSU Health Sciences Spokane. Her research focuses on the transition from pregnancy to parenthood in women with substance use disorders.

The National Academy of Medicine has elected psychologists **David G. Amaral, PhD**, and **Rachel Yehuda, PhD**, as members. Academy membership reflects outstanding professional achievement and commitment to service in health and medicine. Amaral is a distinguished professor in the department of psychiatry and behavioral sciences and the MIND Institute at the University of California, Davis, who studies autism

spectrum disorder. Yehuda is a professor of psychiatry and neuroscience at the Icahn School of Medicine at Mount Sinai in New York City who studies traumatic stress.

South Dakota Gov. Kristi Noem has appointed **Cheryl Anagnopoulos, PhD**, to the South Dakota Advisory Council on Aging, which works to improve services for older adults in the state. Anagnopoulos is a psychology professor and faculty senate president at Black Hills State University in Spearfish, South Dakota. Her research focuses on the psychology of aging, including the relationship between memory changes and language performance in older adults.

Augusta University has named **Tiffany G. Townsend, PhD**, as its new chief diversity officer. In this role, Townsend will work to build a campus culture that promotes inclusivity, compassion, collegiality and integrity. Townsend had been senior director of APA's Office of Ethnic Minority Affairs since 2011. Prior to that, she was an assistant professor of psychiatry at Georgetown University School of Medicine, where she studied prevention programs aimed at decreasing health and mental health disparities among ethnic-minority families. ■

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HURT BY THE ONES WE LOVE

Intimate partner violence continues to be a significant problem in the United States, particularly for women, according to the Centers for Disease Control and Prevention

1 in 4

Number of women who have experienced contact sexual violence, physical violence and/or stalking by an intimate partner during their lifetimes, compared with **1 in 10** men.¹

1 in 2

Number of female homicide victims killed by a current or former male intimate partner, compared with **1 in 6** male homicide victims.¹

1 in 9

Number of female high school students who reported sexual dating violence over the past year, compared with **1 in 36** male high school students.²

1 in 4

Number of female victims who first experienced some form of intimate partner violence before age 18, compared with **1 in 7** men.¹

Sources: ¹Smith, S.G., et al. (2018). The National Intimate Partner and Sexual Violence Survey: 2015 Data Brief—Updated Release. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. Available at <https://www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf>.

²Centers for Disease Control and Prevention, Youth Risk Behavior Survey Data. (2017). Available at: www.cdc.gov/yrbs.



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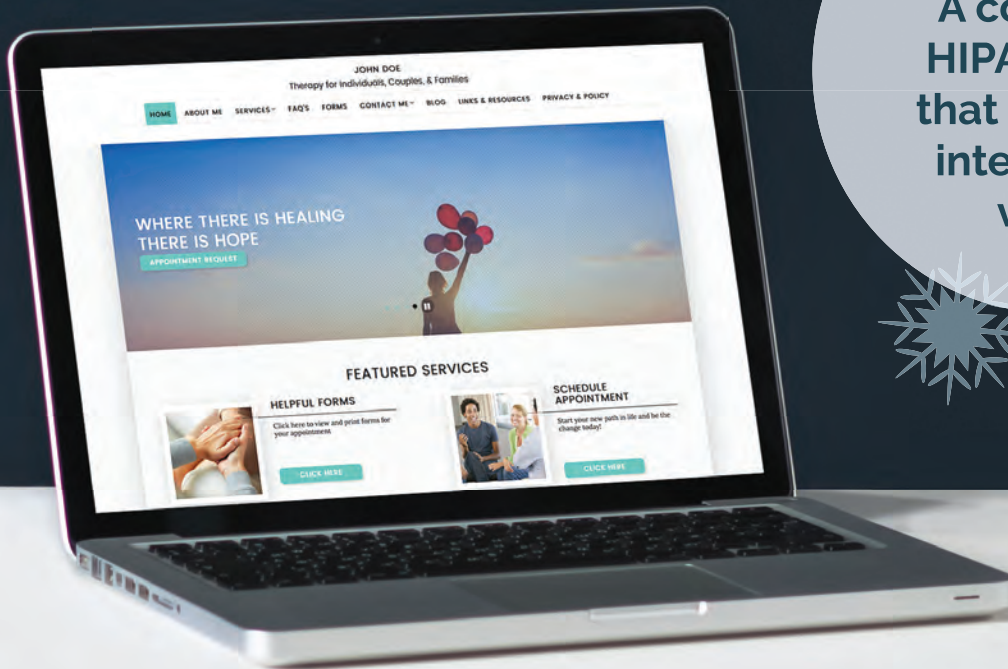
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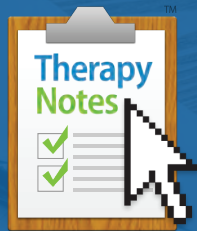
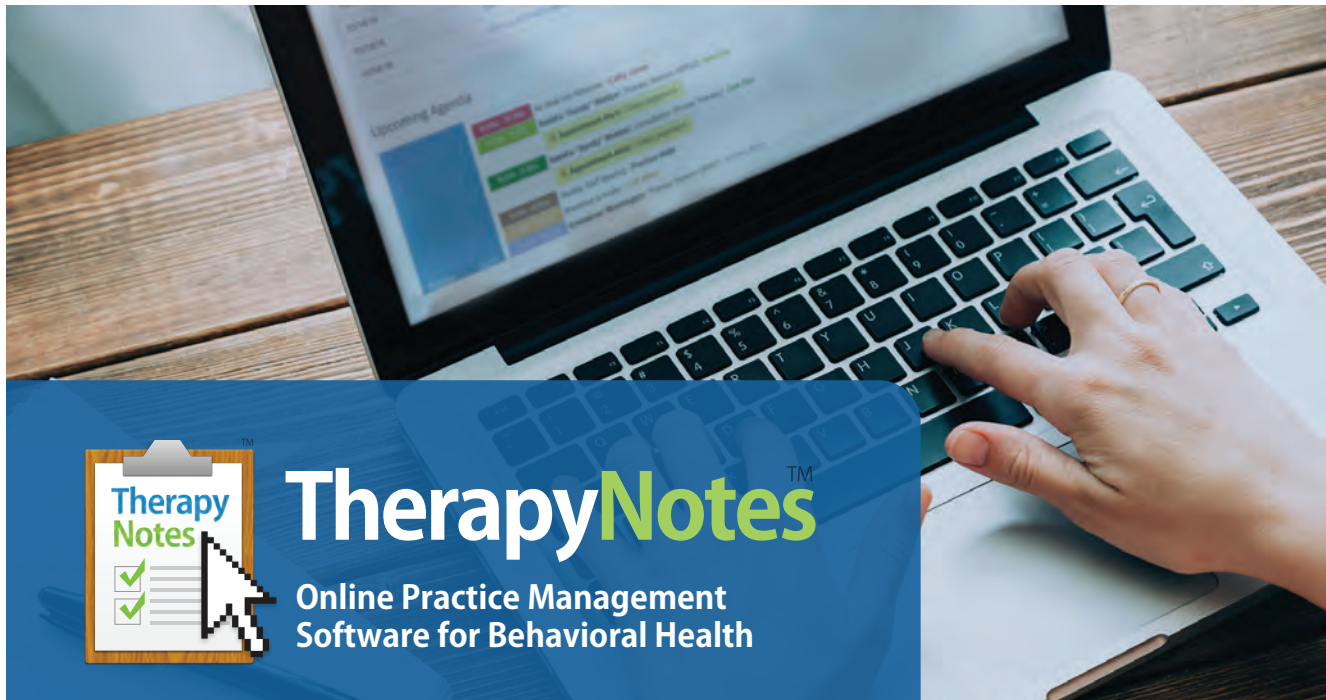


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