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VIRTUAL REALITY | DEPRESSION GUIDELINE | CONSULTING PSYCHOLOGY | IMMIGRATION

monitor on psychology

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VIRTUAL REALITY TREATMENT EXPANDS ITS REACH

PAGE 40

**New Clinical
Guideline for
Depression**

PAGE 34

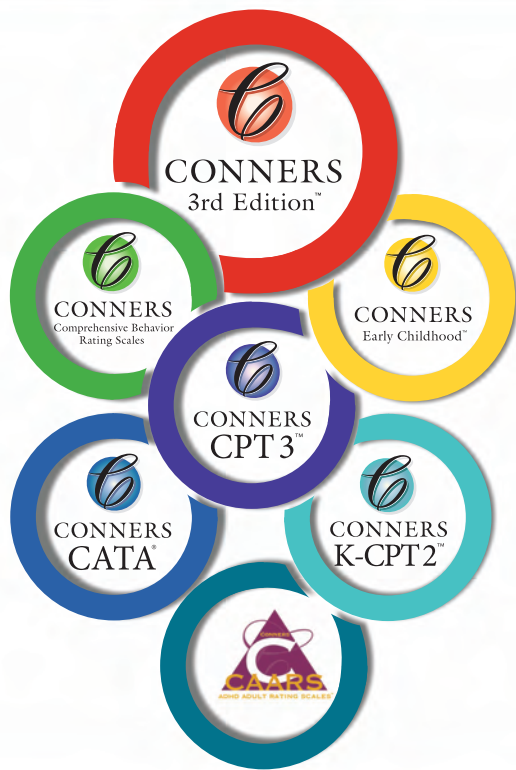
SPECIAL SECTION

**Careers in
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PAGE 56



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COVER STORY

REAL TREATMENTS IN VIRTUAL WORLDS

Virtual reality therapy is becoming an option for more patients as costs shrink and the number of conditions it can treat grows. Psychologists have now developed virtual reality treatments for post-traumatic stress disorder, addiction, autism, pain and more. With increasingly realistic graphics, virtual reality can be used to immerse patients in triggering settings while monitoring their responses in ways not previously possible in a clinician's office. *See page 40*

COVER: ©2019 DANIEL HERTZBERG/THEISPO



GAMES WITH IMPACT

Video games are not just for entertainment—they hold enormous potential for improving health, education and social-emotional skills. Psychologists and other experts have developed “serious” games that increase young cancer patients’ knowledge about chemotherapy, improve conflict resolution and perspective-taking skills, assess students’ learning and more. *See page 48*



Tackling the immigration crisis. Page 20

- 6 PRESIDENT'S COLUMN
- 7 FEEDBACK
- 8 UPDATE FROM THE CEO
- 9 THE HOT LIST

RESEARCH

- 11 IN BRIEF
- 19 DATAPOINT
- 80 BY THE NUMBERS

NEWS

- 20 MORE IMPACT TOGETHER
- 26 PATIENT-CENTERED PAIN MANAGEMENT
- 28 PUERTO RICO, TWO YEARS AFTER MARIA
- 33 JUDICIAL NOTEBOOK

PEOPLE

- 31 5 QUESTIONS FOR ALI MATTU
- 69 PSYCHOLOGISTS IN THE NEWS

CAREER

- 56 CULTIVATING HIGHER ACHIEVEMENT
- 62 PSYCHOLOGISTS ON THE TEAM
- 66 HOW DID YOU GET THAT JOB?
- 70 LAB WORK

EMPLOYMENT ADS

- 75 THE BEST JOBS IN PSYCHOLOGY

CE CORNER

APA OFFERS NEW GUIDANCE FOR TREATING DEPRESSION

Too often depression goes untreated, exacting a significant human toll. But those negative outcomes aren't inevitable—APA's new Clinical Practice Guideline for the Treatment of Depression Across Three Age Cohorts offers a comprehensive, research-based look at depression treatment options for children and adolescents, adults and older adults. *See page 34*



PSYCHOLOGISTS ON THE TEAM

"I believe that helping leaders create a positive work environment is not only good for business, it's also a moral imperative."

Matt Del Giudice, PsyD, MBA,
psychologist at PepsiCo in Purchase, New York. *See page 62*

Does grunting
make a
difference?
Page 13



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HOW CAN WE IMPACT SOCIETY'S BIGGEST CHALLENGES?

Researchers, clinicians, educators: Let's bring APA's strategic plan to life

BY ROSIE PHILLIPS DAVIS, PhD, ABPP, APA PRESIDENT

APA's strategic plan is named "Impact" for a reason—it's designed for action. Among other calls to action, it challenges psychologists to "make a positive impact on critical societal issues." And there is no shortage of those: Since APA's Council of Representatives adopted Impact last February, our society has seen another round of mass shootings, families torn apart by immigration policies and an ever-growing opioid epidemic, to name just some.

As we celebrate Hispanic Heritage Month, I think about how psychologists can make an even bigger impact on one of society's largest critical issues: our nation's changing demographics. As more people of color make up the U.S. population, psychologists and other leaders must figure out ways to celebrate the strengths and differences of diverse groups while dealing more intelligently and compassionately with challenges related to intergroup dynamics, poverty, unmet needs and other large-scale problems.



APA President
Dr. Rosie Phillips Davis

One way psychology can help is to continue diversifying our field. We're making progress but need to do more. Between 2008 and 2016, the percentage of doctoral degrees awarded to Latinx psychologists rose from 10% to 13%, and to African Americans, from 7% to 10%. But Asian Americans receiving doctorates remained static at 6%, and there weren't enough American Indians receiving doctorates to be recorded in the 2016 data.

Psychologists are also working to improve our multicultural competence. The immigration crisis, for example, highlights the need to provide services for those who cross the border under traumatic conditions. Yet just 4.4% of licensed psychologists are Latinx, and only 5.5% speak Spanish. At the same time, the demand for psychological services among the Latinx population is projected to rise 30% by 2030, and the need among other groups is also profound.

This challenging time prompts me to think about two recent APA presidents: Melba J.T. Vasquez, PhD, APA's first Latinx president, who served in 2011, and Antonio E. Puente, PhD, president in 2017. Both were champions in educating Congress about how to better understand and serve immigrants and how to acknowledge their unique strengths. In honor of them and of Hispanic Heritage Month, I call on each of us to creatively envision how we can impact the critical societal issues we face now, which are likely to become even more critical in the years to come. ■

JOHN DAVID PITTMAN

OUR FAVORITE TWEETS

Re: "Better Ways to Prevent Suicide"
July/August

@AFSP_GA Excellent article from @APA on better ways to prevent suicide!

Re: "Tackling Suicide From Many Angles"
July/August

@mitchprinstein Psychology can offer so much more than working as a therapist! This table is a great teaching tool for folks interested in the field, and also for folks who want to learn how #PsySci is being used to reduce #suicide!

Re: "Update from the CEO: More Impact Together" July/August

@MHDDcenter In the #mentalhealth field, it's important that psychologists with different expertise work together

to meet societal needs. In what ways can we support each other better in working with people with #developmentaldisabilities? Thanks for the post, @APA!

Re: "LinkedIn Profiles That Get Noticed"
July/August

@KylerShumway Make sure to check out the fantastic article in the @APA_Monitor by @zaraabrams on building strong LinkedIn profiles, featuring @danwendler and yours truly! Page 72 of the July/Aug ed.

Re: "New Solutions for the Opioid Crisis"
June cover package on opioids

@goacounselor @APA_Monitor Wonderful article about the opioid crisis and ways to deal with it (June cover story). Opioid abuse is a reality in India too but no one is talking about it yet.



Such articles enable us to at least do our bit in the clinics when clients visit us. #goa #india @APA

Re: "The Stigma That Undermines Care" June

@ZachWritesStuff If you're skeptical whether language matters, see @zaraabrams reporting in @APA-Monitor where she interviews several researchers who are #ChangingtheNarrative ■

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THE INTERSECTION OF PSYCHOLOGY AND TECHNOLOGY

APA is raising the visibility of psychology's roles in areas beyond health care

BY ARTHUR C. EVANS JR., PhD

Hundreds of psychological scientists, practitioners, technology industry leaders, policymakers, students and others will gather next month in Washington, D.C., for APA's second annual Technology, Mind & Society (TMS) Conference, Oct. 3–5. The three-day event will bring together some of the world's leading experts on the human aspects of artificial intelligence, big data, cybersecurity, virtual reality, robotics, health-care technology, biotechnology and more.

It's not always obvious to members of the public that psychology plays a key role in these areas. But as psychological scientists and practitioners, we know that psychology is a STEM discipline that can contribute to advancing technological innovation as well as to understanding the impact of technology on the human experience.

In this issue of the *Monitor*, we highlight the work of two TMS 2019 keynote speakers. Skip Rizzo, PhD, is a clinical psychologist who has

been a leader in the virtual reality field for decades. As the director for medical virtual reality at the University of Southern California Institute for Creative Technologies, he has developed treatments for post-traumatic stress disorder, traumatic brain injury and other disorders, offering interventions that wouldn't have been possible even just a few years ago (see page 40). Val Shute, PhD, of Florida State University, studies how video games can be used to help students learn math and science concepts and to assess learning in unobtrusive ways. Her game "Physics Playground" is just one of a growing number of psychologically savvy video games that harness games' power for social good (see page 48).

TMS is just one way that APA is raising the visibility of psychology's roles in areas beyond health care. The association's Office of Applied Psychology, which launched in February, is focused more broadly on how psychology can help solve real-world issues in areas as diverse as business, engineering, education, law, natural and built environments, and sports—as well as technology.

The Office of Applied Psychology is an example of how we are showcasing how psychology can make a positive impact on critical societal issues and helping the public understand the important and diverse roles psychology can play. ■

● **Learn more about** the Technology, Mind & Society Conference at <https://tms.apa.org>. To learn more about the Office of Applied Psychology, go to www.apa.org/applied-psychology.



APA CEO
Dr. Arthur C. Evans Jr.

The Hot List

NEW TOOLS TO MEASURE LEARNING

Creative classroom assignments such as “Restaurant Menu for Zombies” to assess mastery of brain areas and “Find the Format Flaws” to teach APA style can be found at **Project Assessment**, APA’s free online library of assessment tools that undergraduate faculty and high school psychology teachers can use to improve their teaching and demonstrate student learning. Teachers can search the library by learning goal, subject area and format. All the tools align with the *APA Guidelines for the Undergraduate Psychology Major* and the National Standards for High School Psychology Curricula. Register at <http://pass.apa.org>.



EXPLORE NEW RESEARCH ON ‘13 REASONS WHY’

The Sept. 19 webinar “**The Impact of ‘13 Reasons Why’ on Suicide Behavior in Young People: What We Know So Far,**” hosted by APA’s Div. 53 (Society of Clinical Child and Adolescent Psychology), will cover new research that indicates the Netflix show may be a potential platform for psychoeducation on suicide prevention. Sign up at <https://on.apa.org/13ReasonsWhy>.

CANDIDATES ANSWER FINAL QUESTIONS

How do the five **APA presidential candidates** think APA should contribute to reducing health-care disparities? How do they propose to earmark



resources across the association’s constituent groups? Find out at <https://on.apa.org/2021-Election>.



APA ARGUES AGAINST CONVERSION THERAPY

APA filed a new **amicus brief** in the conversion therapy case *Otto v. City of Boca Raton, Florida*, in June. The brief outlines the psychological research showing that sexual orientation change efforts are ineffective and may harm patients. Read it at <https://on.apa.org/Otto>.

A NEW RESOURCE ON TESTING CODES

“**Getting Reimbursed,**” a webinar series from APA Services Inc., offers guidance on applying the new testing codes using practical examples and answers to commonly asked questions. Go to <https://on.apa.org/GetReimbursed>.

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Date: October 30, 2019

Time: 2:00-4:00 PM EDT

SEGMENT #3

Legal, Regulatory, and Ethical Rules of the Road

Date: November 6, 2019

Time: 2:00-4:00 PM EDT

SEGMENT #4

Getting Paid: Reimbursement Strategies and Marketing Your Professional Services Online

Date: November 13, 2019

Time: 2:00-4:00 PM EDT



PRESENTER

Marlene M. Maheu, PhD has been a technology-focused pioneer since 1994. As the executive director of the Telebehavioral Health Institute, Inc., she has overseen the development and delivery of online training to professionals worldwide.

Dr. Maheu has served various organizations to assist with the development of technology-focused standards and guidelines. She now serves as the CEO for the non-profit Coalition for Technology in Behavioral Science (CTiBS).

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In Brief

THE LATEST PEER-REVIEWED STUDIES WITHIN PSYCHOLOGY AND RELATED FIELDS

Follow Your Dreams

People who persist toward their goals and approach life with a positive outlook are at lower risk for mood and anxiety disorders, according to a study in the *Journal of Abnormal Psychology*. Researchers analyzed data from a nationally representative sample of 3,294 U.S. adults who were surveyed three times over 18 years. Participants were asked about their goal persistence, whether they approached challenges with a positive outlook, and

their overall self-mastery (“I can do anything I set my mind to”). Participants who reported stronger goal persistence at their first assessment, as well as those who reported the greatest increase in persistence over the study period, experienced lower rates of depression, anxiety and panic disorders across the 18 years of the study. Adopting a positive approach to challenges was also associated with lower rates of disorders, while self-mastery was not. DOI: 10.1037/abn0000428





TALK MORE TO RAISE CHILDREN'S SKILLS

Young children exposed to large amounts of adult speech tend to have better cognitive skills, even in areas unrelated to vocabulary, suggests a study in *Developmental Psychology*. Researchers captured interactions between 107 U.K. children ages 2 to 4 and their primary caregivers over a three-day period, using tiny microphones embedded in the children's clothing. The quantity of adult spoken words that children heard was positively associated with the children's abilities in areas such as reasoning, numeracy and shape awareness. In addition, children who interacted with adults with

more diverse vocabularies knew a greater variety of words themselves. Finally, children with responsive, encouraging parents showed fewer restless, aggressive and disobedient behaviors.

DOI: 10.1037/dev0000733

DON'T SHOOT THE MESSENGER

People tend to dislike bearers of bad news, suggests a study in the *Journal of Experimental Psychology: General*. Across a series of online and in-person experiments, researchers studied people's responses upon being told bad or good news. In the first study, a researcher picked a number out of a hat to determine if participants won \$2.

Children who hear more words from their caregivers perform better on tests of reasoning, numeracy and shape awareness.

The researcher's colleague announced the results. Participants who were told they did not win rated the colleague as less likable than did participants who received good news. The effect held across a variety of scenarios and was stronger when the bad news was unexpected or made less sense. The experiments also suggest that the reason people dislike a bearer of bad news is that they believe he or she has nefarious motives.

DOI: 10.1037/xge0000586

SUICIDE SPIKE

The Netflix show "13 Reasons Why," about a young woman who takes her own life, was associated with a 29% increase

in suicides among U.S. youth ages 10 to 17 in the month following the show's release in March 2017, according to a study in the *Journal of the American Academy of Child & Adolescent Psychiatry*. Researchers analyzed data from the Centers for Disease Control and Prevention about deaths due to suicide between Jan. 1, 2013, and Dec. 31, 2017. They found that the number of suicide deaths for 10- to 17-year-olds in April 2017 was greater than in any other single month over the five-year study period. This increase was observed primarily in young males. The researchers did not find any significant trends in suicide rates in people ages 18 to 64 during the same month.

DOI: 10.1016/j.jaac.2019.04.020

TACTICAL GRUNTING

The grunting sounds some tennis players make when hitting the ball give their opponents the impression that the ball will travel farther than it really will, suggests a study in *PLOS ONE*. Researchers asked 31 experienced tennis players in Germany to view video clips of tennis rallies in which grunt intensity was experimentally manipulated, and then asked the viewers to predict where the ball would land. Louder grunts led participants to judge that the ball would fly farther but did not affect their judgments of the direction the ball was flying. The evidence from this and other studies did not support alternative hypotheses that grunting serves to distract opponents or to block the sound of the racket hitting the ball.

DOI: 10.1371/journal.pone.0214819

When tennis players grunt loudly as they hit the ball, their opponents think that the ball will fly farther.

TROUBLED FATHERS, TROUBLED DAUGHTERS

Growing up with a harsh, troubled father can influence women's expectations of men, and, in turn, their sexual behavior, suggests a study in *Developmental Psychology*. Researchers surveyed 223 pairs of full biological sisters in the United States whose parents divorced before the younger sister turned 14. At the time of the survey, the mean ages of the older and younger sisters were 29.5 and 23.9, respectively. On average, the older sisters had lived with the fathers 5.6 years

longer than the younger sisters had. The researchers found that older sisters who had more exposure to poor-quality fathers reported lower expectations of male partners, and more sexual partners, compared with older sisters who had lived with warmer, higher-quality fathers. The younger sisters, in contrast, were not affected by paternal behavior on these measures.

DOI: 10.1037/dev0000741

STRETCH OF THE IMAGINATION

Creative individuals are better at imagining distant experiences than are other people with similar levels of education and career success, suggests research from a series of studies in the *Journal of Personality and Social Psychology*. In the first two studies, researchers analyzed the word choices in essays about far-off situations (e.g., "Imagine what the world will be like in 500 years") written by participants recruited from the general population and from various professions. The researchers found that scores on an established creativity task were associated with an enhanced ability to imagine distant scenarios, and that experts in such fields as writing and visual arts showed higher levels of creativity and imagination than experts in other fields, such as medicine and law. Using fMRI on a different set of participants in a third experiment, the researchers found that creative experts were more likely than other professionals to activate the brain's dorsomedial subsystem when



imagining situations beyond the present time, place or social situation.

DOI: 10.1037/pspa0000148

ANGER HARMS HEALTH IN OLDEST ADULTS

Anger may be more harmful to an older person's physical health than sadness, and that may be due to anger leading to increased inflammation, according to a study in *Psychology and Aging*. Researchers administered questionnaires to 226 Canadian adults ages 59 to 93 about how angry or sad they felt, and took blood samples and medical histories from each participant. The researchers found that experiencing anger daily was related to higher levels of inflammation and chronic illness for people older than 80, but not for younger seniors. No such effects were found for sadness. The researchers suggest that younger seniors may be able to channel their anger to overcome age-related challenges and losses, whereas anger becomes problematic for older seniors whose challenges may be insurmountable.

DOI: 10.1037/pag0000348



"POKÉMON" ON THE BRAIN

"Pokémon" characters activate a specific region of the brain's visual cortex in adults who played the "Pokémon" video game extensively as children, according to research in *Nature Human Behaviour*. Recent studies suggest regions dedicated to a novel category of objects can develop in the visual cortex of monkeys when the monkeys are exposed to those objects early in life. To test whether this occurs in humans, researchers used fMRI to scan the brains of 11 adult participants (mean age was about 24) who spent considerable time playing "Pokémon" as children. Experience with the game was verified by their

Adults older than 80 who feel more daily anger have higher levels of inflammation and chronic illness.

Adults who played a lot of "Pokémon" as children showed a specialized "Pokémon"-recognition area in their visual cortex.

ability to name 40 "Pokémon" characters by sight, relative to a control group. When the adult participants were shown images of hundreds of "Pokémon" characters, a specific area of the visual cortex called the occipito-temporal sulcus responded more strongly to the images, compared with the control group.

DOI: 10.1038/s41562-019-0594-6

PURPOSE BRINGS HEALTHY LIVING

Previous research has found that purpose in life is associated with health, and a study in *Health Psychology* points to potential mechanisms underlying this association. Researchers presented 220 adults in the United States who had a sedentary lifestyle with health messages related to exercise while their brains were scanned using fMRI. Later, outside the scanner, the participants rated how much they agreed with those messages and responded to a survey that measured their sense of life purpose. Those who reported a stronger sense of purpose were more likely to agree with the health messages and showed less activity in multiple brain



regions associated with processing conflicting information while considering the health messages, as revealed in the fMRI scans.

DOI: 10.1037/hea0000729

SUPPORT AND SELF-ESTEEM

A study in *Health Psychology* finds that the physical health benefits derived from the support of family and friends go to people with high, but not low, self-esteem. Researchers asked 1,054 healthy American adults to rate the level of support they receive from family members and close friends. Participants also answered questions about their self-esteem. Two years later, the researchers measured levels of c-reactive protein, an inflammation biomarker, in blood samples taken from the same participants. Results showed that higher levels of perceived social support were linked to lower levels of c-reactive protein, but only in people with high self-esteem. The researchers suggest people with negative self-views may actually feel more stress when others offer help because they worry they may not be worthy of the support.

DOI: 10.1037/hea0000746

YOUNG PUNISHERS

Children as young as 3 are willing to punish other children's bad behavior, even if it comes at a personal cost, suggests a study in the *Journal of Experimental Psychology: General*. Researchers brought more than 200 3- to 6-year-old children, all visitors at a U.S. children's museum, one at a time into a room where they were allowed to play on a slide



and asked to draw a picture. The children were then shown a video of another child tearing up someone else's drawing. Half the children—including some as young as 3—chose to close down the slide so that the offending child could not use it, even though they would also no longer be able to enjoy it. Rates of punishment increased with age: 5- and 6-year-olds enacted the punishment at about three times the rate of 3- and 4-year-olds.

DOI: 10.1037/xge0000613

People with low self-esteem may not reap health benefits when they receive support from family and friends.

THIS LEARNING MYTH IS HARD TO SHAKE

Many people, including educators, believe that “learning styles” are set at birth and predict both academic and career success, even though there is no scientific evidence to support this view, according to a study in the *Journal of Educational Psychology*. Confirming previous studies, 90% of 331 online survey respondents in the United States, including 21 educators and 310 individuals in other professions,

reported they believed that people learn better if they are taught in their predominant learning style, whether that is visual, auditory or tactile. Half the believers thought that learning styles are heritable, “hard-wired” in the brain and mark distinct kinds of people, while the other half viewed them as malleable, overlapping and more determined by environmental factors. A second online survey of 337 adults, including 135 educators, found that educators who work with young children were more likely to believe the heritable version of the learning-styles concept.

DOI: 10.1037/edu0000366

DIAGNOSIS VIA SPEECH ANALYSIS

A machine-learning algorithm can detect signs of anxiety and depression in the speech patterns of young children, according to a study in the *IEEE Journal of Biomedical and Health Informatics*. Researchers recorded 42 U.S. children ages 3 to 7—13 of whom had an internalizing disorder diagnosis—improvising a three-minute story during which they were judged on their performance and twice interrupted with a loud beep, in an effort to make the task more stressful. The researchers found that the algorithm was able to identify the children with anxiety and depression diagnoses through an analysis of pitch patterns and repeated content in their speech. Such analysis could provide a faster, easier way of identifying conditions that are often overlooked in young children, the researchers say.

DOI: 10.1109/JBHI.2019.2913590



HIGH SOCIAL CLASS BREEDS CONFIDENCE

People who identify as part of a higher social class tend to have an exaggerated belief in their own capabilities, begetting an overconfidence that is often misinterpreted by others as greater competence, suggests a paper

An algorithm can identify anxiety and depression in children by analyzing their voice recordings.



People who self-identify as belonging to a higher social class may have inflated beliefs in their own abilities.

in the *Journal of Personality and Social Psychology*. In one study, researchers found that Mexican business owners with more education, more income and a higher perceived social class had an inflated belief that they would outperform others on a picture-matching task, compared with their lower-class counterparts. In another study, U.S. undergraduates who self-reported belonging to a higher social class exhibited overconfidence in their performance on a trivia quiz, even though they actually did no better than those who reported belonging to a lower social class. Subsequently, members of this overconfident group were rated by others as more competent in responding to questions during a video-recorded mock job interview, and they were also rated more highly for hiring.

DOI: 10.1037/pspi0000187

‘COLD’ PARENTING SHORTENS TELOMERES

Unsupportive parenting styles may have negative health implications for children, even into their adult years, suggests a study in *Biological Psychiatry*. In 1976, a large cohort of participants in the United States and Canada were surveyed about their mothers’ parenting styles during their first 15 years of life. Then, between 2003 and 2006, researchers examined the telomeres—protective caps at the ends of DNA strands—of 199 of these participants. Shorter telomeres have been associated with poorer health. The telomeres of participants who reported their mothers’ parenting as “cold” were on average 25% smaller

than those of participants who reported having mothers whose parenting style they considered “warm.” The effects of fathers’ parenting styles were in the same direction but were not significant.

DOI: 10.1016/j.biopsycho.2019.03.013

ADDICTION ATTRIBUTION

Describing addiction as a disease may make substance users less likely to seek counseling or therapy, suggests a study in the *Journal of Social & Clinical Psychology*. Researchers recruited 214 substance users to read one of two messages. One was a “growth-mindset message” that described various factors that can contribute to substance use disorder and multiple ways for people to address their addiction. The other was a “disease message” that

described changes in the brain that take place during addiction. Participants who received the growth-mindset message reported more confidence in their ability to handle their addiction and stronger intentions to seek counseling or cognitive-behavioral therapy, compared with the participants who got the disease message. There was no difference between groups regarding their intentions to seek pharmacological treatment.

DOI: 10.1521/jscp.2019.38.5.367

THE FUTURE LOOKS BRIGHTER

We tend to be most envious of things that have not yet happened, according to a study in *Psychological Science*. In one of a series of experiments, researchers

People are more likely to envy friends who are about to depart on a dream vacation than those who’ve just returned from one.

asked 620 participants to imagine a close friend getting to have experiences that the participants themselves desired, such as taking a dream vacation. Some were asked to report how they would feel in the days and weeks before the imagined experience happened and others in the days and weeks after. The researchers found that timing mattered: Participants who reported how they would feel about future experiences rated the experiences as more enviable than participants who reported how they would feel about them afterward. Timing also determined the quality of the envy: Participants who pictured future events reported more malicious envy, characterized by feelings of hostility and schadenfreude, while



TALIP/GETTY IMAGES



those who thought about past events reported a more benign envy, associated with feelings of inspiration and motivation.

DOI: 10.1177/0956797619839689

SLEEP PATTERNS PREDICT ALZHEIMER'S

Sleep patterns can predict the accumulation of tau and β -amyloid proteins associated with Alzheimer's disease later in life, finds a study in the *Journal of Neuroscience*. Previous research has found that in young people, two types of hippocampal sleep waves—slow oscillations and sleep spindles—are synced, but in old age they become uncoordinated. Researchers in the United States studied 101 cognitively normal older adults enrolled in a longitudinal study of aging. They used an electroencephalogram to measure the participants' brain activity during sleep and found that the severity of the decrease in slow oscillation/sleep spindle synchronization was associated with

higher tau levels, while reduced slow-wave-activity amplitude was associated with higher β -amyloid levels. The researchers also found that participants whose self-reported sleep quantity decreased as they aged had higher levels of both β -amyloid and tau. The results suggest that changes in brain activity during sleep and a decrease in sleep quantity could serve as early warning signs for Alzheimer's disease, according to the researchers.

DOI: 10.1523/JNEUROSCI.0503-19.2019

EARLIER AUTISM DIAGNOSIS

Diagnoses of autism spectrum disorder (ASD) in children as young as 14 months are stable, suggests a study in *JAMA Pediatrics*. Researchers studied 1,269 toddlers in the United States who received their first diagnostic evaluation between 12 and 36 months. The children were followed for an average of 20 months, during which they

received at least one additional evaluation. Only 50% of children diagnosed with ASD at 12 to 13 months still had that diagnosis at the final evaluation. However, that figure increased to 79% and 84% when the initial diagnosis was at 14 months and 16 months, respectively. The researchers note that screening for ASD at 14 months enables treatment to begin earlier than it usually does currently.

DOI: 10.1001/jamapediatrics.2019.0624

EARLY ADVERSITY MODIFIES EPIGENETICS

Children under 3 years old are especially vulnerable to epigenetic changes stemming from adverse experiences, including poverty, family turmoil and financial instability, according to research in *Biological Psychiatry*. Researchers examined DNA methylation, a common form of epigenetic change, in 1,000 children in the United Kingdom at birth and at age 7. Children who had experienced significant adversity had the highest levels of methylation, which acts to reduce the expression of specific clusters of genes. The researchers found that the early timing of adverse experiences had a more powerful effect on methylation than the number of such experiences or whether they had taken place recently. The researchers next plan to determine whether DNA methylation patterns are associated with subsequent mental health problems. ■

DOI: 10.1016/j.biopsych.2018.12.023

Children who experience more adversity show epigenetic changes at age 7 that may increase their chances of developing mental health problems.

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

Datapoint

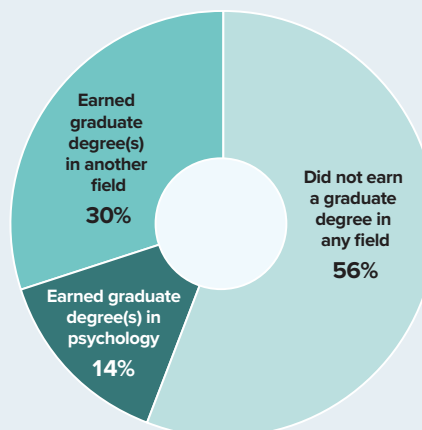
NEWS ON PSYCHOLOGISTS' EDUCATION AND EMPLOYMENT FROM APA'S CENTER FOR WORKFORCE STUDIES

HOW MANY PSYCHOLOGY MAJORS GO ON TO GRADUATE SCHOOL?

In 2017, about 3.5 million people in the United States held a bachelor's degree in psychology.¹ Of those:

- About 499,000 (14%) also held graduate degrees in psychology, with 13% earning a psychology master's degree and 4% earning a psychology doctorate or professional degree. The overlapping 3% earned both master's and doctoral or professional degrees.²
- About 30% held graduate degrees in fields other than psychology, such as education, health and social services.³
- The remaining 2 million (56%) did not earn graduate degrees.
- The proportion of psychology bachelor's degree holders who held a graduate degree was progressively higher from the "ages 24 or younger" group through the "ages 30–34" group, then stabilized, suggesting that the majority of people complete their graduate education by age 30.

2017 Graduate Degree Attainment by Psychology Bachelor's Degree Holders



2017 Graduate Degree Attainment by Psychology Bachelor's Degree Holders by Age and Degree Field

	Bachelor's degree in psychology	Graduate degree in psychology	Graduate degree in other field
TOTAL	56%	14%	30%
Ages 24 or younger	94	2	4
Ages 25–29	70	10	20
Ages 30–34	52	14	34
Ages 35–39	51	14	35
Ages 40–44	52	15	33
Ages 45–49	52	17	31
Ages 50–54	49	16	35
Ages 55–59	57	12	30
Ages 60–64	54	13	33
Ages 65–69	54	18	28
Ages 70–75	47	19	34

Note: Percentages may not sum to 100 due to rounding.

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

For an interactive version of this Datapoint, visit CWS Data Tool: Degree Pathways in Psychology. For more information, contact cws@apa.org.

¹National Science Foundation, National Center for Science and Engineering Statistics. (2017). National Survey of College Graduates Public Use Microdata File and Codebook. Retrieved from <https://sestat.nsf.gov/datadownload/>.

²Graduate degrees include those earned immediately after undergraduate education and those earned after a gap. Professional degrees include JD, LLB, DDS, MD, etc.

³Education, health and social services are the three most frequent degree fields after psychology in which psychology bachelor's degree holders earn graduate degrees.

TACKLING THE ESCALATING IMMIGRATION CRISIS

Psychologists are partnering with each other and those in other disciplines to address the mental health needs of Central Americans seeking refuge and asylum in the United States

BY HEATHER STRINGER

In 2017, University of Texas Rio Grande Valley psychology professor Alfonso Mercado, PhD, watched as U.S. authorities dropped off hundreds of Central American immigrants at bus stops in McAllen, Texas, every week. The numbers had swollen from 200 people per day in 2017 to 800 per day by spring of 2019. He knew these people considered themselves the lucky ones because they had been permitted to enter the United States while awaiting court dates. Thousands of others had been turned away.

To help this immigrant population, Mercado and his students started volunteering at the Rio Grande Valley Humanitarian Respite Center, handing out food, clothing and baby supplies. He also began asking immigrants if they'd be willing to share their stories for a research project about trauma.

Many days, after those interviews, he drove home in tears because the stories were so deeply painful, such as the account of a mother from Honduras who had been sexually and physically assaulted multiple times in her village. Her husband had been killed by gangs, and she fled the country with her 2-year-old son. On the journey to the

United States, a drug cartel kidnapped the pair and sexually assaulted the mother. Family members paid a ransom to secure their release, and the woman was clinging to the hope that she and her son would be granted asylum in the United States.

This mother and her child are among a surging number of immigrants who are desperate to escape violence, abuse and poverty in their home countries by seeking protection in the United States. The number reached a record level in May, with U.S. Customs and Border Protection reporting that more than 144,000 migrants were either apprehended or turned away at the border that month, compared with 60,000 in October 2018. The number then dipped to 104,000 in June, perhaps reflecting the Mexican government's crackdown on immigrants coming through that country. But attention to the issue remains high, particularly with reports of dangerous and unsanitary conditions in detention centers unprepared to handle the influx.

With social service agencies also severely ill-prepared to support this rapidly expanding immigrant population, psychologists with skills in research,

MORE IMPACT TOGETHER

In this *Monitor* series, we explore how psychologists address some of society's greatest challenges through the work they do in their distinct—yet interdependent—roles as researchers, practitioners, applied experts, educators, advocates and more.

Up next month: How psychology has reformed parenting.



clinical care and advocacy are stepping in to help address this humanitarian crisis.

"These psychologists are tackling the same issues, yet from different angles, which will give us a fighting chance at developing policies and interventions that will lead to a sustainable solution," says Manuel Paris Jr., PsyD, associate professor of psychiatry at the Yale School of Medicine and deputy director of Hispanic services for the Connecticut Mental Health Center.

Their work is multifaceted. Psychologist researchers are building on earlier findings on the traumas that immigrants may experience by conducting



new studies with today's populations. Clinical psychologists are applying psychology research to help these patients navigate the complexities of family reunifications, heal from trauma and cope with fear in the current political climate. Other psychologists are drawing on study findings and clinical experience with immigrants to advocate for this population in the courts and the political arena.

They are joined by social workers, teachers, physicians and lawyers, banding together through such partnerships as the Immigration Psychology Working Group. There, team members serve as advisers to APA, and

recently several psychologists in the group published a report, *Vulnerable But Not Broken*, about psychosocial challenges and resilience among unaccompanied minors from Central America.

"Getting the word out about how these immigration experiences impact people is our responsibility," says Claudette Antuña, PsyD, MHSA, LICSW, a psychologist in Washington state whose forensic evaluations have helped more than 700 immigrants obtain asylum or other forms of legal relief to stay in the United States. "Most mental health workers, teachers, lawyers, physicians and other professionals do not learn about

Central American migrants in February as they try to cross the Rio Bravo, which divides the cities of Eagle Pass, Texas, and Piedras Negras, Coahuila, Mexico.

[the impact of these experiences] in school, and without this knowledge they can endanger the lives of immigrants they are trying to serve."

THE DIFFERENT FACETS OF TRAUMA

Psychologists have a long-standing history of studying trauma, separation and resilience in immigrant populations, and their discoveries have shed light on the potential mental health impacts of recent family separation, deportation and other policies influencing undocumented people. Acculturation, repairing family attachments and the academic needs of unaccompanied minors are just a few of the areas in which psychological research has provided critical insights into how to support immigrant populations, and now psychologists are building on those findings.

Gaining a better understanding of the mental health status of Central Americans and Mexicans when they arrive in the United States has become a top priority for psychologists. Mercado was interested in seeing how youths scored on a commonly used trauma screening tool known as the Child PTSD Symptom Scale (CPSS), so he and a colleague, psychologist Amanda Venta, PhD, of Sam Houston State University in Huntsville, Texas, launched a study to assess trauma in two groups: adolescents from Central America who had arrived within the previous two years and younger children from Central America who had crossed the border within the previous 24

hours (*Journal of Child and Family Studies*, Vol. 28, No. 1, 2019).

The older children completed the assessment themselves and rated levels of symptoms such as intrusive thoughts, nightmares, hypervigilance and poor concentration, while parents answered the questions for the younger children. Mercado and Venta discovered that the mean scores for the older students—many of whom had traveled as unaccompanied minors—far exceeded the traditional cutoff levels for post-traumatic stress disorder (PTSD), while children who had arrived with their parents slightly exceeded these levels.

“The rate among the adolescents was so high that it resembled the trauma level in countries that are at war,” Mercado says.

While many immigrants have endured severe abuse or violence before they cross the border, most are propelled by the hope that their circumstances will improve in the United States. But researcher Luz Garcini, PhD, MPH, an assistant professor at the University of Texas Health Science Center at San Antonio, is exploring whether the prevalence of traumatic events experienced in the United States may be higher than the prevalence of trauma related to difficult conditions in their home countries for undocumented immigrants who have lived in this country for more than 10 years. She suspects that trauma repeatedly occurs in the United States when undocumented immigrants do not feel comfortable seeking medical care or

FURTHER READING

Trauma and Cultural Values in the Health of Recently Immigrated Families

Mercado, A., et al.
Journal of Health Psychology, 2019

Miles Over Mind: Transnational Death and Its Association With Psychological Distress Among Undocumented Mexican Immigrants

Garcini, L.M., et al.
Death Studies, 2019

reporting domestic violence and sexual abuse to police because they fear deportation.

“And perhaps the salience of their current struggles dampens memories of the trauma they experienced in their home countries,” says Garcini, who has not yet published the data.

In another study, Garcini’s results suggested that being treated differently for not having a visa by those with documented status was the strongest predictor of clinically significant distress, even more than long periods of separation from family, death of family members abroad or loss of work (*Journal of Latinx Psychology*, in press). Garcini hopes these studies will highlight the importance of providing access to mental health care for the immigrant popu-

ADVOCACY

APA’S OUTREACH ON IMMIGRATION

■ Advocating for humane treatment of immigrants.

In June, APA CEO Arthur C. Evans Jr., PhD, sent a letter to President Donald J. Trump expressing the association’s “shock and dismay about the burgeoning humanitarian crisis at the border and in U.S.-run detention facilities.” Evans strongly emphasized the need for the Trump administration to work with Congress to enact legislation to increase funding to deliver care, improve nutrition and train personnel

to provide proper care for these immigrants, especially the children. He cited empirical evidence of the psychological harm experienced when children and parents are separated. Watch a video at <https://youtu.be/HCpkL8T60LE>.

■ **Supporting Dreamers.** In April, APA sent a letter to House and Senate leadership supporting legislation that would prevent deportation for certain immigrants who entered the United States when they were

children. The letter highlighted research about the deleterious effects of parent-child separations and how the fear of deportation can have negative health consequences.

■ **Speaking out on the trauma of separation policy.** In February, APA member Cristina Muñiz de la Peña, PhD, testified at a congressional hearing where she described the trauma she’s observed in patients who have experienced separations.

■ Fighting harmful policies.

In December 2018, APA sent a letter to the Department of Homeland Security opposing a proposed policy that would decrease the number of low-income immigrants admitted to the United States and limit existing immigrants’ ability to access food assistance and Medicaid.

Psychologists interested in helping can contact Serena Dávila, APA’s senior legislative and federal affairs officer, at sdavila@apa.org.



lation. Advocacy agencies and faith-based organizations may be more promising routes of access because undocumented immigrants often avoid seeking help because of the cost, stigma or risk of deportation, says Garcini.

LIVING WITH CHRONIC UNCERTAINTY

Although today's political climate has intensified many immigrants' distrust of the systems that are equipped to provide help, psychologists are creating channels of access by building relationships in communities. Michelle Silva, PsyD, director of the Connecticut Latino Behavioral Health System, works in an outpatient mental health clinic that has a 40-year reputation in the community as a safe place for

Spanish speakers to access care. She's seen a surge in the number of Central American patients in the last year, with many needing treatment for trauma. Often, mothers will seek care for a child who has been affected by violence or abuse because "culturally the role of parenthood is highly valued, so parents are usually more willing to seek help for their children than themselves," says Silva, who is also an assistant professor in the department of psychiatry at the Yale School of Medicine. Once these parents see the benefits of treatment for their children, she says, they frequently request services for themselves.

By validating feelings like anger, powerlessness, sadness and guilt, Silva builds trust with patients. "Sometimes they

Migrants inside a detention center in El Paso, Texas, in March.

feel like they should not have negative emotions because they are in a better situation in this country, but it's important for them to recognize that these feelings make sense," she says.

Immigrant mothers who have left their children behind in their home countries, she has seen, often suffer feelings of guilt and sadness. They also experience excitement and anticipation as they look forward to reunifying with their children. "When the children finally come to the United States, they may be grieving the loss of the caregivers in their home country and the life they had there," says Silva. She helps families navigate conflict, tolerate ambivalence and rebuild connections with one another.

Kalina Brabeck, PhD, is also

seeing an increase in the number of immigrant patients who are struggling with anxiety and hopelessness under the changing rules of the Trump administration. When President Trump proposed a new policy that would deny green card status to people who use Medicaid and other social services, some clients were afraid to collect food stamps or enroll their children in health insurance plans. “This chronic sense of uncertainty can affect cognition, sleep, mood, work and the ability to manage household tasks,” says Brabeck, who specializes in discrimina-

tion, immigration and trauma at Lifespan Physician Group and Rhode Island Hospital. “It can also put a strain on marital relationships and fuel jealousies around who has more access to services and more privilege.”

Some clients are also ashamed of their mental health struggles. Brabeck helps them understand that these issues are rooted in systemic inequalities and social injustice, rather than their own fault. She teaches clients to understand and name their reactions and regulate emotions. She also connects them with support systems like

José embraces his son, José Daniel, after crossing the border to arrive in El Paso, Texas, in May. The two had trekked across Mexico from Guatemala.

churches or English-language programs that provide a sense of community and empowerment.

For some unaccompanied minors, establishing independence from certain people is another coping strategy, says Suzana Adams, PsyD, a clinical psychologist in Phoenix who regularly treats immigrants. “The unaccompanied minors who concentrate more on themselves tend to do better than the ones who are still attached to families in home countries that ask for money and involve these minors in family problems,” says Adams. She has helped patients disconnect from social media to avoid entanglements with relatives or threatening gangs in home countries. Once their lives in the United States are well established, they can consider reconnecting with relatives and social media, Adams says.

SPOTLIGHT

IMMIGRATION RESEARCH

A special issue of APA’s *Translational Issues in Psychological Science* (Vol. 5, No. 1, 2019) features articles about the psychology of migration, displacement, resettlement and adaptation for immigrants in the United States and international settings. The journal’s editors hope the special issue will inform practices and policies that affect millions of people who have been forcibly displaced worldwide. Key findings from the articles include:

- Parents who were concerned about their documentation status were less likely to be physically present in schools, especially those parents with lower levels of education.
- Once unaccompanied minors enter the United States, they often lack the legal representation needed to successfully navigate immigration proceedings. They also frequently live in areas with higher

rates of poverty and community violence. To serve this population, providers should consider offering support for navigating the legal system and providing family-based and trauma-focused interventions.

- For young Latinas, higher levels of stress from adapting to a new culture were directly associated with factors such as weak social ties, more time in the United States, lower levels of immersion into American society and higher levels of commitment to one’s ethnic identity.
- In the United States, language barriers, differing cultural values and lower literacy and education levels can create barriers between health-care providers and Spanish-speaking patients when it comes to communicating about neuropsychological report results. The authors offer recommendations to improve such communication.

EXPANSION THROUGH EDUCATION

Psychologists like Adams work long hours and take on pro bono cases to meet the steep demand for immigrant mental health services, but recently she started recruiting physicians, activists and nursing students in the community to help. She plans to train these volunteers to become *promotores de salud* (community health workers) who can provide mental health education in Latinx communities about trauma, acculturation, PTSD, depression and other topics.

“Many of the volunteers I’m seeking out have suffered themselves as a result of immigration experiences, so they can quickly build trust with other immi-



grants,” she says. Adams hopes the *promotores* will give immigrants a safe setting to share their own mental health struggles.

Teaching primary-care providers about the link between physical health and mental health in the immigrant population is another strategy for reaching more of these patients, says Silva. As faculty adviser of the HAVEN Free Clinic, a free, student-run primary-care clinic in New Haven, Connecticut, she trains students in the health professions about how stress from migration, living in a new environment and loss of traditional forms of support can manifest in physical symptoms. These symptoms can include headaches, insomnia, neck tension and other diffuse pains, says Silva.

PROPOSING NEW POLICIES

Psychologists are not only on the front lines of research, practice and education that support

immigrants, they’re also advocating for new immigration policies. Among those advocates is Florida-based forensic psychologist Giselle Hass, PsyD, ABAP, who has contributed to amicus briefs and court testimonies about the psychological damage of prolonged detention, child separation policies and the risks of discounting domestic violence as grounds for asylum.

She also partnered with legal, medical and policy experts to file a brief that addresses the one-year deadline to apply for asylum. The brief argues that this deadline should be extended for unaccompanied minors because many have experienced trauma, and neuropsychological research indicates that trauma can delay brain development. In 2017, the federal Board of Immigration Appeals, which is part of the Department of Justice, cited the brief in its decision to extend the deadline for asylum for children

INTER-DEPENDENT ROLES

Psychologists apply their varied expertise to immigration from many different roles:

Researchers

gain an understanding of the mental health of immigrants when they arrive in a new country and the risks they face.

Clinical researchers

bridge the gap between the clinic and the community to test new interventions in real-world settings.

Clinicians

treat immigrants to address PTSD, anxiety, depression and more.

Educators

train the next generation of researchers and clinicians and educate the public.

Policy influencers

advocate on behalf of immigrant needs, drawing from the latest psychological research.

under 18—as long as the case is filed within a “reasonable” time period after they turn 21.

Hass has seen firsthand how difficult it can be for young victims of trauma to seek out legal services. She worked with a 20-year-old immigrant from Honduras who had been sexually and physically abused by his stepfather and by another relative who was a police officer. The abuse started when the young man was 7, but he struggled to remember details. He fled to the United States when he was 14 and started working as an undocumented dishwasher. Though he had long missed the one-year deadline when he applied for asylum, his attorney was requesting an extension.

“It took months and months of interviews before he was ready to start talking about the abuse,” says Hass, who performed a psychological evaluation for his asylum case.

The man earned a GED, enrolled in a technical culinary school and is now working as a sous chef at a Mexican restaurant. He has also been seeing a community therapist to heal from the trauma. Although legal processes can be daunting for immigrants, psychologists hope to see more immigrants like this young man find their place in the United States in the coming years as research, clinical care and policies evolve.

“No matter how sad the stories are, I see an incredible resilience and an amazing ability to rebuild a life,” says Hass. “We can learn from these immigrants, and they can become powerful contributors to the community.” ■

PATIENT-CENTERED PAIN MANAGEMENT

New federal recommendations for pain management recognize the crucial role of psychological and behavioral treatment options

BY DEBORAH BAILEY

Federal recommendations issued in May call for an individualized, multidisciplinary approach to treating people's pain—whether it's acute pain from surgery, burns and injuries, or chronic pain associated with trauma or conditions such as sickle cell disease, arthritis or fibromyalgia.

The U.S. Department of Health and Human Services (HHS) convened a 29-member Pain Management Best Practices Inter-Agency Task Force in response to the nation's opioid crisis. The group recommends a biopsychosocial approach in which health-care providers assess a patient's entire context to develop a treatment plan that minimizes the risk of opioid misuse.

"The role of psychologists in this is profound, vital and underutilized," says task force member Halena M. Gazelka, MD, director of the Mayo Clinic's inpatient pain services.

APA supports this "whole person" approach to care. In June, APA CEO Arthur C. Evans Jr., PhD, testified before Congress about the critical role that evidence-based psychological services can play in more effective pain management care

and reduced exposure to opioids. (Read his testimony at www.apa.org/advocacy/substance-use/opioids/evans-opioids-testimony.pdf.)

A RANGE OF TREATMENTS

The task force report advises that pain management plans should often include more than one type of treatment, including physical therapy, opioid and non-opioid medications, nerve blocks, minimally invasive procedures and behavioral interventions.

"The behavioral health section of the report outlines promising and evidence-based psychological interventions for pain all in one place, and that's pretty noteworthy," says Cecelia Spitznas, PhD, one of two psychologists who served on the task force and senior science policy adviser at the Office of National Drug Control Policy.

Among the treatments cited are behavioral therapy, cognitive-behavioral therapy, acceptance and commitment therapy, mindfulness-based stress reduction, and emotional awareness and expression therapy.

The recommendations reflect a growing awareness that pain includes complex biological, cognitive, emotional, behavioral

and social factors, says task force member Mary W. Meagher, PhD, a professor in Texas A&M University's department of psychological and brain sciences.

Instead of measuring pain on a simple numerical scale, for example, the report advocates for evaluating how pain interferes with daily activities and a person's quality of life. "Those are domains where psychological interventions have been demonstrated to show great effectiveness," says Meagher. As examples, the report cites brief presurgical interventions that reduced patients' needs for opioids after surgery, including a study led by Baylor College of Medicine psychologist Lilian Dindo, PhD, that used acceptance and commitment therapy with veterans having orthopedic surgery (*The Journal of Pain*, Vol. 19, No. 10, 2018), and another study led by Stanford University psychologist Beth Darnall, PhD, that used a single, two-hour pain control class to help breast cancer surgery patients (*Journal of Pain Research*, Vol. 7, 2014). (Read more about managing pain without opioids in the June *Monitor*.)

A CALL TO ACTION

The task force was convened by HHS in conjunction with the Department of Defense, Department of Veterans Affairs and Office of National Drug Control Policy. It was created under the Comprehensive Addiction and Recovery Act of 2016, a law to increase prevention programs and treatment for opioid use disorder.

"This is essentially another call to action, an opportunity to

RESOURCES

Pain Management Best Practices Inter-Agency Task Force

www.hhs.gov/ash/advisory-committees/pain/index.html

The Rise of Non-drug Pain Treatment Monitor on Psychology 2018

www.apa.org/monitor/2018/11/cover-non-drug-treatment



better integrate psychology so that pain is better treated nationally,” says Darnall, who wrote the APA book “Psychological Treatments for Patients With Chronic Pain” (available at www.apa.org/pubs/books/4317497).

Indeed, the report joins a growing chorus of voices calling for more integrative approaches to pain management. The 2016 National Pain Strategy included similar recommendations, and in June the American Medical Association passed new policies that include advocating for increased access to non-opioid treatments, including behavioral therapies.

The momentum is driven by growing recognition of the personal and economic impact of chronic pain and the nation’s

opioid crisis. An estimated 50 million adults have chronic daily pain, and acute and chronic pain cost the United States an estimated \$560 billion to \$635 billion annually. “That’s more than the combined costs of treating heart disease, stroke and diabetes,” notes Meagher.

CHALLENGES

Achieving better patient-centered pain management will require addressing several challenges, the task force report says. These include:

■ **More basic and translational research**, including efforts to understand the molecular and cellular mechanisms of pain and the genetics of pain.

An estimated 50 million adults have chronic daily pain.

■ **Gaps and inconsistencies in best practices.** The report calls for developing clinical best practices tailored to special populations, such as veterans and older adults, as well as to specific conditions. Some policy-makers and physicians have misinterpreted the Centers for Disease Control and Prevention’s 2016 opioid prescribing guidelines, preventing some patients with severe pain from receiving adequate care, the report notes. It explains that while reducing opioid misuse is important, opioids should remain an option as long as the benefits outweigh the risks.

■ **Reimbursement.** Many insurance providers reimburse for non-opioid treatments at lower rates. Instead, reimbursement could incentivize providers to take a broader, integrative approach. Meagher, Spitznas and other task force members met with the Centers for Medicare and Medicaid Services this summer on a review of Medicare and Medicaid coverage policies related to the opioid epidemic.

■ **Growing awareness and expertise.** Many patients have limited provider options, especially in rural areas. Physicians, dentists, psychologists and other health-care providers could use more education on the spectrum of pain management options. Also, few providers specialize in pain management. To address the shortage, Darnall encourages more psychologists to gain expertise in pain management and get involved with developing technology-driven interventions. ■

PUERTO RICO, TWO YEARS AFTER MARIA

Psychologists are working to address the “aftermath of the aftermath”—the mental health challenges that resulted from months spent without shelter, power or adequate care in the wake of Hurricane Maria

BY ZARA GREENBAUM

In the months following Hurricane Maria, 1.5 million Puerto Ricans lived without power, around 4% of the population migrated from the island and nearly 3,000 people died in storm-related incidents, according to a report commissioned by the Puerto Rican government from the George Washington University Milken Institute School of Public Health (2018).

Today, the island’s residents are still dealing with Maria’s fallout. In July, the scandal-plagued governor—whose public image never fully recovered from his missteps after the storm—resigned under pressure.

Meanwhile, the storm also left mental health-care providers scrambling to address post-traumatic stress disorder (PTSD), depression and other psychological fallout. In a survey conducted one year after Maria, more than one-fifth of the island’s residents reported needing or receiving mental health services and 13% said they started new or higher-dose prescription medications to treat emotional problems (*Washington Post/Kaiser Family Foundation Survey of Puerto Rico Residents*, 2018). Other research has measured

the impact of the storm on the territory’s 350,000 public school-children and has documented spikes in suicides, drug use and domestic violence among adults.

But even these striking statistics do not fully capture the hardship on the island, says Silma Quiñones, PhD, counseling psychologist and president of the Puerto Rico Psychological Association (APPR).

“People on the island are still experiencing post-traumatic stress and flashbacks. They are not psychologically going about their daily routines as they did before the hurricane,” she says.

Two years after Maria, the focus has begun to shift from damage control to long-term recovery, says Frances Boulon, PhD, a professor in the psychology department at the University of Puerto Rico at Rio Piedras and past president of APPR.

Now, addressing what some call the “aftermath of the aftermath”—challenges resulting from months spent without

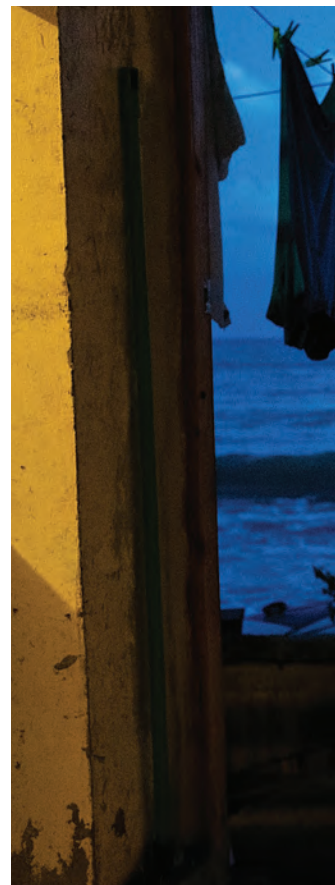
shelter, power or adequate medical care—psychologists are working to screen patients, train providers and deliver trauma-focused clinical care. At the same time, they’re partnering with government officials and other organizations to prepare for another hurricane season.

“One of the upsides of this terrifying experience is that we now have an intense awareness of all the elements needed for proper emergency preparedness,” Boulon says.

EFFECTS ON CHILDREN AND SCHOOLS

Since Maria hit, children on the island have faced death, loss and economic hardship to varying degrees. Now, more than 7% of them meet clinical standards for PTSD, about twice the rate seen in the general population, according to a survey of 96,108 Puerto Rican public school students published in April (*JAMA Network Open*, Vol. 2, No. 4, 2019)—and that percentage

In the nine months following the storm, suicides increased 18% and calls to Puerto Rico’s main suicide hotline rose 13% compared with the previous year.





Joy Lynn Suárez Kindy, PsyD, associate professor of psychology at Carlos Albizu University in San Juan and a co-author of the study. The new evidence also helped the department secure competitive grants from the U.S. Department of Education and the Substance Abuse and Mental Health Services Administration, which will be used to hire 360 nurses and 107 psychologists and to provide training in trauma-focused cognitive-behavioral therapy (TF-CBT).

Other efforts led by Puerto Rico's department of education include training teachers in psychological first aid, providing social-emotional training and TF-CBT to students, and offering resiliency training to teachers and school principals. The department is also helping each of the 857 public schools establish parent centers, where adults can access resources such as clothing as well as advice on topics such as how to care for children with autism during a disaster.

"After the hurricane, we realized that schools are the main source of support where families and communities seek help," says Maria Rolon, PhD, school psychologist and director of student services at the department of education. "That's why we're focusing on making schools the forefront of mental health and wellness."

MARIA'S EFFECTS ON ADULTS PERSIST

Adults on the island have also experienced psychological challenges, including stress and trauma, in the wake of Maria. In the nine months following the storm, suicides increased

may even underestimate the extent of the problem, the survey's authors note.

The study, a needs assessment that has helped Puerto Rico's department of education distribute its limited mental health resources to the hardest hit regions, also found that more than 57% of children had a friend or family member leave Puerto Rico, 45% reported damage to their homes and 32% experienced shortages of water or food. Also, about one-third of the children surveyed felt their lives were at risk during or after the storm.

"These alarmingly high numbers signal that nearly every child

in Puerto Rico was exposed to disaster-related risk factors during Maria," says psychologist Rosaura Orengo-Aguayo, PhD, lead author of the study and assistant professor at the Medical University of South Carolina's (MUSC) department of psychiatry and behavioral sciences. "We also know that these factors are some of the predictors of developing post-traumatic stress, depression and anxiety down the line."

The territory's department of education used the study's findings to distribute mental health resources throughout Puerto Rico on the basis of need—including to remote areas such as the island's west coast, says

Sharmelehia Morges of Naguabo, Puerto Rico, in August 2018. Naguabo was still struggling with Hurricane Maria's effects one year after the storm hit.

18% and calls to the territory's main suicide hotline rose 13% compared with the previous year (Kaiser Family Foundation Issue Brief, September 2018). And suicide rates are still on the rise, with the number of reported suicides in the first three months of 2019 nearly double that for the same period in 2018, according to the Puerto Rican newspaper *Metro*.

Other ongoing problems include surges in drug use, homicides and domestic violence—which Puerto Rico's former governor has created special task forces to address. Such challenges commonly develop after major disasters, according to the World Health Organization.

In addition to the task forces, clinical and community psychology graduate students from the University of Puerto Rico are being trained to conduct psychological interventions in remote and impoverished parts of the territory. The territory's department of education is also providing wellness services to teachers, including mindfulness-based interventions and the Friends Resilience program, which includes exercises that help adults build social-emotional skills and manage anxiety and depression symptoms.

Such programs are helping, says Boulon, but there's still work to be done. "Even before the hurricane, people had difficulty accessing the services they needed," she says. "The most vulnerable people are those who had mental health issues before the storm—and they need more support to fully recover."

HELP FOR MENTAL HEALTH PROFESSIONALS

Ongoing efforts seek to relieve the compassion fatigue that mental health professionals have begun to report—including high levels of anxiety, fatigue and burnout—after more than two years of caring for victims of both Maria and Hurricane Irma, which struck Puerto Rico just two weeks prior.

"By the time Maria got here, there was nothing left for me to give," says Rolon, who helped deliver psychological first aid to children and adults after both storms. "But we didn't have a choice, because there were so few of us left on the island who could treat trauma."

To help caregivers recover, APPR will host a weekend retreat later this month. Local psychologists will participate in mindfulness sessions, fitness classes, massages and even karaoke. Quiñones says the association hopes providers will begin to integrate these and other self-care practices into their own daily routines.

"Many clinicians made great personal sacrifices to serve their communities and to help the island return to normal," she says. "Now, we want them to find balance and restore their own mental health."

LOOKING FORWARD

A top priority moving forward is to plan for future disasters that may hit Puerto Rico. This planning includes practical steps such as stockpiling water and nonperishable food and seeking alternative means of generating electricity. It also involves

enhancing communication, organization and integration between various government agencies and community groups to maximize the effectiveness of emergency services.

APPR is also setting up networks of psychologists to reach and treat vulnerable patients—those who are elderly, isolated or physically or mentally ill—in the event of another disaster.

Meanwhile, researchers from MUSC are conducting an additional needs assessment for the island's teachers, many of whom have remained on the front lines to aid recovery. Another ongoing research effort by school psychologist Ivelisse Torres Fernandez, PhD, of New Mexico State University, seeks to document the emotional toll experienced by aid workers and mental health providers following Maria.

Quiñones says many residents are still waiting for insurance payouts, federal grants and other material resources crucial for rebuilding their society, adding that the federal government's inaction and failure to provide adequate aid have exacerbated Puerto Ricans' feelings of hopelessness and despair. Rolling power outages on the island, which can occur weekly and last for several hours, also provide sustained reminders of the initial trauma of Hurricane Maria, making it difficult for residents to move on.

"The hardest part of recovery is that we don't know when this is going to happen again, and we're still picking up the pieces from last time," says Rolon. "That's what's on everybody's mind." ■

FURTHER READING

In the Aftermath of Hurricane Maria, Employee Needs Remained a Priority

APA Center for Organizational Excellence
2018

Ideas, Actions and Resources for Helping Employees After Disasters

APA Center for Organizational Excellence
2018

Aftershocks of Disaster: Puerto Rico Before and After the Storm

Bonilla, Y., & LeBrón, M. (Eds.)
Haymarket Books
2019

5 QUESTIONS FOR ALI MATTU

The clinical psychologist is helping neurodiverse people find work on the A&E television series “The Employables”

BY STEPHANIE PAPPAS

Reality TV has followed people looking for love, fame, lifestyle makeovers and more. Now, add to that list people looking for a job. The new A&E series “The Employables” follows people diagnosed with autism spectrum disorder and Tourette syndrome as they search for work.

The show highlights what can be a difficult process—the camera sometimes lingers on hiring managers’ faces frozen in uncomfortable expressions as job seekers struggle with verbal tics or stammer to get words out. But the overall message of the show is empowering: Be upfront, find the right fit and there’s a job out there for you.

One of the keys to the success of the job seekers is Ali Mattu, PhD, a clinical psychologist at the Columbia University Clinic for Anxiety and Related Disorders and assistant professor of psychiatry at Columbia University Irving Medical Center. Mattu administers psychological assessments to help the job seekers identify their strengths. James, for example, a 36-year-old Tennessee man with Tourette’s, turns out to have an “off the charts” verbal IQ—and learning that information empowers him to find a job as a museum tour guide that fits his skills and doesn’t exacerbate his tics.

Mattu is no novice in front of the camera, having hosted his own YouTube show (“The Psych Show”) for four years. He’s also been a regular guest on national

news shows discussing mental health and has even participated in the occasional comic-book convention panel (the psychology of “Star Trek,” anyone?).

For Mattu, these appearances are all in the service of “giving psychology away.” With “The Employables,” he hopes to do so on a broader scale than ever before.

How did you get involved with “The Employables”?

The production company Optimum reached out to me after discovering

some of my YouTube videos. They were interested in individuals who were experts in Tourette’s and autism and who had the spirit of helping people understand their strengths and empowering them to realize that they have talents inside of them.

I watched videos of the BBC version, and I fell in love with the show. I thought that this could make a big difference, not only in the lives of the people involved in the show but also for anyone who might be watching at home. It immediately became something that I wanted to be part of.

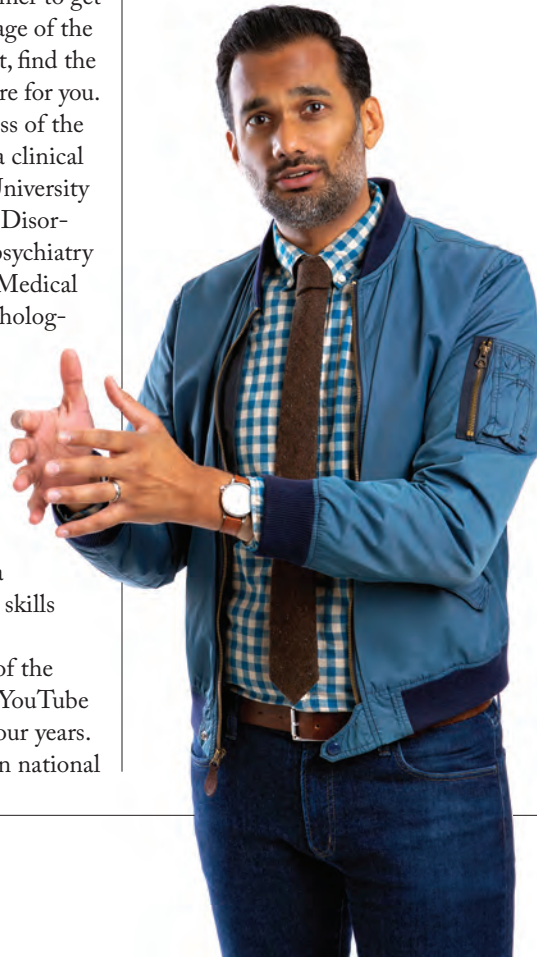
Why is outreach an important aspect of your work?

The further I’ve gone in my career as a psychologist, the more I’ve realized that it’s very difficult to access someone like me. There are a lot of barriers to seeing a psychologist or anyone in the mental health field. Stigma can get in the way, access can get in the way and then there are financial barriers.

It also can be very difficult to access information about psychology. We all build papier-mâché cells in elementary school, and that’s the basis of biology. We learn about physical health, chemistry and physics. But mental health, not so much.

What was it like to film the show?

The most similar experience I’ve had to being on set for “The Employables” was the time I spent working on inpatient hospital teams. Being successful in the



hospital meant knowing your role, as well as the roles of other professionals and being able to communicate across disciplines. My days on hospital units also bounced back and forth between being very busy and waiting for the next thing to happen.

It felt very similar on “The Employables.” To have a successful shoot, I had to quickly learn who was on site, what their role was and how we could work together to get the shoot done. I also had to know when to step back, let the rest of the team do their job and know when it was my turn to step back in.

I had done TV before, but never anything that lasted this long. What I learned about longer shoots is there’s a lot of preparation for shots to be set up, a lot of action to get the shot and then more downtime as the next shot is prepared.

What did you learn about barriers to employment for the job seekers?

I talked with a lot of job seekers about how it’s not their fault that they are experiencing these difficulties and that it is their responsibility to learn how to manage their symptoms. Many had pursued jobs that were a poor fit for the things they struggled with, whether that’s experiencing autism and being in an environment that is heavily verbally and socially biased, or having Tourette’s in an environment where there are a lot of stimuli that make it harder to manage tics.

The big challenge is also the people who make the decision to hire. Organizations, employers—this is where I really believe this show is going to make a big difference. We’ve thought a lot about diversity in the workplace as it relates to different aspects of identity, like race and

ethnicity. Now, I think we’re beginning to see diversity as it relates to neurodiversity.

How can we educate the public about interacting with neurodiverse individuals?

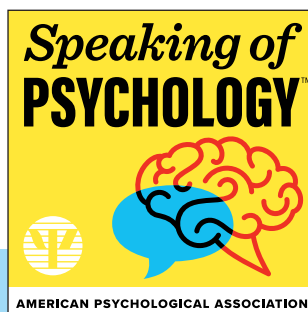
We need honest representations of these conditions, and that is what “The Employables” is doing. You see James’s story, and you see him explain to a group of children on a tour, “I have Tourette’s and you might see me engage in some tics, so if you do, don’t worry about it.” Not only is that something that’s helping him, I think it’s also helping viewers to understand that Tourette’s is just something that’s out there. It’s modeling a healthy way to talk about this. ■

● **Learn more** about the show and resources for neurodiverse job seekers at www.aetv.com/shows/the-employables.

ARE YOU LISTENING?

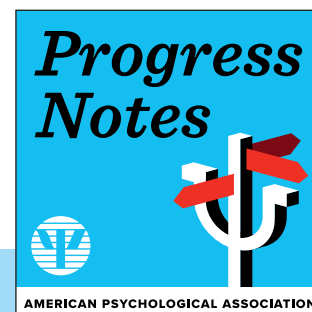
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WHEN PARENTS ARE INCARCERATED, THEIR CHILDREN ARE PUNISHED, TOO

Psychologists have a role in evaluating policies and programs aimed at supporting children who are experiencing parental incarceration

BY MELISSA NOEL, MA, AND CYNTHIA J. NAJDOWSKI, PhD, UNIVERSITY AT ALBANY

There is such a large population of children with incarcerated parents in the United States that even “Sesame Street” is addressing the issue. In 2013, the program introduced Alex, a character whose father is in jail, to highlight the stigma and coping difficulties experienced by children of incarcerated parents. The show’s handling of the topic sparked public interest and initiated a wider discussion about the need for increased support for children of incarcerated parents and their caregivers.

Estimates suggest that 2.7 million children have at least one parent behind bars, and at least 5 million have experienced

parental incarceration at some point in their lives. These numbers are concerning since parental incarceration often leads to a host of psychological strains that affect children’s well-being, including having reduced contact and communication with the incarcerated parent and enduring stigma. As a result, these children are at increased risk of depression, aggression, antisocial behavior and delinquency. Parental incarceration is also correlated with other adverse effects on children, such as being suspended or expelled from school; having poor physical health; and experiencing increased hardship and deprivation, including food insecurity and relocation or displacement from their homes. Thus, parental incarceration can lead to social and economic inequality for children, especially when coupled with other disadvantages often experienced by families of incarcerated individuals.

Considering the potential ramifications, children of incarcerated parents and their families need attention and support, not just from TV programs and the public but also from policymakers. One state that has been at the forefront of addressing these issues is Oregon. In 2001, Oregon was one of

the first states to pass legislation to increase family bonding visits between children and their incarcerated parents. More recently, in 2017, Oregon became the first state to enact a set of guiding principles for its state agencies that aims to protect children from the trauma and stigma associated with parental incarceration. These principles strive to improve communication and visitation between parent and child, consider children’s best interests when making decisions, and prioritize children’s psychological and physical needs through services and programs. Other states, including California, Illinois, New York and Washington, have passed parallel legislation designed to protect parental rights for incarcerated parents, support caregivers in aiding their children and strengthen family reunification efforts.

As legislation emerges to support these children, evaluation research is needed to determine the effectiveness of policies and programs aimed at ameliorating the negative consequences they often experience. In particular, psychologists should investigate how policies are being implemented by agencies, the types of resources that most help children of incarcerated parents, the materials that are most useful in helping caregivers assist children in coping with social stigma and the pathways needed to maintain strong family connections. Longitudinal research is especially needed to determine the factors that prevent and reduce the intergenerational cycle of prison and poverty. Such work will reveal how legislation can best be used to support families as they navigate the experience of incarceration while also offering critical knowledge to practitioners who support children of incarcerated parents. ■



AT ISSUE
How can legislation be used to improve outcomes for children of incarcerated parents?

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

The APA guideline is the first to take an in-depth look at psychotherapy as well as pharmacotherapy options for treating depression.



CE

CONTINUING EDUCATION APA OFFERS NEW GUIDANCE FOR TREATING DEPRESSION

BY KIRSTEN WEIR

Major depression is the second-leading cause of disability worldwide. In the United States, an estimated 6.7% of adults and 11.7% of adolescents experienced at least one episode of major depression in the past year, according to the National Survey on Drug Use and Health by the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA). Yet, too often, depression goes untreated, exacting a significant human toll. Depression impairs quality of life and interpersonal functioning, increases the risk of suicide and substance use disorders and is associated with a raft of physical health problems, including an increased risk of heart disease, stroke, diabetes and Alzheimer's disease.

CE credits: 1

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

1. Explain the goal and purpose of the APA Clinical Practice Guideline for the Treatment of Depression Across Three Age Cohorts.
2. Discuss the prevalence and impact of depression in the United States.
3. Describe evidence-based recommendations for treating depression in children and adolescents, general adults and older adults.

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

But those outcomes aren't inevitable, says John R. McQuaid, PhD, who chaired a panel that created APA's new Clinical Practice Guideline for the Treatment of Depression Across Three Age Cohorts. The guideline provides research-based recommendations for treating depressive disorders including major depression, subsyndromal depression and persistent depressive disorder in children and adolescents, adults, and older adults, using methods including psychotherapy, pharmacotherapy and alternative treatments. (Psychotic depression, the panel members noted, was outside the scope of this guideline.)

"The big takeaway is that there are effective options available to treat people with depression," says McQuaid, a clinical psychologist with the Department of Veterans Affairs in San Francisco and a professor at the University of California, San Francisco.

The guideline-development panel included experts from several countries besides the United States and from a variety of disciplines, including psychology (both clinicians and researchers) and medicine (both psychiatrists and primary-care physicians), as well as methodologists and patient representatives who could speak to the experience of living with depression.

Their goal was to create a comprehensive guideline that compared the efficacy of various types of treatments

in multiple patient populations. To do so, the panel members used 10 separate systematic reviews and meta-analyses and followed the best practices recommended by the National Academy of Medicine (formerly the Institute of Medicine). When reviewing the research, the members considered four factors: the overall strength of the evidence, the balance of a treatment's benefits versus its harms or burdens, patient values and preferences, and applicability of the treatment.

"Most of the existing guidelines for depressive disorders from other professional associations have focused mainly on pharmacotherapy," says Elizabeth H. Lin, MD, MPH, a family medicine physician and clinical professor at the University of Washington School of Medicine who was vice chair of the APA guideline panel. Those who do take a more comprehensive look tend to focus on a specific population, such as military members and veterans. The APA guideline panel took a much broader approach, reviewing the literature and making recommendations for treating depression in three groups: children and adolescents, the general adult population, and adults 60 and older.

"This is truly the first guideline to take such an in-depth look at the rigorous research available in psychotherapy as well as pharmacotherapy," Lin says. "It will help practicing clinicians and researchers determine which

evidence-based treatments can contribute to the overall improvement of depression.”

A summary of the literature review and guideline follows.

TREATING CHILDREN AND ADOLESCENTS

Depression is less common in children, with studies suggesting a prevalence rate of 0.4% to 2.5%, the guideline panel reported. But rates climb steeply as children approach their teenage years, with depression affecting 11.7% of adolescents. What’s more, depression in adolescents appears to be rising. The rate at which adolescents experienced a major depressive episode increased 2.6% between 2005 and 2014.

In younger children, boys and girls are affected equally. After puberty, however, young women are twice as likely as young men to develop depressive disorders. The depression rate among adolescent members of marginalized populations is believed to be significantly higher as well, though the research on those groups is limited.

While many children and adolescents live with depression, they are much less likely than adults to receive mental health treatment. In fact, less than 1% of children and adolescents with depression receive outpatient treatment for depression.

Unfortunately, the guideline panel was unable to make a recommendation for treating depression in children. The members reviewed literature on a wide variety of psychotherapies as well as pharmacotherapy, but they found insufficient evidence

for either recommending or not recommending those treatments.

For adolescents, the panel found more published evidence that met the inclusion criteria. The guideline recommends the use of cognitive-behavioral therapy (CBT) or interpersonal psychotherapy for the initial treatment of depression in adolescents. For clinicians considering medication options for their adolescent patients with major depressive disorder, the guideline recommends fluoxetine over other medications. There was not enough evidence, however, for the panel to determine the comparative effectiveness of psychotherapy versus fluoxetine.

If those treatments are ineffective, unavailable or unacceptable to the patient, the guideline suggests providers consider other treatment options, though the evidence for their effectiveness is less robust. Research on forms of psychotherapy other than CBT and interpersonal psychotherapy was too limited for the panel to be able to recommend a particular type of intervention as an alternative treatment. Information was also lacking regarding alternative medication options.

In some cases, the guideline panel made a conditional recommendation for treatments that were superior to control conditions, but which were less effective than other active

treatments, had greater harms or burdens than other treatments or for which there was insufficient evidence that the treatment was equivalent to other effective treatments. For adolescents, the guideline offers a conditional recommendation that patients and providers might consider alternative antidepressants, but recommends against the use of clomipramine, imipramine, mirtazapine, paroxetine and venlafaxine because of the potential for increased suicide risk in youth taking these drugs. If fluoxetine is not an option, the guideline recommends the clinician share decision-making with a child psychiatrist in addition to the provider, the patient and the patient’s parents/guardians or other family members actively involved in his or her care.

RECOMMENDATIONS FOR ADULTS AND OLDER ADULTS

Depression is common among young and middle-aged adults. SAMHSA estimates that 6.7% of U.S. adults—15.7 million people—experience at least one major depressive episode each year. For 10.2 million of them, that episode results in “severe impairment.” As among adolescents, women are twice as likely to experience depression as men, with a lifetime prevalence of

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SAMHSA estimates that 6.7% of U.S. adults—15.7 million people—experience at least one major depressive episode each year. For 10.2 million of them, that episode results in “severe impairment.”



Depression affects more than 11% of adolescents.

major depression of 21% among women, compared with 12% among men.

For the initial treatment of depression in adults, the guideline recommends either psychotherapy or second-generation antidepressants, which include selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs). There was not enough evidence to recommend one psychotherapy treatment over another, but in general, there was support for behavioral therapy; cognitive therapy, CBT and mindfulness-based cognitive therapy; interpersonal psychotherapy; psychodynamic therapies; and supportive therapy. For clinicians considering combination treatments, the guideline recommends

combining CBT or interpersonal psychotherapy with a second-generation antidepressant.

An estimated 2.6% of older adults experience depression. Research has shown that late-life depression rates are higher among those with more medical problems and with disabilities. Evidence indicates that many older adults prefer psychosocial treatments for depression rather than pharmacotherapy, the panel members note.

As the initial treatment for major depression in adults age 60 and older, the guideline recommends either group life review treatment or group CBT. When considering combined treatment, the panel recommends a combination of second-generation antidepressants and interpersonal

psychotherapy over interpersonal psychotherapy alone.

RECOGNIZING RESEARCH GAPS

While the guideline covers a lot of ground, the panel members found notable gaps in the science. Many studies didn't meet the rigorous methodological criteria set for inclusion in the reviews, McQuaid says, and some areas were thin on any research, high-quality or otherwise. "Particularly in the child and adolescent population, and the older adult population, there was far less scientific literature than for the general adult population," he says. "There's also a real dearth of literature addressing the needs of underserved populations, whether you define them by ethnicity, gender, sexual orientation, socioeconomic status or medical disability. There are broad questions that need to be addressed about these groups."

The guideline panel sees those gaps as a call to action. "We need more research to move forward with our understanding of treating depression in those populations," Lin says. "It's a call to researchers, but also to policy-makers and funders. We really need to address this."

Limitations aside, the new guideline offers a wealth of evidence-based recommendations for clinicians in psychology and across health care, McQuaid says. In addition to the guideline document itself, a complementary website provides additional resources for health-care providers and patients, including materials for assessment, detailed descriptions of treatments, information for patients and their

KEY POINTS

1
This comprehensive APA guideline compares the efficacy of various treatments for depression and makes evidence-based recommendations for treating adolescents, adults and older adults.

2
The guideline is the first to take an in-depth look at the research on both psychotherapy and pharmacotherapy for depression, and makes recommendations concerning specific psychotherapies and medications.

3
The guideline identifies research gaps and notes that more work is needed, particularly on treatments for children, adolescents, older adults and underserved populations.



Many older adults prefer psychosocial treatments for depression.

families, case examples and a resource page that includes links to treatment manuals, books and other relevant sites and sources. “We really hope this will be used broadly by health-care professionals,” McQuaid says.

Indeed, depression treatment

is something that many types of medical providers are—and should be—involved in, Lin adds. “Most of the people in society who have depression don’t initially seek care from psychologists or psychiatrists, but from primary-care physicians or other

FURTHER READING

APA Clinical Practice Guideline Development

www.apa.org/about/offices/directorates/guidelines/clinical-practice

Clinical Practice Guideline for the Treatment of Depression Across Three Age Cohorts

www.apa.org/depression-guideline/guideline.pdf

providers,” she notes.

She encourages psychologists to work closely with primary-care physicians, making themselves available for referrals and reaching out to patients who don’t follow through with a referral for psychotherapy. “We all need to be part of a team” to treat depression, she says.

Those teams must also include the patients and, for youth, their parents, McQuaid adds. “It’s important for clinicians to have a collaborative discussion with patients about psychotherapy and pharmacotherapy options for treating depression, incorporating both the patient’s preferences and the provider’s expertise,” McQuaid says. “These guidelines will support that shared decision-making.” ■

RESEARCH-BASED ADVICE

CLINICAL PRACTICE GUIDELINES AT A GLANCE

In 2010, APA adopted a process for producing clinical practice guidelines for clinicians. The goal of these guidelines is to provide research-based recommendations for the treatment of mental and behavioral health conditions. Each guideline is developed by an interdisciplinary panel of experts and is based on a rigorous review of the scientific literature for each topic.

The **Clinical Practice Guideline for the Treatment of Depression Across Three Age Cohorts** is the third clinical practice guideline developed by APA, following the **Clinical Practice Guideline for the Treatment of Posttraumatic**

Stress Disorder, approved in 2017, and the **Clinical Practice Guideline for the Behavioral Treatment of Obesity and Overweight in Children and Adolescents**, approved in 2018. More guidelines are underway, and the published guidelines will be updated approximately every five years.

Research on mental health and behavioral treatments moves quickly, and the guidelines aim to provide a summary of the most recent literature on a topic, says Raquel Halfond, PhD, director of clinical practice guidelines at APA. “It can be hard for clinicians to take the time to pore over all of the literature,” she says—especially when

the research is extensive, as in the case of depression.

Clinical practice guidelines are designed not to be the last word on treatment options, but rather to inform clinicians about best practices as they engage in shared decision-making to identify the right treatments for each patient, Halfond adds. “Clinicians can consider these guidelines together with their own expertise, keeping in mind a patient’s culture, preferences and values,” she says. “We hope this will be a useful tool for clinicians to have in their toolbox, to be used as part of an evidence-based practice in psychology.”



AMERICAN PSYCHOLOGICAL FOUNDATION

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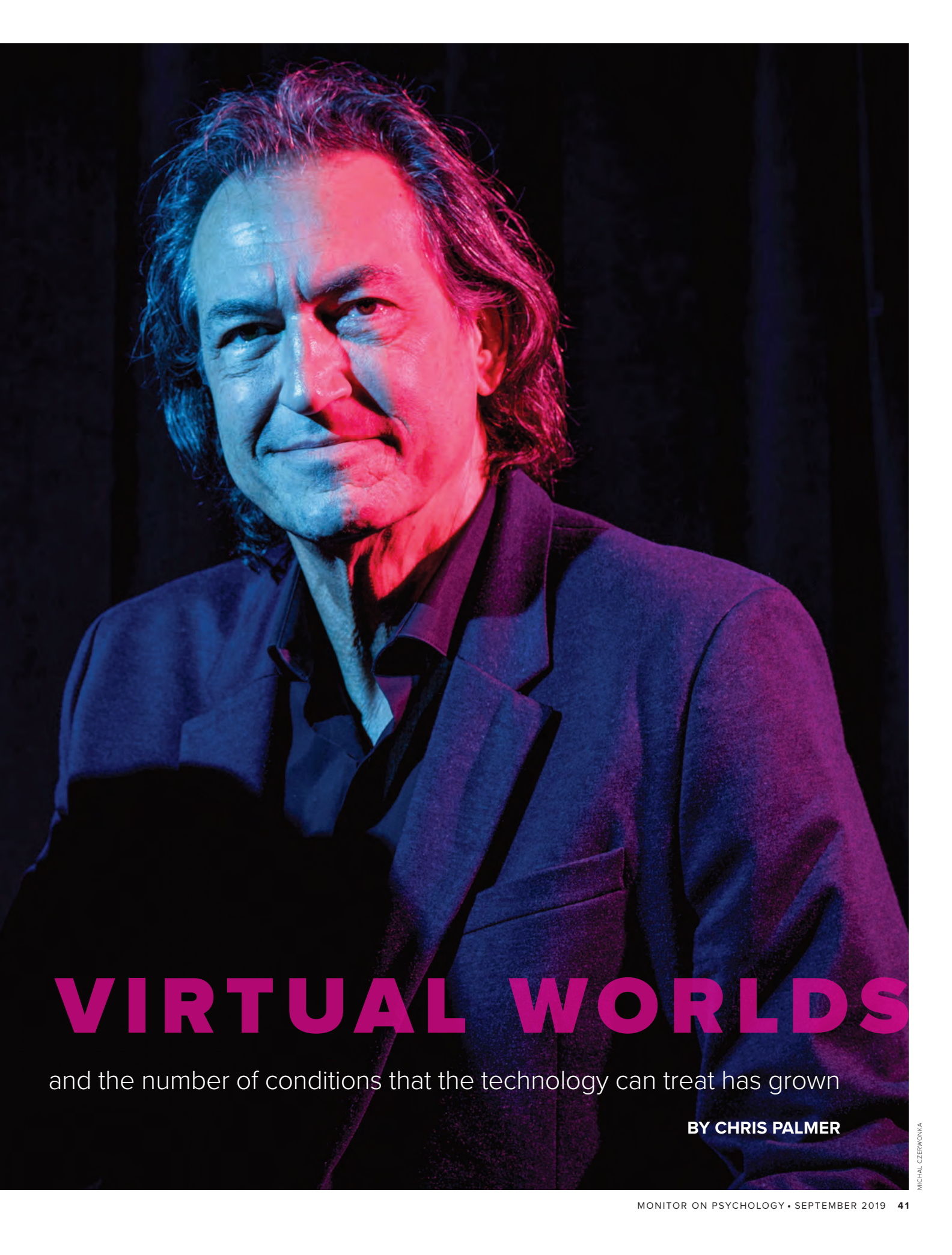
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Virtual reality pioneer Dr. Skip Rizzo has worked with computer programmers, engineers and artificial intelligence experts to design some of the most elaborate virtual environments used in clinical practice today.



REAL TREATMENTS IN

Treating patients in virtual environments is now easier and less expensive,



VIRTUAL WORLDS

and the number of conditions that the technology can treat has grown

BY CHRIS PALMER

MICHAŁ CZERWONKA

A door opens, you walk into a small closet and suddenly the walls start moving in and the door slams shut, trapping you inside. You're sitting quietly in a lobby when a stranger enters the room, then another and another as your anxiety intensifies. While you're on patrol in a small Afghan village, machine-gun fire suddenly erupts, and explosions send debris flying. ¶ These aren't scenes from the latest releases for your living-room game console. Instead, they're virtual reality (VR) scenarios created as safe, fully programmable spaces in which therapists can immerse their patients as they work together to overcome phobias, improve social skills and recover from traumatic events. ¶ The first research on the use of VR to treat a psychological issue—fear of heights—was published nearly 25 years ago (Rothbaum, B.O., et al., *American*

Journal of Psychiatry, Vol. 152, No. 4, 1995), and VR has been used to replace imaginal or real-life exposure to threatening stimuli in the treatment of more than two dozen phobias since then. But it's only in the past few years that the technology has advanced enough and the cost has dropped enough to position VR to begin making its way into more research labs and therapists' offices. Technological advances have also allowed researchers to begin crafting therapeutic VR programs for an expanding number of conditions, including post-traumatic stress disorder (PTSD), addiction and autism.

"There are tremendous opportunities to do great things with VR," says Skip Rizzo, PhD, research professor in gerontology and psychiatry at the University of Southern California (USC). "It's what we've dreamed about

in psychology—a controlled stimulus environment where you make things happen, monitor patient responses, and activate emotions in ways far beyond what we could ever do in a clinical office."

FULL IMMERSION THERAPY

The VR environments of the 1990s and early 2000s didn't look much like the real world. But Rizzo and other VR therapy pioneers found that despite its impoverished graphics, the tool was highly effective for treating many phobias, such as fear of flying and heights. "It didn't have to be an exact replica of reality for patients to show increased heart rate or sweaty palms as they were, say, riding up a virtual glass elevator," says Rizzo, who directs the Medical Virtual Reality (MedVR) lab at USC's Institute for Creative Technologies.

But the rudimentary graphics got in the way of treating other mental health problems, researchers found. "Treating anxiety disorders and PTSD with VR really requires full immersion to put the person in the right context," Rizzo says.

Today, that type of full immersion is possible, and it's Rizzo's specialty. Along with his team of computer programmers, graphic artists, interface designers, engineers, software engineers, artificial intelligence (AI) experts and big-data analysts, Rizzo has designed some of the most elaborate virtual environments used in clinical practice.

One such virtual environment, called Bravemind, is a VR exposure (VRE) therapy tool Rizzo developed to assess and treat PTSD that is currently in use at approximately 100 sites around



Dr. Skip Rizzo is one of the keynote speakers at APA's **Technology, Mind & Society** Conference, an interdisciplinary event that explores interactions between humans and technology, Oct. 3–5 in Washington, D.C. Continuing education is offered. For more information, visit <https://tms.apa.org>.



the United States. Traditional treatment involves the gradual, repeated “reliving” of a traumatic event in the patient’s imagination under a clinician’s care. Some patients, however, are unwilling or unable to imagine themselves back into their traumatic pasts. Bravemind offers a way to overcome this avoidance tendency. The software allows clinicians to gradually immerse patients into virtual combat scenarios that reflect their specific traumatic experiences in a controlled, stepwise fashion. Clinicians can then monitor the intensity of the patients’ stress responses via fMRI

brain imaging and psychophysiological assessment techniques. The Institute for Creative Technologies is starting to roll out the software to Department of Veterans Affairs (VA) offices and other nongovernment treatment centers, free of charge, while the SoldierStrong foundation has offered to donate the hardware.

Rizzo, along with Emory University School of Medicine psychology professor and VRE therapy pioneer Barbara Rothbaum, PhD, ABPP, and their team have shown that patients with PTSD who were unresponsive to prolonged

One virtual reality exposure therapy tool being used to treat post-traumatic stress disorder gradually immerses soldiers into combat scenarios that reflect real trauma.

exposure therapy using their imaginations often responded successfully to VRE therapy using Bravemind (*American Journal of Psychiatry*, Vol. 171, No. 6, 2014). They have since reported that VRE therapy is also effective for treating PTSD stemming from military sexual trauma (Loucks, L., et al., *Journal of Anxiety Disorders*, Vol. 61, 2019). In that study they did not attempt to recreate the subjects’ sexual assaults—no VR assailants were used—but rather attempted to match the assaults’ context and setting cues, including sounds and lighting.

Now, Rizzo and his colleagues, with funding primarily from the Department of Defense, are exploring ways that VR could be used not just to treat PTSD, but to prevent it. One of Rizzo’s latest creations, Stress Resilience in Virtual Environments (STRIVE), aims to build resilience in soldiers before they are deployed by immersing them in up to six different emotionally engaging narrative simulations. “They go on short missions, and something bad happens—seeing an Afghan child die or watching one of their guys get shot,” Rizzo says. A virtual human mentor then delivers a brief resilience training session.

“My vision is that when you go to boot camp, they give you your requisition, your gun, your helmet, your backpack, and your Oculus Go headset preloaded with a bunch of STRIVE and other training episodes,” says Rizzo, who is also working on a version of STRIVE for the Los Angeles Police Department, another group at high risk of developing PTSD.

“MY VISION IS THAT WHEN YOU GO TO BOOT CAMP, THEY GIVE YOU YOUR REQUISITION, YOUR GUN, YOUR HELMET, YOUR BACKPACK, AND YOUR OCULUS GO HEADSET.”

SKIP RIZZO, PhD, RESEARCH PROFESSOR AT THE UNIVERSITY OF SOUTHERN CALIFORNIA

VR FOR ADDICTION, AUTISM AND PAIN

Other conditions that benefit from VR's ability to recreate countless specific environments include substance use and addiction. One of the more effective tools for treating substance use has been cognitive-behavioral therapy (CBT), in which the patient and clinician confront high-risk situations and practice coping skills in a safe environment. "Some researchers have gone so far as to build full bars in their labs, but participants know they're in an office or lab setting, which really weakens the transfer of learning to real-world situations," says Patrick Bordnick, PhD, MPH, LCSW, dean of the Tulane University School of Social Work. "Not only that, but you're limited to this single environment that's expensive to build and staff."

Looking for a flexible, cheaper alternative, Bordnick stumbled onto VR. "I was initially intrigued, but everything I saw was so cartoonish and artificial," he says. He eventually came across a group of researchers who had contracted with a VR company to film real people in front of a green screen and superimpose them into a computer-generated VR party setting to help patients confront social phobias. Bordnick asked the company for a version in which the actors and actresses were smoking and drinking. He then went on to commission a host of other VR environments where people smoke, such as the interior of a car and the exterior of an office building.

In their first study using VR,

Some researchers are exploring the utility of virtual reality environments for treating autism spectrum disorder.

Bordnick and his colleagues, funded by the National Institute on Drug Abuse, compared virtual smoking cues with neutral cues and found that the VR smoking cues elicited cravings similar to those seen in traditional studies with real-world cues (*Addictive Behaviors*, Vol. 29, No. 9, 2004). In a follow-up treatment study, Bordnick found that VR-based skills training significantly bolstered patients' confidence in resisting smoking in high-risk situations and increased abstinence six months post-treatment (*Research on Social Work Practice*, Vol. 22, No. 3, 2012). Other research groups have found VR to be effective in eliciting addiction-related urges in opioid and crack cocaine dependence as well as gambling (Maples-Keller, J.L., et al., *Harvard Review of Psychiatry*, Vol. 25, No. 3, 2017).

A couple of years ago, Bordnick's virtual party environment inadvertently sparked a new research direction for the social work professor. His youngest daughter, who has autism spectrum disorder (ASD), was hanging out in his lab and asked to try on a VR headset. He

loaded up a PG-rated rendering of the party where all the alcoholic beverages were swapped out with soda and water. "I couldn't believe it; she began walking right up to people, which she doesn't do in the real world," recalls Bordnick. Now, he is working to secure funding to study VR's utility for teaching social skills to children and adults with ASD.

Other researchers are exploring the utility of VR environments for treating ASD as well. People with ASD generally have difficulty maintaining eye contact with others. However, VR systems can iteratively tweak faces in a way that puts people with ASD more at ease. Individuals with ASD can also use VR to practice increasingly more challenging social interactions in a less anxiety-producing platform. Despite these advantages, VR-based therapies are only starting to be used to treat autism, including in a recent study in which participants with high-functioning autism who completed a VR training session demonstrated significant gains in emotional recognition, understanding the perspectives of others and the ability to problem solve (Didehbani, N., et al., *Computers in Human Behavior*, Vol. 62, 2016).

Rizzo's virtual battlefield and Bordnick's virtual parties aim for photorealism, but other researchers are exploring the possibilities of more fantastical virtual worlds. SnowWorld is a virtual arctic environment populated by snowball-tossing snowmen, penguins and woolly mammoths. There is nothing true to life about it, and



GOODMOMENTS/GETTY IMAGES



that's the whole point, according to its designer, University of Washington psychology professor Hunter Hoffman, PhD. While VR in most therapeutic contexts helps patients face their fears, SnowWorld uses VR for the opposite effect—it gives burn patients a place they can temporarily go to escape the excruciating pain that comes with cleaning and treating their wounds (*Annals of Behavioral Medicine*, Vol. 4, No. 2, 2011).

"VR keeps their minds off the pain, but also distracts them from ruminating on unhelpful

thoughts, like catastrophizing and worrying," Hoffman says. "While in VR, the patient doesn't have enough mental resources left to take part in these negative psychological behaviors."

Hoffman explains that VR engages the same attention-distraction mechanisms as watching a movie or listening to music (Gold, J.I., et al., *CyberPsychology & Behavior*, Vol. 10, No. 4, 2007). But VR combines video, audio, haptic and motion sensory input to create an immersive experience. As a

Research finds that VR-based skills training can help patients resist smoking in high-risk situations.

result, it's a much more profound stimulus, partly because it blocks out the real world, so patients don't notice the disquieting sights and sounds typically found in hospital rooms. "VR is in a class by itself when it comes to effectiveness for distraction-based pain control," says Hoffman, whose team also has had promising results using VR for other types of painful situations, including pediatric dental visits, pediatric venipuncture and spinal cord injury.

SPREADING THE WORD

As researchers continue to push the boundaries of what's possible in VR treatment, more established treatments—like those for fear of flying and other simple phobias—are becoming more common and accessible. In early 2016, two new VR headsets came on the market: the Oculus Rift and the Samsung Gear. Priced under \$400, these computationally powerful, high-resolution devices signaled a turning point in the feasibility of widespread implementation of VR in the clinic.

"For years the helmet was a big limiting factor," Hoffman says, referring to older helmets' weight and the mess of cables tethering them to external computers. "All the improvements from 1990 to 2016 can't match what we've seen in just the last three years. It's just jaw-dropping, the billions of dollars being pumped into virtual reality." Those improvements have translated into a vastly better user experience, with less motion sickness, increased frame rate, faster tracking systems and light-

"ALL THE IMPROVEMENTS FROM 1990 TO 2016 CAN'T MATCH WHAT WE'VE SEEN IN JUST THE LAST THREE YEARS. IT'S JUST JAW-DROPPING, THE BILLIONS OF DOLLARS BEING PUMPED INTO VIRTUAL REALITY."

HUNTER HOFFMAN, PhD, UNIVERSITY OF WASHINGTON

weight hardware. The result, according to Rizzo, is that more VR companies have entered the mental health field in the past three years than in the 20 years prior. Also, the number of research articles on VR has increased dramatically over the past few years.

Beyond the improved graphics and lowered cost, other developments are helping increase VR's reach into the field of psychology, including Hoffman's recent creation of an fMRI-compatible headset and integration with neurofeedback and biofeedback tools to monitor the ongoing effects of immersive stimuli in order to optimize them in real time.

"Now that we've got the technology where it needs to be, and the software is continuously improving, the key is getting it incorporated into clinical practice," Bordnick says.

A 2016 survey of 185 cognitive-behavioral therapists suggests VR has a long way to go. Fewer than 4% of respondents frequently used VRE therapy, with only about 10% reporting occasional use, despite the fact that more than a third of all respondents said they used VR in other contexts such as gaming (Lindner, P., et al., *Frontiers in Psychology*, Vol. 10, No. 186, 2019). But, overall, attitudes about VR were positive. And although VR therapy has been used mostly in CBT applications, clinicians seem to be aware that the technology can be extended to a wide variety of conditions, not just anxiety disorders and phobias.

As for the cost to patients, in general, therapy sessions with VR cost the same as regular sessions, and sessions are billed the same through insurance companies. In some cases, the overall cost of VR

therapy is less because the therapist does not have to travel to exposure sites such as a bridge or an airport, according to Rizzo.

"A growing number of interdisciplinary research teams are gaining experience and becoming savvier about how to use VR for clinical therapy," Hoffman says. "As more clinical evidence becomes available, demands for VR in clinical psychology services will grow for the subset of treatments that have been empirically validated."

As VR use becomes more ubiquitous, many psychologists caution that VR is just a tool, and not a substitute for an experienced therapist.

"No matter how good these things get, you'd still want a therapist involved," Rizzo advises. "But maybe you only need four office visits rather than 15 because the therapist can manage the rest of the sessions virtually [with the patient practicing on their own with a headset at home], which is really one of the goals of VR—making clinical treatment accessible to more people." ■

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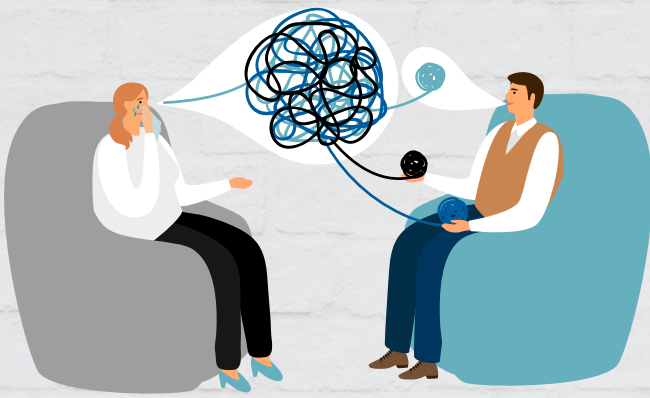
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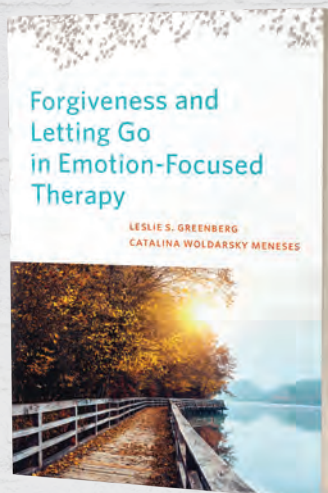
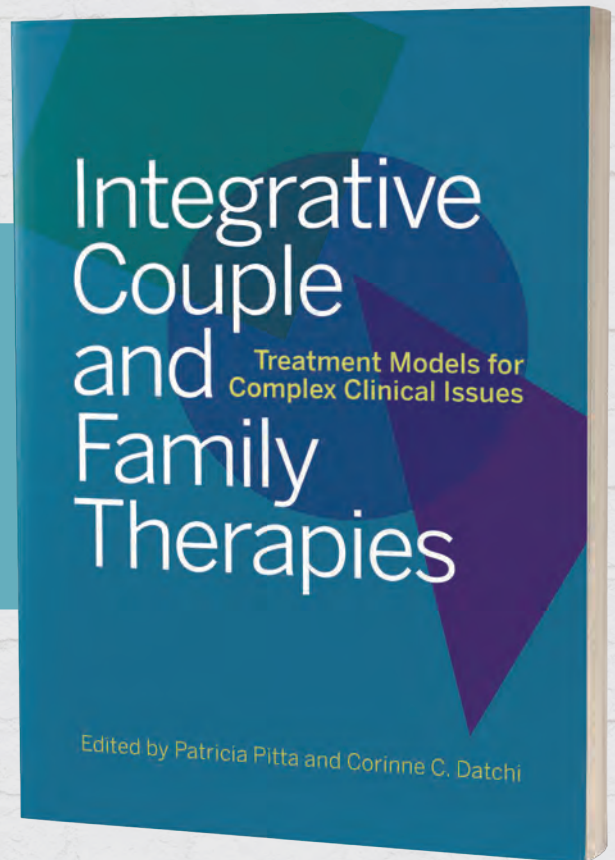
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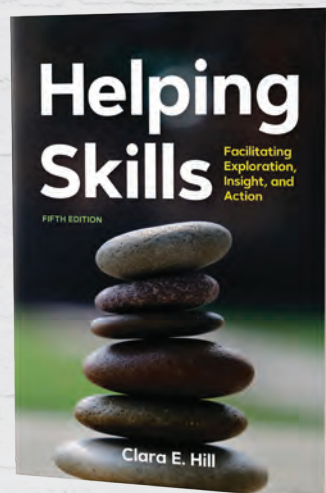
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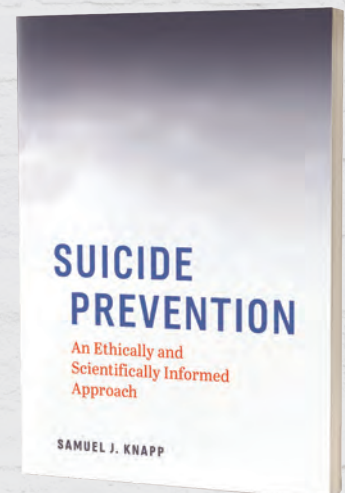
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GAMES WITH IMPACT

Psychology-savvy video games address health, education and social-emotional skills

BY STEPHANIE PAPPAS

A WHITE-HELMETED NANOBOT SWOOPS ACROSS the screen, hurling icy fire toward a stream of blank-eyed, gaping-mouthed villains. Blast! They've got their shields up. The nanobot calls in backup, and a white worm rises from beneath, destroying the enemy. More pour in. The bot reaches for another weapon, sending a river of radiation into the baddies below. They fall. Victory! ¶ This could be any shoot-'em-up game about zombies or space invaders—but it's not. It's "Re-Mission 2," an update to the original "Re-Mission" game, which was shown to improve adherence to treatment in young people with cancer. The nanobot's white fire represents chemotherapy, and the white worm stands

in for the patient's immune system. It may all seem a little like, well, a game, but the "Re-Mission" games teach real lessons. The games are an interactive, nonpreachy way to explain to young people why they must take oral chemotherapy for years, despite unpleasant side effects, says Pam Kato, EdM, PhD, a psychologist and former professor at the Serious Games Institute at Coventry University in the United Kingdom, who helped develop the original game. ¶ "We take them inside the body to help them get this 'aha' moment about how their treatments work," Kato says. ¶ When "Re-Mission" was being developed in the early 2000s, it was in the vanguard of a new class of games: serious games. Today, games designed to have a real-world impact are exceptionally diverse. There are brain-training games that attempt to improve cognitive skills. There are puzzle games in which the players' efforts advance science

and medicine. There is even an annual "game jam" called XR Brain Jam that brings together neuroscientists, social scientists and game developers to explore the intersections of their fields.

But the ultimate goal of many serious games is simply to educate. This can mean a focus on traditional subjects like science, history or politics. Or it can encompass games about health or ones that teach social-emotional skills such as empathy, perspective-taking and conflict resolution. As games become more widespread, researchers say, they may change how students prove their mastery over topics and how they learn complex subjects. And they can do so in an accessible, enjoyable way.

"Games are super-engaging and popular for everybody, across all gender, ethnic and socioeconomic lines," says Val Shute, PhD, a professor in the

educational psychology and learning department at Florida State University and a pioneer in assessment within educational games.

PLAYING TO LEARN

According to a 2008 report from the Pew Internet & American Life Project, 97% of American teens play video games at least sometimes, and half had played within a day of being surveyed (Pew/Internet, Report 202-415-4500, 2008). And there is good evidence that games can both trigger serious emotions and improve learning. Nicholas Bowman, PhD, a professor of media and communication at Texas Tech University, has found that as many as 75% of gamers surveyed have feelings of introspection and self-reflection during gameplay, even in games geared only for entertainment (*Psychology of Popular Media*

Culture, Vol. 5, No. 4, 2016). "World of Warcraft" players, Bowman has found, often feel responsibility for their avatars as distinct social actors (*New Media & Society*, Vol. 18, No. 7, 2016).

These experiences aren't confined to the game. In a study led by Matthew Grizzard, PhD, a communications researcher at the State University of New York at Buffalo, college students were assigned to play a first-person shooter game either as a terrorist or a U.N. soldier or to do nongaming writing assignments. The students who played the shooter game reported greater guilt afterward than those in the nongaming conditions, and those assigned to play as the terrorists felt guiltiest of all. Intriguingly, in-game guilt was associated with the increased salience of the moral domains of care and fairness outside of the game (*Cyberpsychology, Behavior, and*



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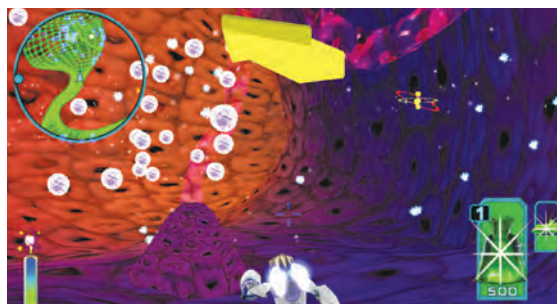
Social Networking, Vol. 17, No. 8, 2014).

These results suggest that even just-for-fun games can be powerful. Serious games, designed with a purpose in mind, have been shown to make an impact, too.

“Re-Mission” is one of the earliest and most striking examples. In a randomized controlled trial of the first version of the game, teens and young adults who played showed increased cancer knowledge over those who played a control game not related to cancer (*Journal of Adolescent Health*, Vol. 41, No. 3, 2007). The same trial found that players took 16% more of their prescribed antibiotics and had 40% more oral chemotherapy metabolites in their blood than young adults in the nongaming control group (*Pediatrics*, Vol. 122, No. 2, 2008). The game quite literally helped save lives.

Another early pioneer in serious gaming was “PeaceMaker,” created at Carnegie Mellon University’s Entertainment Technology Center in 2005. This turn-based game asks players to take on the weighty task of establishing peace between Israel and Palestine. Users can choose between playing the Palestinian president or the Israeli prime minister and must navigate both internal approval ratings and international opinion as they make political choices.

The aim of the game is to improve conflict resolution and perspective-taking, says Eric Brown, one of the game’s co-developers, who now directs a computer-science learning platform at Carnegie Mellon.



Some “serious games” include (top to bottom): “Zoombinis,” a puzzle game that teaches computational thinking; “Never Alone,” an empathy-building game developed in collaboration with Alaska Native elders to continue their storytelling traditions; “Re-Mission,” which helps young cancer patients understand how chemotherapy works; and “iCivics,” a suite of games used to teach civics lessons by more than 170,000 middle- and high-school teachers in the United States.

Especially important, Brown says, is having users play the side they don’t support. “We would have people who were more sympathetic to the Palestinian perspective playing the Israeli side, and they’d keep having negative things happen and they would catch themselves using military options,” says Brown.

Similarly, someone sympathetic to Israel playing as the Palestinian president might find themselves chafing against Israeli policy. “It starts to build the understanding of why these actions are taken,” Brown says.

Ronit Kampf, PhD, a lecturer in the department of communication at Tel Aviv University, has found that players of the game become more knowledgeable about the Israeli-Palestinian conflict (*Information, Communication & Society*, Vol. 18, No. 6, 2015). Kampf has also found that the game is capable of changing player attitudes about the conflict (*Computers in Human Behavior*, Vol. 52, 2015).

Games’ unique ability to put the player in control of a separate character has also opened up new ways to build empathy. “Auti-Sim,” created by independent developers Taylan Kadayifcioglu, Matt Marshall and Krista Howarth, attempts to create empathy for people with autism by putting the player in the shoes of a child with auditory hypersensitivity on a busy playground. The closer the player gets to other children, the more distorted the sound and picture become. Another lush, empathy-focused gaming experience is “Never Alone,” a game developed in collaboration with

Alaska Native elders to continue the storytelling tradition of those cultures.

But empathy-building games need to be designed carefully; otherwise, they can have unintended effects. The 2011 game “SPENT,” developed on behalf of a homeless shelter, asked players to make financial choices on a shoestring budget to avoid ending up on the street. Unfortunately, many players became less sympathetic to those in poverty after playing the game, according to research by Gina Roussos, then a graduate student in social psychology at Yale University. The act of making choices within the game seemed to boost players’ belief in meritocracy, causing the lesson to backfire (*Cyberpsychology*, Vol. 10, No. 2, 2016).

MAKING SCHOOL A GAME

Careful design can be the difference between a good game and a poor one, says Shute, an educational psychologist and a keynote speaker at APA’s Technology, Mind & Society Conference, Oct. 3–5. A crucial component of good games, Shute says, is that the actions within the game reflect what the game designer wants players to learn.

An example is “Physics Playground,” a game designed by Shute and her team that teaches middle and high school students Newtonian physics concepts through game actions. A player might have to build a lever to move an obstacle, for example, or tinker with gravity and resistance to move a ball toward a target.

The key, Shute says, is that students experience the physics

through gameplay. This not only promotes learning, she says, but also allows educators to track a student’s progress in fine-grained detail.

In the game’s log, Shute and her team have access to every move the students make throughout the process: every failure, every aborted attempt, every solution. The team has used game logs to study when and why students succeed at or quit “Physics Playground,” identifying signs, for example, of when a student might need learning support to prevent him or her from giving up (11th International Conference on Educational Data Mining, 2018).

Game-based assessment has great potential to make learning less stressful for students, says Alan Lesgold, PhD, a psychologist and professor of education at the University of Pittsburgh who studies technology and learning. “We really have to learn what folks know without forcing them into psychologically brutal situations because that’s the only way we know how to do it,” Lesgold says. “There may be even more potential in using games for assessment than using games for teaching.”

The paper-and-pencil tests that dominate schools today don’t reflect real-world problem-solving well, says Yoon Jeon Kim, PhD, the executive director of the Playful Journey Lab at MIT, who completed her doctoral training with Shute. They can also be culturally biased. Games, on the other hand, can test as they’re played, a feature Shute has dubbed “stealth assessment.” If researchers can show that skills in games transfer to the

real world, stealth assessment could one day replace fill-in-the-bubble exams.

“I really think that assessment is the key to changing the educational system,” Kim says.

Researchers also hope that games will reach populations who have historically been disengaged from STEM (science, technology, engineering and math) topics. Shute has found that despite stereotypes about games and gender, “Physics Playground” is rated equally highly for enjoyment and learning by boys and girls (“Learning Science: Theory, Research and Practice,” McGraw-Hill, 2019). That’s a promising finding, Shute says, given persistent gender disparities in participation in STEM fields. Games may also provide a route for testing knowledge in non-neurotypical students, says Jodi Asbell-Clarke, PhD, the director of the Educational Gaming Environments group at the technology of education research organization TERC (formerly the Technical Education Research Centers) in Massachusetts. Asbell-Clarke and her colleagues are researching the puzzle game “Zoombinis,” originally developed by TERC to teach computational thinking, or how to solve open-ended problems with logic and organized steps. During studies of “Zoombinis” in schools, the team has observed that teachers often report that hard-to-reach kids, such as kids with Individualized Education Programs (IEPs) for autism or attention-deficit hyperactivity disorder, respond even better

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to the game than their peers, Asbell-Clarke says.

“Our hypothesis is that many of the observed strengths of neurodiverse learners, such as systematic thinking and pattern recognition and detail observation, lend themselves very well to computational thinking,” Asbell-Clarke says. She and her team are currently analyzing their computational-thinking game data based on player IEP status to test this hypothesis.

One of the most widespread game platforms in classrooms today is iCivics, a suite of games and curricula designed to teach civics that was developed by a nonprofit organization founded by retired Supreme Court justice Sandra Day O'Connor. The iCivics games teach civics concepts to middle and high schoolers in an experiential way, says Matthew Farber, EdD, a professor of technology, innovation and pedagogy at

the University of Northern Colorado. In “Do I Have a Right?” students run a virtual law firm to learn about the Bill of Rights. In “Win the White House,” they run a presidential campaign to learn about the electoral college. Pre- and post-test studies of iCivics find that it improves civics knowledge among elementary, middle and high school students (Lecompte, K., et al., *Research in the Schools*, Vol. 18, No. 2, 2011).

The platform is used by more than 170,000 teachers across the United States. Its success, Farber says, is partially due to the fact that social studies teachers are typically comfortable with role-play in the classroom. Even in the 1950s, he says, students ran class elections and participated in political skits. “To do the same thing digitally seems natural,” says Farber, who is in the iCivics Educator Network.

As technology advances, edu-

Dr. Val Shute's game “Physics Playground” teaches physics concepts and can be used to evaluate students' learning.

cational games have the potential to become ever more immersive. At the University of Connecticut, researchers are using virtual reality to simultaneously teach issues of justice, memory and history. The university houses the Thomas J. Dodd Research Center, a collection of the files of one of the lead lawyers who prosecuted the war crimes of Nazi leadership in the Nuremberg trials. Players of the game, called “Courtroom 600,” leaf through digital versions of Dodd's files, accumulating evidence and then interrogating Nazi ideologue Alfred Rosenberg in an immersive virtual version of the courtroom where the trials took place. Players use the experience to explore the logical fallacies of Rosenberg and other trial defendants and to understand how the stage was set for genocide during the Nazi regime. (In real life, Rosenberg was found guilty and executed.)

“We saw the Nuremberg trials as a really interesting opportunity to explore the nature of justice and value of critical discernment, especially during a global rise in digital disinformation and anti-Semitism,” says Stephen Slota, PhD, an educational psychologist at the university.

A looming challenge, Farber says, is to move richer gaming experiences into school classrooms. Serious games could enrich history and English classes just as documentaries and Hollywood adaptations of novels do, he says. The key is integrating them into the curriculum.

“Games are the storytelling medium of the 21st century,” Farber says. “In my mind, why wouldn't we teach with them?” ■



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SPECIAL SECTION

CAREERS IN CONSULTING PSYCHOLOGY

PAGE 56

A Psychologist Who Coaches Struggling Executives PAGE 66

Lab Work: Finding a Pill to Treat Addiction PAGE 70

CULTIVATING HIGHER ACHIEVEMENT

A look at the fast-growing field of consulting psychology—and how to land a job in it

BY EVE GLICKSMAN

Not until the 1950s and '60s did corporate America realize psychology had something to offer the workplace. It was during that time that groundbreaking research by psychologist Harry Levinson, PhD, demonstrated that companies have distinct cultures that can be linked to worker anxiety and depression. Based on his research, Levinson taught managers how to apply psychoanalytic theory and methods to motivate employees and increase productivity. ¶ That, many say, was the birth of consulting psychology, a field that today is widely appreciated for its ability to help people achieve their best, not just in the workplace but also on the sports field, the performance stage and elsewhere. ¶ Today, there are as many as 15,000 consulting psychologists practicing in the country for businesses, nonprofits, government agencies and many other groups,

estimates Bill Berman, PhD, founder of Berman Leadership Development LLC in New York and president of APA Div. 13 (Society of Consulting Psychology).

There is no degree or track in consulting psychology, and given the diversity of the work, there's no single road map for pursuing a career in this field. Most consultants begin as doctoral psychologists and build on that education and training according to their area of interest, whether it's to coach, screen employees, assess organizations or perform

other consulting services.

Consulting psychologists also have choices about the nature of their practice. Some opt to consult full time for one organization or company, while others work within an independent or solo practice that serves multiple clients. Some psychologists also create a specialty niche, such as consulting for schools, political campaigns or insurance companies needing risk analysis.

Here, we explore the career paths consulting psychologists can take and offer insight on how to get jobs in this growing field.

Dr. Mitchell Greene consults with athletes including tennis players, marathon runners and golfers to help them achieve their best.



CORPORATE CONSULTING

Every organization can benefit from the insightful observations and feedback of a psychologist who knows how to draw out the best in people, says Gregory Pennington, PhD, founder of the Pennpoint Consulting Group in the greater Atlanta area, which consults for many Fortune 500

COLIN LENTON



companies. “What’s striking about consulting with large corporations is the scale and impact it has on the industry and communities it serves,” Pennington says.

Many consulting psychologists work with large corporations. Berman, for example, provides executive coaching

and leadership development services to financial firms, technology firms, pharmaceutical companies and others. His goals can range from helping increase a company’s executive-hire success rate to helping clients achieve their goals faster with rapid business planning, better communication planning and

sharper operational focus.

Corporate consulting is “happy work,” notes Randall White, PhD, founding partner of the Executive Development Group in Greensboro, North Carolina, about the perks. “I work with high performers who want to learn, grow and change.”

Pennington has helped com-

panies develop more leaders who are women or people of color through executive coaching and conducting accelerated leadership development programs. “Whatever an organization’s or corporation’s mission is, it will have a higher probability of achieving its mission and sustaining its performance if they are capable of leveraging diversity and inclusion,” he says. “The challenge and the opportunity for us as psychologists is to help people and organizations manage that complexity with minimal complications.”

Pennington also provides support and guidance to clients going through complex mergers and acquisitions. He helps them align and integrate senior leadership teams before and after transformations. “Psychologists with business backgrounds add value because they have both an evidence-based foundation and an experience-based one,” he says.

WORKING ON THE INSIDE

Some consulting psychologists opt to work full time for one company, organization or government agency rather than contract with ever-changing clients. These internal consulting jobs typically require psychologists to assume a broader range of responsibilities, and their roles may combine coaching, business strategy, workshops and assessments, among other functions,

within a human resources or strategy division.

The advantage of being an internal consultant is “not having to learn new jargon, players and politics for every job,” says Dee Ramsel, PhD, MBA, who worked for the Department of Veterans Affairs (VA) from 1986 to the spring of 2019, including 11 years as a consultant for the Veterans Health Administration (VHA). Ramsel and her group were the go-to staff for team-building efforts, data-driven assessments and employee engagement concerns. At the VA, she was also executive director of the National Center for Organization Development, a group of 50 employees that provided executive coaching and management support for employees throughout the organization.

In her consulting psychologist position, Amy Owen Nieberding, PhD, works to improve organizational culture in a variety of ways. As director of leadership and organization development for Vanderbilt University Medical Center in Nashville, Nieberding partners with an external provider to administer an employee culture survey every year to compare employee engagement scores with those of other academic medical centers. Armed with the survey results, Nieberding then works with senior executives to address any concerns, such as

Dr. Ellen Kirschman consults with police departments, providing services including stress-management and peer-support workshops.

collaboration across teams. She also helps leaders respond to employees’ concerns, whether they are about career opportunities or the quality of one-on-one meetings.

The best strategies to address workplace problems often require building cross-disciplinary teams, Nieberding has found. “It’s hard to connect people with different paradigms, but it’s important to get things done.”

FINDING A NICHE

Other consulting psychologists focus on particular populations. Helping athletes achieve their personal bests is the focus of Mitchell Greene, PhD. After years in psychotherapy practice, he established Greenepsych Clinical & Sport Psychology in Haverford, Pennsylvania, to work with individual athletes—from marathon runners to professional squash players to college golfers—as well as schools and sports organizations. He also counsels parents of young athletes on how to manage the pressures to perform that can ruin the joy of playing for a child or teen.

“It’s not just about scoring more baskets or performing better,” he says of sport psychology. “It’s often about helping people not be so hard on themselves.”

Ellen Ostrow, PhD, found a legal niche: She coaches attorneys on management and career issues and has developed an expertise in helping female lawyers trying to advance their careers in a traditionally male profession.

“You have to be bilingual—fluent in the language of psychology and then able to translate it into the language of your client.”

GREGORY PENNINGTON, PhD, PENNPOINT CONSULTING GROUP



“Being a great lawyer doesn’t mean you’re an effective manager and leader,” says Ostrow, a founding principal of Lawyers Life Coach LLC, based in Washington, D.C. “Lawyers are not taught to embrace their emotions, which may work well in the courtroom but doesn’t work well for navigat-

ing a career or other people.”

In addition, Ostrow consults on broader matters with law firms, legal departments, the judiciary and organizations where lawyers work. She may provide advice on how to retain talent, create mentoring programs, improve attorney-client

communication or increase the diversity of lawyers and partners, for example.

Consulting psychologist Ellen Kirschman, PhD, works with another population: law enforcement. She became interested in police consulting while working as a clinical social worker providing family therapy for police families at a California hospital. “I was impressed by how much and how often the stress of the job strained not just officers but their family relations.” Today, based in Redwood City, California, Kirschman has consulted for police departments in 22 states and four countries, providing such services as conducting stress-management workshops for police spouses, consulting with first responders who suffer from post-traumatic stress disorder and teaching police officers how to offer one another peer support. Other consulting psychologists in the field provide pre-employment screening and fitness-for-duty evaluations, she adds.

The biggest challenge in police work is building a trusting relationship, according to Kirschman. “Therapists are often trained to be nondirect, but that makes cops uncomfortable. You have to be direct and transparent about who you are.”

GETTING STARTED

To launch a career in consulting psychology, “you need a good knowledge of psychology and an interest in translating that into real-world applications,” says Berman. He advises anyone entering the field to join Div. 13 to learn about consulting

frameworks and to seek advice from seasoned members. (See sidebar.)

For training and education, look to APA's *Guidelines for Education and Training at the Doctoral and Postdoctoral Level in Consulting Psychology (CP)/Organizational Consulting Psychology (OCP)*. Familiarity with organizational theory and practice ethics would be applicable for most trainees, as would assessment and intervention skills.

Consulting psychologists also advise that those looking for careers in the field:

■ **Self-educate.** Understanding the business or area you are working with is essential.

Given the diversity of the work, there's no single road map for pursuing a career in consulting psychology.

Nieberding, whose background is in counseling, taught herself about business and finance and learned about the politics and dynamics of organizations through reading, on-the-job experience and mentoring received from Div. 13 colleagues.

Particularly if you choose to specialize, you need to learn about the issues important to your client. "Consulting requires both big-system and detailed thinking," says Barry J. Jacobs,

PsyD, of Health Management Associates, a national health-care consulting firm headquartered in Lansing, Michigan. To make the career transition from clinician-educator to consulting at age 60, the Philadelphia-based psychologist put himself through a crash course of books, articles and webinars on consulting, leadership, team-based care and telehealth. Jacobs also took advantage of tutelage from co-workers at his company and shadowed other consultants interacting with clients.

■ **Take a course in a coaching program.** Consultants are often expected to give advice in a more assertive and direct

DIV. 13

THE HOME FOR CONSULTING PSYCHOLOGISTS

As APA works to implement its new strategic priorities, APA Div. 13 (Society of Consulting Psychology; SCP) has been integral in helping guide the way. Members of Div. 13 and Div. 14 (Society for Industrial and Organizational Psychology) participate on APA's new **Change Management Advisory Group**, which is offering expertise on tools and strategies the association can use to push forward the transformational change needed to advance the APA strategic plan adopted by the Council of Representatives earlier this year. "It is a wonderful example of the brain trust we have in APA and the progress we can make when we draw upon our members' expertise," says APA Chief Executive Officer Arthur C. Evans Jr., PhD.

Div. 13 was formed in 1924 as a home for APA members who worked as applied psychologists and consultants outside of academic and scientific circles. With close to 1,000 members, SCP serves as an information and referral network, says SCP President Bill Berman, PhD. The division offers members **guidance and resources** tailored for consultants, including webinars, on-demand training, an annual conference, a listserv and opportunities for mentoring and leadership development. Members receive a **newsletter** and the division's **quarterly publication**, *Consulting Psychology Journal: Practice and Research*.

Former Div. 13 president Amy Owen Nieberding, PhD, credits the **mentoring** she received from senior division members for jump-starting

her consulting career. Today, as a consultant for Vanderbilt University Medical Center in Nashville, she still meets regularly with an informal SCP peer-coaching group—"a huge asset" for discussing difficult work issues, she says.

Carolyn Humphrey, PhD, owner of the Consulting Psychology Group in Charlotte, North Carolina, says she's "professionally grown up with the division." She joined as a student in 1999 and is now an SCP board member. Feedback and mentoring relationships are as critical as experience in becoming a consultant, she says. "Having Div. 13 as a home base helps me talk work issues through and allows me to be courageous in my work."

Learn more at www.societyofconsultingpsychology.org.

way than clinical psychologists are accustomed to. "Coach training helped me differentiate between psychotherapy and coaching," says Ostrow. "You are asking different questions." She recommends that any psychologist trying to break into consulting enroll in a coach training program. "I attended the MentorCoach program, which I highly recommend because the CEO is a psychologist and it's grounded in empirical psychological science with an emphasis on positive psychology," she says.

■ **Develop cultural competence.** Understanding the client's culture and communicating in their language is vital to a consultant's success, says Pennington. "You have to be bilingual—fluent in the language of psychology and then able to translate it into the language of your client." If you're working with corporate executives, for instance, reading *The Wall Street Journal* or *Harvard Business Review* regularly can help you understand how they see their world and define the issues that concern them, Pennington suggests.

White found that teaching a class for executives early in his career helped him learn how to frame psychological information in a way that was practical for business leaders.

To understand police culture, Kirschman recommends face-to-face contact and "any

contribution that allows you to hang out with them."

She suggests inviting a police officer to lunch, taking a ride-along to observe an officer at work or volunteering to teach a class for the department on suicide prevention or stress management, for instance.

■ **Put yourself out there.** Speaking engagements helped Ostrow learn more about the "pain points" experienced by female lawyers. "People in the audience would come up to me afterward," she says, "and those exchanges taught me what resonated with them." Websites, newsletters, writing articles and participating in women's groups are other vehicles she has used to reach out to potential clients.

Greene found that consulting required a big leap and a different business model and mindset than his psychotherapy practice. Since weekly sessions are not the norm in sport consulting, he discovered he needed twice as many clients than he had when he was in private practice, which meant being more proactive in his marketing efforts.

"All of a sudden, I have a logo, golf shirt and website," he says. He recalls it took him three years and "a lot of hand-shaking, free talks, marketing and putting myself out there" to gather a steady clientele of athletes and sports organizations. ■

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A PSYCHOLOGIST AT PEPSICO

Matt Del Giudice, PsyD, MBA, partners with managers and teams at the food and beverage giant to improve collaboration and talent development throughout the company

BY HEATHER STRINGER

When executives at PepsiCo wanted to speed up the process of bringing new ideas to market, they sought help from clinical psychologist Matt Del Giudice (del-joo'-dis), the company's senior director of global talent management and organizational development in Purchase, New York. ¶ This was no small undertaking. PepsiCo has more than 260,000 employees in over 200 countries and territories, and its leaders from various departments around the world were expected to work together to design, produce and market new products like Lay's Poppables and LIFEWTR, PepsiCo's premium bottled water. Leaders often had competing priorities and reported to different parts of the \$64 billion company, making such collaboration difficult. ¶ To start, Del Giudice partnered with Taylor Flake, then vice president of human

resources at PepsiCo, to design a survey for senior leaders to evaluate 10 key collaboration behaviors, such as how well they shared innovation strategies, and how they prioritized PepsiCo's overall interests over the interests of their specific region. Del Giudice also partnered with management to incorporate evaluations of these behaviors into the leaders' annual performance reviews—a strategy to ensure new communication patterns would stick.

Then, to glean further insights into which factors boosted the

odds of better collaboration, Del Giudice mined the survey data to identify trends, like whether leaders in specific jobs, regions or countries were more likely to score better on the 10 behaviors. He discovered that leaders who over the years had held different jobs in various locations and markets were the best collaborators. That led PepsiCo executives to prioritize breadth of experience when building their leadership teams.

"This was a critical insight from Matt's work because it informed our talent management

Dr. Matt Del Giudice oversees succession planning, leadership development and performance management for thousands of PepsiCo employees around the globe.

plans at the company," says Flake, who recently left PepsiCo to start his own consulting business. "It also highlights Matt's ability to toggle between psychological details and business knowledge to create programs that are very strategic for a large company."

The project is one example of how Del Giudice partners with departments worldwide to design and implement strategies that strengthen leaders and help teams collaborate more smoothly at PepsiCo, where strong leadership and teamwork are essential to the bottom line.

"Matt brings decision-making to a new level by taking a more analytical approach," says David Harris, senior vice president of human resources at PepsiCo. "He culls through massive amounts of data and translates this into practical insights about people, which are critical in a fast-paced context where people tend to act first and think later."

A CHANGE OF PLANS

Del Giudice first caught PepsiCo's attention in 2014 when the company was looking for someone to lead an executive assessment and



development program for more than 150 senior vice presidents. At the time, Del Giudice was an organizational development consultant for the Department of Veterans Affairs (VA), a role that helped him refine his skills. “I spent a lot of time consulting with senior leaders, and often this included giving them difficult feedback,” he says.

After completing his undergraduate degree, Del Giudice had planned to pursue a career in clinical psychology. But he enrolled in the dual PsyD-MBA program at Widener University in Chester, Pennsylvania, to expand his options. After working at mental health clinics during graduate school, he realized that he found clinical work isolating and that he wanted to be part of a team and work with teams. That revelation led him to pursue the VA job before PepsiCo tapped him to manage its executive development program.

In that first job at PepsiCo, Del Giudice was responsible for sussing out barriers preventing PepsiCo leaders from maximizing their effectiveness. At times, he encountered resistance from senior executives who were unconvinced they needed to change their management styles. One leader, whose team members felt intimidated by his communication style, told Del Giudice he’d been promoted many times and was good at the things that mattered. But Del Giudice challenged him by sharing that successful leaders

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



In addition to his work with teams, Del Giudice also helps individual employees develop leadership skills.

at higher levels need to build inspired teams. The executive subsequently adopted new interpersonal habits, and interactions with his team members improved significantly.

To put his executive development program to the test, Del Giudice conducted a follow-up study evaluating its effectiveness. He found that more than 90 percent of the leaders who participated improved on key leadership behaviors, and this successful track record earned him promotions in 2016 and 2018. Now, he oversees succession planning, leadership development and performance management for thousands of employees who work in marketing, design, e-commerce and a range of other departments around the globe.

Del Giudice's penchant for translating assessment data into

business insights not only helps with hiring decisions, it also helps teams improve their work. When the innovation groups needed to boost their efficiency and effectiveness, for example, Del Giudice studied teams' work patterns and discovered that some teams had too many members, which led to unproductive meetings. Other teams forgot to include critical stakeholders with specialized skills, such as lawyers and food scientists, in their work. Del Giudice also learned that many teams were not receiving feedback from senior leaders frequently enough, so projects were delayed, or teams were forced to switch direction after months of work had already been completed.

To make teams nimbler, Del Giudice partnered with Justin Wells, MBA, PepsiCo's director of global commercialization, to teach employees new work

behaviors. Rather than coaching the teams himself, Del Giudice trained one member of each group to guide the other team members on the best ways to set project strategies, conduct meetings and share progress with senior leaders. This training strategy was vital for securing buy-in from teams, says Wells.

"Matt helped me see that change is hard for people," says Wells. "Even if people know something will make them more efficient, they may not like it. Matt helped with engaging the teams to make them open to change."

Follow-up surveys showed that the new approach improved the work of the innovation teams. "When senior leaders reinforced that work products were 'works in progress' and did not need to be perfect, communication and feedback flowed more freely," says Del Giudice. "The dynamics became more iterative and focused on learning."

WINNING OVER SKEPTICS

Although Del Giudice spends most of his time developing programs and tools that affect large numbers of PepsiCo employees, he occasionally partners with smaller groups. When one team sought him out, Del Giudice started by interviewing members individually and by conducting a team dynamics assessment. He found that most of the people in the group had similar personality traits: They were skeptical by nature and highly pragmatic—traits that can be associated with a tendency to be more critical of others.

"Initially, many in the group

ROBERT ADAM MAYER

"Even if people know something will make them more efficient, they may not like it. Matt helped with engaging the teams to make them open to change."

JUSTIN WELLS, MBA, PEPSICO DIRECTOR OF GLOBAL COMMERCIALIZATION

were skeptical of the assessment results,” says Del Giudice. “But when I pointed out the problematic behaviors happening during the meeting in real time, they realized that this was an opportunity to be more inclusive of different opinions and new ideas.”

During one discussion, the team members followed Del Giudice’s advice by asking each other clarifying questions and encouraging input before reaching a decision. In a follow-up session, employees reported that the team’s behavior had improved because they were using the new strategies.

Del Giudice also consults

with leaders who show potential for higher levels of leadership, like Thanh Nguyen, a legal director at PepsiCo. Through a formal leadership assessment and informal feedback from Nguyen’s colleagues, Del Giudice found that positivity and resilience were two of her greatest strengths. But he also shared with her the potential pitfalls of these strengths. “He helped me see that jumping to positivity during interactions with business leaders could come across as Pollyannaish and lacking in empathy about what colleagues were facing,” says Nguyen. “If I’m constantly hitting a high note,

this could seem like I’m not taking time to listen.”

Del Giudice suggested that Nguyen start asking her colleagues about the challenges they were facing so she could help them solve problems, rather than focusing on how to improve her programs and initiatives. Nguyen says Del Giudice’s coaching insights have changed the course of her career.

“I originally thought that my goal was delivering a strong legal compliance program, but Matt showed me that I’m here to help other business leaders succeed,” says Nguyen.

The guidance goes two

ways, says Del Giudice. By working with his PepsiCo colleagues, he has discovered that the psychological details he finds fascinating may not interest business leaders, who are primarily focused on getting business results. Gradually, he has honed his ability to approach problems through that lens.

“I consider it a privilege to work with leaders,” says Del Giudice. “They wield a significant amount of influence over the lives of those who work with them. I believe that helping leaders create a positive work environment is not only good for business, it’s also a moral imperative.” ■

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AN ALLY FOR BUSINESS LEADERS

Taylere Joseph uses her psychology expertise to help top executives be more effective in their jobs

BY HEATHER STRINGER

One of the main lessons Taylere Joseph, PhD, imparts as an executive coach at Berman Leadership Development in New York City is the need to ditch the dichotomous belief that executives are either “good” or “bad” managers. “This type of thinking tends to put a value judgment on someone’s worth, which can lead people to focus on their deficits,” Joseph says. Instead, she teaches leaders to recognize their strengths and opportunities for growth and how to work effectively with others, and this new self-knowledge helps managers achieve their goals. ¶ Pharmaceutical companies, financial firms, nonprofits and a range of other organizations

seek out coaches to help struggling executives or to enhance leadership skills for top performers. Although change takes time, Joseph sees the fruit of her coaching when her clients’ colleagues report they are seeing improvements, such as in bosses who have become more approachable or leaders who are more confident. Clients have shared that these subtle changes can lay a foundation for greater productivity, profitability and job satisfaction—improvements that can ultimately boost their organizations’ bottom line.

What is a typical example of how you help a struggling leader?

I worked with a C-suite executive who had a habit of taking on everything herself rather than delegating, which was limiting her effectiveness as a leader. Based on interviews with direct reports, bosses and peers, I also learned that she seemed to lack confidence, which

affected the way she led presentations at events like board meetings. She was often overly apologetic for her ideas and sometimes defensive when people asked questions.

She was one of the younger members of the executive team and felt unsure whether she was filling her predecessor’s shoes. To help her feel more confident, I challenged her assumptions about not being qualified and asked her to reflect back on her achievements and successes. I also encouraged her to take more risks to assert herself as a leader.

As she started to believe that she deserved to be in the role, we talked about strategies she could employ to reflect this belief. At board meetings, she could see presentations as an opportunity to relay information rather than looking for permission for her ideas. When she expressed concern about delegating because she might have to correct someone’s work, we brainstormed how to



decide when things were good enough to move forward. She now feels more willing to assert herself and is more satisfied with her impact in the organization.

What challenges do you face in your job?

One challenge is that companies usually want to see changes faster than people can change, so I try to set appropriate expectations about the time it takes to build new behavior. I may start by meeting a client twice a month for six months, and when the organization sees signs of progress during that time, this builds trust and they often agree to continue.

Another challenge is that the business world keeps changing, so I have to adapt. It’s important for me to understand the

ROBERT ADAM MEYER



context my clients are working in, so I am constantly reading publications like the *Financial Times* or *Harvard Business Review*, and I also completed a business strategy certification program through Cornell University.

One of the most stressful changes in today's business climate is the lessening of job security. In the past, most companies were striving to stay around for the long term, but now more organizations are hoping to be acquired to increase their financial worth, while others fear being bought by larger companies because this can decrease their control of the business. For example, I coached a director-level leader at a company who was managing team members who were worried they

might lose their jobs in an upcoming reorganization. She felt it was important to give people an opportunity to express their feelings, but team meetings started to turn into group therapy sessions. We talked about how she could show support without enabling helplessness by setting time limits for sharing, focusing on the work and staying optimistic as a leader.

What led you to the field of executive coaching?

After I earned an undergraduate degree in humanistic psychology, I worked as an executive administrator for the CEO of a start-up company, and I noticed a lot of dysfunction in the executive team. I was searching for answers to help me navi-

gate this situation, and I discovered "The Fifth Discipline" by Peter Senge. The book helped me see that the dysfunction was the result of how people were interacting with one another within the organizational system rather than a lack of technical or business skills. At that point, I wanted to pursue a career that would allow me to leverage psychological insights to help companies function better.

So, I earned a master's degree in marriage and family therapy to lay the foundation for a systems way of understanding dyads and group dynamics. Then I worked as a therapist while earning a doctorate in organizational psychology at the California School of Professional Psychology in San Francisco.

After graduating in 2012, I got a postdoc at Leadership Worth Following in Irving, Texas, a company that offers executive assessment and coaching. It was exciting to see how assessments could help big-name leaders understand their behavior better and drive changes that made them more successful.

How did you get the job you have now?

I moved to New York after completing my postdoc and started interviewing for executive coaching roles, but the organizations were looking for people with 10 or more years of experience. I networked with a psychologist friend in the area, and she suggested that I join the communications committee. Bill Berman was heading for APA's Div. 13 (Society of Consulting Psychology). He eventually hired me as a contract writer,

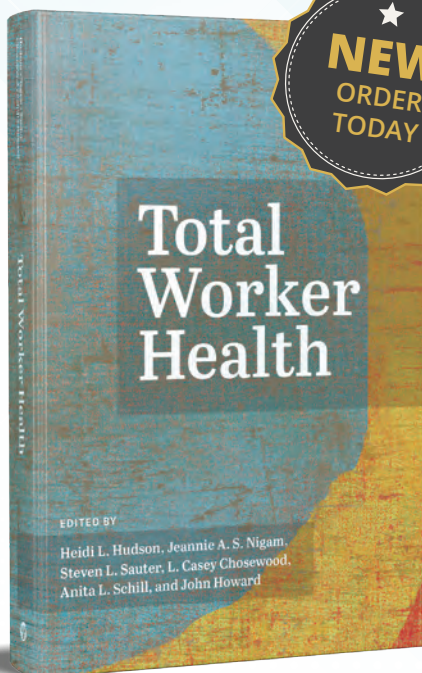
and I started writing reports for his client engagements, which included interviews and assessments. Three months later, I was asking him for feedback on a report when he said, "You want to know how much I like your work? I'd like to hire you." I became his first full-time employee in 2015. He also partners with numerous adjunct consultants who work with clients throughout the country.

What do you enjoy most about your job?

Work climates can be pretty competitive and feel like a "Game of Thrones," so it's rewarding being someone who can be on a leader's side. For example, I was working with a leader who wanted coaching because he was concerned about feedback from his team. People found him argumentative, reactive and difficult to approach. After working with this client,

I could see that he would benefit from additional support outside the scope of executive coaching, so I referred him to a therapist. He and I worked on new ways to manage his reactions. Rather than taking it personally when employees were late finishing a task, he adopted a solutions-oriented approach. He learned to ask questions to understand why direct reports or peers were delayed with deliverables and tried to help solve the problem. The changes he made in his behavior were so noticeable that the CEO of the organization said he was an ideal example of the power of coaching, and he was promoted.

I love facilitating success that people may not have achieved on their own, because these soft skills are not necessarily taught in business school, law school or other professional training programs. ■



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Nadal



Van Dahlen

PSYCHOLOGISTS IN THE NEWS

Stephen Gillaspay, PhD, APA's new senior director for the Office of Health Care Financing, is leading the association's strategy for improving the public's access to health care and ensuring that psychologists are fairly compensated for their services. For the last three years, he has served as an APA adviser to the American Medical Association's Relative Value Update Committee, which helps set reimbursement rates for psychological services. Gillaspay comes to APA from the University of Oklahoma College of Medicine, where he was a professor and the director of the Pediatric Psychology Emphasis Area.

In June, former President Barack Obama (@BarackObama) retweeted to his 106 million followers a celebratory LGBTQ Pride Month photo and post by psychology graduate student **Jiwandeep Kohli** (@jiwandeepkohli). In the post, Kohli, a student in the San Diego State University/University of California, San Diego joint doctoral program in clinical psychology, wears a rainbow turban and writes: "I'm proud to be a bisexual bearded baking brain scientist. I feel fortunate to be able to express all these aspects of my identity, and will continue to work toward ensuring the same freedom for others." Obama's retweet

added: "You've got a lot to be proud of, Jiwandeep. Thanks for everything you do to make this country a little more equal. Turban looks great, by the way. Happy Pride Month, everybody!"

The National Center for Health Research has named **Cristina Muñiz de la Peña, PhD**, a Health Policy Hero for her work helping immigrant families separated at the U.S.-Mexico border. She is a co-founder and the mental health director of Terra Firma in New York City, a program that provides medical, mental health and legal services to immigrant children who were separated from their parents at the border or who traveled to the United States without a parent. In addition to her work at Terra Firma, Muñiz de la Peña has visited immigrant detention centers to document conditions and testified before a congressional committee on the traumatic impact on children of the family separation policy.

GREAT WORK, APA WINNERS!

APA and the American Psychological Foundation presented awards to 27 people during APA 2019 in Chicago. See who won at <http://bit.ly/APAHonorees>.

Kevin Nadal, PhD, has won the Richard Tewksbury Award for Advocacy Work from the Western Society of Criminology for shining a spotlight on hate crimes that target the LGBTQ community through his research and his work with local law enforcement groups. Nadal is a psychology professor at John Jay College of Criminal Justice. He served for seven years as a mental health trainer for the New York Police Department and has consulted with the department on LGBTQ-affirmative training.

The White House has appointed **Barbara Van Dahlen, PhD**, to serve as the executive director of the Presidential Task Force established by President Trump's March 2019 Executive Order to End Veteran Suicide. The task force is responsible for creating the President's Roadmap to Empower Veterans and End the National Tragedy of Suicide and will include a community integration and collaboration plan, a national research strategy and an implementation effort in order to end veteran suicide in the United States. Van Dahlen is the president and founder of Give an Hour, a network of 7,000 mental health professionals who provide free mental health services to U.S. service members, veterans and their families. ■

A PILL TO TREAT ADDICTION

Finding new ways to treat alcohol and substance use disorders is top of mind at the UCLA Addictions Lab

BY KIRSTEN WEIR



More than 6% of U.S. adults have alcohol use disorder, according to the National Institute on Alcohol Abuse and Alcoholism—that's more than 15 million people. Odds are, you know some of them.

Yet even though alcohol misuse is common, many people are unaware of the treatment options—even health-care providers. Behavioral treatments play an important role for many people, but they aren't the only choice. Several prescription med-

ications have been approved to treat alcohol use disorder. While they aren't perfect, they can help people resist the urge to drink. Still, the medications aren't well known or widely prescribed, says Lara Ray, PhD, a professor of clinical psychology at the University of California, Los Angeles (UCLA) who studies the clinical neuroscience of alcohol and tobacco addiction, and a 2017 recipient of an APA Distinguished Scientific Award for an Early Career Contribution to Psychology.

Dr. Lara Ray's lab works to understand the brain mechanisms that underlie alcohol addiction and treatment.

To find treatments that work for more people, Ray's UCLA Addictions Lab integrates clinical psychology, pharmacology and neuroscience to explore the underlying mechanisms of addiction and how medications might upend them. She uses a range of methods including neuroimaging, behavioral genetics, measures of inflammation and pharmacological tools to understand addiction.

Her hope is to push the science of addiction out of the lab and into the world, where it

YACOBCHUK/GETTY IMAGES

can make a difference in people's lives. "I'm passionate about filling [the gaps] in knowledge, but also trying to put forth the science we have so that people can start to benefit now, and not 30 years from now," she says.

THINKING CLINICALLY

Ray became interested in alcohol dependence early in her training. After finishing her undergraduate degree in psychology at San Diego State University, she took a job at the University of California, San Diego, helping with a study of the genetics of alcohol use disorder. "I was interviewing families who had a loved one affected by alcoholism, and I could see the impact of this disease on the individuals and their families," she says.

She went on to earn a PhD in clinical psychology at the University of Colorado Boulder in 2007, where she studied the effects of the drug naltrexone on alcohol sensitivity. Naltrexone is perhaps more commonly known as a medication to treat opioid dependence, but it is also approved for treating alcohol use disorder. After a clinical internship and postdoctoral fellowship at Brown University Medical School, Ray joined the UCLA faculty in 2008. Today, she continues to study naltrexone and other medications for treating alcohol dependence and other substance use disorders.

At first glance, medication development might not seem like a natural fit for a clinical psychologist—but Ray explains why it's important that psychologists play a role in such research. "In my lab, I try to

put the 'clinical' in 'clinical neuroscience,'" she says. "I'm committed to thinking clinically about who's likely to benefit from a treatment, how it's delivered in the real world and what clinicians need to know to be more effective in their treatment of addiction."

Naltrexone works by blocking receptors in the brain that are involved with cravings and feelings of reward. It's an effective tool for some heavy drinkers, but a literature review by Ray and her colleagues found that the effect sizes in studies of naltrexone treatment are relatively modest (*CNS & Neurological Disorders—Drug Targets*, Vol. 9, No. 1, 2010). One likely reason for that? Not all types of alcohol use disorder are governed by the same brain mechanisms.

Broadly speaking, people with alcohol use disorder fall into two categories. "Reward drinkers drink to feel good and get a lot of positive reinforcement from drinking," Ray says. Relief drinkers, by contrast, drink to ease withdrawal symptoms or counteract negative mood. "We think the relief drinkers are further into their addiction, or came to their addiction through a different pathway," she says. "These two distinct pathways may be useful clinically to identify the best treatment options."

Some research suggests naltrexone might work better in those who are driven by reward rather than relief, Ray says. In current work, her team is exploring whether they can find a way to measure that reward drive through patient self-report, and validate the measure through

neuroimaging. "We're trying to deliver something that's clinically useful," she says.

DISENTANGLING DRINKING AND SMOKING

She's also investigating whether combining naltrexone with other medications can be helpful for people who both drink alcohol and smoke cigarettes. About 25% of regular smokers are also heavy drinkers, and people who drink more have a harder time quitting cigarettes. Using both substances increases the risk of developing functional impairments and several types of cancer, beyond using one or the other alone.

To learn more, Ray and colleagues enrolled 130 non-treatment-seeking men and women who drink heavily and smoke in a double-blind controlled laboratory trial. Some participants took naltrexone, and others received varenicline (also known as Chantix), a prescription medication for smoking cessation. A third group received both medications, and a fourth took a placebo. The team found that the combination of the medications was more effective than either drug alone at reducing cravings for both alcohol and cigarettes, and those in the combination group used less alcohol and smoked fewer cigarettes during the two-week study period (*Psychopharmacology*, Vol. 231, No. 19, 2014). When participants were presented with smoking-related stimuli, those in

RESEARCH FOCI

The UCLA Addictions Lab is:

1

Exploring the mechanisms that underlie alcohol and tobacco use disorders

2

Testing new, targeted medications for treating addiction

3

Investigating genetic and immune markers related to alcohol use disorder and treatment response

4

Using neuroimaging tools to refine laboratory paradigms for studying alcohol use disorder

● "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."

the combination group showed decreased activation in the anterior cingulate, a region of the brain associated with cognitive processes including reward-based decision-making (*American Journal of Drug and Alcohol Abuse*, Vol. 41, No. 1, 2015).

Following from those experimental studies, Ray and her lab team designed a trial to further study the medications, this time in 274 heavy-drinking smokers who were seeking treatment for substance use. Participants were randomly assigned to receive 14 days of either naltrexone, varenicline or both, in addition to counseling for smoking and drinking. Ray's team followed the participants for 26 weeks to measure smoking prevalence and alcohol consumption. They're just wrapping up the trial now, but hope the study will help clarify the role of these medications in smoking cessation and alcohol use.

There are many more open questions about how to address the combined use of alcohol and tobacco, says Ray's third-year clinical psychology graduate student ReJoyce Green, whose research focuses mostly on

tobacco use. If someone smokes and drinks alcohol, is it best to try to quit both at once? Or should the person focus on one habit at a time? If so, which one? "There are high rates of co-use between these substances, and there's a lot of demand to disentangle these behaviors," Green says.

A ROUTE TO THE REAL WORLD

Like the study of smokers and drinkers, many of Ray's projects follow a trail from controlled laboratory studies to real-world clinical trials. "I like to start with an experimental psychopharmacology approach," she explains. In the lab, she can control whether participants smoke, how much they drink, if they take the medication as prescribed. "We do very controlled experiments to understand whether a treatment might be useful. If we find support, we move forward into clinical trials that can hopefully change the way treatments are delivered in the real world," she says.

In another example of that trajectory, she and her team are studying a drug called ibudilast, which is not yet approved in the



People who drink more have a harder time quitting cigarettes.

FURTHER READING

Elucidating the Effect of a Brief Drinking Intervention Using Neuroimaging: A Preliminary Study

Grodin, E.N., et al.
Alcoholism: Clinical and Experimental Research, 2019

Neurobiology of Craving: Current Findings and New Directions

Ray, L.A., & Roche, D.J.O.
Current Addiction Reports, 2018

Alcohol Treatment Navigator

National Institute on Alcohol Abuse and Alcoholism

United States, though it's used in Asia to treat asthma. Ibudilast is a neuroimmune modulator that decreases inflammation—not only in the lungs but also in the brain. Chronic alcohol use leads to sustained neuroinflammation throughout the brain, Ray explains. That neuroinflammation, in turn, may contribute to alcohol-seeking behavior.

In a controlled laboratory study of people with alcohol use disorder, she found that ibudilast reduced overall alcohol cravings and improved mood when participants were exposed to stress- and alcohol-related cues—particularly in participants with symptoms of depression. She also found that when participants were administered alcohol, "the medication really seemed to blunt the rewarding effects of alcohol, especially in people who have some level of depressive symptoms," she says (*Neuropsychopharmacology*, Vol. 42, No. 9, 2017).

Now, she's enrolling patients for a 12-week clinical trial of ibudilast that will assess whether the medication reduces drinking. Ray's team will also investigate biomarkers of inflammation in the blood and the brain. If the trial shows that ibudilast is more effective than a placebo at controlling alcohol cravings and use, Ray says, such biomarkers might one day be used to identify which patients are most likely to respond to the treatment.

In one component of that project, postdoctoral researcher Erica Grodin, PhD, is leading a two-week study comparing patients randomized to receive ibudilast with those randomized



Dr. Lara Ray, second from right, and her UCLA Addictions Lab team.

to receive a placebo. She'll collect daily diary information from participants about their alcohol cravings, drinking behavior, activities and mood. She'll also measure brain activity with fMRI while participants view pictures of alcoholic and nonalcoholic drinks. "We want to see if ibudilast is able to dampen that reward response to alcohol-related images," Grodin says.

Through these studies, the team hopes to explore the medication from many angles: Will the treatment reduce drinking? Improve mood? Change markers of inflammation? Alter the brain's response to alcohol cues? The goal isn't just to find an effective treatment, but to understand how it works. "The idea is to really understand the mechanisms behind any clinical outcomes we see," Ray says.

TREATING PATIENTS AND TRAINING STUDENTS

Ray's commitment to improving outcomes for real people extends to her clinical work. She spends a half day each week seeing

patients and overseeing clinical graduate students who treat patients in the UCLA Addiction Medicine Clinic. She has also treated patients as a psychologist in a primary-care setting. "That has really shaped my understanding of how care is delivered on the front lines," she says.

That hands-on experience also helps her guide students to view their research through a human lens, says graduate student Aaron Lim. In his four years in the lab, Lim has gotten used to learning—and juggling—a lot. "The research has been pretty fast paced, but the diversity of projects has made me a better addiction researcher and a better clinician, too," he says.

The UCLA Addictions Lab is a bustling place. In a typical year, Ray works with about five graduate students, 10 undergraduates, a postdoc or two, and often some neuroscience graduate students who split their time between her lab and others on campus. She also has four or five full-time staff who help run the studies—many of whom are recent UCLA

graduates who plan to apply to graduate school or medical school. "So, I see them as folks I'm mentoring as well," Ray says.

These days, she's able to offer more mentoring, thanks to her 2018 Midcareer Investigator Award in Patient-Oriented Research from the National Institute on Alcohol Abuse and Alcoholism. The award supports her efforts to conduct patient-centered alcohol research while carving out more time to guide students, postdoctoral fellows, psychiatric residents and junior faculty. With support from the award, for instance, she developed a summer program for undergraduates from under-represented groups who are interested in addiction science.

Ray tries to model for her students that an academic career can be extremely satisfying. "Academic life isn't always conveyed in the most positive way, but I think I have a fantastic job. We get paid to think and test hypotheses and talk to and train smart people every day," she says. "There are a lot of wonderful perks in this job."

But it's not just about the perks. Ray is driven to answer important questions about addiction, and more broadly, about the human mind. "I'm especially interested in pursuing concepts of habit, reward learning and constructs of relief or negative reinforcement," she says. "One of the big questions that I'm hoping to answer in the long term is: Which principles from addiction neuroscience translate generally to the human condition—and how can we use them to improve clinical care?" ■

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MORE TEENS ARE TRYING E-CIGARETTES

Earlier this year, the U.S. Food and Drug Administration announced new regulations restricting the sale of flavored e-cigarettes to teenagers. Here's why.

20.8%

The percentage of U.S. **high school** students who used an e-cigarette in the past month in 2018, according to the National Youth Tobacco Survey. That's up from **11.7%** in 2017 and **1.5%** in 2011.

4.9%

The percentage of **middle school** students who had used an e-cigarette within the past month in 2018, up from **3.3%** in 2017 and **0.6%** in 2011.

641%

The one-year increase in sales reported by **JUUL** Labs Inc., the leading manufacturer of e-cigarettes, between 2016 and 2017—from **2.2 million** to **16.2 million** devices.

Sources: Cullen, K.A., et al. (2018). Notes From the Field: Use of Electronic Cigarettes and Any Tobacco Product Among Middle and High School Students—United States, 2011–2018. *Morbidity and Mortality Weekly Report*, 67, 1276–1277. DOI:10.15585/mmwr.mm6745a5.
King, B.A., et al. (2018). Electronic Cigarette Sales in the United States, 2013–2017. *JAMA*, 320(13), 1379–1380. DOI:10.1001/jama.2018.10488.



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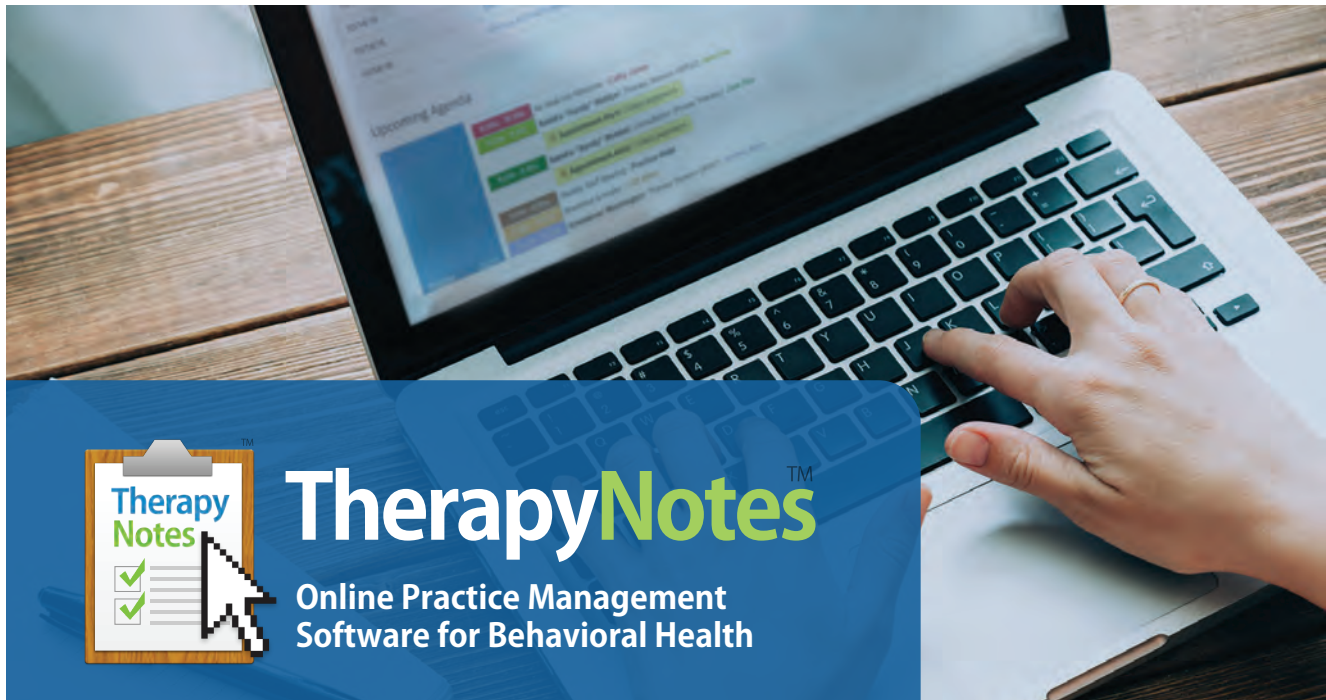
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11:30AM Appt with Kyle
Called in to say he may be a little late

12:00PM Appt with Susan
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Evaluation
Progress Note
Treatment Plan

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F40.10 Social Anxiety Disorder
F41.0 Generalized Anxiety Disorder
F41.8 Other Specified Anxiety Disorder

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Treatment Goals:

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