SEPTEMBER 2025

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The Hot List

Resources, opportunities, and news for psychologists from APA



THAI LIANG LIM/GETTY IMAGES

HEALTH ADVISORY

Prioritizing Health and Safety in Teens' Use of AI

APA's new health advisory, *Artificial Intelligence and Adolescent Well-being*, offers recommendations on setting healthy boundaries with artificial intelligence (AI) that simulates human relationships, AI use that promotes healthy development, limiting engagement with harmful content, and the power of AI literacy. Review the recommendations at

www.apa.org/topics/artificial-intelligence-machine-learning/health-advisory-ai-adolescent-well-being

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PROFESSIONAL GUIDANCE

Career Transitions

Career Transitions is a new resource for psychologists facing employment transitions and personal career challenges. Find events, articles, and webinars on topics such as shifting from academia to industry, consulting, networking, maintaining well-being, preventing burnout, and more. The hub also provides job listings, virtual hiring events, and networking opportunities. Unlock the insights at

www.apa.org/education-career/job-search/market/transitions

NAVIGATING CHANGE

Professional Resilience in Changing Times

This new webinar series offers strategies for psychologists facing career shifts, employment disruptions, and supporting clients through job uncertainty. Learn to boost your resilience during interviewing, career changes, retirement, and more. Register at

www.apa.org/education-career/training/professional-resilience-series

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www.apa.org/education-career/training/science-training-sessions

COACHING FOR SUCCESS

New Guidance on ADHD

The updated *ADHD Coaching: A Guide for Mental Health Professionals* offers step-by-step guidance for teaching adults, college students, and adolescents how to manage the emotional and interpersonal struggles that may arise from attention-deficit/hyperactivity disorder (ADHD). It covers challenges like time management, organization, and goal-setting and offers guidance on launching a successful ADHD coaching practice. Get the guide at

www.apa.org/pubs/books/adhd-coaching-second-edition

PICK OUR NEXT LEADER

Vote for the Next APA President

APA members are voting for APA's 2027 president from August 1 to September 15. APA will send members the ballot via email. You can find candidates' answers to members' questions at

www.apa.org/about/governance/elections/president-elect-candidates

SMART PRACTICE

Ethical Use of AI in Practice

APA's new *Ethical Guidance for AI in the Professional Practice of Health Service Psychology* offers practical recommendations to integrate artificial intelligence–driven tools into your practice while safeguarding your patients' well-being and trust. Download the guide at

www.apa.org/topics/artificial-intelligence-machine-learning/ethical-guidance-ai-professional-practice

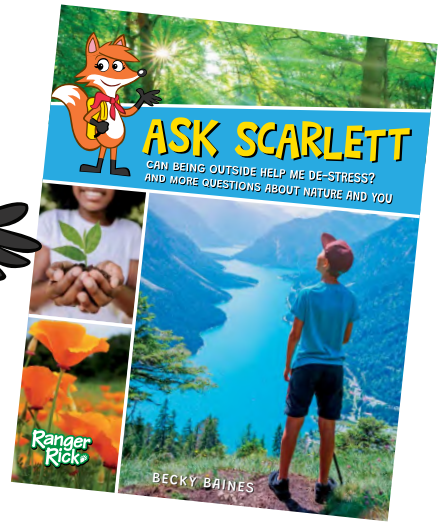
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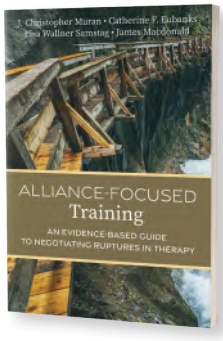
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New Releases from APA Books

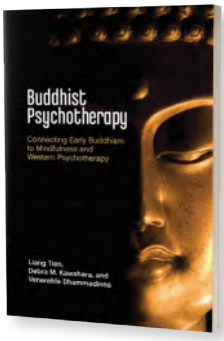


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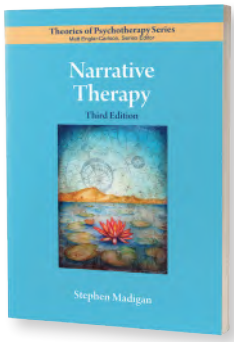


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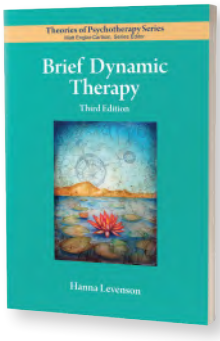


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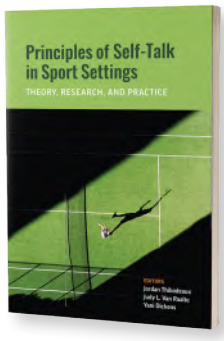


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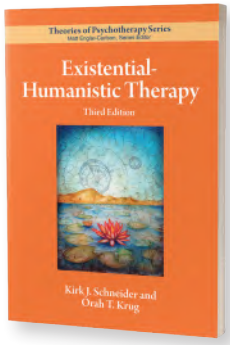


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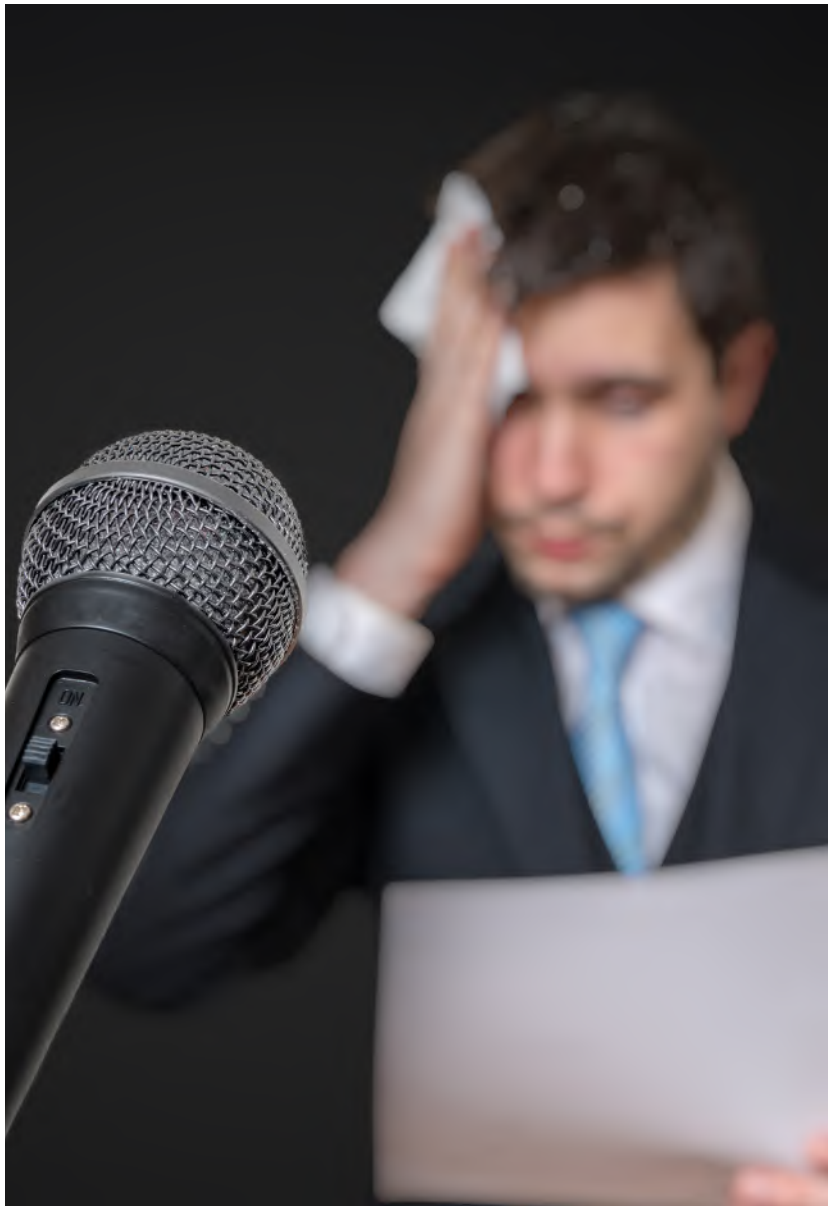
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Researchers in the field of neuroaesthetics are learning what happens in the brain when we experience art and how to unleash that power for health, well-being, and social change.



62 The Promise of Precise, Personalized Mental Health Care

Researchers are harnessing the power of coordinated, individualized tools—brain imaging, genetic profiling, health history, and more—to determine the best approaches to mental health care.



46 In Search of Courage *(cover)*

Courage is a virtue that is universally admired yet difficult to study. Researchers are discovering why some people act despite fear—and how values, anger, and deliberate practice can build bravery in us all.

ON THE COVER: In September 2020, a firefighter prepares to battle the Bobcat Fire threatening California's Monrovia Canyon Park, with its historic observatory and vital broadcast towers.

CONTENTS



MANAGING COUNTERTRANSFERENCE

Countertransference, a therapist's emotional and cognitive reaction to a patient, can arise in any form of psychotherapy. When examined thoughtfully, these emotional responses can deepen clinical insights and improve patient outcomes. The art of managing countertransference lies in knowing whether, when, and how to address it with a patient (see page 40).

@APA

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Democracy in Action

APA 2025 opening keynote showed the power of responsible citizenship



Dr. Kawahara is the 2025 APA president and associate dean for academic affairs and distinguished professor at the California School of Professional Psychology, Alliant International University.

BY DEBRA KAWAHARA, PhD

APA 2025'S CONVENTION THEME beautifully captured the spirit of collective insight and transformative action. "Perspectives Power Possibilities" reminds us that when diverse perspectives are honored and harnessed, they become catalysts for innovation, healing, and justice. At the opening keynote at APA 2025 in Denver in early August, Eric Liu outlined responsible citizenship, setting a resonant tone for the gathering, especially as his work with Citizen University emphasizes civic empowerment rooted in dignity, agency, and shared purpose.

Liu reframes citizenship not as a passive position or obligation but as a shared opportunity to co-create the world we want to see. It is the conscious use of one's voice, values, and power to shape a more just and compassionate society. His call-to-action centers on three essential acts of engagement:

- **Show up**—Be present in the spaces where decisions are made and communities are shaped.
- **Listen deeply**—Seek understanding across difference, with humility and empathy.
- **Act together**—Recognize that lasting change is forged through collective effort, not individual heroism.

These principles resonate deeply with psychology's commitment to human rights and ethical responsibility. So, what does responsible citizenship look like in our field?

1. **Stay informed:** The APA/APASI Response Center is a vital hub for real-time updates on policy, advocacy, and psychological science. In a rapidly shifting landscape, staying current allows us to respond with clarity, courage, and care.

2. **Share your voice:** Whether through scholarly writing, public commentary, or personal storytelling, your lived experiences and professional insights can shift narratives and expand public understanding. Your voice matters—and it can move hearts as well as minds.

3. **Engage policymakers:** The data tell part of the story; human experience enriches it. When we speak to legislators, our stories bring life and the impact on real people into the science of psychology, illuminating the realities of those we serve.

4. **Show up locally:** Town halls, school board meetings, community forums, and the ballot box are where democracy is enacted. Your presence and perspective can influence decisions that ripple outward.

5. **Partner with purpose:** Advocacy organizations amplify our reach and deepen our impact. Collaborating with them ensures that our efforts are strategic, sustained, and grounded in community wisdom.

In Liu's words, "you're more powerful than you think." Responsible citizenship is not about perfection—it's about participation. It's about showing up with intention, listening with compassion, and acting with others to build a future rooted in equity, resilience, and hope. ■



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Perspectives Power Possibilities

APA 2025 charts the path forward



Arthur C. Evans Jr., PhD, is the chief executive officer of APA. You can follow him on LinkedIn.

BY ARTHUR C. EVANS JR., PhD

THIS AUGUST IN Denver, thousands of psychologists came together at APA 2025 to reflect, reconnect, and reimagine. The theme, "Perspectives Power Possibilities," was a call to action and a celebration of what psychology can offer in this moment of global uncertainty and generational change.

Over 3 full days, across hundreds of Main Stage programs, scientific symposia, CE workshops, advocacy panels, networking events, and governance meetings, presenters and attendees showcased the breadth and depth of our field. From supporting youth mental health, to shaping the development of AI, to addressing polarization in our communities, our conversations highlighted the importance and urgency of our profession and discipline to meet this moment.

It becomes more evident every day that psychology is relevant to nearly every issue we face as a field and society at large. We are researchers uncovering ways that people can inoculate themselves against misinformation. We are clinicians guiding people through complex journeys toward healthier, more fulfilling lives. We are applying knowledge about effective leadership and teamwork across organizations and industries. Our collective work continues to expand the possibilities of what psychology can do—and who can benefit from it.

The APA 2025 Main Stage sessions reinforced this momentum. They reminded us that while our roles and specialties may differ, we are united by a deep commitment to advancing human well-being and a shared drive to make a meaningful impact. Across generational, political, and social divides, we saw psychology's power to restore trust, shape public policy, and create a more equitable future. We also saw psychology's ability to fuel systems change and remind us that this often starts with small, local actions rooted in our professional expertise.

Convention is a moment, but APA's mission is ongoing. The perspectives we hold matter. The power we can have as a discipline is immense. And the possibilities we imagine—when grounded in our science and guided by our values—can truly transform lives.

Thank you for the work you do every day to advance psychology and improve the human condition. ■



DOWELL/GETTY IMAGES

Beliefs About Mental Health Have Evolved, but Stigma Remains

Although most Americans say there is no shame in having a mental health disorder, about a third carry judgment about those with mental illness and most think mental illness is still stigmatized—an unexplained disconnect

BY TORI DEANGELIS



RUDZHAN NAGIEV/GETTY IMAGES

88%

Percentage of U.S. adults who say that having a mental health disorder is nothing to be ashamed about, with **83%** saying they are generally comfortable talking about their mental health.

84%

Percentage of U.S. adults who think the term "mental illness" still carries a **stigma**. Similarly, **35%** of adults say they would **view someone differently** if they discovered that person had a mental health condition.

55%

Percentage of U.S. adults who cited **feeling emotionally safe** as the reason they chose to share their mental health struggles with someone else, with **54%** saying that **experiencing relief** was why they shared their struggles.

Sources: Harris/APA Poll conducted April 18–25, 2025, with 1,076 U.S. adults ages 18 and older. Available at https://theharrispoll.com/briefs/mental-health-awareness-month-key-findings-on-u-s-attitudes-and-barriers-to-care-2/.

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In Brief

COMPILED BY CHRIS PALMER, PhD



People may experience jealousy when their celebrity crush enters into an actual romantic relationship.

TERO VESALAINEN/GETTY IMAGES

Parasocial jealousy toward real-life 'rivals'

People in parasocial romantic relationships—one-sided romantic attachments to celebrities—can experience jealousy when the targeted individual begins a real-life romance, particularly with a partner who looks different from the admirer, according to research in *Psychology of Popular Media*. Researchers asked 309 participants in the United States who were in a parasocial romantic relationship with a celebrity who recently started a new real-life relationship to rate the strength of their attachment, their level of parasocial jealousy, and how similar they felt to the romantic "rival." They were also asked the degree of threat they felt about the potential (1) loss of benefits from the relationship, (2) damage to self-esteem, and (3) end of the imagined relationship. The researchers found stronger parasocial romantic relationships were linked to higher levels of jealousy. Jealousy levels in those cases were higher when the participant had a higher degree of fear that the relationship might end. And participants who felt that the rival was unlike them were more afraid that the relationship was over.

DOI: https://psycnet.apa.org/record/2025-79561-001

Rooting against winning team stings more

In contests between two parties (political candidates, sports teams, awards contenders), fans of the losing side are more upset when they strongly oppose the opponent than when they are more invested in supporting their candidate or team, suggests research in the *Journal of Personality and Social Psychology*. Researchers examined several datasets that captured how 12,830 participants in the United States reacted to losses in political or sports domains. Some participants described their preference as opposition to the other side rather than support for the preferred choice. Their preference was no stronger than that of those who framed their preference around support of a side, but they did experience significantly more negativity than the supporters did when their side lost. That negativity manifested as disengagement, retaliation, or trash-talking the people whom they perceived to be responsible for the disappointing result.

DOI: https://psycnet.apa.org/fulltext/2025-84315-001.html

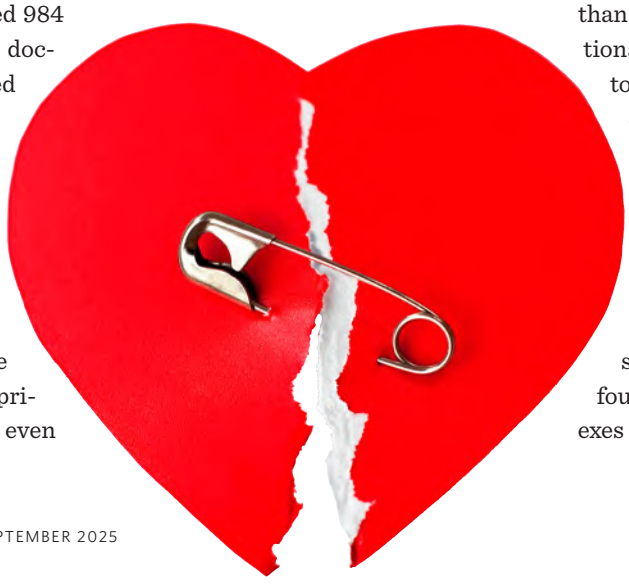


Whether in sports or politics, losing hurts more when you strongly oppose the winning side.

Clinical trainee burnout hinders self-care

Clinical psychology trainees feel burned out and struggle to make time for self-care, according to a study in *Training and Education in Professional Psychology*. Researchers surveyed 984 trainees in clinical psychology doctoral programs across the United States and Canada. Trainees reported suffering from high rates of burnout, especially emotional exhaustion. Most felt they had adequate time for self-care and reported that faculty in their programs talked about the importance of work-life balance but did not actually prioritize it. These problems were even more acute for trainees who identified as non-White. Self-care is often framed as an individual competency that trainees are responsible for learning and achieving on their own. However, trainees indicated they believe that the demands placed on them may make self-care almost impossible.

DOI: https://psycnet.apa.org/fulltext/2025-66179-001.html



IAN HOOTON/GETTY IMAGES

Post-breakup attachment half-life

On average, it takes a little more than 4 years for a person's emotional attachment to an ex-partner to dissolve halfway and around 8 years for the bond to fade fully, suggests research in *Social Psychological and Personality Science*. Researchers interviewed 320 participants who had previously been in a long-term romantic relationship lasting at least 2 years. They found that emotional attachments to exes eventually faded, taking 4.18 years,



on average, after the breakup. For some people—especially those still in contact with their exes—the attachment bond never completely faded. Attachment bonds also persisted longer (more than a decade) for people who did not initiate the breakup, compared with fading more quickly for those initiating the breakup. Finding a new partner did not impact how long it took to get over an ex. Finally, participants who were more anxious and less avoidant in their general attachment styles maintained their attachments longer than others.

DOI: 10.1177/19485506251323624

Men are more open to psychological help than believed

Men and women alike underestimate how willing men are to seek help for depression, a perception that may discourage men from seeking help themselves, according to a study in *Sex Roles*. In the first of two studies, 2,042 participants rated their likelihood of seeking help from a doctor or a psychologist. The researchers found that men believed men were less likely to seek help than they actually were. Women were even

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Ethical and Effective Telepsychology: Applying the Updated APA Guidelines in Practice
September 4, 2025 at 12:00 pm and 2:00 pm ET
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Telepsychology has advanced rapidly, prompting significant updates to the APA's Guidelines for the Practice of Telepsychology. This two-part webinar series explores the 2024 revised guidelines in depth.

Alzheimer's Disease: Navigating New Research and Clinical Practice Developments
September 19, 2025 at 1:00 pm ET
CE CREDITS: **3.0**
Provides a research and practice update on Alzheimer's disease, with a focus on (1) new treatments, (2) diagnostic guidelines that rely heavily upon biomarkers and enable asymptomatic detection and diagnosis, and (3) growing prevention science.

Lifestyle/Functional Medicine to Modulate the Cell Danger Response for Better Mental Health
October 8, 2025 at 1:00 pm ET
CE CREDIT: **1.0**
Explores how lifestyle medicine—an evidence-based component of functional medicine—can be used by psychologists to downregulate the Cell Danger Response, a chronic cellular stress state linked to trauma, anxiety, depression, and other mental health conditions.

Work and Mental Health: What Every Clinical/Counseling Psychologist Needs to Know
October 24, 2025 at 1:00 pm ET
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Provides an overview of what clinicians need to know about the relationship of work and mental health and how clinical skills can ethically be applied to work concerns in psychotherapy.

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Young children whose mothers are highly affectionate with them are more likely to be open, conscientious, and agreeable as young adults.

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more likely to underestimate men's willingness to seek help. However, women accurately perceived that other women were equally willing to seek help as they themselves were. The second study, with 1,528 participants, indicated that men were less willing than women to tell friends and colleagues they sought help for depression, which could contribute to the misperceptions.

DOI: 10.1007/s11199-025-01574-6

Warm mothering matters

Affectionate mothering in early childhood may play a lasting role in shaping the personality traits that influence educational, professional, and health outcomes, according to a study in *American Psychologist*. Researchers examined data from a survey of 1,116 18-year-old British twins followed from birth. The analysis revealed that, across all sets of twins, higher levels of maternal affection were associated with greater openness, conscientiousness, and agreeableness. These findings held when adjusting for genetic and environmental influences. Even among identical twins raised in the same household, the twin who received more maternal affection was more likely to be open, conscientious, and agreeable as a young adult. These associations remained after controlling for early emotional and behavioral problems. In contrast, no links were observed between maternal affection and extraversion and neuroticism in the same household comparison, suggesting those traits may be better explained by shared genes or environment than by parenting.

DOI: https://psycnet.apa.org/fulltext/2026-02028-001.html

Infants and memory retrieval

Babies as young as 1 year old can form memories, according to research in *Science*, but these memories fade by adulthood. Researchers showed a series of previously unseen images to 13 younger children (4 to 9 months

old) and 13 older children (1 to 2 years old) and measured their brain activity using MRI scans. After, the children saw the images again, and the researchers used the time they spent looking at each one as an indicator of memory (i.e., if they looked longer, they likely remembered the image). An analysis of the MRI scans indicated that hippocampal activity was higher when the infants viewed the images that they later appeared to remember, indicating that they likely formed memories of those images. This result was clearer in the older infants. Additionally, only older infants exhibited activity in the orbitofrontal cortex, which plays a key role in memory-related decision-making and recognition. Given these results, the researchers suggest that mechanisms that operate after the encoding, and not the encoding process itself, might be responsible for preventing access to infancy memories later in life.

DOI: 10.1126/science.adt7570

CBT effectiveness varies by diagnosis

Cognitive behavioral therapy (CBT) is effective for most mental health problems, with smaller effects for issues like bipolar disorder and larger effects for disorders including post-traumatic stress disorder (PTSD), according to a study in *JAMA Psychiatry*. Researchers performed meta-analyses of 375 trials comparing CBT against control treatments. They found that CBT was associated with significant reductions in mental health problems, with small effect sizes for bipolar and psychotic disorders; large effect sizes for major depression, panic disorder, social anxiety disorder, generalized anxiety disorder, bulimia nervosa, binge eating disorder, and obsessive-compulsive disorder; and very large effect sizes for PTSD and specific phobias.

DOI: 10.1001/jamapsychiatry.2025.0482

Mood stabilizers may reduce suicide risk

Lithium and valproate may have significant anti-suicidal effects in patients with schizophrenia and bipolar disorder, according to a study in the *Journal of Psychiatric Research*. Researchers conducted a retrospective study that included 102,540 patients with schizophrenia and 96,336 patients with bipolar disorder who were diagnosed between 2007 and 2010. The researchers assessed the association between suicide mortality and recent prescriptions of clozapine, lithium, and valproate. They found that suicide rates per 100,000 person-years were 308.0 for schizophrenia and 285.1 for bipolar disorder. Lithium and valproate prescriptions were associated with about 40% lower suicide rates for both schizophrenia and bipolar disorder. Clozapine was associated with a lower likelihood of suicide in patients with schizophrenia but was statistically nonsignificant.

DOI: 10.1016/j.jpsychires.2025.03.045

Watched pots and underrated progress

The more frequently people monitor the progress of a process, the slower it seems to go, suggests research in the *Journal of Experimental Psychology: General*. In one experiment, researchers asked 132 undergraduate students in Spain to assume the role of a manager who checked the progress of employees rarely or frequently. Although employees had the same level of productivity, "managers" deemed those frequently assessed as less productive. Similar results were observed across several other experiments in various domains



(e.g., disease spread, investments, physical growth). This monitoring frequency effect persisted when financial incentives encouraged accurate progress measurements. However, effect size diminished when information about the size of an attribute (e.g., a person's height) was presented as a running total rather than as incremental changes since the previous measurement. The researchers explored two mechanisms to explain the effect—difficulty in keeping tracked information in memory and a failure to synthesize tracked information—and found experimental evidence only for the latter.

DOI: 10.1037/xge0001733

Imagine all the odors

Just as people can imagine images, they can also imagine odors, according to research in the *Journal of Experimental Psychology: Human Perception and Performance*. Researchers conducted two odor pair similarity experiments: one with 37 participants in Sweden who rated real-life pairs of 16 odors, including leather, rose, apple, licorice, and pineapple, and another with 2,023 online participants who rated odor pairs based solely on their labels. Participants in the odor-based group smelled pairs of real odors and made similarity judgments about each pair. The label-based group was presented with a target odor word (e.g., licorice) and four of the other odor words (e.g., leather, rose, apple, and pineapple) and rated how similar the target word's odor would be to each of the four other odors. The researchers observed that the ratings of the odor-based pairings were strongly correlated with ratings of the label-based pairings, indicating that imagining the odors was similar to smelling them. This result suggests people can create mental "images" of odors, similar to how they imagine visual content.

DOI: 10.1037/xhp0001292



DENEMMANUEL/GETTY IMAGES

In social interactions, men and women emote differently when they recall earlier sad experiences.

Sadness leaves emotional residue

People's sadness may "leak" through in subsequent social interactions—even if they try to hide it—and in ways that are different for men and women, suggests a study in *Emotion*. Researchers split 230 participants in the United States into same-gender dyads and had each participant recall a personal event. In the "sad" condition, one member of the dyad recalled an experience of deep sadness, while their future partner recalled a neutral experience. In the control condition, both people recalled neutral experiences. After the recall, the dyads participated in cooperative activities while electrocardiogram sensors captured participants' physiologic linkage—the degree to which one partner's sympathetic arousal predicted their partner's arousal in subsequent moments. Men recalling the sad experience were more engaged (smiling and gesturing more) than men in the control condition, and their partners showed stronger physiologic linkage to them. Conversely, women recalling the sad experience were less expressive (smiled less) than women in the control condition, and their partners showed weaker physiologic linkage.

DOI: https://psycnet.apa.org/fulltext/2025-80022-001.html

Only child brain

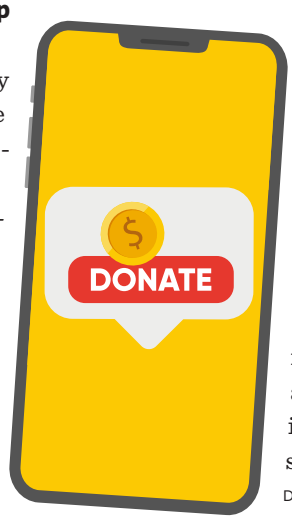
Research in *Nature Human Behaviour* suggests that children who grow up without siblings exhibit recurring patterns in their brain structure, neuronal activity, memory, and mental health, as well

as common behavioral characteristics such as cognitive, personality-related, and behavioral tendencies. Researchers used MRI to measure the brains of 2,397 pairs of Chinese adult participants with and without siblings who were well-matched across other variables. They also administered behavioral assessments and surveys about socioeconomic status and childhood experiences. The researchers found associations linking being an only child to higher language fiber integrity (or the degree to which the fiber tracts are undamaged), lower motor fiber integrity, larger cerebellar volume, smaller cerebral volume, and lower frontotemporal spontaneous brain activity. They also found that only children were more creative, reported higher life satisfaction, and were less impulsive and reward-dependent. However, these brain and behavioral outcomes are subject to modifiable factors, such as socioeconomic status, maternal care, and family support.

DOI: 10.1038/s41562-025-02142-4

A donation a day may keep depression away

Donating less than one penny a day may lessen depressive symptoms and increase emotional well-being, suggests research in *Psychological Science.* Researchers recruited 883 participants in China with depressive symptoms indicative of risk for clinical depression. Half of the participants received daily reminders to make daily donations of about $0.0014 for 2 months, while the other half did not. All participants completed weekly or monthly surveys measuring depression and emotional positivity. Donators showed significantly greater improvements in both depressive symptoms and emotional positivity compared with the other group. These improvements—in many cases showing at least a 50% reduction in depressive symptoms—emerged early in the study and were generally sustained over the 2 months. Increases in emotional positivity accounted for much of the improvement in depressive symptoms.



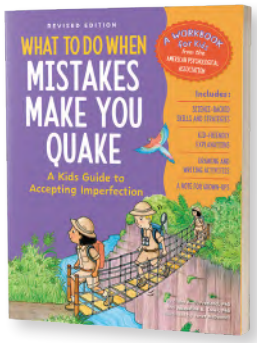
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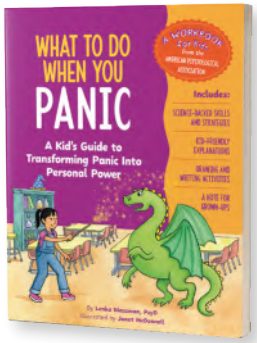
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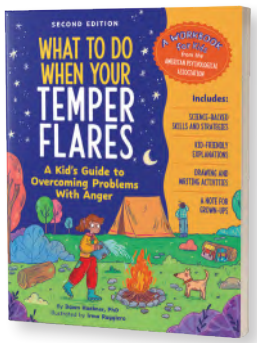
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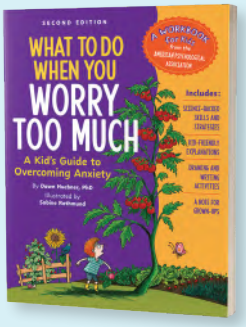
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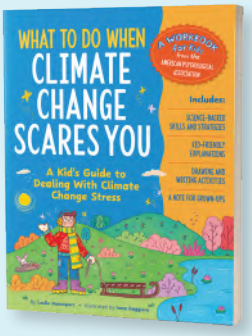
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Datapoint

News on psychologists' education and employment from APA's Center for Workforce Studies

Growth in Psychology Graduate Degrees Driven by Increases in Health Service Psychology Master's Degrees

Psychology doctoral degrees also grew, but much slower

CORY PAGE, MPH, MPP, KAREN STAMM, PhD, & MERON ASSEFA, MS

THE NUMBER of graduates earning master's and doctorate degrees in psychology increased from 2014 to 2023, with notable growth in master's degrees in health service psychology subfields. In 2014, U.S. colleges and universities awarded 28,500 master's degrees in psychology and 6,815 doctorate degrees. By 2023, these numbers rose to 38,033 master's degrees and 7,194 doctorate degrees.

From 2014 to 2023, the total number of psychology master's degrees awarded increased by 33%. While master's degrees in research subfields grew by 26%, master's degrees in health service psychology subfields grew by 39%. Over this same period, the total number of psychology doctorate degrees awarded increased by only 6%. Psychology doctorates in health service psychology grew by 2% and doctorates in research subfields grew by 10%. Interest in master's degrees in health service psychology could be driven by workforce transformation and expansion of practice pathways in psychology.

Figure 1. Number of Psychology Master's Degrees Awarded by Broad Subfield, 2014–2023

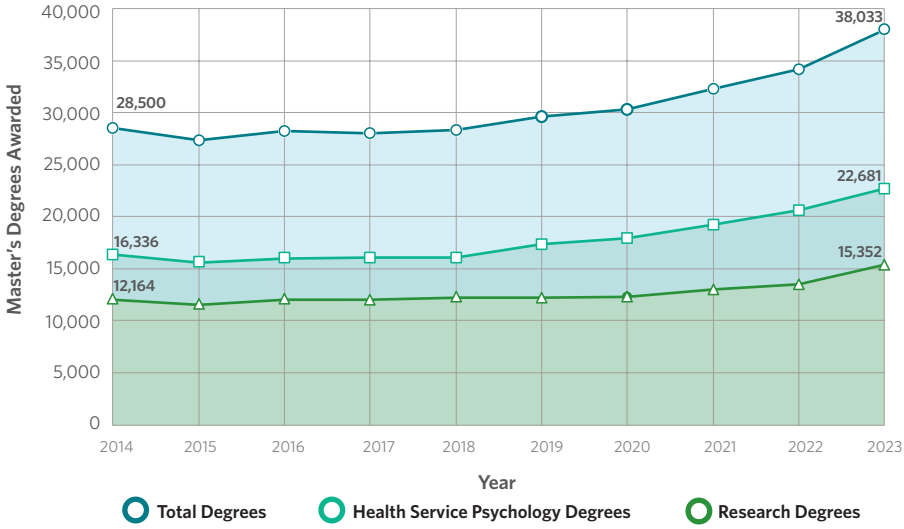
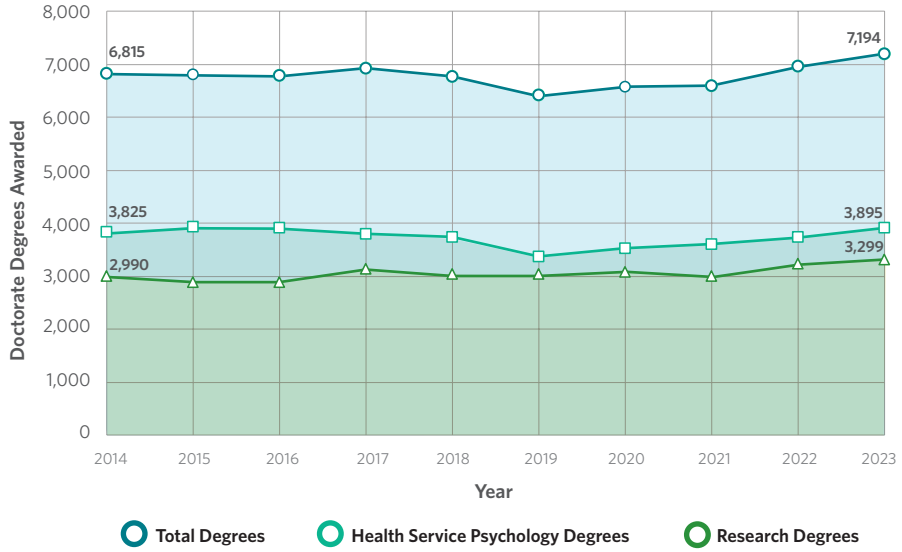


Figure 2. Number of Psychology Doctorate Degrees Awarded by Broad Subfield, 2014–2023



Want more information? See Center for Workforce Studies (CWS) interactive data tools at https://www.apa.org/workforce/data-tools or contact cws@apa.org.

SOURCE

American Psychological Association. (2024). *Degrees in psychology* [interactive data tool]. Retrieved March 25, 2025, from https://www.apa.org/workforce/data-tools/degrees-psychology

Note: Broad subfields (health service psychology and research) were defined based on Classification of Instructional Programs (CIP) codes. See https://www.apa.org/workforce/publications/2016-postsecondary-data/table-1.pdf for a crosswalk.

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Correcting Misinformation About Autism

Recent policy shifts have stoked fears of stigma and surveillance and have undermined crucial care

BY EFUA ANDOH

MONTHS OF SWEEPING changes by the current U.S. administration have prompted a surge of fear and uncertainty around autism. The combination of misinformation, harmful rhetoric, and concerning policy shifts has troubled psychologists who provide treatment and evaluations, conduct research, and serve as advocates. Last spring, Health and Human Services Secretary Robert F. Kennedy Jr. called autism a "rapidly growing epidemic" and alluded to an "environmental toxin" as its cause. He characterized autistic children as "kids who will never pay taxes, they'll never hold a job, they'll never play baseball, they'll never write a poem, they'll never go out on a date."

Despite the fact that Kennedy fast-tracked studies to pinpoint the "root causes of autism" by September 2025, overall federal funding for autism research was cut. Privacy concerns spiked in May when the National Institutes of Health (NIH) and Centers for Medicare and Medicaid Services (CMS) announced the launch of a "real-world data platform" that would share medical and wearable data of autistic enrollees with the studies' researchers.

AT A GLANCE

- Recent administration policies on autism are stoking misinformation, confusion, and fears about patient privacy.
- Psychologists have observed an upsurge in autism evaluation cancellations and medical record redaction requests.
- Clinicians should inform autistic patients of their privacy rights, particularly regarding use of their health data in research.

Amplifying the scientific consensus

APA and other organizations have pointed out that Kennedy's statements contradict scientific consensus around autism and reinforce harmful stereotypes about the autistic community. Increasing numbers of autism diagnoses reflect improved screening and diagnostic practices as well as increased public awareness (Shaw, K. A., et al., *Morbidity and Mortality Weekly Report*, Vol. 74, No. 2, 2025). Autism, clinically known as autism spectrum disorder, is not a diagnosis with a single cause (such as environmental toxins or vaccines) but a spectrum of neurodevelopmental differences that vary across individuals based on genetic, biological, and environmental factors (Froehlich, W., & Fung, L. K., *Psychiatric Times*, Vol. 29, No. 11, 2012).

According to the Coalition of Autism Scientists, researchers have discovered "hundreds of genes associated with autism" along with "environmental factors that may interact with genetic predisposition." The full range of genetic combinations and triggers are yet to be fully understood.

A recent twin study highlights this complexity. Researchers analyzed data from 366 identical twin pairs, including both autistic and non-autistic individuals (Castelbaum, L., et al., *Behavior Genetics*, Vol. 50, 2020). They found that in 96% of the pairs, both were autistic. However, there was variation in how disabling their autistic traits were. Twins with lower clinical impact were more similar in terms of their particular autistic traits than twins with higher levels of disability. This suggests that while genetics plays a strong role, individual experiences and environmental factors can shape the degree and impact of how autistic traits manifest.

Similarly, in another study, researchers examined a large neuroimaging dataset of autistic individuals and identified three main patterns in how different parts of the brain connect and communicate (Buch, A. M., et al., *Nature Neuroscience*, Vol. 26, 2023). Based on these patterns, they were able to identify four subgroups of autistic individuals, each with unique profiles of brain connectivity and behaviors. Each subgroup showed genetic differences related to how their brain regions communicated with each other, along with other biological processes. These findings show the complex interplay between



JESSIE CASSON/GETTY IMAGES

Scientific consensus affirms that autism occurs along a diverse neurodevelopmental spectrum. Recent characterization of autism as a debilitating condition that prevents people from leading full lives ignores the reality that many autistic people enjoy successful careers, loving families, and rewarding hobbies.

biological and genetic factors, demonstrating that autism has no single root cause; rather, it has many pathways to how it presents itself. Autism is best understood as a spectrum of neurodevelopmental differences that can manifest in distinct profiles.

One of the most prevalent and harmful myths about autism is that it is caused by vaccines. This misconception originated from a now-discredited study published in *The Lancet* in 1998 by former physician Andrew Wakefield. The study focused on 12 children, eight of whom had developed autism after receiving the measles, mumps, and rubella (MMR) vaccine according to their parents. Wakefield's methodology was deeply flawed, using cherry-picked cases, a very small sample, no control group, and relying on parental recall. It also did not account for the fact that the age at which children receive the MMR vaccine coincides with the onset of regressive autism in many children. Subsequent investigations have found Wakefield misrepresented the medical histories of some of the children in the study (Deer, B., *The British Medical Journal*, Vol. 342, 2011). Wakefield's study was retracted 12 years later, and the United Kingdom's General Medical Council removed him from the medical register.

Large epidemiological studies have found no link between the MMR vaccine and autism. Similarly, 16 large population-based studies have found no link between autism and thimerosal, a preservative commonly used in other childhood vaccines. The scientific consensus debunking a link between vaccines and autism is robust (DeStefano, F., & Shimabukuro, T. T., *Annual Review of Virology*, Vol. 6, No. 1, 2019). However, vaccine hesitancy continues to linger because of distrust in public health authorities, particularly among parents of autistic children who are seeking answers (Mensah-Bonsu, N. E., et al., *Journal of Child Neurology*, Vol. 36, No. 10, 2021). It is essential for public health authorities to rely on the rigorous research debunking this myth as they seek to investigate the root causes of autism.

Kennedy's promise to deliver preliminary results on autism's root causes by September has also prompted multiple experts to dismiss his timeline as unrealistic. "There have been decades of research into understanding autism," said Micah Mazurek, PhD, director of the Supporting Transformative Autism Research program at the University of Virginia and president of APA Div. 33 (Intellectual and Developmental Disabilities/Autism Spectrum Disorder). "The bottom line is that science takes a while, and part of the scientific method is replication. The idea that we could find an answer by September just does not make sense."

Stigma and surveillance

Framing autism as a tragedy or disease and using deficit-based stereotypes to describe autistic people harms their mental health while also twisting public perception, experts

say. Moreover, they warn such rhetoric undermines decades of progress for people with disabilities and evokes a painful history of violence, institutionalization, and sterilization. Autistic psychologist and neurodiversity advocate Karissa Burnett, PhD, noted, "When we reduce autistic lives to economic output, we revive the same eugenic logic that has endangered disabled people for more than a century."

The lack of clear information from the government about protecting privacy in the proposed NIH/CMS data platform has fueled significant anxiety and mistrust. "Registries without full consent and oversight put disabled people at risk. We need to be centering safety, not surveillance," Burnett said. Psychologists have reported a surge in distress among autistic patients and their families following the announcement. Many fear their private health data could be used without their consent. Some are canceling or postponing evaluations, requesting redactions in patient records, or questioning the safety of disclosing their children's diagnoses in Individualized Education Plans, the agreement between parents and their child's educators that outlines the accommodations the child will receive at school.

Jennifer Paz Ryan, PsyD, cofounder of Elevated Insights Assessment, LLC, in Denver, has seen these effects firsthand. "It's a panic and a plea," Paz Ryan said. "Families are asking, 'What's going to happen to me or my child? What do I tell them? How does this impact them?'" This sense of fear is particularly harmful as autistic people are already at higher risk for anxiety and depression.

The cancellation of evaluations disrupts diagnoses that would allow access to essential services. "It's heartbreaking because these services are vital for children and adults. To delay receiving a diagnosis in a timely way is going to delay access to care and support for people who really need it," said Mazurek.

"Diagnosis is supposed to be a doorway to support, not a trap. Autistic people already face devastating rates of trauma, suicidality, and mental health misdiagnosis," Burnett said.

Ben VanHook, an autistic graduate student and advocate who is active in Div. 33, admitted that he has personally avoided seeking medical and psychiatric care because of privacy fears. "It has really impacted my ability to get medications and to trust that my doctors have my best intentions or interests in mind. I'm really skeptical as to whether they will or will not share my private information with the federal government," he said.

Burnett recommends that psychologists take a trauma-informed and social justice–oriented therapeutic approach that validates clients' fears and experiences. Clinicians can also remind patients that if their diagnosis is on record with their insurer, they may be able to opt out of their private health information being used in research under the Health Insurance Portability and Accountability Act (HIPAA). Providers should openly discuss their privacy practices with clients, prioritize transparent and consent-driven care, and minimize unnecessary disclosures whenever legally and ethically permissible.

An affirming agenda

Psychologists are embracing a strengths-based approach that affirms neurodiversity in their advocacy, research, and clinical work on autism. "What has really advanced our work, especially in the past decade, has been partnering with autistic individuals and families," said Cameron Neece, PhD, director of the Child Research and Treatment Evaluation Lab and a past-president of Div. 33. "I feel that we're one of the rare disciplines that has tried, as intentionally as possible, to appreciate and celebrate the diversity of neurodevelopment."

VanHook is critical of deficit-based diagnoses of autism in the *Diagnostic and Statistical Manual of Mental Disorders*. He urges psychologists to let autistic individuals define their own strengths and needs to shift away from deficit-based diagnostic language. "The medical model of disability is responsible for creating harmful stigmas and stereotypes about the autistic community through rhetoric such as 'deficient in,' 'rigid/inflexible,' or 'difficulty with,'" he said. "By contrast, strengths-based approaches can dismantle these stereotypes while helping autistic people develop self-acceptance and embracing their identity."

Creating neuroaffirming and nonjudgmental spaces is particularly important in the current climate. "It takes a hell of a lot of vulnerability for a family to continue with an

ADVOCACY

CORRECTING MISINFORMATION ABOUT AUTISM

Psychologists can help by knowing the facts and correcting misinformation when they hear it. For a brief overview of the most important facts about autism and the misinformation surrounding it, read the article "Addressing Recent Misinformation About Autism" at the APA/APASI Response Center at updates.apaservices.org/autism.

evaluation for autism at this time," Paz Ryan said. "We have to celebrate that strength." In addition to her direct consultation with families, Paz Ryan is making an impact on the advocacy front. As a member of the executive board of the Autism Society of Colorado (ASC), she has worked alongside colleagues to provide sample letters and scripts to community members so they can engage legislators and advocate against harmful policies that impact autistic individuals.

> **"One of the most important things the public can understand is that autism is a form of neurodiversity and not a deficit or disease."**
>
> **Elizabeth Laugeson, PsyD**
> Director of the UCLA Program for the Education and Enrichment of Relational Skills Clinic

Challenging outdated and stigmatizing views of autism is also a powerful way psychologists can support the community. "One of the most important things the public can understand is that autism is a form of neurodiversity and not a deficit or disease. Autistic people think, feel, and connect in ways that are often different but equally valid," said Elizabeth Laugeson, PsyD, director of the University of California, Los Angeles (UCLA) Program for the Education and Enrichment of Relational Skills Clinic.

Adding to the urgency, recent funding cuts to autism research risk jeopardizing years of considerable progress when it comes to understanding how best to support autistic individuals. During the first few months of the year, $31 million in NIH autism research funding was cut, including many studies investigating the barriers autistic people face in education and employment. "Just one of many examples includes a research study I was a part of for Cornell University that explored pathways to STEM careers for autistic jobseekers," said VanHook. "It was terminated in May. The cuts to funding for crucial research studies are going to set us back decades in terms of support for our community."

To move forward, experts stress the need for ethical, inclusive research. "We need more research into personalized interventions that are going to be the best fit for the right person at the right time," said Mazurek. "If you are designing new studies, it needs to be done in a very systematic and ethical way. The people leading those studies should be experts in their fields and should involve the voices of autistic people in planning and conducting those studies."

Burnett emphasizes the importance of learning from autistic-led organizations, such as the Autistic Self Advocacy Network, about how best to support autonomy, safety, and informed decision-making for autistic people navigating health care systems.

Daisy Montgomery, an autistic advocate and ASC board member, encourages psychologists to hire autistic educators to come to their communities so the public can see and hear from autistic people themselves as a direct counter to misinformation. "The more we humanize autism and take the stereotype of it being a boogeyman out of the conversation, the more that we can look at it as just a variation of neurotypes," Montgomery said.

For Burnett, the takeaway is urgent and clear: "Autistic people thrive not when we are cured, but when we are understood, accommodated, and respected. Psychologists must move from awareness to allegiance and stand with autistic people against dehumanization." ■

FURTHER READING

'Being autistic is kind of who you are, it's an identity rather than a disorder': Identity negotiation and construction among autistic adults diagnosed in later life
Bransgrove, K., & Karakas, G.
Journal of Autism and Developmental Disorders, 2025

Autism diagnosis among U.S. children and adults, 2011–2022
Grosvenor, L. P., et al.
JAMA Network Open, 2024

Parental stress, family resilience, and health-related quality of life: Parents of children with autism spectrum disorder
Hsiao, Y.-J.
Current Psychology, 2024

'What my son needs is me. What I need is … guidance': Caregiver perspectives about early autism supports amid changing attitudes and policies
Pye, K., et al.
Journal of Autism and Developmental Disorders, 2025

Psychological strengths and well-being: Strengths use predicts quality of life, well-being and mental health in autism
Taylor, E. C., et al.
Autism, 2023

Grounded by Aviophobia

Recent aviation incidents amplify a fear of flying, but effective therapies are helping people reclaim the skies

BY CHARLOTTE HUFF

IN JANUARY, a regional airplane on its final approach to Ronald Reagan National Airport collided with a helicopter, killing 67 people. The following month, an airplane flipped onto its back after landing in Toronto. Then in June, a London-bound 787 crashed in India shortly after takeoff, killing all but one of the 242 people aboard. Meanwhile, headlines continue to detail shortages of air traffic controllers at Newark Airport and elsewhere in the United States.

By spring, two thirds of U.S. adults reported heightened nerves, according to a Harris Poll of 2,092 adults. One in 4 described themselves as far more fearful about flying in the wake of these incidents.

While nervous flyers are not uncommon, the diagnostic criteria for aviophobia require that individuals have persistent and excessive fears that often lead to avoidance behaviors, including skipping flying entirely. The common anxiety disorder does not necessarily stem from an unsettling flight experience per se, as it can involve claustrophobia or other fears. But media coverage of worrisome airplane incidents can worsen fears in those already living with aviophobia, according to experts.

To amplify the situation, these recent flying incidents follow an unusually lengthy stretch in the United States without any major airline crashes, said Capt. Tom Bunn, LCSW, a pilot and social worker who launched SOAR, a program to help fearful flyers, more than 4 decades ago.

"Suddenly there's a change, and people aren't used to it," he said. "Meanwhile, our way of getting news has changed, so that when there's an aviation story and you click on it, you are going to get more aviation stories."

Studies indicate that as many as 40% of people say they fear flying, though a lower percentage likely fits the formal diagnostic criteria for aviophobia (Clark, G. I., & Rock, A. J., *Frontiers in Psychology*, Vol. 7, 2016). Like fear of heights or spiders and other situational phobias, fear of flying is disproportionate to the danger involved, may involve intense anxiety or panic attacks, and must persist for at least 6 months. Those with the disorder may highly limit or avoid flying entirely for long periods of time, which can lead to difficulties in their personal relationships, career goals, and travel plans.

Making the correct diagnosis is critical, according to clinicians who treat the disorder, because what initially seems to be aviophobia may be rooted in another primary diagnosis, such as agoraphobia. Fortunately, the phobia is highly treatable using exposure therapy along with mindfulness, meditation, and other cognitive behavioral approaches that can help patients better ride out their sometimes overwhelming anxiety. In a study of aviophobia, for example, roughly three fourths of patients completed their first post-treatment flight, often referred to as the graduation flight, and nearly that many were still flying a year later (Rothbaum, B. O., et al., *Behavior Therapy*, Vol. 37, No. 1, 2006).

Too often, though, people do not seek out the treatment help they need, said clinical psychologist Stephanie Cherestal, PhD, of Weill Cornell Medicine in New York City, who has conducted research involving aviophobia. Without therapy, people may avoid flying altogether, while others are "endurers," as she described them. These endurers "are equally afraid," she said. "But endurers might use certain strategies"—such as medications, alcohol, or prayer—"to essentially white-knuckle their way through the flight," she said.

AT A GLANCE

- With exposure and cognitive behavioral treatment, roughly 75% of patients can successfully board their first post-treatment flight, according to one study.
- Psychologists are using exposure therapy, including talking through anxiety-producing scenarios, to help patients ease their fear of flying.
- Screening questionnaires can assist with diagnosis, as well as help psychologists develop a fear hierarchy in pursuit of exposure therapy.



KOLDUNOVA_ANNA/GETTY IMAGES

Aviophobia, a diagnosable anxiety disorder, often involves persistent, excessive fear unrelated to actual danger and can stem from claustrophobia, fear of panic attacks, or loss of control—frequently worsened by media coverage of aviation incidents.

Diverse types of fears

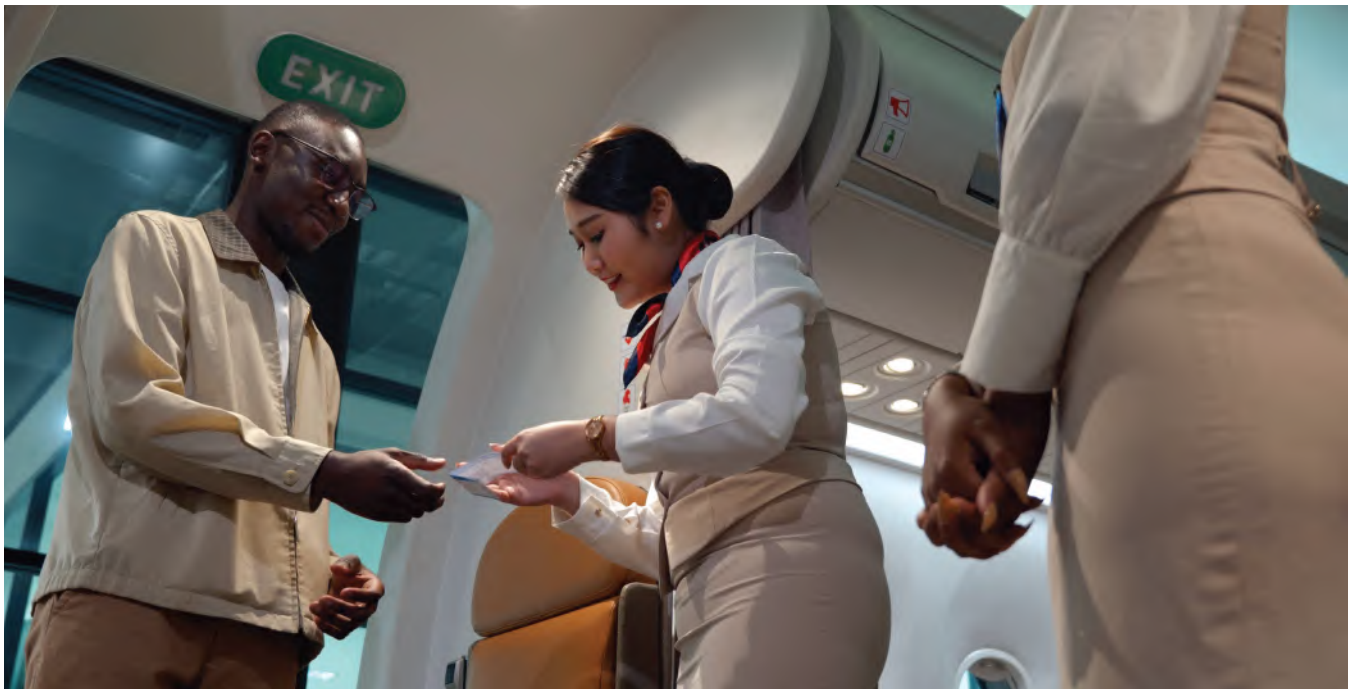
It is not surprising that people in general can be afraid to step onto an airplane, said John Hart, PhD, a clinical psychologist who works with fearful flyers treated through a Houston-based program. "I don't think humans evolved to fly around at 40,000 feet in tubes of steel," he said. Even for people who are not afraid of flying, he said, plane crashes are "in the back of their minds."

And flying has become more stressful, even before recent airplane mishaps, with heightened security procedures and other logistics, said Jonathan Bricker, PhD, a clinical psychologist at the University of Washington in Seattle, who treats fearful flyers. To gain a better snapshot, Bricker developed an air travel stress scale to gauge the various components of flying-related anxiety and stress (*Journal of Counseling Psychology*, Vol. 52, No. 4, 2005).

For some fearful individuals, their anxieties are more constructed around the potential terror of the crash-related process itself rather than a fear of dying, Hart said. Turbulence also can be anxiety producing, and climate change has boosted that likelihood, with severe clear-air turbulence up by 55%, according to a recent analysis (Prosser, M. C., et al., *Geophysical Research Letters*, Vol. 50, No. 11, 2023).

More commonly, Hart said, aviophobia involves other fears: lack of control; claustrophobia in a confined space; having a panic attack or appearing notably anxious in front of other passengers. Nearly two thirds of individuals who fear flying will meet the criteria for another anxiety disorder during their lifetime (Depla, M. F., et al., *Social Psychiatry and Psychiatric Epidemiology*, Vol. 43, 2008). Before Joe Sulewski sought treatment at SOAR, he would closely monitor turbulence reports before flying, and he experienced anticipatory anxiety a few days prior to boarding the plane. He closely followed the news coverage of turbulent flights and imagined the physically overwhelming experience of those inside the plane. "For me, it's the violence of being in that shaking," the 56-year-old software engineer said. "Imagine you're the salt in the saltshaker. I don't want to be the salt in the saltshaker."

Fearful flyers can develop the phobia despite never having boarded a plane, added Cherestal, who has treated fearful flyers and has studied remote virtual reality exposure therapy (*Translational Issues in Psychological Science*, Vol. 7, No. 3, 2021). In other circumstances, a traumatic flying experience may trigger or worsen their symptoms, whether from a very turbulent flight or experiencing nausea on board, she said.



Therapy emphasizes tolerating anxiety, not eliminating it. Patients learn mindfulness and cognitive strategies to manage distress, sometimes culminating in a short "graduation flight." Continued exposure and support, like group counseling, help maintain progress and reduce long-term aviophobia symptoms.

But people also may fly without angst for years until they experience an accumulation of major and minor traumas involving a lack of control or not feeling safe, said Bunn. Then the phobia can flare, seemingly out of nowhere. "It doesn't require a bad flight—the problem is a series of traumas," he said.

Proper diagnosis

Importantly, what appears to be fear of flying may have another primary cause, with aviophobia as one example, Bricker said. For that reason, mental health clinicians need to assess patients to be sure they are making the correct diagnosis. For example, a patient whose primary diagnosis is actually panic disorder with agoraphobia is not necessarily afraid to fly; they are afraid of having a panic attack on the plane. "The plane is just the place where you have the panic attack," Bricker said.

There are a number of validated screening tools that can help with diagnosis, such as the Flight Anxiety Situations questionnaire and the Flight Anxiety Modality questionnaire (Van Gerwen, L. J., et al., *Psychological Assessment*, Vol. 11, No. 2, 1999). The situations questionnaire, for instance, helps clinicians determine the extent to which someone is coping with generalized flight anxiety, anticipatory anxiety, or anxiety during the flight itself.

The questionnaires can also help therapists develop a fear hierarchy in the pursuit of exposure therapy, exposing patients to their fears in a controlled and gradual manner, Bricker said. They flesh out not just the patient's symptoms but also some of the triggers involved, whether that is turbulence, strange sounds, or related to specific stages of flight, such as boarding or takeoff, he said.

Exposure therapy is then paired during treatment with assisting the patient to develop and hone various cognitive behavioral skills, such as practicing meditation and mindfulness or learning to reframe intrusive thoughts, Bricker said. "Before they get on a plane, they want to be armed with a set of skills."

Ideally, following treatment, a therapist should accompany the patient on a flight at least once, Bricker said. But virtual reality can provide a viable alternative if that is not feasible or someone cannot access a therapist, he said, noting that rigorous trials are still needed to determine the treatment's efficacy. Bunn was far more critical about virtual reality exposure therapy, saying that studies have not sufficiently compared outcomes before and after the treatment.

Mental health clinicians can still assist fearful flyers in the office in another way, by helping them to develop and think through how they would react to specific flying

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"Not only is it OK to be anxious, but you're learning to tolerate your anxiety, and you're actually making progress when you are anxious."

John Hart, PhD
Clinical psychologist who treats patients with aviophobia

scenarios, Bricker said. The therapist may guide the patient in describing an anxiety-producing scenario: for example, having a panic attack during turbulence. Bricker recommends that therapists ask probing questions to help patients make the angst-producing scenario as detailed as possible.

Then the therapist reads that scenario in the office or via teletherapy, and the patient can practice mindfulness, an acceptance perspective, or whatever other techniques they have learned during prior therapeutic work, Bricker said. Record the scenario. "Then your homework for them," he said, "is to leave the office and practice hearing that story."

Hart, in his therapeutic work, reminds patients that the more they struggle against flying anxiety, the more anxious they will become. If they lean on alcohol or a prescription medication to get through the flight, such crutches will interfere with their ability to manage their anxiety and distress more consciously, he said.

The goal is to "develop a willingness to experience the anxiety rather than trying to get rid of it," Hart said. "Not only is it OK to be anxious, but you're learning to tolerate your anxiety, and you're actually making progress when you are anxious." The more someone learns they can handle even excess anxiety, ideally the less anxiety they will experience each time they fly, he said.

After effective therapy, fearful flyers should be ready to first visit the airport and later take a "graduation flight," ideally 30 minutes or less in the air, Bricker said. If they cannot, he said, "they have to be willing to eat the ticket."

More commonly, though, by the time they reach cruising altitude, "they're feeling pretty good," Bricker said. "That first 30-minute flight is a major mastery experience for them—it's a huge confidence builder." But it is also important for people to keep up their exposure to flying and increase the length of flights to build upon the cognitive coping skills they have developed, said Bricker and other experts.

Facing fears and flying anyway

Joe Sulewski, the software engineer who was particularly afraid of turbulence, first signed up for Bunn's program about 5 years ago. But he had little reason to fly after that, and by late last year he knew he needed help again because he was going to have to start traveling for his job.

During his recent treatment, which included therapy with Bunn, Sulewski realized that at least part of his fears stemmed from a sense of feeling trapped once the plane's door closed. So, rather than thinking about the potentially turbulent, claustrophobic journey ahead, he learned to focus on the excitement of being at his destination.

Sulewski, who describes himself as very data centric, also began to track turbulence-related data, measuring various g-forces to assess the gravitational force, using an app on his phone. "I started to be able to quantify [the turbulence] as a value, and not as an emotional response," he said, as he recognized that seemingly strong turbulence did not carry as much force as he thought.

He has flown a handful of times since then, including overseas. He still checks the turbulence reports in advance. But his anxiety has notably eased. He now often joins weekly group counseling calls through SOAR to continue his progress as well as to provide support to newer clients.

Sadly, though, too many people either suffer in silence or avoid flying entirely because of the grip of this phobia, Bricker said.

"Because aviophobia is not valued the same as other disorders, it creates a lot of shame for people who have it," he said. "They don't realize that there are very effective options to help them." ■

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The Psychological Cost of U.S. Immigration Policy

As U.S. immigration enforcement intensifies, mental health experts highlight the urgent need for culturally responsive care to address the trauma, stress, and systemic barriers faced by immigrant communities

BY MYRIAM VIDAL VALERO

AT A GLANCE

- The psychological toll of detentions and deportations, or even fear of these actions, is compounding the challenges many immigrants face, including the lingering effects of exploitation, violence, and family separation often experienced during migration.
- Researchers face persistent barriers to studying the mental health impacts of detention, the conditions of which often resemble those of the federal prison system, where it is difficult to get access to gather research.
- Barring reform of immigration policies, psychologists working with or researching the mental health of communities at risk of detention or deportation can strive to gain cultural competencies that can help them build trust.

SINCE THE BEGINNING of the second Trump administration, the Immigration and Customs Enforcement (ICE) agency has significantly stepped up detentions and deportations of individuals whom it says are in the country unlawfully. The agency has also broadened its authority to detain and deport people possessing green cards, visas, humanitarian parole, and other lawful statuses. As the psychological toll of these actions compounds the physical, economic, and social challenges that many immigrants already face in their daily lives, researchers and organizations focused on mental health care are working to better understand their needs and provide culturally appropriate support. Psychology can play a crucial role not only in treating trauma and chronic stress but also in helping communities build resilience, strengthen social ties, and advocate for systemic change that supports well-being overall.

The United States is home to the largest immigrant population in the world—46 million people, or about 14% of its total population. Projections indicate that by 2060, 1 in 5 U.S. residents will be foreign born, according to the APA Task Force on Immigration and Health 2024 report *Psychological Science and Immigration Today*. Immigrants benefit host countries by contributing to economic, cultural, and social growth; bringing diverse skills, experiences, and perspectives; and driving innovation and productivity. While some people migrate by choice, the number of asylum seekers fleeing climate change, violence, poverty, and political instability has surged over the past decade. In 2023, approximately 945,000 asylum applications were submitted—an 88% increase from 2022.

The immigration journey can have a profound impact. Many immigrants enter the country on skilled worker visas or as students, while others may face dangerous travel conditions, exploitation, violence, family separation, and long periods of uncertainty while in transit or waiting in limbo at borders, shelters, or detention centers. Regardless of an immigrant's particular path into the United States, all of this as well as fear for personal safety, loss of control over their circumstances, and uncertainty about the future can contribute to anxiety, depression, post-traumatic stress disorder (PTSD), and other mental health symptoms—often persisting long after their arrival (Filges, T., et al., *Campbell Systematic Reviews*, Vol. 20, No. 3, 2024).

If migration travel is difficult, the fight-or-flight response is activated, explained Luz Garcini, PhD, a member of APA's Board of Directors and director of the Center for Community and Public Health at the Kinder Institute for Urban Research at Rice University. When they arrive in the United States, many are still triggered because they need to learn how to survive. "You have to learn the language, the culture, and adapt and prove that you're worthy," Garcini said.

Although every migrant's experience is unique—and approximately 77% of those coming to the United States become residents with authorized immigration status—restrictive immigration policies, popular sentiment, and structural violence



A detainee walks through the courtyard at the Bluebonnet Detention Center in Anson, Texas, on May 13, 2025. Detentions and deportations have increased since the beginning of the second Trump Administration.

COURTNEY JOST

continue to place many at a disadvantage (APA Task Force on Immigration and Health, *Psychological Science and Immigration Today*, 2024; Guillot-Wright, S., et al., *Current Opinions in Psychology*, Vol. 47, 2022). These barriers often limit their access to essential needs such as food, housing, employment, education, and health care—regardless of immigration status—creating widespread insecurity and hardship.

Ultimately, these overlapping inequalities place them at heightened risk for a range of mental health conditions—such as anxiety, depression, PTSD, alcohol misuse, suicidal ideation, and increased vulnerability to sexual violence—as well as chronic physical illnesses including diabetes, liver disease, heart disease, kidney disease, and more (Rashki, K. A., et al., *Medical Journal of the Islamic Republic of Iran*, Vol. 35, No. 1, 2021). "The body gets tired," Garcini said.

Considering the impact of such factors on the well-being of these populations, in 2011 the International Organization for Migration (IOM) urged governments to formally recognize migration as a social determinant of health. Since then, researchers have increasingly focused on how immigration policies shape health outcomes, highlighting the critical role of immigration status, access to services, and systemic exclusion in driving these disparities (Gomez-Aguinaga, B., et al., *International Journal of Environmental Research and Public Health*, Vol. 18, No. 11, 2021). "Migration policies are having an impact on creating these long-term disparities," said Mitra Naseh, PhD, an assistant professor at the Brown School, Washington University in St. Louis.

In her research, Naseh has observed how visa-related stress can trigger anxiety, depression, panic attacks, weight changes, and a profound sense of powerlessness among immigrants without legal status or with tenuous legal status—or those afraid of losing it—along with their families and friends. They often internalize their vulnerability, blaming themselves for their struggles rather than the structural barriers imposed by policy (*BMC Public Health*, Vol. 23, 2023). "It was my decision. I came here," is a sentiment she's heard repeatedly. Many feel obligated to remain invisible, to be "good citizens," and to avoid being seen as a burden.

At the same time, fear of detention and deportation can lead to depression, anxiety, stress, somatic symptoms, anger, low self-esteem, and behavioral problems (Bailey, C., & Widener, K., *Current Opinion in Psychology*, Vol. 47, 2022).

This fear may also cause individuals to avoid applying for government benefits, such as health programs, and to isolate themselves and their children from the community, which can negatively affect their children's development (Society for Community Research and Action: APA Div. 27, *American Journal of Community Psychology*, Vol. 62, No. 1–2, 2018). And parents, fearing family separation, are more likely to keep their children out of school. This harms student achievement more broadly, according to a study of five school districts in California's Central Valley that were subject to expanded local immigration raids in the first 2 months of 2025 (Dee, T. S., *Recent Immigration Raids Increased Student Absences*, EdWorkingPapers: 25–1202, 2025).

Such fears can also affect the dynamics of mixed-status families. Maryam Rafieifar, PhD, an assistant professor at the University of Texas at Arlington School of Social Work, has found that undocumented parents sometimes fear their citizen children might report them to immigration authorities after a disagreement. Legal

status differences among siblings can create tension—one child may have opportunities like college and financial aid, while another may be excluded. These disparities can place heavy expectations and feelings of guilt on the citizen child, Rafieifar said (*Child and Family Social Work*, online first publication, 2025).

Furthermore, deportation fears can impact public safety more broadly, explained David Hernández, PhD, an associate professor of Latina/o studies and critical race and political economy at Mount Holyoke College. If, for example, immigrants witness or are victims of a crime, they may not want to report it out of fear of being found. "It's sort of a double-edged sword."

All these experiences can intensify when migrants come into contact with the detention system. Detention introduces a new layer of trauma—marked by isolation, uncertainty, and often dehumanizing conditions—that can severely worsen existing mental health challenges.



In early July 2025, beds stand ready for detainees in a new migrant detention center dubbed "Alligator Alcatraz" because of its setting in the Florida Everglades. Detention is often marked by dehumanizing conditions that can create or worsen mental health challenges.

PHOTO COURTESY OF NORMA SAMUELSONZ

The mental strain of being detained

The United States has the world's largest immigration detention system. Although immigration detention is a civil, not criminal, matter, the living conditions in these facilities often resemble those of the federal prison system (Saadi, A., et al., *Health and Human Rights Journal*, Vol. 22, No.1, 2020). These conditions vary depending on the type of facility (federal detention centers operated by ICE, privately contracted prisons, or state and local jails that lease bed space to ICE), but sexual abuse, overcrowding, denial of medical care, and restrictions on religious freedom have been reported in all of them.

To make matters more complicated, privately run prisons are held to nonbinding standards and have minimal federal oversight. And because immigration detention falls under civil law, most detainees lack key protections such as time limits or access to bail, with few exceptions, which leads to prolonged confinement—many are held for over a year while fighting deportation (Saadi, A., et al., *JAMA Network Open*, Vol. 8, No. 1, 2025).

Researchers have faced persistent barriers (particularly under the new administration) in studying the impact of immigration detention on mental health, mainly because of the lack of public data and the underreporting of mental health emergencies by ICE. But similarities to the criminal justice system have allowed them to extrapolate likely effects (Dekker, A. M., et al., *JAMA Network Open*, Vol. 6, No. 11, 2023).

For example, delayed or poor-quality care, inadequate nutrition, sleep deprivation, and practices like solitary confinement all contribute to declining health and well-being (Saadi, A., et al., *JAMA Network Open*, Vol. 8, No. 1, 2025). Given the existing trauma many immigrants already carry, detainees are vulnerable to developing chronic medical conditions, and the longer they spend in detention, the more likely they are to be at risk of mental health problems, including PTSD and suicide (Borschmann, R., et al., *The Lancet Regional Health – Americas*, Vol. 36, 2024). "Conditions within immigration detention can not only worsen mental health illness if someone has that diagnosis coming in, but they can also contribute to a new diagnosis," said Altaf Saadi, MD, MSc, a clinician investigator at Massachusetts General Hospital and an associate professor at Harvard Medical School.

Another risk factor is little or no training of staff in detention centers to recognize or manage mental health symptoms. "Solitary confinement is often used as a disciplinary practice in immigration detention, and our studies have shown that people with mental illness are more likely to be exposed to solitary confinement," Saadi said. This results in the worsening of their

mental illness (*Journal of Migration and Health*, Vol. 11, 2025).

Even when staff at detention centers conduct mental health screenings during intake, they sometimes rely on non-validated tools instead of those recommended by APA and the American Academy of Pediatrics (Sridhar, S., et al., *The Lancet Regional Health–Americas*, Vol. 43, 2025).

Risk factors also vary by gender and age. Women may experience sexual assault and pregnancy-related emergencies and undergo unnecessary gynecologic procedures (Dekker, A. M., et al., *JAMA Network Open*, Vol. 6, No. 11, 2023). Given the added dangers, unsurprisingly, women are more likely to develop a psychiatric disorder and higher depression levels while in detention than men are (*Addressing the Health Challenges in Immigration Detention, and Alternatives to Detention: A Country Implementation Guide*, WHO Regional Office for Europe, 2022). Children may experience PTSD, depression, anxiety, weight loss, and sleep problems, and those who get separated from their mothers are more likely to develop behavioral issues like hyperactivity (MacLean, S., et al., *Social Science & Medicine*, Vol. 230, 2019).

The mental health impacts extend to family well-being in other ways, too. When a parent is detained or deported—especially if they are the primary breadwinner—it can significantly reduce the family's income, forcing the remaining parent or caregiver to choose between working to support the household or staying home to care for the children (*Addressing the Health Challenges in Immigration Detention, and Alternatives to Detention: A Country Immigration Guide*, WHO Regional Office for Europe, 2022). This loss often triggers a chain reaction, jeopardizing access to basic needs like food and housing, and can have other outcomes affecting school performance and engagement across public sectors (Gonzalez, G., & Patler, C., *Sociological Perspectives*, Vol. 64, 2021; Patler, C., & Gonzalez, G., *Social Problems*, Vol. 68, No. 4, 2021).

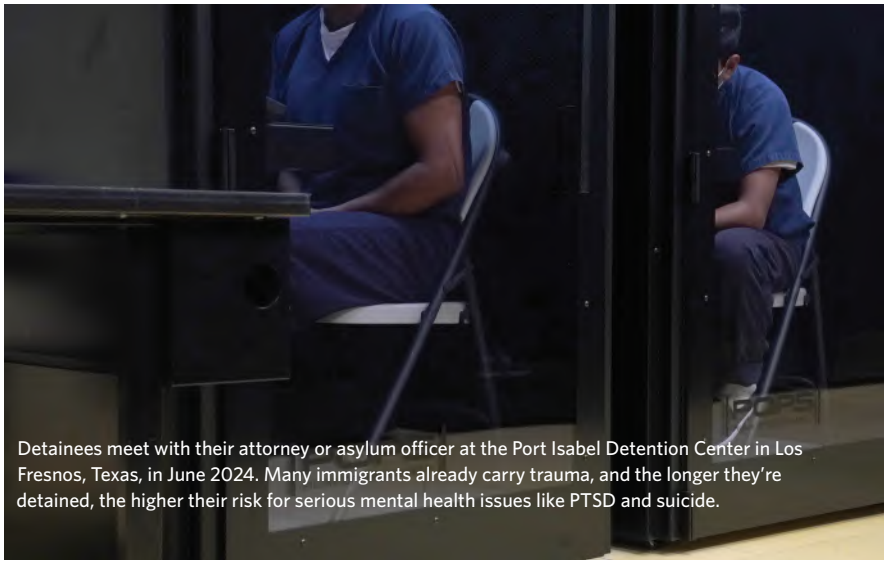
Further, the financial and emotional strain can lead the remaining caregiver to experience heightened levels of stress, depression, and sleep problems that can interfere with their ability to care for their children (Naseh, M., et al., *Social Science & Medicine*, Vol. 352, 2024). Naseh's research has shown that children who experience this type of family separation find it difficult to self-regulate.

And children who are left alone because their caregivers are taken away have reported feeling extremely worried about the caregiver's safety and experiencng anxiety, depression, and poor academic outcomes (Pinedo, M., et al., *American Journal of Public Health*, Vol. 114; Lovato, K., et al., *Children and Youth Services Review*, Vol. 95, 2018).

Further confusion amid deportation

When detention is followed by deportation, the emotions experienced while in custody often evolve into a new set of mental health challenges as individuals are uprooted from their lives, separated from family, and forced to return—sometimes after decades—to unfamiliar environments they may not even remember, especially if they immigrated as young children.

Some may feel a sense of relief for their recovered freedom when they go back to their home countries, but eventually this mood may be mixed with depression and anxiety. They may have left behind a life that they had established, said Claudia Masferrer, PhD, an associate professor and researcher at the Centre for Demographic, Urban and Environmental Studies of El Colegio de México in Mexico City. "Many have children whom they left behind in the United States, and they don't know when they will see them again." They may feel trapped between two worlds and challenged to picture the future, a feeling she attributes to the "policy trap," when immigration policy first keeps them in the United States with irregular status and then in Mexico because the United States won't let them return legally or safely.



Detainees meet with their attorney or asylum officer at the Port Isabel Detention Center in Los Fresnos, Texas, in June 2024. Many immigrants already carry trauma, and the longer they're detained, the higher their risk for serious mental health issues like PTSD and suicide.

COMMUNITY VOLUNTEERS AND ATMIYATA PROJECT TEAM, AND THE CENTRE FOR MENTAL HEALTH LAW & POLICY, INDIAN LAW SOCIETY, PUNE

In her research, Masferrer has also seen returnees experience confusion as they try to rebuild their lives from scratch, often with no money or family to help them. They may struggle to recognize people and places that have changed dramatically since they immigrated.

Local people may stigmatize them for having behaviors from the United States or because they presume them to be criminals. Returnees may feel isolated. "Many of their families don't understand the experiences they had in the United States, so they also don't understand what [returnees] are missing when they return," Masferrer said.

Moreover, many individuals return to the same dangerous conditions that forced them to flee in the first place. They face fear and persecution. Researchers at the Global Migration Project have documented numerous cases in which deported people have been kidnapped, tortured, raped, and even murdered.

Meanwhile, families left behind in the United States must reorganize their lives, often forcing older children to take on adult responsibilities (Gonzalez, N., & Morgan Consoli, M. L., *Interamerican Journal of Psychology*, Vol. 46, No. 3, 2012). Some children blame themselves for the deportation of their parents. If the families reunite—whether they all move back to their country of origin or the parent returns to the United States—children sometimes struggle to recognize the parent who was deported or accept their authority. There is often a lingering fear of loss and the belief that it could happen again, Rafieifar explained.

Policy and community-based solutions

The current political climate has underscored the need for more research and coordinated interventions to support the mental health and well-being of immigrants. Solutions from psychology must be multifaceted, ranging from increasing the number of culturally competent health professionals to shifting the broader public narrative around migrants.

"A genuinely welcoming, compassionate environment can do wonders for anyone experiencing a difficult transition," said Ané Maríñez-Lora, PhD, a research assistant professor at the Crown Family School of Social Work, Policy, and Practice at the University of Chicago.

Schools also play a key role in supporting immigrant communities, she noted. As a member of the Coalition for Immigration Mental Health—a research-informed initiative based in Chicago that provides safe spaces, advocacy, resource sharing, and training for frontline providers and community organizations—she emphasizes the importance of preparing teachers and administrators with training on topics including culturally responsive practices, challenges of migration, acculturation, and cultural barriers that may impact learning and school engagement.

Community responses also include proactive planning for family separation. Rafieifar found that undocumented parents, sometimes with help from immigrant-serving organizations, prepare their U.S. citizen children for possible deportation by naming guardians and having open conversations (*Families in Society: The Journal of Contemporary Social Services*, Vol. 0, 2025).

For their part, health professionals should work to acquire cultural competencies that will help them gain immigrant communities' trust. They should "conceptually know who the community is, what its history is, and what the legal context in the country is," Garcini said. For example, the Latinx Therapists Action Network, an organization that provides culturally responsive mental health support and advocacy for Latinx communities, helps immigrants talk about mental health using their own terms for symptoms and elements of traditional medicine, aiming to reduce stigma and open the conversation. "If they can name what they're feeling, and if they can equate it with something, that has a lot of power, and it also frees the person to a certain extent," said Francisca Porchas Coronado, director and founder of the network.

Ultimately, the most impactful solution would be to reform immigration policies—the root of many challenges. But until that happens, those working with or researching the mental health of immigrant communities must keep in mind that immigration is complex and deeply layered. "I try to encourage people to think about the continuum of experiences," said Saadi. "There's potential for mental health consequences across that whole continuum." ■

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Child & Family Social Work, 2025

5 Questions for Page Anderson

The clinician and researcher helps psychologists overcome barriers around digital mental health

BY ZARA ABRAMS

MORE THAN A quarter of practicing psychologists worry that artificial intelligence (AI) may make some or all their job duties obsolete, according to APA's December 2024 Practitioner Pulse Survey. But Page Anderson, PhD, an associate professor of psychology and neuroscience at Georgia State University, is not one of them.

Anderson, also a licensed clinical psychologist with a board certification in behavioral and cognitive psychology, doesn't consider herself a technology person but is bullish on what digital mental health can do for the field and the world. She studies acceptance and use of digital interventions by both clients and clinicians and sits on the board of directors for the International Society for Research on Internet Interventions.



PHOTO BY PATRICK HEAGNEY

Anderson covers these and other considerations in her APA continuing-education course, "The Chatbot Cannot Replace You: Using Digital Technologies to Expand Your Positive Impact on Mental Health," and shared insights with the *Monitor* on how psychologists can thoughtfully integrate such tools into their practice.

What do you say to psychologists who are worried about tech's impact on the profession?

A recent workforce analysis by the Substance Abuse and Mental Health Services Administration estimated the number of additional behavioral health providers needed to meet the current demand in the United States for adults with substance use and serious mental illness. That number is 4,486,865. There's essentially no way that we can meet the mental health needs of our counties, states, country, or the entire world with our current model for providing mental health services.

Tech may not be what we like to lean on, but it's an extremely powerful way to help people. We'll always have a big need for in-person services, but we need more than that.

On the patient side, what barriers are slowing the adoption of digital mental health interventions?

There are two main barriers to people accessing and using mental health services: practical barriers, such as cost and getting time off work, and attitudinal barriers—including mental health stigma, lack of perceived need, and our desire to handle issues on our own. Technology can address the former, but without a clear strategy, it won't necessarily solve the latter.

For example, research from my lab shows that people who have more barriers to accessing in-person services also show more skepticism toward internet-based cognitive behavioral therapy. That's a very troubling finding.

Building a digital mental health service doesn't guarantee people will use it—or use it long enough to benefit. Dropout is a huge problem. The earliest digital programs repackaged empirically validated in-person treatment for anxiety and mood disorders to deliver on the internet, like a digital self-help book. But that's not how we use technology. We must design digital interventions that fit with how we use technology in the real world.

People's attitudes toward artificial intelligence seem better. It could be that people feel engaged, they have self-efficacy, they design their own prompts, and they can get immediate feedback that feels personalized. That's much different from a 12-week digital mental health intervention for depression that's been packaged, tested, and approved.

What are some practical ways that psychologists can support the integration of tech into the field?

Ask yourself: What would help me? If you're a clinician, and you want to know

how somebody's sleep is, you could rely on self-report or you can ask them if they're willing to share data from their Fitbit. If you're tired of repeating psychoeducation about cognitive behavioral therapy, you can explore ways to reinforce that message with technology, such as sharing a relevant YouTube video. And if writing progress notes is time-consuming, artificial intelligence could be used to help you.

What are some of your concerns around digital mental health and equity?

Access continues to be an issue. Many of us take broadband access for granted, but there are still many people in this country without it. There's also growing concern about a new sort of digital equity gap—that those who "have" will be treated by people, while those who "have not" will be treated by algorithms.

Another real concern: One of the main things that promotes equity is transparency, but most AI algorithms are proprietary, business-owned algorithms. That's a problem first because we don't know how the model is trained. Most of them are trained on publicly available data, and all of humanity is in that data—so, the good, the bad, and the biases baked into the data will also be baked into the algorithm. Another problem is that algorithms are typically developed without input from clinicians with on-the-ground expertise, which can result in the use of proxy variables that fuel inequities. That's another way that bias gets in, but it's often invisible.

How can psychologists help address these concerns about equity?

Oftentimes the approach to developing new technology is: Here's a solution; let's find a problem it can fix. Using technology to increase equity in mental health services begins with a very careful framing of the problem. To do that, we'll need to work with community groups, clinicians, and the people who could benefit from services but for whatever reason cannot or will not access them.

We have the opportunity to build technology equitably from the ground up, versus what has happened with in-person services, where a model was built first and equity was considered later on. We have a chance to do it differently through technology, but it won't happen unless it is very intentional.

As part of a research fellowship from AIM-AHEAD, I'll be developing an AI algorithm based on social determinants of health that identifies people and places most likely to benefit from technology-based interventions. I'm also developing a doctoral-level course and continuing-education workshops to teach clinicians about how AI works and the ethical and equity issues related to its use, as well as a social media strategy to educate the public about these considerations around AI and mental health. ■

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Parental Right to Pull a Child From an Inclusive Curriculum

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

A group of parents argues that their inability to opt their children out of instruction involving books with LGBTQ+ characters constitutes a violation of their First Amendment rights

BY APRYL A. ALEXANDER, PsyD, UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE

OVER THE PAST SEVERAL YEARS, legislation regarding the Parental Bill of Rights has been introduced in numerous states. This legislation outlines a list of legal rights parents have regarding their child's education, including access to school policies and parental consent for school activities, including health examinations and specific curriculum content. Since 2022, 26 states have introduced 85 new parental rights bills, with six of these bills being signed into law (Giles, C., *University of Cincinnati Law Review*, Vol. 92, No. 4, 2024).

Many of these new laws are aimed at preventing discussion about sexual orientation and gender identities in school. The Florida Parental Rights in Education Act, commonly known as the "Don't Say Gay" bill, was signed into law in March 2022 and asserted that curricular instruction by schools that includes sexual orientation or gender identity cannot occur before the third grade. In 2023, researchers examined the concerns of LGBTQ+ parents regarding the legislation, and more than three quarters of their sample expressed concern about the bill's effects on their families (Goldberg, A. E., & Abreu, R., *Family Relations*, Vol. 73, No. 1, 2024).



AT ISSUE

Parental rights to opt out children from LGBTQ+ instructional material

In January, the U.S. Supreme Court agreed to hear *Mahmoud v. Taylor*, regarding First Amendment rights of parents to opt out of LGBTQ+-inclusive curriculum in public schools. Parents in Montgomery County, Maryland, sued the school district for including storybooks with LGBTQ+ themes in an English Language Arts curriculum, arguing they were not allowed to opt their children out. One book at the center of the debate is *Jacob's Room to Choose*, an APA Magination Press book by Sarah and Ian Hoffman, inspired by their son's experience of being assaulted in a school bathroom. Because of parental rights legislation, the book is presently banned in several U.S. states and Malaysia.

The U.S. Court of Appeals for the 4th Circuit ruled against the plaintiffs. Judge Steven Agee noted there was no "evidentiary link showing that the Storybooks are being implemented in a way that directly or indirectly coerces the Parents or their children to believe or act contrary to their religious faith."

In April, APA filed an amicus brief summarizing research showing that LGBTQ+-inclusive curricula reduce student victimization and improve mental health. In 2015, researchers found that students in schools without LGBTQ+-inclusive curricula feel less safe and face more bullying (Snapp, S. D., et al., *Sex Education*, Vol. 15, No. 6, 2015). Further, anti-LGBTQ+ legislation may impact mental health by reinforcing structural stigma and censoring inclusive content that supports all families in public schools (Goldberg, A. E., et al., *The Counseling Psychologist*, Vol. 52, No. 2, 2024).

The Supreme Court heard arguments in late April, and on June 27, in a 6–3 decision, the court ruled in favor of the plaintiffs. This decision orders the school board to notify parents in advance when one of the storybooks at issue in the case will be used in classroom instruction, allowing parents to have their children excused from the instruction. The authors of these books issued a joint statement, noting, "We created our books for all children. We believe young people need to see themselves and families like theirs in the books they read; this is especially true for LGBTQ+ children and LGBTQ+ families. And all children need to learn how to share their classrooms and communities with people different from themselves. Books can help them understand one another and learn to treat each other with acceptance, kindness and respect." ■

JAKUB CAJA/THE NOUN PROJECT



The art of managing countertransference lies in knowing whether, when, and how to address it with a patient.

CE Corner

Managing countertransference with patients

Therapists' emotional responses, when examined thoughtfully, can deepen clinical insights and improve patient outcomes

BY ZARA ABRAMS

***COUNTERTRANSFERENCE*, A THERAPIST'S** cognitive and emotional reactions to a patient, is now recognized as a phenomenon that can arise in virtually any form of psychotherapy. Rather than something to avoid, psychologists today view countertransference as an important facet of therapy to notice and manage, as well as an opportunity to harness for the patient's benefit.

"Countertransference doesn't mean you're doing something wrong. In fact, it regularly happens during therapy," said Kirsten Lind Seal, PhD, LMFT, a psychotherapist in private practice in Minneapolis, Minnesota, who leads CE workshops on countertransference. "The main thing is acknowledging and understanding its power to help and possibly harm, then deciding what to do about it."

If countertransference is not addressed, a therapist may act out their own unconscious patterns with a patient, such as meeting anger with defensiveness or detachment. But with proper preparation, including training on self-awareness, self-disclosure, and emotion regulation, therapists can learn to recognize countertransference when it arises. In some cases, engaging countertransference during a session can even advance the goals of treatment.

"Patients communicate their wishes, fears, and longings to us in all sorts of ways that are not verbal and not conscious," said Tamara Feldman, PsyD, a clinical psychologist who practices individual and couples therapy in Wellesley, Massachusetts, and has published on countertransference. "Tuning in to countertransference—the feelings you experience with and about the patient—is essential to truly understanding them."

CE CREDITS: 1

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

1. Define countertransference and describe how it may show up during therapy.
2. Explain how to identify countertransference and what factors prepare therapists to navigate it successfully.
3. Discuss when and how to address countertransference with patients, including when to seek consultation from a peer or supervisor.

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

Understanding countertransference

In the psychoanalytic tradition, countertransference is best defined in relation to transference, a patient's unconscious projection of feelings about other people in their life (such as a parent or spouse) onto the therapist. The mirror of transference, countertransference describes the therapist's resulting feelings, thoughts, and reactions, which relate to their own experiences and triggers. Psychoanalysts view both as key tools in the therapeutic process, offering a window into the patient's inner self and relationships that often transcends what is spoken aloud in session.

In other forms of therapy, countertransference describes any feelings and reactions of the therapist toward the patient. That may include everything from anger, dread, or excitement to distraction and boredom. One example: When a longtime patient of Lind Seal's continued to avoid social gatherings that he had originally decided to attend, after they had worked together for years on managing loneliness, she noticed she felt frustrated.

"I realized I was becoming irritated in a way that I imagined other people in his life had also become irritated with him," she said.

KATERYNA KOVARZH/GETTY IMAGES

Countertransference can also manifest as positive feelings toward a patient, such as a maternal or protective instinct, said Janina Fisher, PhD, a licensed clinical psychologist and trainer of clinicians who delivers trauma-focused treatments. Though less often seen as problematic, these feelings are important to recognize, she said, because they can compromise a therapist's boundaries and objectivity.

While countertransference can arise in any form of therapy, not all practitioners are equally prepared to handle it. Training differs widely between graduate programs, courses, and supervisors. Research suggests that therapists trained in certain theoretical orientations, such as psychodynamic therapy compared to cognitive behavioral therapy, are more likely to expect and attend to countertransference during sessions. That is due in part to the strong emphasis psychodynamic training places on a therapist's emotional awareness as a tool for understanding the therapeutic relationship (Gordon, R. M., et al., *Clinical Psychology & Psychotherapy*, Vol. 23, No. 3, 2016).

Engaging countertransference

Unexamined countertransference can lead to missed opportunities to help a patient or—even worse—replicate the harmful dynamics that led them to therapy in the first place.

In a series of meta-analyses conducted between 2001 and 2018, psychologists Jeffrey Hayes, PhD, and Charles Gelso, PhD, explored what happens when therapists react behaviorally to feelings of countertransference, such as scolding a patient after feeling personally attacked. They found that patients had worse outcomes when their therapist showed more behavioral reactions toward them, compared with when the therapist reacted less. But several therapist traits, including self-awareness and anxiety management, were associated with fewer countertransference reactions and better patient outcomes (*Psychotherapy*, Vol. 55, No. 4, 2018).

"The good news is that we don't have to be perfect," said Hayes, a professor of education and psychology at Penn State University. "We can be human, we can make mistakes, and all hope is not lost when we manifest countertransference behavior."

Early psychologists saw countertransference as a sign that the psychoanalyst needed more therapy. "But the idea that a therapist could maintain a benign, physician-like attitude all the time with all patients has not been clinically supported," said Nancy McWilliams, PhD, who has published extensively on psychoanalysis and has a private practice in Lambertville, New Jersey.

Instead, countertransference is increasingly seen as a process co-created by therapist and patient—a unique dyad with its own dynamics. That relational perspective informs psychologists' recommendations for identifying and addressing it.

Managing countertransference

To determine whether countertransference is at play with a given patient, Lind Seal suggests a series of questions for therapists to explore. During a session, do you feel irritated? Bored? Anxious? Surprisingly sad? Is this a feeling you have often, or is it limited to sessions with this particular patient?

"If the feeling is uncharacteristic and the exact trigger is not immediately obvious, that's the time to really investigate what's happening inside yourself," Lind Seal said.

Consider, for example, a female trainee treating an older male patient, said Beatriz Palma, PhD, a staff psychologist and groups coordinator at the University of Virginia's Counseling and Psychological Services (CAPS) who has done research and trained extensively in countertransference and how to manage it. The trainee, who comes from a culture with strong patriarchal norms and respect for authority figures, has become increasingly agreeable with the patient, keeping quiet during sessions and challenging him less than her other patients.

"In supervision, the trainee can explore where those behaviors stem from, any fears about what might happen if she 'rocks the boat,' and whether and how the dynamic should be discussed with the patient," Palma said.

Research by Hayes, Gelso, and others has helped identify a series of factors that can prepare therapists to navigate countertransference when it arises. First and foremost is self-awareness.

"Be in your own therapy, with the aim of knowing as much about yourself as possible, including what

KEY POINTS

1. *Countertransference,* a therapist's emotional and cognitive reactions to a patient, can arise in any form of psychotherapy.
2. Self-awareness, emotion regulation skills, and clear internal boundaries can help therapists navigate thoughts and feelings that arise when working with a patient.
3. Countertransference can offer powerful insights about a patient, which can deepen therapeutic work.

buttons are pressed for you with different kinds of patients," said Joyce Slochower, PhD, a private practitioner, professor emerita of psychology at the City University of New York, and faculty member at New York University's postdoctoral program in psychotherapy and psychoanalysis. For example, if you know you tend to become more active when a patient behaves passively, you can more quickly realize when that occurs in a session, Palma said. That, in turn, can help illuminate the client's own dynamics.

Strong emotion regulation skills, including those developed through mindfulness meditation, have also been shown to reduce countertransference reactions among therapists (Hayes, J. A., et al., *Psychotherapy*, Vol. 55, No. 4, 2018). Palma suggests grounding techniques (sensing your feet on the floor, taking a deep breath before responding) and cognitive strategies ("this is just a thought") to help manage intense reactions (including emotions, thoughts, and somatic responses), in the moment. These approaches help therapists pause and create space so that internal reactions do not translate into external behaviors.

A firm understanding of appropriate boundaries and self-disclosure is also key. If a therapist experiences countertransference, they may sometimes react impulsively—for instance, by sharing personal information to explain or justify their feelings. While self-disclosure can be helpful in certain contexts, it is not always the best solution. For example, a therapist might disclose their trauma history in hopes of building rapport with a patient. But if that disclosure is driven by the therapist's own emotional needs, it can shift focus away from the patient's experience. A 2018 study found that when therapist self-disclosure was unsuccessful, it was usually preceded by a countertransference reaction (Pinto-Coelho, K. G., et al., *Journal of Counseling Psychology*, Vol. 65, No. 4, 2018).

Countertransference can also manifest as positive feelings toward a patient, such as a maternal or protective instinct. While not problematic, these feelings are equally important to recognize so that they do not compromise objectivity.



MASKOTS/GETTY IMAGES

Lind Seal's advice: When in doubt, sit quietly.

"If you're very activated, it's probably a good general rule not to do anything right in the moment," McWilliams said.

When and how to respond

The art of managing countertransference lies in knowing whether, when, and how to address it with a patient. The choice between expressing or containing, Slochower said, requires drawing on your clinical judgment. Is this person capable of hearing how you see them? What are the chances they might shut down, leave, or otherwise suffer?

"Sometimes, you really have to name the elephant in the room," Slochower said. "Other times, you just have to make space for the patient and wait for another moment to name what you see."

Small self-disclosures can move therapy along for some patients, said McWilliams, such as a therapist who says: "I find myself to be really sad as you talk, and yet you don't seem to be processing any sadness."

A more direct challenge, in the case of Lind Seal's patient who skipped multiple social opportunities despite his loneliness, might sound something like this: "I'm feeling like you've got a lot of excuses here, and I wonder if other people might feel the same. What do you think?"

Offering a forewarning can help soften the blow of a hard-to-hear statement. Slochower sometimes starts by noting, "I'm going to say something you're not going to like."

Using language that emphasizes therapy as a two-person process is another way to make such statements more palatable. For example: "It feels like we're in a place where there's temporarily a loss of hope" or "It feels like there's a lot of irritation between us right now."

"Sometimes when you talk about countertransference in a two-person way, it's easier for the patient to sign on to," McWilliams said.

With a patient who was repeatedly angry and devaluing, Fisher found herself thinking, "No matter how hard I try, I can never please her." The thought brought to mind her relationship with her mother—and helped her snap out of a countertransference reaction: She had been walking on eggshells.

"I realized: I'm the little kid trying to please my mother, and there's no therapist in the therapy room," Fisher said.

It took a few tries to find an approach that worked. One day, when Fisher did not respond to an angry remark, the patient demanded, "What's wrong with you?" Fisher closed her eyes and noticed her internal experience—she felt shaky and worried about saying the wrong thing. She then opened her eyes and shared that with the patient, who seemed surprised and apologized for causing anxiety. Processing the countertransference together ultimately deepened their relationship, Fisher said.

In certain situations, therapists should pause and consider seeking consultation before addressing a countertransference, such as if they feel a temporary hatred or futility toward a patient or if they are feeling very activated emotionally, McWilliams said. Disclosing sexual attraction or

In moments of uncertainty, it is often best to remain still. Pausing can allow for clarity and time to examine feelings and investigate reactions before responding.



BY MURAT DENIZ/GETTY IMAGES

"Tuning in to countertransference—the feelings you experience with and around the patient—is essential to truly understanding them."

Tamara Feldman, PsyD
Clinical psychologist in Wellesley, Massachusetts

fantasies about a patient may need to be addressed in a general way, such as: "Do you feel like there's a sexualization of the atmosphere between us?"

Caution is also warranted when patients have a history of trauma, Fisher said. Classic psychodynamic approaches to transference and countertransference may not work with these patients, who can interpret a pointed observation as a rejection or be triggered by the high degree of intimacy.

"Transference and countertransference work is very intimate," Fisher said. "That's complicated with trauma survivors, who were often abused by the people they were closest to. The closeness, although they yearn for it, can be triggering."

New perspectives

Countertransference is not something therapists study once and master. Reviewing new clinical research and seeking support from colleagues can help midcareer psychologists sharpen their skills and deepen their impact.

Research by Hayes suggests that reflective practice, a system for exploring and improving one's actions, offers a helpful framework for approaching countertransference. It involves therapists reflecting on their own thoughts, feelings, sensations, and behaviors during and after a session; forming and testing hypotheses about their underlying causes; and testing and evaluating potential solutions with patients. A preliminary test with trainees in Australia and New Zealand found that engaging in reflective practice helped trainees think more critically about the causes and consequences of their countertransference reactions, as well as how to manage them (*Australian Psychologist*, Vol. 56, No. 2, 2021). Hayes is now conducting a follow-up study at Penn State that includes data on patient outcomes.

Feldman, who works with families and couples, has also studied new ways of looking at countertransference. A therapist's attitudes toward "important others" in the patient's life—anger at an insensitive spouse, for example—can also interfere with the therapeutic process (*Psychoanalytic Psychology*, Vol. 41, No. 2, 2024).

"When a therapist finds themselves feeling a particular way about a person in the patient's life, we should think about that as countertransference, too," Feldman said.

At any career stage, seeking support is key in dealing with countertransference. Join a peer supervision group, go for supervisory consults, or talk with a friend in the field, Slochower suggests.

"The challenge never goes away," McWilliams said. "You always need people you can reach out to, preferably somebody who knows you very well and knows what soft parts of you have been activated."

Self-care in whatever form works for you, be it socializing with friends, spending time in nature, or listening to music, should not be neglected. Hayes suggests reading *Leaving It at the Office*, a guide to self-care for therapists that covers sleep, diet, exercise, leisure, managing a difficult caseload, and more.

"A lot of experienced therapists say they know this—but how often are we actually doing it? It's a question we need to be honest about," said Hayes. Forgoing sleep and downtime may feel like a necessary sacrifice for patients in need. But that sacrifice can undermine a therapist's ability to stay emotionally regulated, making countertransference harder to manage.

"We need to remember that we are role models for our patients in terms of mental health," Hayes said. "It's hard to take care of other people if we're not taking care of ourselves." ■

RESOURCES

APA psychotherapy video series: Countertransference
Hayes, J. A.
APA, 2023

Countertransference: A foundation of psychotherapy
Corpuel, J. H.
In O'Donohue, W., & Graybar, S. R. (Eds.), *Handbook of contemporary psychotherapy*
Sage Publications, 2009

Countertransference and the therapist's inner experience: Perils and possibilities
Gelso, C. J., & Hayes, J. A.
Lawarence Erlbaum Associates Publishers, 2007

An introduction to countertransference
Cartwright, C.
Sage Publications, 2022

The analyst's vulnerability: Impact on theory and practice
Maroda, K. J.
Routledge, 2022

Navigating thorny topics in therapy
Abrams, Z.
Monitor on Psychology,
March 2022

IN SEARCH OF COURAGE

Courage is a virtue that is universally admired yet difficult to study. Researchers are discovering why some people act despite fear—and how values, anger, and deliberate practice can build bravery in us all.

BY TORI DEANGELIS

BOONCHAI WEDMAKAWAND/GETTY IMAGES



COURAGE TAKES MANY forms, from Alexei Navalny's fatal opposition to Russian corruption to everyday acts like confronting a friend who drinks too much.

Yet getting a handle on this virtue scientifically, empirically, and psychologically, has not been easy.

"Because courage is so intricately tied to an action and that action has a specific context, it is very hard to measure it," said Aakash A. Chowkase, PhD, an associate research scientist at Yale University who studies human virtues. A lot more work is also needed to understand it conceptually, he said.

There are other reasons courage is not easy to study. It is a multifaceted concept with divergent faces: social, political, personal, psychological, moral, and more. Is courage a rare act of nobility committed largely by extraordinary individuals, or is it an action that any of us can take at any time? Are actions that take place without much forethought—running into a burning building to save someone, for instance—courageous even though they are driven by impulse? Or is courage always the product of deliberate reflection and difficult decision-making that ultimately results in acts of heroism?

Answering those questions could not come at a more pivotal time, according to Robert J. Sternberg, PhD, a professor of human development at Cornell University and a main researcher in positive psychology, which includes virtues like courage.

"The world has plenty of people with high IQs," Sternberg said. "What the world lacks, and desperately needs, are more people with the courage to do the right thing at a time when so many leaders, including those of high IQ, are scrambling to do the opposite."

AT A GLANCE

- Courage involves weighing risk, personal ability, and meaning before choosing whether to act.
- In workplaces, social courage links to better mental health, job satisfaction, and problem-solving, but it can be misused by narcissistic personalities.
- Using deliberate practice and feedback, people can build courage like a skill, enhancing both leadership and personal relationships.

Making inroads

Cynthia Pury, PhD, a professor of psychology at Clemson University, has spent 20 years testing theories about courage. She draws on a definition of courage first proposed by Christopher R. Rate, Sternberg, and colleagues. The team posited that courage has three aspects: It is a *voluntary* action in pursuit of a *worthwhile or noble goal* that involves *taking on a risk* (*The Journal of Positive Psychology*, Vol. 2, No. 2, 2007). That risk may or may not involve overcoming fear; research has shown that fear does not always accompany acts of courage. For example, some people say in retrospect that they weren't aware of feeling fear when they performed an action that others deemed courageous. Common wisdom, however, holds that courage inevitably involves facing and overcoming fear: If one isn't afraid, how could an action be considered courageous? To tackle this conundrum, Pury and Charles Starkey, PhD, an associate professor of philosophy at Clemson, came up with two dimensions of courage defined by who is performing and assessing it: accolade courage and process courage. Accolade courage is how courage looks to outside observers. Process courage, meanwhile, refers to a person's internal state—how much fear they must overcome to take a courageous action they view as having a noble goal but a high level of risk.



Process courage is the inner strength to act nobly despite fear, especially when the risk feels personally high.

CHALABALA/GETTY IMAGES

Whether running into a building to save another person rates as courage depends on the perspectives of both the actor and witnesses. If the rescuer has no protective gear and realizes the physical harm, this noble action is high in both accolade and process courage (external and internal high risk). But if the rescuer is a firefighter in full gear who feels safe, competent, and protected, then the action is likely high in accolade courage but probably not in process courage (a high risk to onlookers but not to the firefighter themselves), for example.

Pury, whose work has focused largely on accolade courage, tested some of these notions in a study reported in *The Journal of Positive Psychology* (Vol. 19, No. 2, 2024). Participants—300 undergraduates and



1,254 people recruited online—were randomly assigned to read about either Caitlyn Jenner's public gender transition in 2015 or county clerk Kim Davis's refusal to issue same-sex marriage licenses that same year. Participants also completed a moral traditionalism scale, in which they were asked to rate how courageous, risky, and valuable they thought the action was.

In all cases, the team found that people's assessments of courage depended mostly on the perceived value of the goal; while the amount of risk was seen as important, it was less so. Moreover, people's sociopolitical views influenced the findings: Courage ratings depended on the extent to which participants agreed with the goals of Jenner's or Davis's actions, suggesting the importance of keeping personal values in mind when studying this form of courage.

The courage process

Another team of researchers has taken the first steps toward understanding process courage and how it might operate psychologically. In *Frontiers of Psychology* (Vol. 15, 2024), Chowkase, Sternberg, and colleagues laid out a theory of courageous action that involves both cognitive information processing and resolving an "approach-avoidance" conflict that they and others—including Pury in her definition of process courage—posit is at the heart of people's decision to act courageously or not.

The model focuses solely on situations that give people the opportunity to think and analyze before they act, rather than those that happen so fast that one must behave automatically. In the model, once a person faces a courage trigger—a fellow employee's mistreatment by a superior, or seeing the opportunity to join a protest, for example—they face the dilemma of whether to approach or avoid the encounter. The quandary is "that you want to approach the situation because you want to do the right thing," said Chowkase, "but at the same time, you're afraid to take the action because there is a perceived risk—either to you or to someone else." In the work scenario, that risk might be angering your boss, and in the protest scenario, it might be the threat of getting arrested.

As this larger conflict is playing out, the person is also asking themselves questions that help inform their

decision—specifically whether taking a courageous action is sufficiently meaningful to warrant the risk, and whether they have enough efficacy, or personal power, to take the action. If the answer to one or both questions is no, they will likely retreat; if it is yes for both, they must still decide whether to act.

Finally, the theory maintains that people's choices have consequences, and that the resulting experiences will influence how they act in similar situations in the future.

While Chowkase acknowledged that the theory is still at the concept stage, he noted the team plans to embark on a variety of next steps, including trying to validate the model and, if it holds up, creating measures that test different aspects of the theory. He also envisions future interventions using the model.

Most important, the model takes the view that everyone, not just a select few, has the potential to take courageous actions, he added.

"In trying to model courage, we don't think of it as purely as a trait that some people have and some don't, or simply as a virtue," he said. "We think of it as a conscious, deliberate set of decisions and assessments."

Courage in context

While some are proposing theories of courage, others are studying specific aspects of the virtue to better understand how it operates under different circumstances.

Matt C. Howard, PhD, an industrial and organizational psychologist at the University of South Alabama in Mobile, is examining a specific form of courage—social courage—in workplaces. Few empirical tools related to courage existed when he started researching it in 2013, so he wanted to start by creating a basic assessment measure.

To that end, he and colleagues developed the Workplace Social Courage Scale, a highly validated self-report measure that attempts to capture who is prone to take courageous actions in the workplace despite social risks, such as damaging a work relationship or looking bad in the eyes of others.

DELIBERATE PRACTICE

BUILDING THE COURAGE MUSCLE

Organizational behavior expert Jim Detert, PhD, caught the courage bug early on, writing his doctoral dissertation on why people speak up when it's not easy and gathering data on courageous behavior.

Over 10 years of research, he concluded that myths about courage abound—that "people tend to view it as these grand, heroic events that make you either a hero or a martyr, and that it's an innate capacity of a few"—but that people believe such myths in part because it lets them off the hook.

But Detert, a professor of business administration at the University of Virginia's Darden School of Business, notes that nearly everyone he's worked with sees the need for more courage in themselves and in the world. And as a professor of future business leaders and a leadership trainer, he also saw that the ability to behave courageously, with competence, simply wasn't being taught in business schools.

"We don't usually help students and leaders practice under conditions that mirror reality," he said. "And for leaders, that reality is often high stress, high emotion."

To counter this problem, Detert and colleagues developed an experiential leadership development lab that helps current and future leaders build key interpersonal and decision-making skills one step at a time. Using the model of "deliberate practice"—a training intervention used in performance domains such as athletics, music, and therapy—they deploy a comprehensive methodology that helps people gradually develop the behaviors needed to effectively address specific interpersonal challenges, such as giving difficult feedback to a subordinate or confronting peers who are behaving inappropriately.

Tools he employs include a courage ladder, where people list their challenges from mild to difficult; iterative practice sessions with trained actors; feedback via videotaping and physiological measures; and comprehensive background training material that draws on cognitive psychology, exposure and desensitization therapy, educational psychology, athletic coaching, communication skills, and more.

Participants report that the training makes a difference in the workplace and in other life areas, too. "[As a result of the training] it's common for people to say, 'I've been estranged from my sister for 3 years, and I'm going to call her next week.' Or, 'My parents took over control of my wedding, and I want to get control back. I'm going to call my mom this weekend and have that difficult conversation," said Detert. "These kinds of things tell me that people are hungry to develop these skills, because fear affects all domains of our interpersonal lives," Detert adds. "My view is that if you practice key skills in one domain, you'll get better across all domains, because the underlying physiological, cognitive, and behavioral challenges are the same."

GIVEN HOW RELATIVELY RARE IT IS FOR PEOPLE TO CHOOSE COURAGEOUS ACTIONS, IT'S MORE IMPORTANT THAN EVER THAT RESEARCHERS KEEP EXAMINING THE CONCEPT, IN HOPES THAT THIS KNOWLEDGE WILL EVENTUALLY HELP PEOPLE EXERCISE IT MORE OFTEN.

Howard has found that people reporting high levels of workplace social courage are more likely to report high levels of life satisfaction and low levels of stress, depression, and anxiety than those reporting less of this quality. These individuals also score higher on their tendency to engage in positive workplace behaviors like taking voluntary, nonrequired actions to benefit the organization. His research also shows that those scoring high in social courage are more likely to take an "approach" stance toward workplace problems—a willingness to confront challenging situations and see the benefits of such actions, versus steering clear because of fear, anxiety, and seeing the potential costs of such actions (*The Journal of Positive Psychology*, Vol. 14, No. 6, 2019).

Reported social courage may also harbor some down sides, Howard and others have found. For example, people scoring high in narcissism are more likely to show courage in the workplace than others, in part because their attitude is, "Hey, I'm too special to have bad things happen to me," as Howard put it (*Journal of Organizational Effectiveness: People and Performance*, Vol. 9, No. 4, 2022). Workplace interventions that promote prosocial behavior and transparency, such as team-based recognition programs, peer mentoring initiatives, and open communication policies, are potential antidotes to these more undesirable tendencies, he said.

Brave rage

Can anger make people more courageous? In a study reported in *Emotion* (Vol. 22, No. 6, 2022), Julia Sasse, PhD, a social psychologist at the Ansbach University of Applied Sciences in Germany, and colleagues examined the possible role of anger in acts of moral courage—instances in which bystanders intervene to stop actions they view as morally transgressive despite potential costs to themselves. Sasse wanted to study anger because emotions are an important understudied topic in courage research in general and because previous research has suggested that anger might play a significant role in courageous feelings and behaviors.



In workplaces, people high in social courage report greater life satisfaction and lower stress, depression, and anxiety. Research shows that narcissistic individuals may misuse social courage at work, acting boldly because of inflated self-worth and a belief they're immune to consequences.

To test these ideas, the researchers brought 145 participants into a lab where they were told they'd be part of a study on learning and emotion. As participants waited for the study to begin, the researchers staged an event in which two members of their team quietly discussed plans to embezzle funds from the project fund. They did so in a manner subtle enough to suggest they didn't think others would hear them, but loud enough that participants were able to catch on. Independent observers later videotaped and rated participants' actions, facial expressions, and body language.

Participants had numerous opportunities to confront the wrongdoing, ranging from directly confronting the embezzlers to reporting the incident to the project leader. On average, participants reacted to the embezzlement with anger, reporting feeling more angry after the event than before. The researchers also found that the angrier participants felt, the more likely they were to intervene. That said, only 27% of participants did anything at all, and most chose subtle ways of intervening, like asking the "embezzlers" about their actions rather than taking the information to a superior.

This squares with other findings that moral courage is quite rare, and importantly, that anger can be a useful aid in taking courageous action, Sasse noted. "Anger may be an important source of information that provides us with the necessary boost to stand up for our moral beliefs and show courage," she said. Given how relatively rare it is for people to choose courageous actions, it's more important than ever that researchers keep examining the concept, in hopes that this knowledge will eventually help people exercise it more often, Chowkase added.

"Studying courage is a stepping stone to maintaining healthy societies that are just and equitable—to making sure we're doing the right thing," he said. "Without it, we'd all be sheep." ■

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TEACHING CONNECTIONS

LESSONS ON THE SCIENCE OF COURAGE

The following prompts (organized by topic) can support high school and undergraduate educators in discussing the science of courage in the classroom.

1. Motivation and emotion

Using the concept of "approach-avoidance conflict" described in the courage research, explain how the motivational conflict model applies to a real-life courageous decision such as whistleblowing or joining a protest. What emotions—like fear or anger—compete in this decision and how might they influence behavior?

Reinforces: *types of motivational conflicts, emotional triggers like anger, and decision-making*

2. Personality

The research of Matt C. Howard, PhD, a professor at the University of South Alabama in Mobile, links high workplace social courage with lower anxiety and stress, but it also notes narcissists may misuse it. Apply one personality theory (e.g., Big Five, psychoanalytic, social-cognitive) to explain these differing uses of courage in the workplace.

Reinforces: *personality theories, trait approaches, and application to behavior*

3. Social psychology

In a study by Cynthia Pury, PhD, a psychology professor at Clemson University, participants rated public actions as more or less courageous depending on whether they agreed with the actor's goals. How does this finding reflect social cognition processes like attribution bias, in-group/out-group bias, or the fundamental attribution error?

Reinforces: *social cognition, attitudes, and bias in perception*

4. Learning

University of Virginia professor of business administration Jim Detert, PhD, developed a courage ladder to help people deliberately practice courageous behavior, similar to exposure therapy. Compare this method to classical or operant conditioning techniques and discuss how reinforcement or desensitization might shape brave behavior over time.

Reinforces: *learning theory, conditioning, and therapeutic techniques*

5. Research methods

Evaluate one of the studies described in the article (e.g., moral courage and anger, social courage in the workplace). Identify the study's research method, potential biases, and how variables were operationalized. How would you design a follow-up experiment to build on the findings?

Reinforces: *experimental design, operational definitions, and evaluating research validity*

FURTHER READING

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APA, 2010

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The Journal of Positive Psychology, 2019

Racial justice allyship requires civil courage: A behavioral prescription for moral growth and change
Williams, M. T., et al.
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Dare to be yourself: Courage promotes self-authenticity via sense of power
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The Journal of Positive Psychology, 2024

Choosing courage: The everyday guide to being brave at work
Detert, J.
Harvard Business Review Press, 2021

Institutional courage buffers against institutional betrayal, protects employee health, and fosters organizational commitment following workplace sexual harassment
Smidt, A. M., et al.
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Workplace courage: Review, synthesis, and future agenda for a complex construct
Detert, J. R., & Bruno, E. A.
Academy of Management Annals, 2017

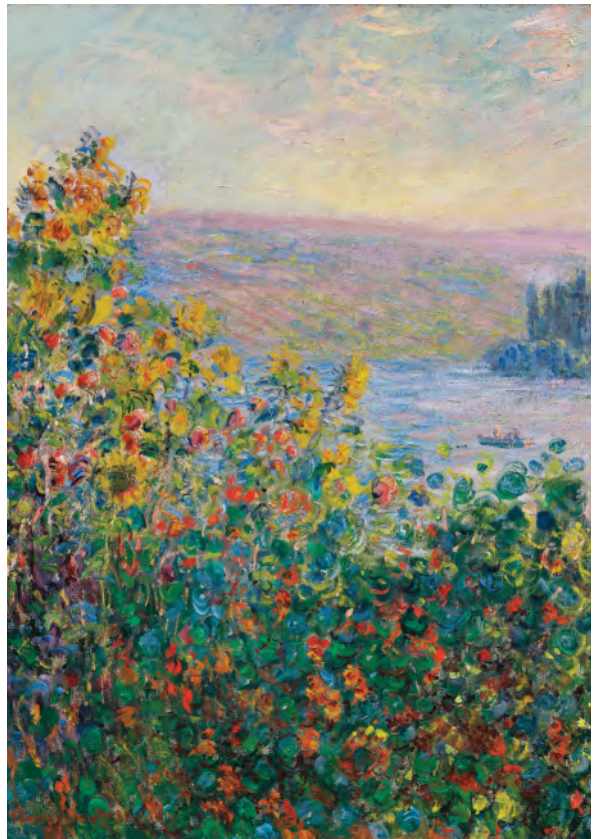






Art and the

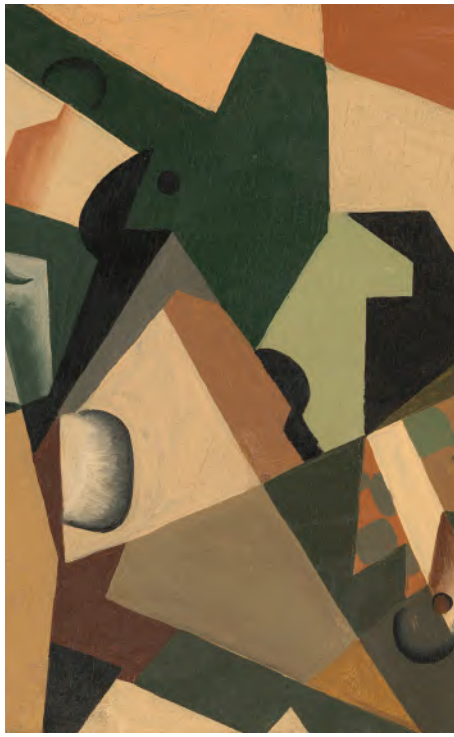






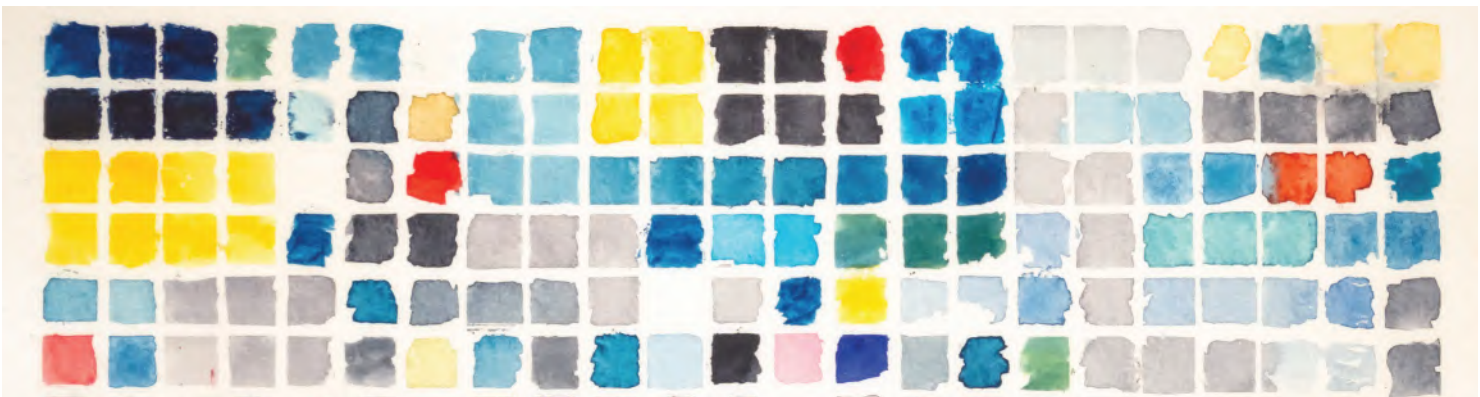


Mind



Researchers in the field of neuroaesthetics are learning what happens in the brain when we experience art and how to unleash that power for health, well-being, and social change

BY KIRSTEN WEIR





At the Rothko Chapel in Houston, envisioned by legendary abstract expressionist painter Mark Rothko, visitors view 14 purplish-black canvas panels. The visitors often report transformative experiences despite the simplicity of the art.

THE ROTHKO CHAPEL in Houston, Texas, is a spare, still space. Lining the walls of the octagonal room are 14 enormous canvas panels painted in solid purplish black by the abstract expressionist Mark Rothko. The artist envisioned the nondenominational chapel as a place where viewers could engage directly with his art. Rothko died in 1970, a year before the chapel was completed. But he succeeded in his vision.

Matthew Pelowski, PhD, an associate professor of psychology at the University of Vienna who studies transformative art experiences, has combed through volumes of the chapel's visitor logs. Time and again, people wrote of being transformed by the experience, of confronting their innermost selves. "It's just purple paint," Pelowski said. "It doesn't move or change or do anything to them outwardly, but amazing things are going on in their bodies and minds."

Artistic expression dates back to our prehuman ancestors, and philosophers have long puzzled over the significance of art and beauty to the human experience. Now psychologists and other scientists in the field of neuroaesthetics are going deeper, learning what happens in the brain when we are moved or even transformed by art—and how to harness its power for personal growth and social change.

"Artists, philosophers, and children have always known the power of the arts. It's innate and intuitive, yet we've marginalized the way we've thought about the arts as a form of entertainment," said Susan Magsamen, founder and executive director of the International Arts + Mind Lab, an applied neuroaesthetics initiative at the Johns Hopkins University School of Medicine. "In fact, the science shows we're neurobiologically wired for these kinds of experiences, and they contribute to our health and well-being."

Art and change

Through music, theater, literature, visual arts, and more, our species has

AT A GLANCE

- Research shows people engage with the arts in a variety of ways, sometimes reporting transformative experiences.
- When interacting with art one finds meaningful, the default mode network—a brain region associated with introspection—is engaged.
- Aesthetic experiences may promote positive outcomes such as empathy, social connection, and cross-cultural understanding.

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surrounded itself with the arts. Those aesthetic experiences can improve health and well-being in a dazzling variety of ways, as described in a recent World Health Organization report. Art therapy and engagement with the arts have been shown to reduce symptoms of depression and anxiety, ease pain, help people heal from trauma, protect against cognitive decline, and enhance social cohesion, among other benefits. Listening to music can promote language development in children and foster new neural pathways in adults after a stroke. In people with neurological disorders like Parkinson's disease, dance has been found to improve balance and functional mobility (Fancourt, D., & Finn, S., *What Is the Evidence on the Role of the Arts in Improving Health and Well-Being? A Scoping Review*, World Health Organization, 2019).

The arts also have the power to change the way we see the world, said Edward Vessel, PhD, a computational cognitive neuroscientist at the City College of New York who studies visual aesthetic valuation and liking. And in recent years, scientists have moved away from classic philosophical questions of beauty to explore the processes by which art can transform us. After all, art is more than just a pretty face. We can be moved by a painting of a brutal battle scene or inspired by an avant-garde melody made from discordant sounds. Like beauty, however, art is in the eye of the beholder. "Any of us looking at a particular artwork might take something different from it," Vessel said. "You can really only understand why art has an impact if you get inside the person's head."

People who measure high on the trait of openness are more likely to engage with art and, in turn, are more likely to have meaningful experience with it, as Pelowski and colleagues described in a review of the transformative power of aesthetic experiences. People with greater empathy are also more likely to connect with the arts on an emotional level and to experience new insights and understanding (*Frontiers in Psychology*, Vol. 15, 2024). Experience matters, too. Someone who grew up in a city exposed to graffiti might have a different understanding of its symbolism than someone from an area where spray-painted artistry is uncommon. And compared with nonbelievers, religious people experience greater feelings of personal communication and empathy when viewing religious art (Iosifyan, M., et al., *Psychology of Religion and Spirituality*, Vol. 17, No. 3, 2025).

As researchers begin to peel back the layers on these transformative encounters, they have had to create a system for measuring aesthetic experiences. Anjan Chatterjee, MD, a professor of neurology, psychology, and architecture and founding director of the Penn Center for Neuroaesthetics at the University of Pennsylvania, and colleagues created a taxonomy for describing the



Psychologists and neuroscientists are exploring how art affects the brain, contributing to personal growth and social change. Studies show that engaging with art can improve health, reduce anxiety, and foster new neural pathways.

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appearance and impact of visual aesthetic experiences. Using semantic network analysis, they identified 17 distinct dimensions related to the appearance of an artwork (including concepts such as colorful, controversial, balanced, and unimaginative) and 11 dimensions relating to the ways a piece of art made viewers think or feel (such as anger, calm, and pleasure). Those 11 impact dimensions could be distilled into four broad categories, Chatterjee said: positive affect, negative affect, a feeling of immersion, and transformative experiences (*British Journal of Psychology*, Vol. 114, No. 2, 2023).

Pelowski and his colleagues have undertaken a similar effort to categorize interactions with the arts, interviewing hundreds of museumgoers in Europe and the United States. Their experiences clustered into five patterns, with results quite like those Chatterjee identified (*Empirical Studies of the Arts*, Vol. 43, No. 2, 2025). Some visitors reported they were bored or unmoved by a particular work. Some reacted negatively, feeling uncomfortable or challenged by the art. Others reported a "harmonious" response, similar, perhaps, to Chatterjee's feeling of immersion. "Something about the piece just resonated with them, and they felt really good afterwards," Pelowski said.

The final two groups both reported transformational experiences, but they took different shapes: "small transformations" and "big transformations." Those who experienced small transformations felt they had learned something or found meaning, though they did not feel like a profoundly changed person. They were more likely to report positive emotions, Pelowski said. Those who described big transformations felt changed by the experience—yet they were also more likely to



Visitors at the Albertina Museum in Vienna, Austria, study "The Kingdom" by Matthew Wong. Some visitors report being transformed by engagement with art.



Visitors sit captivated by swirling projections of haystacks and wheat fields at Toronto's "Immersive Van Gogh" exhibition, a five-story digital gallery celebrating the artist's vivid landscapes.



A museumgoer in Milan, Italy, explores "Straordinaria," an immersive installation that blends art and innovation in a captivating sensory experience.

report negative feelings as a result of having their worldview turned upside down. The results suggest art that elicits small transformations might be a sweet spot for boosting well-being and personal development, he said. On the other hand, the more conflicted responses of big transformations could lead to revelatory experiences that result in greater personal growth. "If you don't put anything of yourself out there and feel a bit of a challenge, then nothing very exciting can happen," Pelowski said. "If you want to actively change people's worldview or change their actions, transformative engagement is a good vehicle for that."

Making meaning

To find out what makes art experiences so powerful, scientists are peering under the hood. According to a framework developed by Chatterjee and Oshin Vartanian, PhD, a psychological scientist at the University of Toronto, aesthetic experiences arise from an interaction of three brain systems, collectively dubbed the aesthetic triad. The *sensory-motor system* perceives sensory features such as color or movement. The *emotion-valuation system* is concerned with feelings of reward and liking. And the *knowledge-meaning system* involves the prior knowledge and personal experiences that allow someone to find significance in the artwork (*Trends in Cognitive Sciences*, Vol. 18, No. 7, 2014).

That last system is what makes artwork more than just an object or sensory experience. When people are moved by a powerful piece of art, they are deriving pleasure from their ability to make sense of the experience—what Vessel calls "pleasure from understanding." That pleasure seems to come from within. His research has shown that when people interact with visual arts such as paintings, architecture, and sculpture, the brain's default mode network comes alive (*Frontiers in Human Neuroscience*, Vol. 6, No. 66, 2012; *PNAS*, Vol. 116, No. 38, 2019). "This was actually somewhat surprising," he said.

Typically, when people are looking at or listening to the world around them, the default mode network goes quiet. It becomes engaged when people are focused instead on inward-facing tasks like daydreaming, future planning, and introspection. "But in rare moments, we can have a change in brain network dynamics where both systems can be engaged," Vessel said. "Our work shows that this can happen with aesthetic experiences, and there's increasing evidence that it may also be important in creativity." In fact, he has found that interacting with aesthetically moving artwork can prime people for a state of creative inspiration (*Psychology of Aesthetics, Creativity, and the Arts*, Vol. 17, No. 3, 2023).

The involvement of this introspective brain system may be why our responses to art are so personal. A song that moves one person to tears can spur another to change the radio station. Vessel has shown that the more personally relevant the art, the greater its appeal. He and his colleagues surveyed participants about their cultural backgrounds, lifestyles, and autobiographical experiences. Then the researchers prompted an artificial intelligence (AI) program to create synthetic artwork tailored to each participant's life and interests. The participants later rated the AI-generated art that was designed specifically for them more aesthetically appealing than AI art that had been created for the other study participants (*Psychological Science*, Vol. 34, No. 9, 2023). "When something relates to our own self construct, it acts like a road map to go deeper," Vessel said.

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Research shows that viewers of art often feel emotions similar to those the artist experienced while creating the work. This emotional connection enhances the viewer's engagement and appreciation, making the art more meaningful and enjoyable.

But art does not just act as a mirror for people who experience it. It can also act as a window into an artist's inner world. Pelowski asked professional artists about their own emotions and intentions as they created installation art, then assessed the emotions and understanding of observers as they viewed the finished pieces (*Psychology of Aesthetics, Creativity, and the Arts*, Vol. 14, No. 3, 2020). In many cases, observers could guess what the artist intended to convey, though that ability did not predict the observer's enjoyment or sense of understanding of the work. Often, though, viewers described emotions similar to what the artist reported they had actually been feeling when making the work, even if it was not an emotion they consciously aimed to convey. Those shared emotions between artist and observer led to deeper engagement, Pelowski found. "If people actually feel the way the artist was feeling—regardless of whether that was the artist's intent—they say they like the artwork more and think it's more meaningful," he said. "It has to be felt."

Using art for good

Visits to museums and performing arts centers are often social activities, and in a society where loneliness is an increasing concern, the arts could bring people together. But creating beneficial arts experiences might require intentional efforts to facilitate social interactions around art. Researchers have found, for example, that when museumgoers viewed art together and discussed the works, they reported greater well-being and more social connectedness than participants who viewed the paintings side by side without talking (Igdalova, A., et al., *Psychology of Aesthetics, Creativity, and the Arts*, advance online publication, 2025).

Aesthetic experiences might also be tools for encouraging prosocial attitudes. The arts have long been a medium for commentary and activism, and researchers are exploring how the arts might lead to lasting changes in beliefs and behaviors. In one study, Pelowski and his colleagues assessed the attitudes and opinions of participants who viewed an exhibit focused on the acceptance of refugees. The results were mixed, though participants' reports did suggest increased empathy and prosocial thoughts shortly after viewing the installation. But those changes lasted only a day (*Psychology of Aesthetics, Creativity, and the Arts*, advance online publication, 2024).

Under the right circumstances, however, art might lead to more enduring changes. Ellen Winner, PhD, a professor emerita at Boston College who studies the psychology of art, asked study participants to read either a literary memoir written by an undocumented immigrant or a news-style expository account on the same topic. Those who read the literary work had significantly greater empathy for immigrants, particularly if they had initially been unsympathetic toward the group. In some cases, the effect was still measurable a month later (*Scientific Study of Literature*, Vol. 12, No. 1–2, 2022).

To harness art for public good, it may be important to provide the right framework for understanding. People typically prefer artworks from their own cultures, but the right information can help people see unfamiliar art in a new light, Chatterjee found. He and his colleagues showed participants from North America and India images of representational art from each of those regions, then asked participants to rate the works for beauty, complexity, and how much they liked them. Providing viewers with information about the content, artist, and

JEFFREY GREENBERG/UNIVERSAL IMAGES GROUP/GETTY IMAGES

technique reduced participants' bias for art from their own culture, especially among North American participants with low art experience (*Journal of Comparative Literature and Aesthetics*, Vol. 47, No. 3, 2024). "Art, with a little context, could potentially be a vehicle to bridge cultural divides," Chatterjee said.

To realize such benefits, we need to slow down, Chatterjee said. One oft-cited study found that visitors to New York's Metropolitan Museum of Art spent an average of 27.2 seconds looking at each artwork (Smith, J. K., & Smith, L. F., *Empirical Studies of the Arts*, Vol. 19, No. 2, 2001). An advocate of a movement known as slow looking, Chatterjee asks his students to examine one work of art for 15 minutes, devoting 5 minutes to each of the three components of the aesthetic triad: What are its sensory features? What emotions does it evoke? What associations and knowledge does it stir up? When doing this exercise, students are more engaged and more likely to have a meaningful experience. "We live in such a manic, transactional world, and we don't know how to be present. Art can get people to slow down and can be a tool for self-discovery," he said.

Others are catching on to the idea of using art for good. Since the 1980s, health care providers in the United Kingdom have used "social prescribing" to refer patients to a range of beneficial services, including arts experiences like museum visits for depression or dance programs for people with movement disorders. Health care providers in the United States are now experimenting with the model. Through an arts prescription program launched in Massachusetts in 2020 by the Mass Cultural Council, medical providers prescribed activities like dance classes or community theater performances that were offered to participants at no cost. A pilot study of the effort found participants enjoyed their arts experiences and believed they had a positive effect on their well-being (Golden, T. L., et al., *Frontiers in Public Health*, Vol. 10, 2022). "It's a drumbeat that has gotten louder and louder, and the momentum is increasing," Magsamen said.

Unfortunately, traditional arts venues like museums and opera houses have not historically felt welcoming to people from all backgrounds, and the arts can seem intimidating to people with little experience of them. "People sometimes feel that the arts are intrinsically good for them, and if they don't understand something or find it pleasurable, they feel they failed in some way," Pelowski said. He urges educators and health care providers to help people understand that there is a range of normal experiences and ways to engage with the arts. "There's a lot that can be done by validating people's experience and letting them know that there's no right way to respond to art," he said.

Meanwhile, researchers continue to study the conditions that foster positive arts experiences. "One of the most exciting things about the psychology of aesthetics is how many unanswered questions there still are and how much room there is for more research in this space," Pelowski said. To aid that effort, the International Arts + Mind Lab recently launched the interdisciplinary Neuroarts Resource Center, an online platform that connects researchers, artists, practitioners, funders, and others interested in the arts.

As researchers seek to learn more about the arts, they are also helping to answer broad questions about cognition. Aesthetic judgments are informed by a person's background, emotions, and experiences, Vessel said, and the tools researchers have developed to study those judgments will be helpful for unraveling other aspects of subjective experience. "When we find something aesthetically appealing, it's not just some mistake of evolution," he added. "These experiences are critical." ■

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How art works: A psychological exploration
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The Routledge international handbook of neuroaesthetics
Scov, M., & Nadal, M., (Eds.) Routledge, 2023

The need for robust critique of research on social and health impacts of the arts
Clift, S., et al.
Cultural Trends, 2021

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Weir, K.
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RESOURCES

Neuroarts Resource Center
www.neuroartsresourcecenter.com

Society for the Psychology of Aesthetics, Creativity and the Arts
www.apa.org/about/division/div10

International Association of Empirical Aesthetics (IAEA)
iaea-aesthetics.org





THE PROMISE OF PRECISE, PERSONALIZED MENTAL HEALTH CARE

Researchers are harnessing the power of coordinated, individualized tools—brain imaging, genetic profiling, health history, and more—to determine the best approaches to mental health care

BY HEATHER STRINGER



NEARLY ONE THIRD OF ADULTS with major depressive disorder fail to respond to at least two different antidepressant medications, and half of those treated for generalized anxiety disorder do not respond to first-line treatments. Numerous other mental health conditions also require that patients endure a lengthy period of treatment experimentation (Zhdanava, M., et al., *The Journal of Clinical Psychiatry*, Vol. 82, No. 2, 2021; Ansara, E. D., *Mental Health Clinician*, Vol. 10, No. 6, 2020).

"This is like getting the wrong antibiotic," said Leanne Williams, PhD, a professor of psychiatry and behavioral sciences at Stanford University and director of Stanford Medicine's Center for Precision Mental Health and Wellness. "In that time, the disability is developing. It is essential to find a way to get patients to the right treatment as quickly as possible to limit the chances of chronic illness." Williams lost her partner, who suffered from major depression for decades, when he died by suicide in 2015.

Williams is among a growing cadre of researchers leading the charge to improve mental health outcomes by collecting data about a patient's brain circuitry, genetics, environment, and lifestyle to better diagnose, treat, and prevent disease. This individualized treatment model, known as precision

AT A GLANCE

- Precision mental health uses brain scans, genetics, and lifestyle insights to match patients with the right treatment.
- Precision mental health can tailor treatments for those who don't respond to standard care and can prevent serious mental illness before it starts.
- Machine learning combined with clinician input is helping predict suicide risk within months, enabling earlier, more targeted interventions for those most at risk.

PREVIOUS PAGES: PATRICKHEAGNEY/GETTY IMAGES; COURTESY OF DR. LEANNE WILLIAMS, STANFORD UNIVERSITY

"The field is being transformed by an increased understanding of neurobiology that is leading to more personalized care."

Conor Liston, MD, PhD
Professor of psychiatry and neuroscience at Weill Cornell Medicine in New York

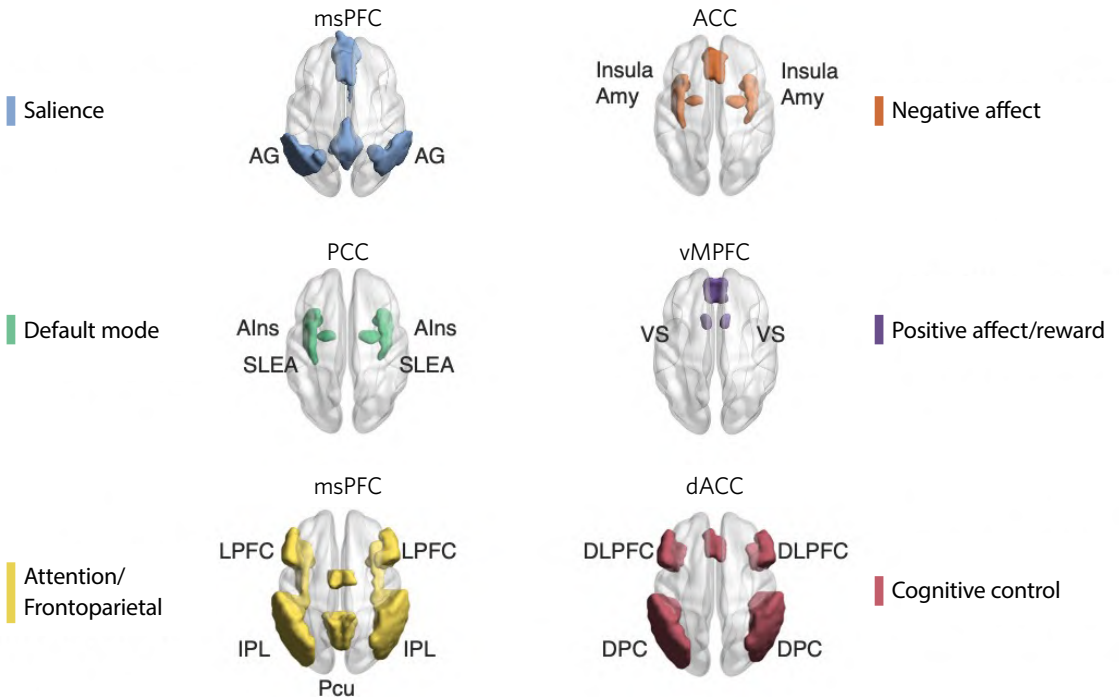
health, has already been adopted in cancer, cardiology, and other disciplines, and mounting evidence suggests that the field of mental health is the next frontier.

At present, the medical community tends to treat patients with a particular mental health diagnosis as if they are all the same, according to Jordan Smoller, MD, ScD, director of the Massachusetts General Hospital (MGH) Center for Precision Psychiatry. "If we could know ahead of time who is more likely to do well with a given treatment—whether it is psychotherapy or medication—that could avoid the sometimes long odyssey of trial-and-error treatment and reduce the burden of illness for those who are struggling."

Recent studies highlight the benefits of using fMRI, biomarkers, electronic health records, and other information about a patient to treat and potentially prevent depression, suicide, attention-deficit/hyperactivity disorder (ADHD), anxiety disorders, and schizophrenia. In addition, researchers are developing precision health technology tools that clinicians can use to inform their decisions about which mental health treatments to recommend for a patient. While this approach has yet to become a standard of care, those pioneering this method believe it is an innovation that is long overdue.

"Someone who is sleeping only 4 hours a night, has lost weight, and is intensely agitated may not have the same biological problem as a patient who has gained 40 pounds, can't get out of bed, and has lost interest in things that used to be enjoyable, but they may get the same diagnosis and treatments," said Conor Liston, MD, PhD, a professor of psychiatry and neuroscience at Weill Cornell Medicine in New York City. "The field is being transformed by an increased understanding of neurobiology that is leading to more personalized care."

The colored areas represent the regions of the brain on an fMRI that show abnormal activity in a distinct set of brain circuits that regulate mood and cognition. This data can help clinicians identify which treatment would likely be effective for a patient.



Biotypes for precision

fMRI brain scans are one way to capture biological differences between individuals, and Williams has studied this data on thousands of patients with depression. Williams has identified at least six "biotypes" of depression that are associated with certain patterns of dysfunction in brain circuits (*Nature Medicine*, Vol. 30, No. 7, 2024). One of the biotypes shows hyperconnectivity within the default mode circuit, which is associated with internal reflection and thinking about the past and future. She has found that cognitive behavioral therapy (CBT) is particularly effective for people with this biotype. "If this circuit is not easily suppressed, cognitive therapy can train people to focus their thoughts differently, and this changes the brain," said Williams.

Another biotype exhibits dysfunction in brain circuits associated with positive affect. These patients experience emotional numbness and lack of pleasure in activities they previously enjoyed. People with this biotype do not typically respond to standard antidepressants, but Williams found that pramipexole—a drug used to treat restless leg syndrome and Parkinson's disease—boosted activity specifically in the reward circuits in the brain. One study participant who struggled with depression since childhood had lost his job and was experiencing suicidal ideation. He had failed to respond to five different antidepressants when he joined Williams's study. But 2 weeks after starting the test drug, he called the research team to share that when he heard one of his favorite songs on the radio, he felt joy for the first time in years. He also found a new job and has continued to experience relief from depression since he started taking the medication several years ago.

Brain scans can also identify patients who have underactive or overactive cognitive control circuits, which are associated with executive functioning. Based on her studies, Williams estimates that about one quarter of people with depression have dysfunction in their cognitive control circuits. These patients do not typically improve with standard antidepressants, but study participants with underactive circuits in this region improved after receiving transcranial magnetic stimulation (TMS), a noninvasive brain stimulation technique using magnetic fields to influence electrical brain activity. "For these people, it is a big effort to make the cognitive control circuits active, and as a result they experience brain fog," said Williams. Cognitive control performance increased significantly after a few early sessions of TMS treatment and continued after the full 6-week course of treatment (*Nature Mental Health*, Vol. 2, No. 8, 2024).

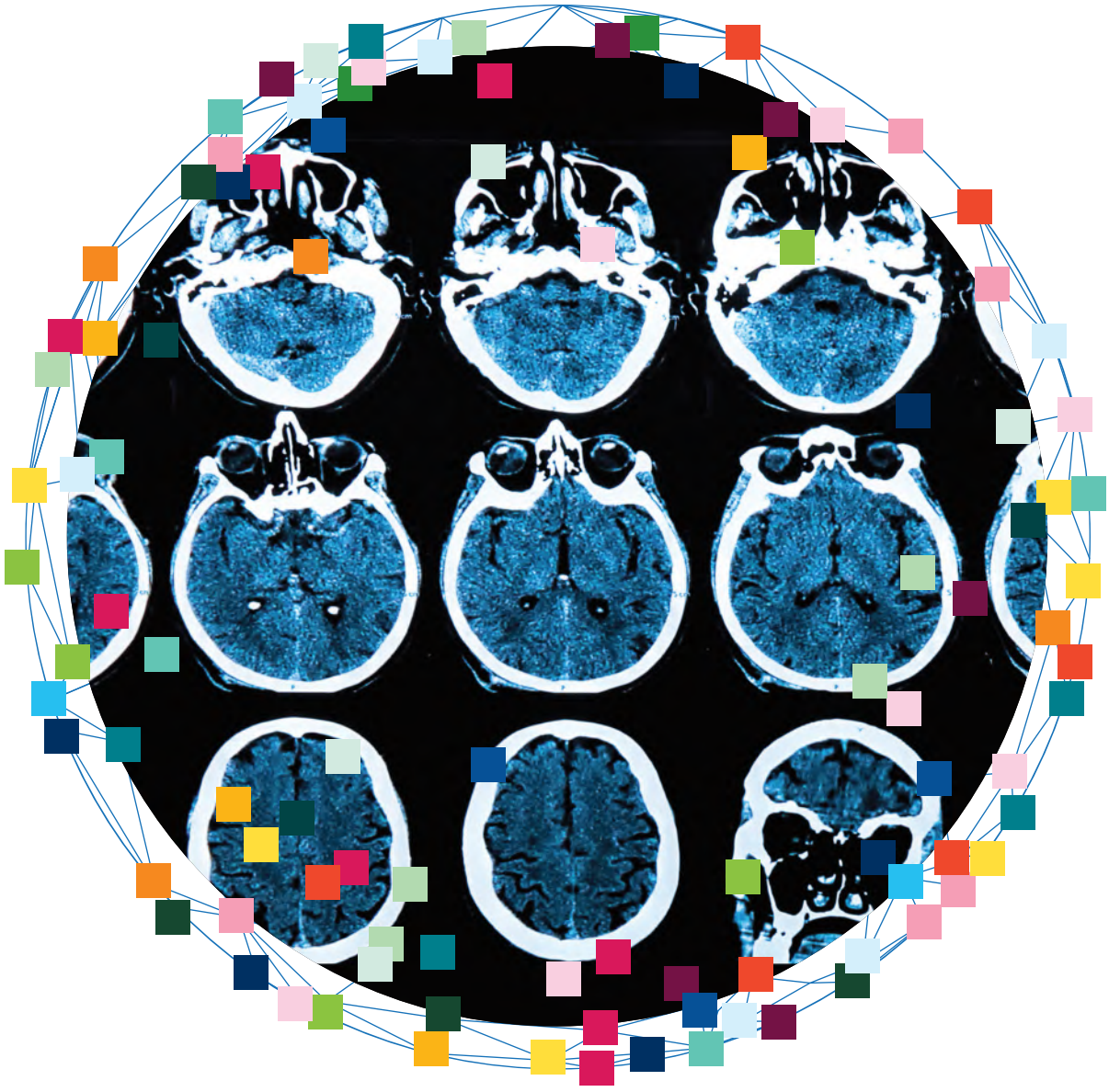
In another study of people diagnosed with both major depression and obesity, one third who had overactive cognitive control circuits responded to a form of CBT known as problem-solving therapy. This type of treatment helps people learn to disregard irrelevant details and process information more efficiently. Brain scan data showed that in the group receiving this therapy, decreased cognitive control circuit activity was associated with improved problem-solving ability (*Science Translational Medicine*, Vol. 16, No. 763, 2024). "This therapy is creating brain changes that help people solve problems in their relationships, at work, or in other situations that affect mental health," said Williams.

Personalized prevention

While precision mental health has the potential to help people with mental health conditions who do not respond to standard treatments, psychologists are also exploring whether this approach could prevent the onset of serious mental illness. Carrie Bearden, PhD, a professor of psychiatry, biobehavioral sciences, and psychology at the University of California, Los Angeles, has been studying how an individual's genetic information could help clinicians predict who has an increased risk of developing schizophrenia. About 20% of people missing a piece of DNA on chromosome 22, known as 22q11.2 deletion syndrome, develop schizophrenia, but it has been difficult to predict who will develop the disease and who will not, Bearden said.

In a recent study, she and her colleagues discovered that participants with this genetic syndrome in addition to other genetic variants associated with schizophrenia had much greater risk of developing the disease than those with the genetic syndrome and low variant risk (*Nature Medicine*, Vol. 26, No. 12, 2020). "The damaging effects to the brain appear to be greatest during the first 5 years of the illness, and early intervention can make a significant difference in outcomes," she said. "In the early stages, before full-blown illness hits, psychosocial treatments like family-focused therapy and cognitive behavioral therapy can improve symptoms and functioning."

Psychologist Susan Whitfield-Gabrieli, PhD, is using precision techniques to help adolescents reduce their risk of developing major depression and severe anxiety later in life. In a pilot study, teens with a history of depression, anxiety, or both, learned mindfulness exercises that can help downregulate an overactive default mode network. While in the scanner, a software program converts an individual's brain signal into an image of a ball. The degree of motion of the ball helped participants see the calming effect of the mindfulness exercise on their default mode network (*Molecular Psychiatry*, Vol. 28, No. 6, 2023).



PHOTOPROFI30/GETTY IMAGES

Precision mental health researchers are using genetic and brain imaging data to identify individuals at high risk for conditions like schizophrenia and depression—enabling early interventions such as cognitive behavioral therapy and mindfulness to reduce long-term mental health impacts.

"Each person's default mode network is different, so they can experiment with different types of mindfulness training to see on the scanner what works best," said Whitfield-Gabrieli, the Tommy Fuss Endowed Chair in Precision Psychiatry at MGH. "The really exciting part is empowering patients to learn how to change their brains by seeing a visual of how they are doing." She has four NIH-funded clinical trials to use this technology to mitigate symptoms to help individuals with depression, borderline personality disorder, or schizophrenia, and people at risk for psychosis, but one of the grants has been affected by the recent funding cuts. She is also applying for a grant to use this technology to help elementary-school-age children use the technology to learn techniques that change their brain circuitry, which could ultimately help reduce their chances of developing mental health conditions.

Lowering suicide risk

Researchers are also investigating how precision health could help clinicians more accurately predict both who is at risk of suicide and when the risk is highest. "When clinicians see large volumes of patients in settings such as the ER or primary care, even the most trained providers have trouble identifying who are the few who will actually go on to attempt suicide," said Kate Bentley, PhD, an assistant professor of psychology at Harvard Medical School



Innovative neurofeedback tools empower teens and at-risk individuals to visualize and regulate their brain activity in real time, helping them build resilience against depression, anxiety, and other disorders—marking a shift toward proactive, personalized mental health care.

and director of the Suicide Prevention Research Program at the MGH Center for Precision Psychiatry.

Bentley is part of a team that is using machine learning algorithms to improve prediction of who is at risk of suicide within months of seeing a health care provider. In a recent study, the team collected data from more than 800,000 suicide risk assessments entered by clinicians into the electronic health record for nearly 90,000 patients in the Boston area between 2019 and 2023. The assessments included questions about suicidal ideation, depressed mood, firearm access, and social support. At the end of each assessment, clinicians documented their overall estimate of a patient's risk. Over the 6 months that followed, the researchers tracked whether patients visited the emergency room for a suicide attempt (*JAMA Psychiatry*, Vol. 82, No. 6, 2025).

While clinician estimates of risk were higher than chance, using statistical machine learning models that combined those estimates with suicide risk assessment data significantly improved the accuracy of predicting future suicide attempts. "This type of personalized prediction could be used to alert providers if there is a patient they need to be especially concerned about and elevate the level of care," Bentley said. "It could also let them know who they don't need to be as concerned about, reserving high-cost interventions for the highest risk patients."

Psychology researchers are also investigating how to use precision health techniques to tailor risk assessment and prevention strategies for depression. In one study of more than 100,000 adults in the United Kingdom, a machine learning algorithm analyzed data using 106 variables for each patient, including exercise, sleep, diet, media use, green space, and social connections. The participants had also shared genetic information for depression biomarkers and reported their history of traumatic life experiences, such as childhood sexual, emotional, or physical abuse. For individuals at higher risk of depression based on genetic or trauma data, three factors showed the most potential for preventing disease: confiding in others, reducing television time, and managing daytime sleep (*American Journal of Psychiatry*, Vol. 177, No. 10, 2020). "Once depression develops, it is difficult to treat and tends to come back again, so preventing the onset of depression is important for reducing its burden," said study coauthor Karmel Choi, PhD, an assistant professor of psychology at Harvard Medical School and director

MARK KOSTICH/GETTY IMAGES

"Using machine learning models, we can develop multivariable models to predict which treatment is indicated for a specific individual."

Zachary Cohen, PhD
Assistant professor of psychology at the University of Arizona

of the Precision Prevention Program at the MGH Center for Precision Psychiatry.

In another study, patients with a higher genetic risk of depression were 20% less likely to develop depression when they engaged in more physical activity than when they didn't. With 45 minutes a day of activity—such as yoga, walking, or jogging—the outcomes for these patients looked more like people with low genetic risk for depression, (*Depression & Anxiety*, Vol. 37, No. 2, 2020). "We can use precision strategies to recommend the lifestyle factors most likely to reduce depression risk, informed by an individual's own risk profile," said Choi.

Precision psychiatry in the clinic

Although precision techniques in mental health are primarily used in academic research settings, studies are underway to develop decision support tools providers can use in the clinical setting. Psychologist Ellen Dreissen, PhD, of Radboud University in Nijmegen, Netherlands, spent 10 years collecting and analyzing raw data from more than 60 randomized clinical trial studies involving nearly 10,000 patients globally who were diagnosed with depression.

Dreissen's team is building a machine learning model that can give individualized treatment recommendations based on multiple variables, such as patient history, family history, suicidality, inpatient treatment, personality factors, anxiety and depression assessments, comorbidities, and more (*PLOS ONE*, Vol. 20, No. 4, 2025). The algorithm will combine this information with outcome data on five different treatments: antidepressant medications, cognitive therapy, behavioral therapy, interpersonal therapy, and short-term psychodynamic therapy.

"To a large extent, research in mental health treatment has focused on 'average treatment effects' from clinical trials that compare one treatment versus another, but this can mask the fact that there are many different patient-level factors at play that affect outcomes," said Zachary Cohen, PhD, the study's senior author and an assistant professor of psychology at the University of Arizona. "Using machine learning models, we can develop multivariable models to predict which treatment is indicated for a specific individual." The team's goal now is to develop an algorithm-based tool that can be disseminated to clinicians and patients to support shared decision-making. Clinicians could potentially tell patients their likelihood of responding to an antidepressant medication versus psychotherapy, or one type of psychotherapy versus another.

Researchers are also testing another decision support tool that uses data from a patient's brain scan, depression rating scale, and symptoms to generate a depression subtype and predictions about which treatments would be most effective. "It would be similar to doctors ordering blood tests, an EKG, and a chest X-ray for chest pain," said Liston, who is leading a study of the tool. "Doctors would use this information to make decisions to treat mental health conditions."

While tests such as brain scans are not typically covered by insurance to diagnose and treat mental health conditions, researchers like Liston are hopeful that evidence will build the case to adopt precision mental health tools into primary care, emergency departments, and psychiatry throughout the world.

"We must generate more data to prove that precision mental health works," said Liston. "If we can show how this approach improves outcomes, these tools can be scaled to better help patients with depression, OCD, autism spectrum disorder, and many other conditions that are difficult to treat and affect millions of people worldwide." ■

FURTHER READING

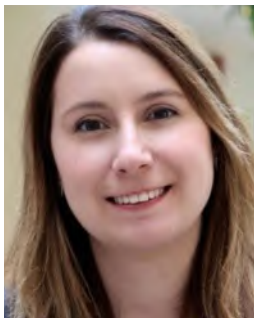
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JAMA Psychiatry, 2022


SMITH-JACKSON


YOUNG


BABCHISHIN


LIM


FEENY

Psychologists in the News

TONYA SMITH-JACKSON, PhD, provost at North Carolina Agricultural and Technical State University (NC A&T), has been named the next chancellor of Rutgers University–Newark. A human factors engineer with advanced degrees in psychology, ergonomics, and industrial engineering, she has held key leadership roles at NC A&T since 2013—including chair of the Department of Industrial and Systems Engineering and executive vice chancellor. She also led research labs and centers focused on cybersecurity and human-tech interaction and played a major role in establishing centers of excellence in cybersecurity, product design, and innovation.

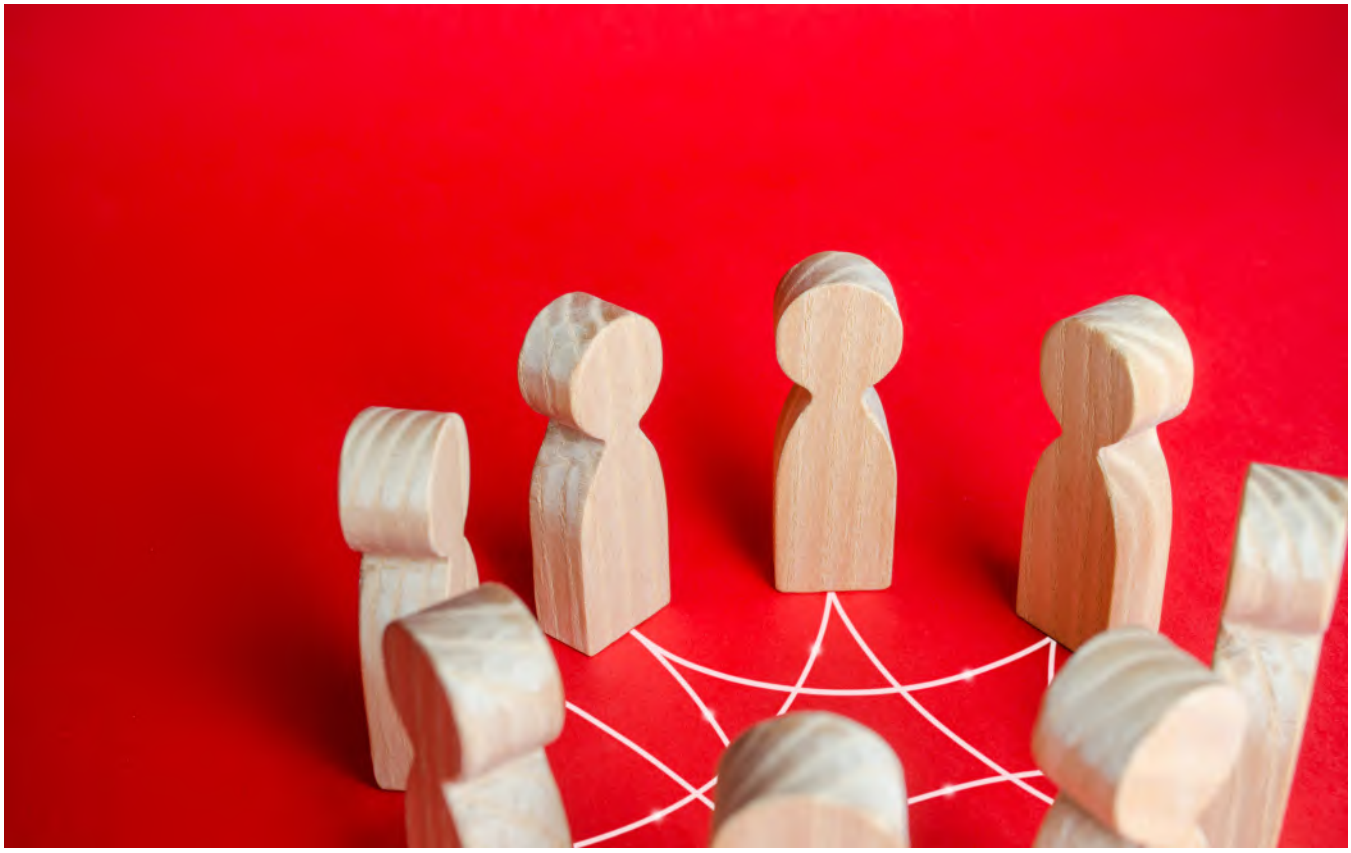
MICHAEL E. YOUNG, PhD, has been appointed vice provost and dean of the graduate school at Baylor University. A professor of psychological sciences at Kansas State University, Young brings a multidisciplinary background in artificial intelligence and cognitive psychology. Young has held faculty positions at multiple universities and played key leadership roles at Kansas State, including department head and associate director of a major NIH-funded research center. His research explores decision-making in dynamic settings, particularly impulsive and risky behavior in video game environments, blending computational modeling with psychological theory.

KELLY BABCHISHIN, PhD, an assistant professor of forensic psychology at Carleton University in Ottawa, received an Early Researcher Award from Ontario's Ministry of Colleges and Universities for her project on technology-facilitated sexual offenses. Her study will analyze data from university students and convicted offenders to better understand online-to-offline exploitation and improve prevention and management strategies. Part of a broader CA$75 million provincial investment in research, Babchishin's project aims to inform education, reduce recidivism, and support public safety efforts in Ontario.

SUNG-JOO LIM, PhD, a psychology professor at Binghamton University of the State University of New York, received a prestigious $815,269 National Science Foundation CAREER grant to explore how the brain's dynamic functions support speech and language learning, especially in adults. Her research investigates new pathways to enhance brain plasticity and improve language acquisition, offering fresh insights into why kids pick up languages more easily. The 5-year study aims to unlock strategies for more effective adult language learning. As Lim investigates implicit learning in language education, she aims to explore its application beyond simple speech to complex rules like grammar.

NORAH FEENY, PhD, a leading expert in post-traumatic stress disorder (PTSD), anxiety, and trauma, has been named the first executive director of the Moll Institute at Case Western Reserve University. A professor and director of the university's PTSD Treatment and Research Program, Feeny brings more than 30 years of experience across clinical settings, from sexual assault and substance abuse programs to outpatient care. Her work focuses on evaluating and refining mental health treatments, with an emphasis on improving outcomes for underserved communities. Under her leadership, the Moll Institute will expand research, training, and resources to support individuals with mental illness and their caregivers.

FRANK M. DATTILIO, PhD, has received the 2025 Clinical Faculty Award in Psychiatry from the University of Pennsylvania's Perelman School of Medicine, where he is a full clinical professor of psychiatry. He also holds a teaching associate position at Harvard Medical School. Widely recognized for his contributions to cognitive behavioral therapy and forensic psychology, Dattilio has earned multiple state and national honors for his work in psychology and psychotherapy. ■



ANDRII YALANSKYI / 500PX/GETTY IMAGES

Rather than placing the burden solely on individual patients, a population health approach acknowledges the powerful role that societal systems and structures play in helping people stay well over time.

How Psychology Practices Population Health

Often, it's about reframing familiar work through a much broader lens. Here's how a variety of psychologists are sharpening their focus on prevention for greater reach.

BY ZARA ABRAMS

AN ESTIMATED 1 in 5 U.S. adults is living with a mental health condition—and psychologists are keenly aware that traditional services cannot reach everyone in need. For practitioners across the field, a paradigm shift toward population health is offering new opportunities to close that gap.

"We all know there aren't enough providers to meet current needs with one-on-one services, so we are having to be creative in how we train the general public to help identify and talk about behavioral health conditions," said health psychologist Elizabeth McKune, EdD, chief operating officer at Seven Counties Services, which provides community mental health care in Louisville, Kentucky.

A public health, or population-level, framework can address the high need for care that currently overwhelms the nation's mental health workforce. While cultural, structural, and systemic barriers must also be addressed, population health approaches are one promising way to help. It

means that wellness-promoting services such as support groups, public health campaigns, and mental health education are just as much a part of psychological care as treatment for a mental health diagnosis.

"A population health approach assumes that everyone needs to be concerned with both their physical and mental health, which means that psychology is relevant to the entire population—not just those with diagnoses," said Nicole Barnes, PhD, APA's senior director for child and adolescent learning and well-being and a key contributor to APA's population health efforts, which include a science summit and member town hall around the topic. Rather than placing that burden solely on individual patients, this approach acknowledges the role of societal systems and structures in helping people stay well.

Those systems and structures must be both tailored and scalable to effect meaningful change. Practicing psychologists are well equipped for this work. Many are leading research and policymaking efforts that can help a broad swath of the nation. Equally important, solo practitioners are integrating population health strategies—such as annual mental health screenings and brief interventions—into their individual care, expanding the reach and relevance of psychological services.

"Traditionally, clinicians focus on the person, while public health focuses on the population," said psychologist Perry Halkitis, PhD, MPH, dean and the Hunterdon Professor of Public Health and Health Equity at the Rutgers School of Public Health in New Jersey. "The best work we can do is broad enough that it can be applied at the population level but tailored enough to meet people's individual needs."

A pyramid of care

With a population health approach to mental health, care can be seen as a pyramid that includes the entire continuum of needs, from people who are thriving to those experiencing serious mental health challenges. Unlike traditional models that focus on treating those with diagnosed conditions, a population health approach provides support at every level. The 75% of the population that is generally well benefits from efforts to keep people healthy—everything from workplace and state policies that support well-being, such as universal paid family leave, to mental health wellness exams in primary-care clinics.

One step up, at-risk individuals or those with subclinical mental health symptoms are identified and helped as early as possible before mental health problems can develop or worsen. That can be done through early screenings and referrals for things like problematic alcohol use, smoking, stress, trauma, depression, suicidal ideation, and anxiety, and through psychotherapy for people without a diagnosis, for instance, to address work issues or relationship stress. For example, research suggests that yearly depression screenings are an affordable way to protect adolescent mental health (Doan, T. T., et al., *JAMA Health Forum*, Vol. 6, No. 5, 2025). Vulnerable individuals can also benefit from efforts to reduce risk, such as better child welfare policies that lower the prevalence of trauma.

At the top of the pyramid, individual and group therapy, crisis intervention, and inpatient services are available for individuals currently experiencing mental health difficulties (roughly 25% of the population at any given time): those meeting diagnostic criteria who need more extensive care.



The boundaries between these levels are not fixed. People can move up or down throughout their entire lives depending on their needs, experiences, and the contexts in which they find themselves.

Family Connects, a program developed by psychologists in Durham, North Carolina, shows how a population-level approach can simultaneously help families at each layer of the pyramid by offering support at a critical time. Kenneth Dodge, PhD, a professor of psychology and neuroscience and public policy at Duke University, and his colleagues built what he calls a "universal system of primary psychosocial care" for families, akin to the primary health care provided by a pediatrician.

"We realized that we needed to create a universal intervention to reach all families, but we also needed to tailor it to a particular family's needs



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Wellness-promoting services such as support groups, public health campaigns, and mental health education are just as much a part of psychological care as treatment for a mental health diagnosis.

and to identify what those needs are," Dodge said.

Dodge and his colleagues developed a directory of more than 400 community resources across Durham to help new parents with common challenges, such as managing postpartum depression and sleep issues and buying essential baby items. Then a team of nurses conducted home visits shortly after babies were born to identify family needs and connect them to relevant agencies. In a randomized controlled trial that included nearly every newborn in the county, the intervention improved maternal mental health, reduced emergency room care, and lowered Child Protective Services investigations for abuse and neglect by nearly 40%. The program is now active in 22 states and is on track to reach 10% of U.S. newborns within 5 years.

In Seattle, psychologists are also working to build a community infrastructure that can better support children and families after the spike in mental health concerns triggered by the pandemic.

"The idea is that we should not be gatekeeping mental health services, especially for youth and their families, because the need is too great to be met by one-on-one services," said Janine Jones, PhD, a licensed psychologist and associate vice chancellor for graduate affairs at the University of California, Santa Barbara.

Jones helped launch Reach Out Seattle, which trains anyone who interacts with children—including parents, teachers, summer camp counselors, and community center workers—in psychological first aid. Pitching it like a form of mental health CPR training that anyone can take, the organization trains adults to recognize when a child needs support, as well as where to find it. Last year, Reach Out Seattle launched a partnership with the community organization Erika's Lighthouse to educate the community about depression in teenagers.

To serve a broader range of students, APA's Coalition for Psychology in Schools and Education is developing a framework called Healthy Habits for School Communities that uses a population health approach to integrate supports into schools nationwide. The model, to be released later this year, will include specific evidence-based guidance—such as how to create peer mentoring programs—for the classroom, school, district, state, and federal levels.

Lowering the demand, meeting the need

Health psychologists, too, are finding that a population health approach is an effective way to meet the widespread need for support—and perhaps even indispensable. According to a 2023 study from the National Institutes of Health, an estimated 21% of U.S. adults are living with chronic pain. Of those, more than a third have "high-impact chronic pain," pain that limits daily activities for 3 months or more.

"This information makes it clear that while individual treatment is important, we have to take a population approach to more effectively address the problem, or we won't make any headway," said pain psychologist Ravi Prasad, PhD, director of behavioral health in the Division of Pain Medicine at the University of California Davis Medical Center.

To reach more patients, Prasad mainly provides group therapy, which also serves a secondary goal: helping

patients with an invisible condition feel less isolated.

McKune, in her work with Passport Health Plan, a Medicaid-sponsored care plan in Kentucky, also sought a creative way to tackle physical and behavioral health needs at the same time. Her team's solution flipped a familiar practice on its head: Instead of integrating behavioral care into primary-care settings, they tried the reverse. Passport Health paid behavioral health providers to collect medical data, such as asking patients when they last had a dental checkup.

"We know that people with severe mental illness have a higher comorbidity of other physical health conditions and die much sooner, so we continued to look at where there were opportunities to address both behavioral and physical health needs simultaneously," McKune said.

A public health intervention is strongest when it can reach a broad population while adapting to individual social and cognitive needs, Halkitis said. At Seven Counties Services, McKune is working to launch a drop-in crisis center with input from more than 200 community partners. The center will house licensed behavioral health professionals as well as various forms of community support (such as help with housing and employment) to address the full spectrum of needs that arise during a behavioral health crisis.

"There's not a one-size-fits-all approach, but we can be ready with multiple interventions that speak to different groups within a population," Halkitis said.

Doing the work

In shifting toward a population health framework, it's critical to determine how psychology practitioners—many of whom are already doing this type of work through screenings, brief interventions, and integration with other providers—can be paid for work that often falls outside traditional reimbursement models, Dodge said.

Health psychologists are finding that a population health approach is an effective way to meet the widespread need for mental health support.



LUIS ALVAREZ/GETTY IMAGES

"Our profession has a large number of individuals who are in practice and rely on that revenue to make a living. Can these individuals be salaried, reimbursed, or paid consulting fees for activities like community-wide intervention planning?" he said.

Recent national and state-level changes in reimbursement models are allowing a growing number of practitioners to weave a population health approach into their one-on-one work. Kentucky, for example, adopted a Certified Community Behavioral Health Clinic model in 2022. That approach reimburses integrated care community clinics at a daily rate, rather than paying a fee for each service provided.

"For one, that allows us to do more thorough intake screenings of new clients entering our system, including physical health, mental health, and social determinants of health," said psychologist Elizabeth Jackson, PhD, who oversees a team of interdisciplinary providers at Seven Counties Services, the community mental health provider in Louisville, Kentucky.

Providers in Jackson's unit use a social determinants screener that includes questions about food and housing insecurity, childcare needs, companionship, and more, which helps flag challenges that could complicate treatment early on. The new payment structure also allows Seven Counties to provide transportation, case management, peer support, and other services typically not covered by Medicare and Medicaid.

Over in Europe, a pilot program in Belgium is testing whether reimbursing private practitioners for population-level interventions through mental health networks is a better use of mental health care funds than the country's current approach, which reimburses practitioners through a simple fee-for-service model. Psychologist Koen Lowet of Beringen, Belgium, delivers workshops on managing stress at a large children's football club and provides brief interventions to children with early signs of anxiety or depression. Similar programs are freely available to all Belgians through schools, nursing homes, and welfare centers.

"With the limited resources we have, we can either hire more psychologists—or we can ask psychologists to retrain and focus more on primary care," said Lowet, who also works as a strategic policy expert for Belgium's largest social health insurer. "The hope is that focusing on early detection and intervention will be a more efficient use of psychologists' skills," he added, and the program's early results are promising.

Since 2022, the U.S. Centers for Medicare and Medicaid Services (CMS) has released billing codes that allow psychologists to be reimbursed for screenings related to social determinants of health, including housing and food security. CMS also reimburses providers for principal illness navigation—support services for people with serious conditions—such as guidance for navigating health care systems. In addition, psychologists can use CMS codes to conduct screenings and brief interventions for tobacco, alcohol, and opioid use, providing essential care even if they do not specialize in addiction services.

State-level policy changes also reflect the shift toward population mental health. In Ohio and Colorado, psychologists in integrated care settings can now be reimbursed for conducting annual mental wellness screenings. New York is one of several states that has changed medical necessity criteria so patients can access short-term psychological care without a diagnosis.

"We will never have enough therapists to treat everybody, so solely investing in one-on-one services is not an efficient way to use public money," Lowet said. "Population health approaches are key to scaling our impact and getting mental health services to many more people." ■

RESOURCES

Population health
APA, 2025

Psychology's role in advancing population health
APA, 2022

Improving community well-being: Psychology's role in advancing population health
APA, 2024

"Population health: Engage your community and supersize your practice" [webinar]
APA, 2023

Population mental health science: Guiding principles and initial agenda
Dodge, K. A., et al.
American Psychologist, 2024

A new public health psychology to mend the chasm between public health and clinical care
Halkitis, P. N.
American Psychologist, 2020



With fewer academic job opportunities, many young psychological scientists are using their training in research, leadership, and problem-solving to pursue other sectors of the job market.

FG TRADE/GETTY IMAGES

Jobs for Young Scientists in Turbulent Times

Psychology graduate students who planned careers in academia or research are facing major job uncertainty. Here's how they can navigate this challenging time and find fulfilling work in other settings.

BY TORI DEANGELIS

WHEN KALEY DAVIS began graduate school in clinical psychology in 2021, she knew she wanted to pursue an academic career where she could study her passion: how to foster resilience and thriving after trauma.

But with the current upheaval surrounding funding for research and academia, Davis, now in her 5th year at Marquette University, is no longer sure that path is even a remote possibility.

"There is this state of uncertainty and almost a feeling that things aren't real," said Davis, who chairs the American Psychological Association of Graduate Students (APAGS) Science Committee and is graduate student liaison to the APA Board of Scientific Affairs (BSA). "Every day there's a new headline, and it creates a state of anxiety where you feel like you can't really do anything to generate change. The whole situation is disheartening, and that is putting it lightly. It is actually devastating."

Davis is far from alone. While opportunities for practitioners are slated to expand, according to the U.S.Bureau of Labor Statistics, prospects for students interested in academic research careers are expected to be much more limited, with the current political reality adding exponentially to this scenario.

"There's a lot of uncertainty in terms of where we can go and what options are available if academia is not one of them," said Brendan Lam, a 4th-year student at Yale University and a graduate student member of BSA.

Sue M. Orsillo, PhD, head of education at APA, said there are some potential silver linings of the current state of research and academia, however, including the opportunity to use one's degree in expanded, interesting, and creative ways, whether for the short term or the long term. And, she added, what's happening with federal funding today is simply an acceleration of the ongoing trend toward declining opportunities in academia. For example, APA's PsycCareers, the number one job site for psychologists, shows a sharp decline in the percentage of academic jobs held relative to all psychology jobs, from 68% of the psychology job market in 2020 to just 27% in 2024, though this drop could be attributed to factors other than actual job openings.

"For students who are only considering faculty positions or jobs at NIH [National Institutes of Health], it's important to think flexibly and to start to learn about other career paths—to think about the skills you have and the additional training you might need to help you succeed in the marketplace," said Orsillo.

Here are some specific ways students can do that.

Identify and describe your skills

Many sectors of the job market focus on hiring people as much for their skills as their credentials. That's a big plus for psychology students targeting research careers, because they have a wide range of marketable skills, said Wendy Wood, PhD, a Washington, D.C.-based behavioral scientist and researcher and provost professor emerita of psychology at the University of Southern California.

"Psychology graduate students are trained in a broad set of analytic skills that are useful very generally," said Wood, also a former president of the Association for Psychological Science. These include skills in research, communication, complex problem-solving, project management, collaboration, leadership, and innovative thinking. "So, although students might feel invested in one specific area of study, it's important for them to recognize that their broad skill set is useful in many other contexts."

However, translating these research and science skills for the job market requires knowledge and effort, said Karen Stamm, PhD, senior director of APA's Center for Workforce Studies. "There is often a language gap between how we're trained as psychologists and what employers are looking for in their job applications," she said.

She recommends that students start to fill this gap by developing an individual development plan, or IDP. For example, APA offers a five-part tool that helps students pinpoint their interests, skills, abilities, knowledge, motivations, and values and reflect on their career interests and goals. Another free tool is Imagine PhD, which helps doctoral students and postdoc researchers in the humanities and social sciences assess skills, explore career paths, create goals, and map out next steps for career and professional development success.

"Once you have developed this kind of self-understanding, you can start creating a plan and implementing it," Stamm said.

Assess the job market

After the self-assessment, it's time to assess the job market, Stamm and others say.

For starters, a number of online resources provide comprehensive information about job types and trends. The U.S. Bureau of Labor Statistics is a fount of information on job types, requirements, and trends. A related website, O*NET, lets people search occupational profiles for hundreds of jobs, job activities, and wages across the job market. Students can explore this site in various ways, including searching for jobs that tap different aspects of their expertise, for example, psychology knowledge, research expertise, or a particular kind of computer coding. An O*NET search category called Bright Outlook also singles out job types that are expected to grow rapidly in the next few years, have large numbers of openings, and/or are new and emerging occupations.

Students can also get a good sense of job possibilities by searching and building a profile on LinkedIn, around their 4th year of graduate school, said Dennis P. Stolle, JD, PhD, head of applied psychology at APA.

"Students can look at how other people characterize themselves so they can emulate what they like and at the same time create their own profile to fit their personality and skill set," he said. This activity "can give students real-world, real-time insight into how people in the business world are selling themselves to one another." Once a student is ready to begin the job search, they can post that information on their profile page, as well, he recommended.

In terms of broad areas of growth for psychology students in general, health care remains a solid and growing arena for clinical jobs, said Stamm. Meanwhile, there is a huge opportunity for psychologists to apply their expertise to the exploding world of artificial intelligence (AI), Stamm added. "Psychologists have the foundations to help artificial intelligence be much safer and better than it is right now," she said.

There are numerous opportunities for psychologists to work in settings that are adopting AI, added social psychologist David Evans, PhD, director of market research at Microsoft.

RESOURCES

APA Center for Workforce Studies data tool on psychology careers
Interactive tool with data on career outcomes for psychology graduates

Explore the wide range of psychological science careers
APA guide to help psychological scientists consider the many different possible careers that draw upon doctoral training and skills

How did you get that job?
APA webinar series showing how psychologists apply their knowledge, skills, and experience in real-world settings

PhD Life Blog
PhD students and graduates from the University of Warwick (U.K.) and elsewhere share their experiences

APS Student Notebook
An online forum for psychology graduate students, hosted by the American Psychological Society

These include research and design jobs in user experience (UX), customer experience (CX), and patient experience (PX); jobs in privacy and security research; and opportunities to join regulation and policy initiatives related to the use of AI in the classroom and/or the clinic, to name a few.

"Psychologists are essential to ensure that AI implementations are human-centered, responsible, and truly of value to everyday people," he said. "We can help artificial intelligence promote authentic humanity."

Get your feet wet

Students also need to open themselves up to real-world connections—to rubbing elbows with people who can help them gain savvy in applied settings. For example, Jason Cantone, JD, PhD, a senior research associate at the Federal Judicial Center in Washington, D.C., landed his job 14 years ago thanks to networking with another legal psychologist who sent him the job listing.

"On sites like LinkedIn, there are not only people looking for work but also people regularly posting job ads and offering free advice on how to get jobs." Meanwhile, job boards like Altac Jobs, LLC "often include a wide range of applied careers that most people don't think about."

He and others also recommend reaching out to potential workplaces that intrigue you—say a nongovernmental organization that focuses on a particular human need, a tech company conducting interesting research on human factors, or a policy center that supports a mission you believe in. Connect with specific people in those settings through LinkedIn or an organization's website, not for the purposes of applying for a job, per se, but to find out more about what they are looking for and to describe your skills and interests as they fit with the organization's mission and aims. You can even ask them to vet a draft resume if they're open to it, which can sharpen your practical knowledge about different potential employers and your application skills.

When it comes to actually applying for jobs, frame your experiences in the language of the potential employer, not in academic speak. For instance, most nonacademic employers don't care much about academic publications; they'd rather hear about your experience and expertise in the skills that matter to them. If you're applying for jobs in UX research, for example, make sure that you are up to speed on issues such as what AI is and is not capable of doing in this arena, the latest iterations of tools such as Figma and Sketch and how you can use them in the job, and how UX skills relate to relevant departments such as product development, sales, marketing, and strategy, said Ian Tingen, who heads Tingen Industries, a company that uses psychological and behavioral design expertise to carry out a diverse range of projects.

"Look for ways that your work can support the goals of those units and be smart and proactive in demonstrating it," Tingen suggested.

Another way for students to connect with people and systems outside academia is to share their expertise in the community, said Orsillo. Examples are joining in public comment periods on issues you know something about, such as Medicaid cuts, organizing workshops on specific topics, or joining in advocacy work headed by APAGS or other relevant groups.

"Now more than ever, students can be ambassadors for educating the public about what psychology is and does," Orsillo said.

Cantone, who is also an adjunct faculty member at George Mason University in Fairfax, Virginia, brings in psychology professors to show how their research applies in real-world settings, as well as people with applied careers to show how crime analysts and research organizations use some of the same tools they are learning about.

Students can also take electives in departments like business and management and lobby faculty to make applied internships available, Stolle added. Ask yourself, "If I take this class, will it help me gain skills that can actually be used and will be marketable?"

Even recent graduates and those in postdoc programs can expand their opportunities and take advantage of the growth in practice through

re-specialization programs. Designed for psychologists who have obtained a PhD in another area of psychology, these programs offer a shorter course of study to get a license.

Be creative

If you have an entrepreneurial bent, consider out-of-the-box ways to use your training, Tingen said.

While studying social and personality psychology in graduate school, he knew that academia was not for him. So instead of pursuing that path, he took his first postgraduate job at an environmental consulting firm. There, he was assigned to a client who charged him with getting people to put more trash into trash cans and less into recycling bins—they were essentially using the recycling bins as trash cans—and to save consumers money in the process.

Using his psychology training, Tingen first challenged the client's assumption that the customers weren't thinking through how to do things properly. Next, he analyzed what might be causing the problem and tested potential solutions. He discovered that people couldn't read the script on the recycling bins, making it difficult for them to decide what was or wasn't recyclable. He also found that their trash cans were generally too small to contain most of their trash. Both problems, he said, were relatively easy fixes.

That experience made Tingen realize that he loved getting quick results and that psychological principles could be successfully applied almost anywhere. He's adopted that philosophy at Tingen Industries, where a diverse range of projects have included helping the video-streaming service Twitch create real-world communities from digital ones. He is also developing psychology-informed products such as his iOS-based Decision Deck app, which walks people through evidence-informed ways of making the best decisions.

Tingen encourages students to explore and keep an open mind. "Devote 10% to 20% of your week just taking in new things, new ideas, new places," he recommended. "I guarantee you'll be able to apply a lot of your psychological expertise in interesting and useful ways."

Stay in touch with peers

Now is not the time to isolate, so make efforts to stay connected with colleagues, said Orsillo. Depending on where you are in your program, consider joining APAGS or the Committee on Early Career Psychologists (CECP), both of which offer a wealth of relevant resources and opportunities for networking, getting involved in advocacy work for the profession, and more.

For those strongly considering a nonacademic path, Tingen has received excellent support and mentorship from a group called Recovering Academics, run by social psychologist Gabrielle Filip-Crawford, PhD. It includes a Slack channel for group chats and other helpful resources.

"A lot goes into changing an identity," he said. "So don't be shy about seeking out community and help, especially while you're going through a transition like the one from academia to another kind of career path."

Know that your first job isn't your last

No matter what job you take out of graduate school, it will provide valuable experience and help you figure out who you want to be professionally, said Cantone. In his work at the Federal Judicial Center, he has learned how to conduct research that is pivotal in helping judges better manage their courts—work that he loves. "You won't fully know what you love and how you can best use your talents until you start getting some real-world experience," he said.

Adopting a growth mindset can help you build a rich career over time, more than if you locked yourself into a singular path, Stamm added.

She noted that in her own case, she earned her doctorate during the Great Recession of 2008, another time of job uncertainty. Many of her peers at the time were scrambling for jobs, as they are now.

However, "these political and economic trends tend to be cyclical," she said. "So, take the long view and look at your career as not just one step but as many. Our research shows that there are a lot of career options in psychology, even in an uncertain time like right now." ■

FURTHER READING

An evidence-based evaluation of transferrable skills and job satisfaction for science PhDs
Sinche, M., et al.
PLOS ONE, 2017

PhD training is no longer fit for purpose—it needs reform now
Nature (Editorial), 2023

The declining interest in an academic career
Roach, M., & Sauermann, H.
PLOS ONE, 2017

Pursuing additional income streams in an uncertain economy
Andoh, E.
Monitor on Psychology, July/August 2025

Psychology under siege
Abrams, Z.
Monitor on Psychology, July/August 2025

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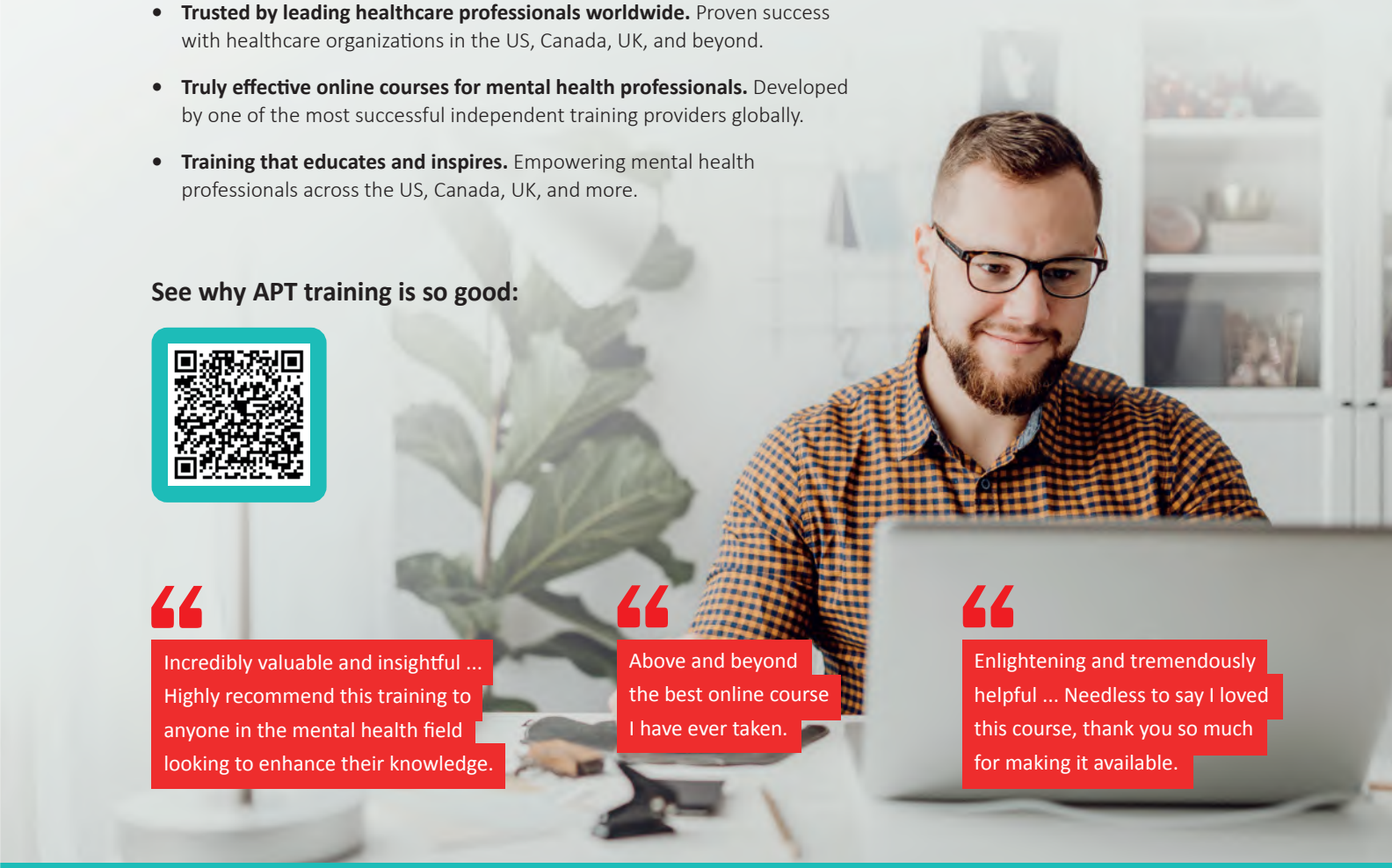
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