

Monitor on Psychology

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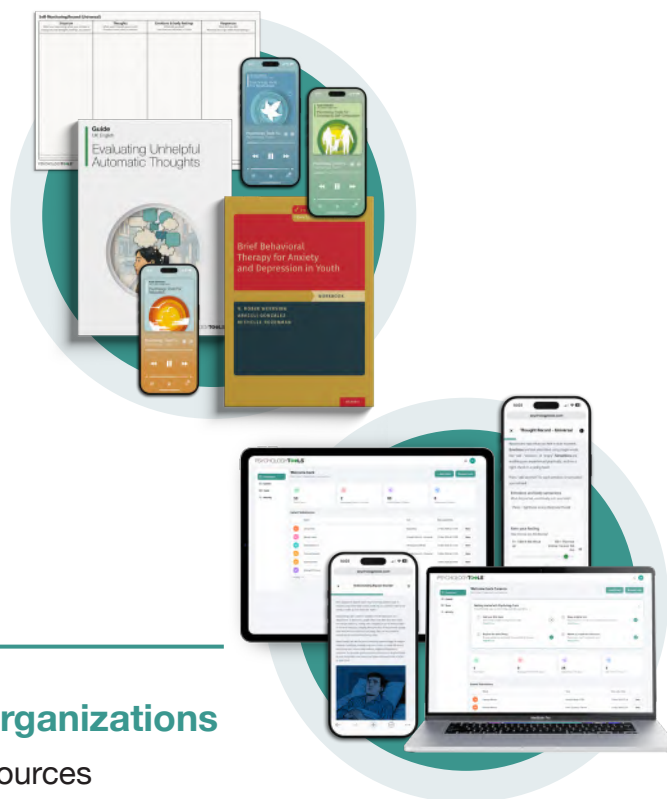
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VOLUME 57 | NUMBER 5

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The Hot List

Resources, opportunities, and news for psychologists from APA



APA 2026

Lead Through

What does it mean to “lead through” every stage of life? Find out at APA 2026, Aug. 6–8, in Washington, D.C. The Main Stage Headline Events trace the arc of human development from childhood to middle age to older age. Keynote sessions explore how psychology leads through today’s defining challenges: ethics, intersectionality, and AI. Speakers include numerous psychology luminaries, plus legal scholar Kimberlé Crenshaw and Microsoft’s VP of AI Transformation Kieran Snyder, PhD. Register at convention.apa.org.



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To access or update your print or digital subscription, email monitorsubscriptions@apa.org; for story ideas or comments, email monitor@apa.org.

ELECTIONS

Meet the APA Presidential Candidates for 2028

The three candidates for APA's 2028 president are Candice Nicole Hargons, PhD, Chuck Hollister, PhD, and Margaret Bull Kovera, PhD. Read their personal statements on page 36 and learn about their experience, vision, and priorities for the association. Voting opens Aug. 3 and runs through Sept. 16. Vote at MyAPA:

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APA LABS

Explore the Library for Digital Mental and Behavioral Health Technologies

APA members now have access to a searchable library of technologies that have earned the APA Labs Digital Badge—an independent, evidence-based rating of bronze, silver, or gold. Whether you're a clinician, researcher, educator, or advocate, discover evaluated digital mental and behavioral health tools, make informed decisions for your practice or organization, and support innovation that aligns with psychological science and ethical care. Find the Digital Badge Solutions Library at apa.orchahealth.com/en-US.

APA BOOKS

The Impact of Poverty on Early Development

Millions of young children face the devastating effects of poverty on their brains, behavior, and future opportunities. Featuring leading voices in developmental psychology, neuroscience, education, and policy, the new book *The Impact of Poverty on Early Development* uncovers the real impact of poverty on brain development and school readiness, the unique challenges of rural poverty and immigrant families, the intersection of race and poverty for young children, and evidence-based solutions such as early intervention, education, and policy strategies. Find this and other titles at

www.apa.org/pubs/books.

POD SCIENCE

How Accurate Are Our First Impressions?

How much can you really tell about someone at first glance? Nicholas Rule, PhD, University of Toronto, joins *Speaking of Psychology* to discuss the science of first impressions. Discover how your brain judges other people in milliseconds, how accurate those judgments are, and how stereotypes and biases play a role. Rule also explores research on gaydar, the degree to which you can detect traits like extraversion and trustworthiness, and the real-world consequences of snap judgments. Listen in at

www.apa.org/news/podcasts/speaking-of-psychology/first-impressions.

INBOX INSIGHTS

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July/August 2026



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Psychological research is illuminating the power—and limits—of our sensory processing systems.



64 Volunteering and Other Kind Acts Help the Helper, Too

Research shows that people who volunteer or perform other acts of kindness are happier, less depressed, and less lonely than others.



48 How AI Is Reshaping Human Skills and Thinking *(cover)*

Some evidence suggests that heavy reliance on generative AI can reduce critical thinking and job-specific skills. But using AI in a structured way can help optimize human-machine collaboration, preserving human abilities while improving AI output.

ON THE COVER: RISKY MING/UNSPLASH



CONTINUING EDUCATION

Using Brain Stimulation to Treat Mental Illness

Transcranial magnetic stimulation (TMS) technologies are continuing to evolve. Clinicians view neuromodulation—the process of delivering targeted electrical stimulation to the brain to normalize abnormal neural circuitry—as a valuable tool for treating obsessive-compulsive disorder, migraines, smoking cessation, and more. Meanwhile, researchers are exploring TMS to treat eating disorders, post-traumatic stress disorder, and even neurological conditions such as mild cognitive impairment, Alzheimer's disease, and autism (see page 42).

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From Commitment to Action

How we treat one another inside this profession sets the stage for all of our work

BY WENDI WILLIAMS, PhD



Dr. Wendi Williams is the 2026 APA president and principal consultant at WSW Consulting Services, where she advances equity-driven leadership through psychology-informed consultation rooted in Black Women's Liberatory Leadership Praxis.

MY WORK centers on liberatory leadership praxis: an ethical, embodied practice of leading that cultivates belonging, names the systems that refuse it, and knows psychology has a role in the response. That work has taught me that values, however sincerely held, mean little without the structures and sustained effort to bring them to life. Good intentions are not enough. Neither are policy statements alone, however important they may be.

In February 2025, the APA Council of Representatives reaffirmed our commitment to justice, human rights, fairness, and dignity for all, recognizing these values as central to the discipline and practice of psychology. That reaffirmation was not made in the abstract. It came in direct response to policy changes and actions across the United States that have the potential to hinder psychologists' ability to provide care, deliver services, and conduct research, particularly for marginalized and vulnerable populations. The council acted because the moment demanded it.

But reaffirming a commitment is only the beginning. The work that actually creates change lies ahead of us. It is between us.

Our values do not live in resolutions alone. They live in how we treat

one another as colleagues, in the respect we bring to difficult conversations, and in the ethical collaboration we model within our own professional community for the better of the society psychology serves. We cannot advocate for dignity in the world while failing to practice it among ourselves. I have always believed that how we treat one another inside this profession says everything about what we are capable of outside it. If we want

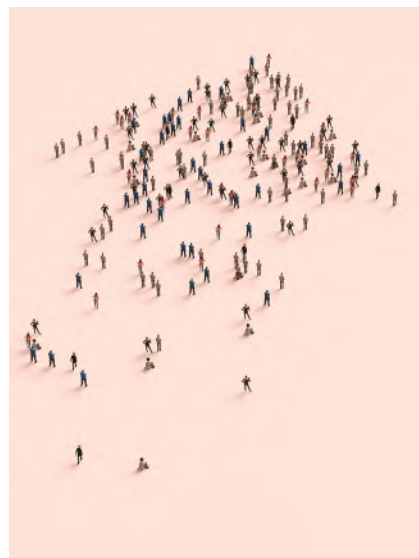
psychology to stand for dignity in the world, we have to practice it in our own hallways first.

This is the conviction behind my presidential initiative, the Task Force for Actualizing APA's Policy Commitment to Justice, Human Rights, Fairness, and Dignity. The task force will mobilize psychologists through collaborative networks, leverage our science through shared expertise, and develop strategic interventions grounded in respectful, ethically sound engagement. Through coordinated advocacy, education, research support, and policy development, it will work to ensure that our commitment moves concretely and measurably from aspiration to implementation.

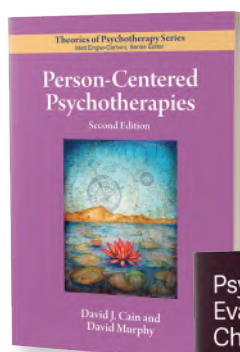
By strengthening the ethical foundations of our professional community, we protect psychology's capacity to serve all communities while actively challenging the systemic injustices that contradict our science and perpetuate harm.

As your president, I am committed to ensuring that this initiative marks not just a reaffirmation of what we believe but a rededication to doing what those beliefs require, for ourselves, our communities, and the people who depend on psychology to show up fully for them. ■

APA must continue to build on its commitment to justice, human rights, fairness, and dignity, persevering in moving from aspiration to implementation.



New Releases from APA Books

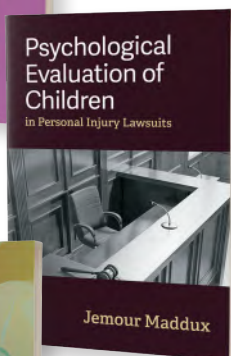


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BY JEMOUR A. MADDUX

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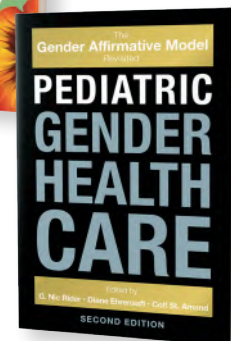
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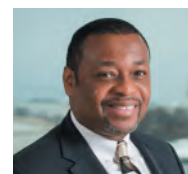
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Psychology's Moment in the AI Revolution

The rise of AI is a human story and psychology has a central role to play

BY ARTHUR C. EVANS JR., PhD



Arthur C. Evans Jr., PhD, is the chief executive officer of APA. You can follow him on LinkedIn. [in](#)

A I IS DEVELOPING at a pace that few of us fully anticipated. It is reshaping how we work, how we learn, how we relate to one another, and how we make decisions that affect millions of lives. And yet, in the rush to build faster, smarter, and more capable systems, something essential has been missing: the human layer.

That is not a metaphor. When you look at how AI systems are constructed—from computing power and infrastructure, to data, to models, to products and applications, to deployment—the science of human behavior has largely been an afterthought. The technology has advanced rapidly. How its design accounts for human complexity and our understanding of how it shapes behavior in return have not kept pace.

This is precisely where psychology comes in. And it is what has driven APA to launch the Center for Behavioral Science and AI.

The center is built on a straightforward premise: Frontier AI companies want better products, safer deployment, greater trust and legitimacy, and human benefit at scale. What we bring is independent scientific infrastructure, behavioral and developmental science for AI design, and practical guidance grounded in evidence. Rooted in our mission to improve people's lives, APA's role includes reducing harm caused by AI and ensuring that it ultimately benefits humanity.

Our model is deliberate. There is a strict boundary between the science and the technology companies, with APA recommending research-based principles and frameworks for AI design and evaluation. The translation of those principles into technical application requires codesigning specifications with the tech industry. Implementation will be led by those with the technical expertise to execute it. Each layer has its role. Ours is to ensure that psychological science is elevated and translated, without ever being compromised.

The center's work is taking on pressing, high-stakes issues like

youth well-being—an area where APA has already caught the attention of the tech industry, policymakers, and the public—and workforce, where AI is creating enormous ripple effects across industries.

The decisions being made right now will shape human experience for generations. Adding the human layer is imperative—both for mitigating AI's harms and for using AI to reimagine systems that are more effective, efficient, and equitable.

Psychology is at the forefront of one of the most consequential technological shifts in human history—not reacting to it but shaping it. That is precisely where we belong. ■

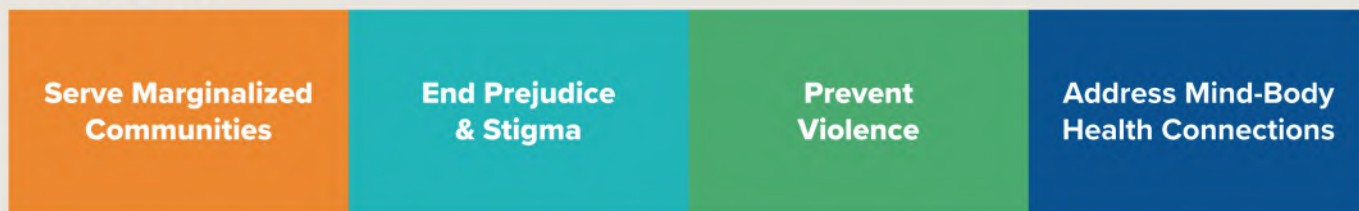
APA's new Center for Behavioral Science and AI provides independent scientific infrastructure, behavioral and developmental science for AI design, and practical guidance grounded in evidence.



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In Brief

COMPILED BY ANNA MIKULAK, PhD

Friends may influence prejudice toward outgroups

Social ties may have a small impact on prejudice over time, according to a longitudinal social network analysis of data from 2,484 adolescents in Germany. The findings, published in *American Psychologist*, indicate that the degree and direction of change depended on the level of prejudice the teens and their friends had at the beginning of the study. Using data from students in 10 German schools, researchers modeled the students' friendship networks, simulating the influence of friendship ties on students' attitudes toward people from ethnic and religious outgroups over 9 months.

The results indicated that friends who started with similar levels of prejudice tended to show minimal attitude change over time; friends who began the study with opposing attitudes had the largest effect on each other, showing slight shifts toward each other over time. At most, students' social ties were linked with a 3% change in prejudice, suggesting a small but noticeable effect. According to the researchers, these findings could inform real-world efforts that use socialization as a mechanism to reduce prejudice.

DOI: 10.1037/amp0001662

A longitudinal study of German adolescents linked friendships to small shifts in prejudice toward ethnic and religious outgroups, especially among teens who started with differing views.



KENTARO TRYMAN/GETTY IMAGES

Strategy matters when helping a loved one manage stress

Helping a loved one think about a stressful situation from a new perspective may have benefits for both the individual and the relationship, according to two new studies in *Emotion*. The findings suggest that strategies focused on helping a loved one commit to a new goal or perspective (e.g., “You can handle this”) may be more effective than strategies focused on helping them decommit from the old goal or perspective (e.g., “It’s not as bad as it seems”). An online study with 261 participants indicated that when participants encouraged their partners to manage pandemic-related stress by broadening their perspective to consider possible positive outcomes, the partners felt

more supported; participants, in turn, reported better relationship quality. However, when participants encouraged their partners to detach from the old perspective by seeing the situation as less serious, the partners felt more judged, and participants, in turn, reported worse outcomes for both their partner and the relationship. Another study with 86 friend groups found similar benefits for friends and friendships.

DOI: 10.1037/emo0001648

Social norms mostly sway people to increase their effort

People may raise their level of effort in accordance with social norms, but they tend not to go below their typical level of effort even when it is acceptable to do so, according to 12 studies in the

Journal of Experimental Psychology: General. In each study, participants chose whether to complete a harder or easier version of a task. Some were told that most participants tended to choose the harder task; others were told that the easier task was more popular; a third group was not told anything about task preference. The results were consistent across studies and task variations: Participants exposed to a high-effort norm were more likely to choose the harder task than those in the control group, while those exposed to the low-effort norm showed no difference. Even when participants read that choosing the easier task was more efficient and wiser, they were no more likely than the control group to choose it. The findings suggest that social norms may have a directional influence on effort, but further research is needed to determine whether these findings hold for more varied work in real-world settings.

DOI: 10.1037/xge0001904

Job ads that target marginalized groups may backfire

Job ads that specifically target non-White groups to boost recruitment from these groups may have unintended consequences, according to research in the *Journal of Experimental Psychology: General*. Across five online studies, Black Americans who saw a job ad that explicitly mentioned race were more concerned about being tokenized and anticipated less belonging at the company than were Black participants who saw an ad that did not mention race. One study with 319 participants indicated that ads explaining why the company was interested in diversity and included multiple indicators of the company’s pro-diversity stance—such as policies addressing discrimination and pay inequity—decreased concerns about tokenism to some

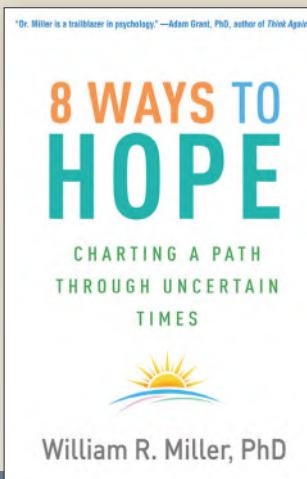
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degree. Together, the findings suggest that the race-targeted ads may cause people from non-White groups to feel scrutinized as token representatives of their race and lead them to anticipate less trust, belonging, and comfort at the company.

DOI: 10.1037/xge0001882

End-of-world beliefs offer a lens on response to risk

Findings in the *Journal of Personality and Social Psychology* suggest that people's beliefs about the end of the world shed light on how they perceive risk and the actions they would support to address pressing global threats such as climate change and geopolitical instability. In a preregistered online study, researchers examined end-of-world beliefs among 1,409 U.S. adults representing six different groups: Catholics, mainline Protestants, evangelical Protestants, Jews, Muslims, and nonreligious. Results showed that end-of-world beliefs were both common and varied, with religiosity and age accounting for some of the variation. In addition, different aspects of end-of-world beliefs were linked with attitudes about global risk. For example, participants who saw the end of the world as near, as subject to personal influence, or as generally positive tended to express more support for taking extreme societal action to address global threats. The researchers suggest that end-of-world beliefs may act as a lens that can help us understand both risk perception and collective decision-making in the face of real-world challenges.

DOI: 10.1037/pspi0000519

Genetic factors do not account for sex differences in suicide

Suicide attempts are more common among females than males, but a study in *BMJ Mental Health* suggests that

the genetic factors associated with suicide attempts largely overlap between the sexes. Based on these findings, the author concludes that sex-specific nongenetic factors, such as environmental or social contributors, are likely to play a role in sex differences in suicide. Researchers examined national register data for 3.1 million people born in Sweden between 1963 and 1998. As expected, suicide attempts were more common among females (3.3%) than males (2.6%). Data from parent-child, full-sibling, and half-sibling pairs indicated that although risk generally aggregated within families, this aggregation was stronger for females and for same-sex relative pairs. Data from full-sibling and half-sibling pairs also indicated

a high genetic correlation between female suicide attempt and male suicide attempt, suggesting significant genetic overlap. Future research can illuminate how nongenetic and genetic factors combine to influence sex differences in suicide risk.

DOI: 10.1136/bmjment-2025-302082

It's good to laugh at a gaffe, but only if no harm was done

After committing a faux pas, the most socially acceptable response may depend on how much harm it caused, according to research in the *Journal of Personality and Social Psychology*. In six online studies, participants read about a person recounting a faux pas they committed, such as walking into a glass door at a party. They also



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received information about how the person reacted as they told their story. In general, participants considered an amused reaction, such as laughing at oneself, as a signal of warmth, competence, and authenticity, whereas embarrassment was seen as overly self-conscious. However, a study with 809 participants indicated that this was not the case when the faux pas caused harm to someone else. When the scenario entailed accidentally breaking a colleague's arm, participants saw an amused reaction as a sign of incompetence and moral disregard. The studies suggest that the reputational benefits of amusement and embarrassment depend on whether the responses seem appropriately calibrated to the situation. Further research can clarify whether these findings extend to real-world behavior and cultures outside the United States.

DOI: 10.1037/pspa0000477

Knowledge appears to beget curiosity for younger and older adults

Adults of all ages may draw on their existing knowledge to assess their own curiosity, according to research in *Psychology and Aging*. The research adds nuance to previously reported findings that older adults tend to show more curiosity than younger adults in lab-based experiments. In two experiments, younger adults (ages 19 to 30) and older adults (ages 65 to 83) saw a series of 50 trivia questions. For each question, they reported how many possible answers they could think of and how curious they were to learn the actual answer. The researchers interpreted the number of possible answers, or search space, as an indicator of participants' existing knowledge. While older adults were more likely than younger adults to report having only one possible answer, they also tended



 Adults' curiosity about a topic appears to grow based on what they already know and the range of possibilities they can imagine.

to report being more curious overall. However, both age groups showed a link between more possible answers and greater curiosity. The researchers conclude that older and younger adults may use the same information—the scope of their search space—when determining how curious they are, but older adults may be more curious overall.

DOI: 10.1037/pag0000980

Kids may follow their parents' lead when it comes to cooperation

Children may follow a tit-for-tat model when it comes to selfish behavior, but they follow their parents' example in reciprocating cooperative behavior, according to findings in *Developmental Psychology*. For the study, 179 Israeli parents and their 4-year-old children

played a turn-based game involving rewards. In the first part of the experiment, the parents played the game with another adult who chose to either split the reward cooperatively (evenly) or selfishly (unevenly). On their own turn, the parents could choose whether to mirror their partner's behavior; in some cases, the child was in the room while the parent played. In the second part of the experiment, the parent left the room, and their child played the game with a same-age peer. Although parents almost always reciprocated cooperative behavior, they were much more likely to reciprocate selfish behavior in front of sons rather than daughters. In contrast, children almost always reciprocated selfish behavior, while they tended to follow their parent's example in responding to cooperative

behavior. The research suggests that context and gender shape the modeling and development of reciprocity in parent-child relationships.

DOI: 10.1037/dev0002161

Difficult social ties may harm health over time

While social ties can support well-being as we age, a study in *PNAS* suggests that the challenging people in our lives may act as chronic stressors that negatively affect well-being and health. Using social network data from 2,345 adults, researchers examined whether ties to so-called hasslers were associated with measures of biological aging and other health outcomes. About 29% of participants reported at least one hassler in their network; these ties were more common among women, daily smokers, people in poorer health, and those who had adverse childhood experiences. Overall, people who reported more hasslers reported worse mental and physical health and showed signs of advanced biological age and faster biological aging, as indicated by epigenetic biomarkers. Intriguingly, the type of relationship seemed to matter—while kin and nonkin hasslers were associated with biological aging, spouse hasslers were not. These associations held even after accounting for baseline health, suggesting they are not explained by reverse causation (i.e., biological aging leading to more ties with hasslers).

DOI: 10.1073/pnas.2515331123

A cognitively rich life may support healthy aging

Higher levels of cognitive enrichment across the life span are associated with cognitive resilience and delayed onset of Alzheimer's-related dementia, according to a longitudinal study of 1,939 older adults in *Neurology*. At the beginning of the study, participants answered questions about cognitive enrichment at different life stages, including whether they had certain cognitive resources in the home and how often they engaged in cognitively stimulating activities. They also completed annual tests measuring global cognition, memory, perceptual speed, and visuospatial ability. Over the average course of the study (7.6 years), 551 participants met the criteria for Alzheimer's-related dementia, as determined by a clinician. Increased lifetime enrichment was associated with a slower rate of cognitive decline and lower likelihood of developing Alzheimer's-related dementia. The researchers estimated that the onset of Alzheimer's-related dementia was delayed by about 5 years for participants with the highest levels of lifetime enrichment compared with those with the lowest levels. The researchers conclude that being exposed to and

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engaging with cognitive enrichment throughout life may support cognitive health as we age.

DOI: 10.1212/WNL.000000000000214677

📷 Expecting sugar may enhance our drinking experience

How much a person enjoys a sweetened beverage may depend on whether they expect it to have sugar regardless of whether it actually does, according to findings in the *Journal of Neuroscience*. For the study, the researchers screened 99 healthy adults to identify a sample of 27 participants who could not reliably distinguish a sugar-sweetened lemonade from lemonade made with sugar-free sweetener. The researchers did this to eliminate sensory differences as a potential confound. The participants then underwent neuroimaging while completing a beverage tasting task. In general, participants' expectations largely influenced their experiences: They enjoyed a drink more when they believed it had real sugar and less when they believed it had an artificial sweetener, regardless of how the drink was sweetened. This correlated with greater responses to artificial sweetener in the reward-related mid-brain when participants believed the drink had real sugar. Together, the findings suggest that expectations influence both behavioral and neural responses to sweetness, and a preference for sugar may reflect nutrient-based conditioning.

DOI: 10.1523/JNEUROSCI.1121-25.2026

To simulate ignorance, people draw on cognitive schemas

If you want to get away with pretending not to know something, you must convincingly behave like someone who is naive. How do people go about feigning this kind of naivete? Researchers conducted two online experiments with 1,001 participants who played several

rounds of one of two popular games. On some rounds, they played a regular game; on other rounds, they saw the game's solution but were incentivized to play as if they did not know the solution. The findings, published in *Psychological Science*, suggest that participants gave convincingly naive performances that went undetected by peers. On pretend games, they made an appropriate number of guesses and adjusted their decision-making time to account for uncertainty. However, computational modeling identified a tell: stereotyped gameplay. People used similar guess sequences across pretend games, suggesting that they relied on simplified cognitive schemas to simulate belief states and their effects on decision-making. Further studies can clarify the boundary conditions of this simulation ability, including whether some aspects of belief are harder to simulate than others.

DOI: 10.1177/09567976251409747

Across 19 languages, related words prime each other

Semantic priming—the idea that exposure to a particular word (e.g., dog) can activate related words (e.g., cat) and thereby influence response times—is one of the most studied phenomena in cognitive psychology. Yet, the degree to which semantic priming varies across languages and cultures remains unclear. For this large-scale collaborative study in *Nature Human Behaviour*, researchers across many labs used coordinated measures to examine the semantic priming effect in 25,163 participants and 19 languages. Across all 19 languages, participants tended to respond more quickly to related word pairs than unrelated word pairs. However, analyses also indicated

📷 Believing a drink contains real sugar can heighten enjoyment and brain-reward responses, regardless of the sweetener actually used.



some variation across languages, with Brazilian Portuguese showing the smallest average priming effect and simplified Chinese showing the largest. The study lays a foundation for more detailed exploration of the semantic priming effect across languages and cultures; it also highlights the value of large-scale research collaborations in overcoming some of the methodological limitations that are common in smaller studies.

DOI: 10.1038/s41562-025-02254-x

Gaze 'fingerprints' may be distinct and identifiable across people

How we look at a picture or a scene can reflect what we find interesting, relevant, or important. A study in *Psychological Science* suggests that

gaze patterns may be idiosyncratic enough that they, like a fingerprint, can be used to identify an individual with relatively high accuracy. In one study, 105 adult participants completed an eye-tracking session in which they looked at 700 pictures featuring complex natural scenes; they completed another session about 1 week later. Using gaze heat maps, the researchers found that participants' gaze patterns had repeatable and unique spatial distributions. These so-called gaze fingerprints distinguished participants with about 52%–63% accuracy, far above chance identification rates of 1%–2%. The researchers were also able to create unique identifiers, or barcodes, reflecting the types of images and image features that contributed to a participant's gaze fingerprint. Further

studies can illuminate whether these gaze fingerprints apply to dynamic real-world scenes and shed light on the individual-level factors, including genetics and neurodevelopmental influences, that contribute to these idiosyncratic patterns.

DOI: 10.1177/09567976251415352

Research synthesis offers an integrated view of self-regulation

Researchers have developed a new transdiagnostic framework for understanding self-regulation in the context of neurodevelopmental conditions such as autism, attention-deficit/hyperactivity disorder, and intellectual disability. The qualitative content analysis, published in *Nature Human Behaviour*, highlights elevated dysregulation as a



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common feature associated with neurodevelopmental conditions across narrative, scoping, systematic, and meta-analytic reviews. The researchers synthesized their findings into a transdiagnostic framework that integrates the emotional, cognitive, and behavioral facets of self-regulation within the individual developmental context and broader ecological context. The framework is intended to be adaptable, accounting for commonalities and variations within and across neurodevelopmental conditions. The researchers note that many empirical studies rely on measures that assess isolated aspects of self-regulation and rely heavily on parent self-report. Overcoming these methodological limitations is critical to advancing a comprehensive and nuanced understanding of self-regulation, they argue.

DOI: 10.1038/s41562-026-02410-x

📷 More teens are getting very little sleep

The percentage of teens getting insufficient sleep increased in the time period from 2007 to 2023, with a sharp rise among those sleeping less than 5 hours a night, according to a study in *JAMA*. The data come from 120,950 high school students in the nationally representative Youth Risk Behavior Survey. Using established guidelines, the researchers defined insufficient sleep as 7 hours or fewer and very short sleep as 5 hours or fewer per night. The percentage of students reporting insufficient sleep rose from 68.9% to 76.8% between 2007 and 2023, driven primarily by a rise in very short sleep from 15.8% to 23.0%. The increase in insufficient sleep was greater for Black students than White students; it was also greater for students who reported depressive symptoms or suicidal thoughts. Insufficient sleep was consistent regardless of



📷 More than three quarters of U.S. teens get too little sleep, with deficits particularly pronounced among Black teens and those reporting mental health struggles.

potential behavioral contributors, such as electronic media use, substance use, or sedentary activity. The findings suggest broad structural and environmental factors may play a role, highlighting the need for systemic interventions such as later school start times.

DOI: 10.1001/jama.2026.1417

📷 The brains of birders may be tuned by their expertise

The expertise of skilled bird-watchers may be reflected in differences in both brain structure and function, according to a study in the *Journal of Neuroscience*. For the study, 29 skilled birders (ages 24 to 75) and 29 age-matched novices underwent structural and functional brain imaging. During functional imaging, they completed a challenging identification task that involved memorizing local and nonlocal birds and picking them out of lineups of similar-looking birds. Compared with novices, expert birders tended to have greater density in frontoparietal and posterior cortical areas associated with guided attention and

perception, suggesting more compact and efficient organization in these areas. Experts' greater density was linked with greater accuracy, and their frontoparietal regions were also selectively engaged when they completed the more difficult task of identifying nonlocal birds. Although the study does not show causation, the findings suggest that developing a skill over many years may lead to expertise-specific changes in both brain structure and function.

DOI: 10.1523/JNEUROSCI.1307-25.2026

📷 Expert bird-watchers show differences in brain structure and function linked to attention and perception, suggesting long-term expertise may shape how the brain works.





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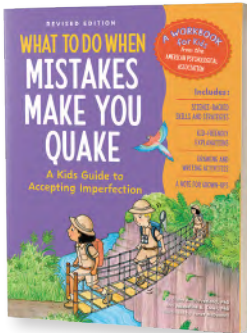
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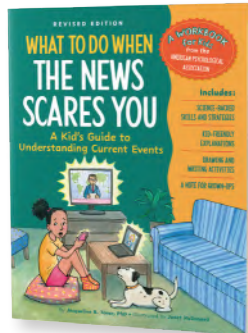
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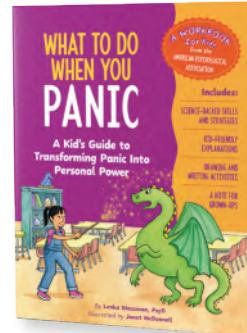
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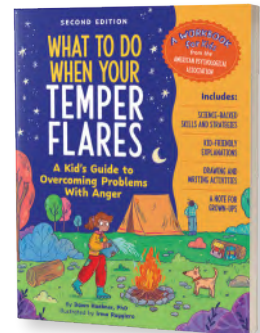
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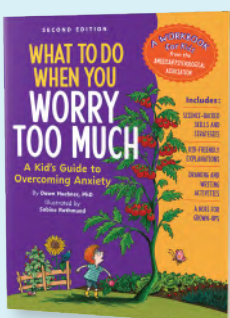
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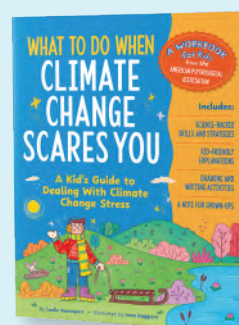
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Top 20 skills prepare psychology bachelor's degree holders for career opportunities

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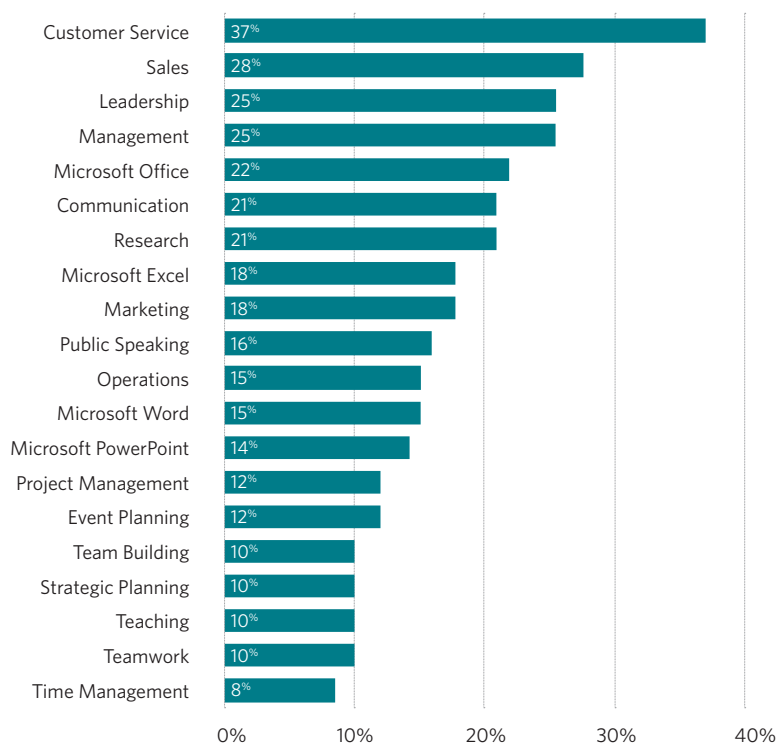
News on
psychologists'
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UNDERGRADUATE PSYCHOLOGY education develops a wide set of skills that are required for nearly all jobs. Top skills possessed by psychology bachelor's degree holders include customer service (37%), sales (28%), leadership (25%), and management (25%; Lightcast, 2026a). Many of these skills are broad in their definitions and may draw on a combination of several related skills. For example, customer service is a skill that goes beyond fielding complaints and fulfilling requests; it involves communicating to understand needs, responding to questions and concerns, and solving problems (Lightcast, 2026b). Customer service is also a component of service-orientation skills (Naufel, K. Z., et al., 2018), which focus on showing empathy, being centered on the customer, and working within communities. Similarly, sales is a skill that involves a combination of other skills, such as persuasive communication, problem-solving, creativity, and being adaptable (Lightcast, 2026c).

Emphasizing the skills taught in undergraduate psychology programs can better prepare students to communicate the value of their skills to employers. Psychology educators can also align existing student learning outcomes and curricular goals with workforce needs and explicitly provide language describing the underlying skills developed through psychology education. ■

What Job Skills Do Psychology Bachelor's Degree Holders Highlight in Their Networking Profiles?

Lightcast, a labor market analytics company, gathered profiles from online professional networking sites and additional data sources to analyze those with psychology bachelor's degrees. The chart below shows the percentage of those profiles who listed each of these specific skills.



REFERENCES

- Lightcast. (2026a). Profile analytics (Version 2026.1) [database]. <https://lightcast.io>. Extracted on March 12, 2026. Lightcast's profile database gathers information primarily from profiles from online professional network sites and additional data sources. The database contains approximately 167 million profiles in the United States, including 1,260,883 with psychology bachelor's degrees as the highest education attainment. For more information about the Profile Analytics methodology, see <https://kb.lightcast.io/en/articles/6957504-profiles-methodology>.
- Lightcast. (2026b). Skills taxonomy: customer service. Retrieved March 12, 2026, from <https://lightcast.io/open-skills/skills/KS12IZ26S4VJLQ1WXN21/customer-service>
- Lightcast. (2026c). Skills taxonomy: sales. Retrieved March 26, 2026, <https://lightcast.io/open-skills/skills/KS123X777H5WFXNQ6BPM/sales>
- Naufel, K. Z., et al. (2018). *The skillful psychology student: Prepared for success in the 21st century workplace*. <https://www.apa.org/education-career/guide/transferable-skills.pdf>

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What Psychologists Need to Know About New Federal Student Loan Rules

Sweeping changes to postbaccalaureate borrowing policies pose new challenges for students, institutions, and the field of psychology

BY ZARA ABRAMS

ON JULY 1, student loans will change. The new federal borrowing rules taking effect that day will reshape how students can finance graduate education in psychology—and who can afford to pursue it.

The rules set new borrowing caps on Federal Direct Unsubsidized Loans, the standard loans used for graduate education, and eliminate Federal Direct Graduate PLUS (Grad PLUS) Loans, which many students use to cover living expenses. The changes are part of the 2025 One Big Beautiful Bill Act, which also includes deep cuts to Medicaid and the Supplemental Nutrition Assistance Program.

“This is a significant change, both for psychology students and the field as a whole—one that is poised to affect access to higher education, the clinical workforce pathway, and our scientific

research infrastructure,” said Debra Kawahara, PhD, associate dean of academic affairs at Alliant University and APA’s 2025 president.

Under the new rules, postbaccalaureate programs are divided into two federally defined categories: professional programs and graduate programs. Students in professional programs—doctoral programs in certain fields that lead to licensure and practice—will be able to borrow twice as much as students in graduate programs. After persistent advocacy efforts by APA and its partners, clinical psychology was added to the list of professional programs. By extension, students in counseling psychology, school psychology, and certain applied psychology programs will also qualify for the higher borrowing limits.

Nevertheless, the changes come at a challenging time for higher education, with universities navigating shrinking federal grant funding; the rollback of equity, diversity, and inclusion initiatives; and demographic pressures on enrollment. Programs, institutions, and the field of psychology will be forced to adapt.

“This was a huge victory for clinical psychology programs, but there’s still more work to do. We’ve got to get people at the table—and quickly—to figure out how to reduce the cost of these programs,” said Andy Vaughn, EdD, president and CEO of Alliant University and one of three negotiators who represented

higher education institutions during the federal rulemaking process.

A new borrowing landscape

Beginning July 1, postbaccalaureate programs will fall into either the professional or graduate category.

Professional programs include doctoral degree programs in the following fields: pharmacy, dentistry, veterinary medicine, chiropractic, law, medicine, optometry, osteopathic medicine, podiatry, theology, and clinical psychology. Programs with matching Classification of Instructional Programs (CIP) codes—federal codes used to classify academic programs—will also make the cut if these programs are generally doctoral level, take at least 6 years to complete, and generally lead to professional licensure and practice.

For that reason, counseling psychology and school psychology also gain the professional designation, along with certain applied programs as estimated by a Department of Education analysis. All other programs, including research-oriented psychology degrees, will fall under the graduate designation.

With the new caps on Federal Direct Unsubsidized Loans (formerly called Stafford Loans), students in professional programs can borrow up to \$50,000 annually and up to \$200,000 throughout their graduate studies. Students in graduate programs can borrow up to \$20,500 annually and up to \$100,000

AT A GLANCE

- Starting July 1, postbaccalaureate students will face new borrowing caps: \$50,000 per year for programs that lead to licensure and \$20,500 per year for all other programs.
- Clinical, counseling, school, and certain applied psychology doctoral programs qualified for the \$50,000 annual limit only after intensive APA advocacy efforts.
- The nearly \$300 billion cut to higher education, buried in a tax bill, will require many institutions to rethink program structure, costs, and timelines.



The new borrowing limits could have ripple effects across higher education, which is already experiencing the pressures of declining federal grant funding, shrinking enrollment, and more.

overall. These total borrowing limits include loans taken out for both master's and doctoral programs and exclude any undergraduate borrowing at the federal level. These funds can be used to cover tuition, fees, housing, and other living expenses.

In addition to the new borrowing caps, the rules eliminate the Grad PLUS loan program, which allowed

students to borrow additional funds—up to the total cost of attendance—after reaching the limit on Federal Direct Unsubsidized Loans. Many students used these funds to cover living expenses while enrolled full time.

A legacy clause will allow students who enrolled in postbaccalaureate programs before July 1, 2026, and are already receiving federal student aid to

continue accessing Grad PLUS loans and Federal Direct Unsubsidized Loans under the previous federal loan limits. The extension lasts either 3 academic years (through June 30, 2029) or until the student's expected program completion date, whichever comes first. Students who withdraw or delay completing a program will be subject to the new rules if they reenroll, while most students on an approved leave of absence will remain protected under the legacy clause.

Who bears the burden?

Debt levels in psychology graduate programs vary widely by degree type, subfield, and location. In a 2016 survey of 1,283 graduate students and early career psychologists, average anticipated debt was \$130,000. PsyD students had the highest debt, averaging \$173,000, followed by health service psychology doctoral students at \$136,000 and research-oriented doctoral students at \$76,000 (Doran, J. M., et al., *Training and Education in Professional Psychology*, Vol. 10, No. 1, 2016). Those figures have almost certainly grown in the past decade—surveys show that clinical psychology doctoral students continue to face significant financial strain and that program stipends have not kept up with rising living costs (Szkody, E., et al., *Journal of Clinical Psychology*, Vol. 79, No. 3, 2023).

“Students attending private and for-profit schools in high-cost-of-living areas could be some of the most affected by these changes,” said Kenneth Polishchuk, APA's deputy chief for education and training policy.

The elimination of Grad PLUS loans is likely to have a substantial impact. Internal data from Alliant and similar institutions suggest that up to half of students in licensure-oriented programs rely on these loans to cover part of their costs.

TAKE ACTION

TELL CONGRESS HOW THE NEW RULES ARE AFFECTING YOU

The new rules are final, at least for the time being, but psychologists and trainees can help secure the future of the field, said Raegina Likewise, senior manager of congressional and federal relations at APA.

“One of the best things that psychologists, students, and institutions can do is educate their local, state, and federal policymakers about what is happening on the ground,” she said.

Psychologists are encouraged to contact their member of Congress to explain how the new policy is affecting them and others around them. Are the new caps making training less accessible? Is the loss of Grad PLUS funding harming students, practitioners, or institutions? For guidance on different forms of advocacy, join APA's Psychology Advocacy Network and explore the APA/APA Services, Inc. Response Center.

“APA can provide the statistics and data, but legislators want to know how these changes are impacting people in their district,” said Debra Kawahara, PhD, APA's 2025 president. “That brings a human side to this that's hard to ignore.”

“With that going away, the question is how students will pay for rent and food when they can’t work full time—or in most cases, even part time,” Vaughn said. Projections from his team estimate that clinical psychology programs could face a 10%-20% drop in enrollment now that these loans have been eliminated—a decline that could have been far worse if those programs were excluded from the professional designation.

The Grad PLUS program, which began in 2006, was designed to help students attend graduate school without relying on personal funds or private loans. It has been particularly important for first-generation, low-income, and other underrepresented students.

Critics of the program argued the ability to borrow up to the cost of attendance pushed universities to raise tuition prices. But research suggests that rising housing costs rather than tuition increases may be the larger burden for many students (Wood, C., & Schuch, C., *University of North Carolina at Charlotte Undergraduate Research Journal*, Vol. 1., No. 1, 2021; Jiang-Brittan, S., *Crisis by Design*, UC Berkeley Center for Studies in Higher Education, 2025).

“When we account for inflation, tuition has stayed relatively stable over the past few years,” Polishchuk said. “But the cost of living has risen substantially—and that’s primarily what’s driving up the price of higher education.”

Now, experts note that students will once again turn to private lenders, as they routinely did before 2006. Loans from private lenders can carry higher interest rates, stricter credit requirements, and fewer borrower protections than federal loans. Those policies could increase students’ debt burden over the long term or lock some out of graduate school entirely.

Relying on private loans, nonfederal loans offered by banks, credit unions, and other lenders could also make it

harder for some students to start or complete their education. Students who lack credit history or a cosigner may not qualify, while others may qualify initially but lose access later. Private lending timelines may not line up with academic calendars, further complicating enrollment. These barriers are likely to disproportionately affect students from groups historically excluded from higher education, Kawahara said.

“We anticipate that underrepresented and lower-income students will struggle to afford psychology doctoral programs,” she said. “That could deepen the diversity and equity gaps that we already see in the field.”

The new borrowing limits could have ripple effects across higher education, a sector already under strain. Universities are facing an enrollment crisis because of the “Great Cliff,” a demographic drop-off in college-age

students that started in 2025 and is expected to continue through 2037 (see January/February *Monitor*). Amid those pressures, The George Washington University, for example, paused admissions to its clinical psychology program in 2026, citing financial constraints and small incoming class sizes (Alonso, J., *Inside Higher Ed*, Jan. 26, 2026). Over time, changes like these could constrain the pathway of future clinicians as the nation continues to face a mental health crisis.

Research-oriented programs are also vulnerable to the new borrowing limits. Many support students through grant-funded stipends, but those funds are already contracting and often do not fully cover students’ living costs. With lower loan caps now in place for programs classified as graduate, some students may find it even harder to afford research training. This could weaken the

ESSENTIALS

KEY FACTS ABOUT NEW FEDERAL BORROWING RULES

New rules, which take effect July 1, change what federal loans postbaccalaureate students can access. The policy divides students into two categories: professional and graduate.

Professional students

- Professional students include those enrolled in clinical psychology, counseling psychology, school psychology, and certain applied psychology doctoral programs.
- These students may borrow up to \$50,000 per year and \$200,000 overall in Federal Direct Unsubsidized Loans.

Graduate students

- Graduate students include those enrolled in all other psychology programs, including research-oriented doctoral degrees that do not lead to licensure.
- These students may borrow up to \$20,500 per year and \$100,000 overall in Federal Direct Unsubsidized Loans.

All students

- Federal Direct Unsubsidized Loans can be used toward master’s-level or doctoral-level education. Totals exclude any undergraduate borrowing at the federal level.
- Grad PLUS loans, additional funding many students used to cover living expenses, will no longer be available.
- Most students who enrolled in a postbaccalaureate program and started accessing federal loans before July 1, 2026, may continue under the earlier loan policy until June 30, 2029, or their expected program completion date, whichever comes first.

APA ADVOCACY

HOW APA FOUGHT FOR PSYCHOLOGY

New federal borrowing rules will strain psychology students and programs. But the changes reflect the best possible outcome after intensive advocacy by APA Services, Inc. (APASI) helped secure a critical win for the field.

Starting in December 2024, APASI partnered with other higher education advocates to fight for psychology behind the scenes. APASI met with congressional leaders, led coalitions, and organized grassroots campaigns through which psychologists sent thousands of messages to legislators. These efforts helped increase federal student loan limits set by the One Big Beautiful Bill Act (OBBBA), which was signed into law on July 4, 2025.

But there was still a problem: OBBBA listed 10 examples of programs that would gain the “professional” designation and therefore qualify for higher borrowing limits, but health service psychology, including clinical psychology—and many other health services—were not on the list. During the rulemaking process that followed, APASI worked closely with the Department of Education to get psychology added, supported by federal negotiator Andy Vaughn, EdD, president and CEO of Alliant University.

Key negotiating messaging included:

- **Workforce pathway:** Clinical psychology must be protected to help ensure continued delivery of Medicaid services.
- **Mental health equivalency:** Mental health care should be valued at the level of physical health care in order to address the country's current crisis.
- **Statute alignment:** Several existing policies, such as the Biden-era gainful employment rule, recognize clinical psychology as a professional doctoral degree.

Though APA and federal negotiators hoped to expand professional designation to other health services, clinical psychology was the only field added to the list of covered disciplines. By extension, certain related areas of psychology also qualify for the designation. Many other professions, such as nursing, physician assistant practice, occupational therapy, physical therapy, social work, counseling, and speech-language pathology, were left out.

“On the whole, we were able to protect as many psychology programs as possible,” said Kenneth Polishchuk, APA’s deputy chief for education and training policy. “We’re now exploring other ways to support students and lessen the potential impact on the psychology workforce.”

research infrastructure that supports breakthroughs in suicide prevention, youth mental health, human-technology interaction, and much more.

“If we don’t train the next generation, the U.S. risks falling behind in psychological science, with far-reaching effects on our country’s health and overall well-being,” Kawahara said.

The path forward

On the financial side, institutions can do several things to support students.

Some may use university endowment income or other funds to offer additional financial aid. Schools can also explore partnering with private lenders to make funding available under preagreed-upon terms, as well as provide financial counseling and education to help students understand the changes and their options.

Many of these steps would take time to implement and require additional staffing or training in financial aid offices. Ultimately, the larger goal is to

bring program costs down so students need to borrow less money.

Experts say these financial realities may require psychology programs to modify curricula, meet competencies in creative ways, and even reconsider time to degree completion. For example, Vaughn suggests cutting coursework that duplicates undergraduate work from clinical psychology doctoral requirements.

One major way to reduce program costs is to create hybrid programs that let students live where they choose—for example, in a less expensive city or with their parents—for part of their training. In one model, students might spend 2 years on site and complete the rest of their coursework remotely. That could reduce students’ living expenses and borrowing needs while giving schools more flexibility in how they use space and deliver instruction.

“These are very expensive programs to run,” Vaughn said. “With APA’s help, schools need to figure out how we can keep the quality high while reducing the cost to deliver them.” ■

FURTHER RESOURCES

Making sense of the student loan changes from OBBBA’s RISE Committee

Desjean, J.
National Association of Student Financial Aid Administrators, 2025

Loan changes from the One Big Beautiful Bill Act: Brief for campus leadership

National Association of Student Financial Aid Administrators, 2026

Sustained advocacy leads to critical win for doctoral psychology students and programs

APA Services, Inc., 2025

Psychologist’s guide to advocacy

APA Services, Inc., 2026

Revising the Model Licensing Act to Secure the Future of Psychology

The proposed changes are designed to help psychology lead—not just respond to—a shifting mental health landscape

BY ZARA ABRAMS

THE MODEL LICENSING ACT (MLA), APA's recommended guidance to states on what psychology licensure should include for health service psychologists spanning education, supervision, scope of practice, and credential titles, has been revised and will go before APA's Council of Representatives for a vote in August. The revised document was made available for public comment for 60 days earlier this year, giving APA members and other stakeholders an opportunity to share comments and concerns before the vote.

The 2026 revision includes the addition of licensure standards for master's-level health service psychology providers, with a recommended title of "licensed practitioners of psychology." The term "psychologist" will continue to be reserved for doctoral-level health service psychology (HSP) providers.

Many states have already created or are considering such licensing pathways to address workforce shortages and other challenges. As part of APA's broader efforts to optimize the health service psychology workforce, the MLA revisions give psychology a chance to shape how those changes unfold.

The ultimate goal of the MLA revisions is to ensure that the public can access care grounded in psychological science. Nineteen states currently

license master's-level health service psychology professionals. But without guidance from the discipline's main professional organization, states have developed an inconsistent patchwork of licensing regulations, scopes of practice, and professional titles. For example, some states allow master's HSP professionals to practice independently after meeting supervision criteria; others require career-long supervision. This fragmentation has caused confusion about qualifications and scope of practice from state to state, making it harder to maintain consistent standards and a clear professional identity for psychology.

"States have and will continue to license master's-level psychology practitioners to address the mental health needs of their populations," said Syretta James, PhD, ABPP, the chief behavioral health officer at Armor Health, a leading provider of correctional health care, and cochair of the APA task force responsible for updating the MLA. "APA weighing in helps maintain quality, safety, and scalability in a rapidly changing mental health landscape."

Each year, around 23,000 students earn master's degrees in health service psychology. But 31 states and Washington, D.C., do not offer pathways to licensure in health service psychology for master's-degree

holders, meaning most graduates must seek licensure in other professions, such as counseling or marriage and family therapy.

"Our field now has an opportunity to work with this reality rather

AT A GLANCE

- APA's Model Licensing Act, guidance states can refer to when drafting licensure laws, has been revised to include licensure standards for master's-level practitioners of psychology. The revision will go before APA's Council of Representatives for a vote in August and is part of APA's strategic work to expand workforce capacity and meet growing behavioral health needs.
- Nineteen states currently license master's-level health service psychology professionals, which include clinical, counseling, and school psychology, though scope of practice and title vary by state. In the remaining 31 states and Washington, D.C., licensure pathways exist for master's-level behavioral health providers but not within psychology. This misalignment means most master's-level psychology graduates must enter another profession to become licensed.
- Psychology provides the disciplinary foundation for much of behavioral health preparation, but limited master's-level licensure pathways in many states have redirected entry into practice toward other professions. Over time, continued absence at this level may weaken psychology's role in shaping workforce standards in ways that safeguard the public and ensure care is grounded in psychological science. The proposed MLA revisions help address this gap.



Many psychologists provide direct services and will continue to do so, or they may choose to shift into specialty care, oversight roles, or other opportunities.

than against it,” said James. “It’s time to look within our profession and identify how we’re going to lead this change.”

The demand for care continues

Psychology is one of several fields facing pressure from health systems to put master’s-level clinicians on the front lines of care. Physician assistants and nurse practitioners, who

increasingly take on primary care provider roles, are among those grappling with similar questions about training, supervision, and scope of practice. In 2024, the Centers for Medicare & Medicaid Services moved to reimburse additional master’s-level behavioral health practitioners, reflecting broader recognition of the value these providers can bring to the public.

Meanwhile, the demand for care continues to exceed the size of the workforce. APA’s Center for Workforce Studies continues to predict a substantial shortage of health service psychology professionals over the next decade. With mounting pressures on graduate education, including cuts to grant funding and student loans, simply training more doctoral psychologists is unlikely to be enough to meet future demand.



In addition to delivering services, psychologists are increasingly being called upon to step into leadership and program evaluation positions—drawing on their depth of training in research, statistics, and clinical practice to ask and answer broader questions about impact.

“There’s not a shortage of work. We know we have a mental health crisis, and we also know that psychology’s master’s-level professionals are well equipped to meet that need,” said Eric Russ, PhD, a licensed psychologist and organizational consultant based in Louisville, Kentucky, who is executive director of the Kentucky Psychological Association.

Psychologists argue master’s-degree holders with psychology training are better positioned to fill this gap than providers from other fields because of their robust training on evidence-based psychological interventions and assessments.

In Kentucky, master’s-level psychology practitioners have worked

alongside psychologists since 1948. Russ points to that successful integration, as well as similar examples in Vermont, Kansas, and other states, as evidence for the model’s feasibility.

“For decades, master’s- and doctoral-level providers have used their clinical training to improve access to evidence-based care,” he said. “Although trained at different levels, a shared grounding in psychological science helps create a coherent professional identity and improves care for folks in Kentucky over what they might otherwise get.”

Evidence from the 19 states where master’s-level practitioners of psychology already operate also suggests they have not posed a competitive

threat to psychologists. An initial review by the task force updating the MLA did not find evidence that master’s-level practitioners of psychology negatively affect employment or practice opportunities for doctoral psychologists in states where both levels of practice exist. However, task force members acknowledged that the available data are limited and the subject warrants further study.

Expanding opportunities for psychologists

If the MLA revisions are adopted by states, psychology would have an opportunity to shape its own master’s profession. Comprehensive psychological evaluations and

neuropsychological testing would remain exclusively within the scope of doctoral practice.

This may create advancement opportunities for psychologists. As master's-level licensed practitioners of psychology take on evidence-based care for common mental health concerns, those with doctoral training may continue to do so, or they may choose to shift into specialty care, leadership roles, or program development and evaluation.

As psychologists complete their training, more may elect to pursue specialties recognized by the Council of Specialties in Professional Psychology, such as forensic psychology, geropsychology, and clinical neuropsychology, as well as those eligible for certification by the American Board of Professional Psychology, including addiction psychology and rehabilitation psychology.

A specialist approach is one potential way to differentiate those with doctoral training, said Jason Washburn, PhD, chief of psychology in the Department of Psychiatry and Behavioral Sciences at the Northwestern Feinberg School of Medicine, and it also makes more sense from a population health perspective. More practicing master's-level psychology professionals would help meet the growing need among people with common mental health concerns, freeing up psychologists with more specialized expertise to diagnose and treat patients with more complex concerns. This could help build capacity in areas where the field is struggling to meet demand, Russ said. "Unless we find a way to meet that need within our profession, it becomes harder to argue that the current system is working," he said.

The doctoral degree also uniquely positions psychologists to step into

leadership and program evaluation roles, James said, by providing a depth of training in research, statistics, and clinical practice that allows them to ask and answer broader questions about impact.

"The doctoral degree is a reflection of discipline—an immersion in assessment, intervention, and consultation that prepares us to ask better questions and resolve problems on a larger scale," said James, who leveraged those skills as executive director of Respire Behavioral Health between 2021 and 2025.

Down the line, doctoral programs may further bolster those opportunities by adding training in new areas, such as communication and advocacy strategies that help health service psychologists expand psychology's impact and share its value with broader audiences, Russ said. Programs can also be more methodical about translating clinical competencies—such as communication, empathy, and problem-solving—into leadership training (Hunt, M. G., et al., *Psychological Services*, Vol. 21, No. 4, 2024).

Training programs may also incorporate more consulting and leadership skills to prepare health service psychologists for roles in industry, business, and the military where they already play important roles. They can prepare psychologists to apply their expertise in the technology sector, helping companies build products that draw on psychological science and minimize harm to users, particularly children.

A voice for psychology

The revised MLA does not bind states to enact licensing in a specific way. Instead, it provides guidance that states can consult if or when they update their psychology licensure

statutes, which many do periodically in response to workforce needs, legislative priorities, or changing professional landscapes.

These changes ensure that psychology's perspective—informed by training standards, scientific evidence, and professional expertise—is available to states considering these issues.

"The world is changing whether or not we step into the debate," James said. "This move makes sure that psychology has a hand in how this is done, because if we don't, other people are ready to decide for us."

The decision ultimately rests with APA's Council of Representatives, whose vote will reflect member input, public comment, and the needs of a changing workforce. ■

FURTHER READING

Understanding APA's Model Licensing Act
APA, 2026

APA health service psychology workforce optimization: A strategic response to national need
APA, 2025

The New Prediction-Driven Gambling Boom

A growing digital betting ecosystem is testing psychological vulnerabilities. Can it also provide solutions?

BY STEPHANIE PAPPAS

IN THE LEAD-UP to the United States bombing Iran in February, an unknown person created an account on the prediction market Polymarket, placed two bets that the United States would strike the country by the end of the month, and won more than \$85,000.

For market watchers, the bet—and others like it—sparked concerns over insider trading. For many addiction psychologists, in contrast, the spotlight on Polymarket highlighted what they’ve been grappling with as regulations on gambling in the United States have relaxed over the past 8 years: a dizzying array of new betting action directed at a growing marketplace of users.

“We’re seeing how gambling is evolving in terms of not just accessibility but in what people can bet on,” said Andrew Hyounsoo Kim, PhD, a clinical psychologist at Toronto Metropolitan University who specializes in addiction.

Since a 2018 Supreme Court decision paved the way for states to regulate

their own legal sports-gambling programs, online betting has exploded. Now, in addition to traditional bets over the victor of a game, sports bettors can also place nearly continuous “prop bets” on minor events, such as the outcome of the next play. And prediction markets, which are regulated like financial markets rather than gambling sites, expand the new normal of online sports betting into any aspect of life, from how many times Elon Musk will tweet today to the number of magnitude 7.0 earthquakes that will happen this year.

Researchers who study problem gambling are hustling to keep up. They’re learning that online gamblers aren’t quite like the old-timers who used to gather at the horse track, just as playing slots on a phone screen in bed is significantly different from visiting a casino. They’re also seeking new ways to ensure people who do develop a gambling disorder can reach help, a challenging aim considering that less than 10% of people with gambling problems actually seek treatment (*National Gambling Impact Study Commission Final Report*, 1999).

Gambling’s expansion

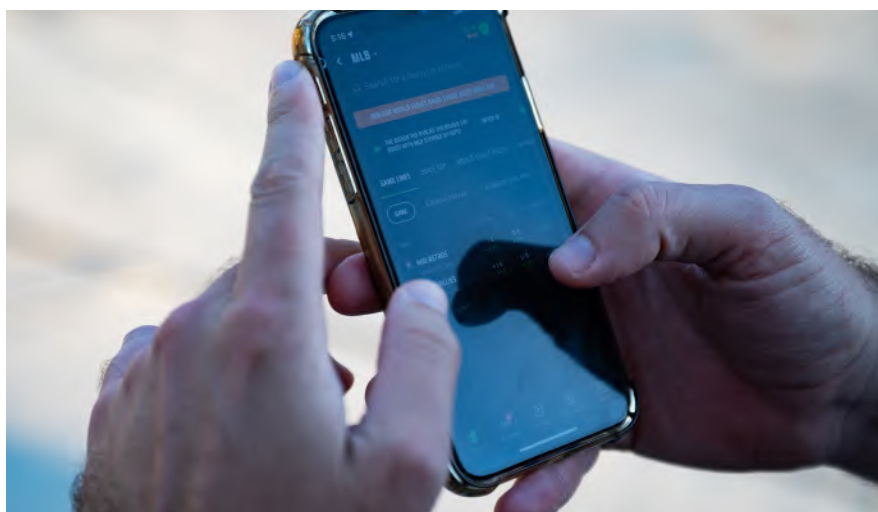
Though there are no nationally representative numbers for who gambles online, a February 2025 poll by Siena College Research Institute and St. Bonaventure University’s Jandoli School of Communication found that

22% of Americans and almost half of men ages 18 to 49 have at least one active online sports-betting account. A 2025 consumer survey by S&P Global found that 15% of internet-using adults in the United States reported placing a sports bet in the past year (Nissan, K., “Who Are America’s Sports Bettors?,” S&P Global, June 27, 2025). As of March 2026, 39 states and the District of Columbia had legalized sports betting, with 30 allowing mobile sports betting. Meanwhile, seven states allow mobile casino games such as blackjack or slots using real money.

Prediction markets, on the other hand, are only regulated at the federal level by the Commodity Futures Trading Commission. The sites emerged in the 2020s, and to participate users need to be only 18 or older; sites verify via user-submitted government ID. (Ongoing legal battles could affect where these markets are accessible, as dozens of states are attempting to regulate them under gambling laws.) There is little research on those users so far, said Debi LaPlante, PhD, a social psychologist at Harvard Medical School. LaPlante’s research has found an overlap in interest in day trading and cryptocurrency with interest in higher-risk gambling and gambling-related problems, especially for people who tie money to self-concept (*Journal of Gambling Studies*, Vol. 41, No. 1, 2025). That

AT A GLANCE

- Prediction markets, prop bets, and mobile casino-style games have expanded online gambling into riskier territory.
- Adolescents and young men are particularly at risk for developing problem gambling.
- Mobile gambling is evolving rapidly, and research, legislation, and prevention programs are scrambling to keep up.



Mobile betting apps enable rapid, continuous wagers with a few taps, boosting convenience and risk. Researchers say phone-based gambling's always-on nature increases betting frequency.

might hint at a group of people primed for the risky use of prediction markets, but the potential for developing a gambling problem via these markets is still unknown.

Problem gambling is not new, and it is frequently comorbid with substance use disorders and emotional disorders (Moreira, D., et al., *Journal of Gambling Studies*, Vol. 39, No. 2, 2023). But some research suggests that online gamblers are a bit different from gamblers who play in person. Online gamblers are more likely to be male and young, with a higher level of education and income (Ghelfi, M., et al., *Journal of Gambling Studies*, Vol. 40, No. 2, 2024). They're more likely to gamble more frequently, to make a wider variety of bets, to gamble for longer periods, and to make higher bets. They're also more likely to be at risk of a gambling problem.

Pennsylvania's Gaming Control Board reported in 2025 that requests for online self-exclusion, a practice by which individuals can voluntarily block themselves from gambling apps by providing a government ID, rose from 2,200 in 2023 to 3,500 in 2024, a 60% increase. Other states have

reported similar increases. Studies find that self-exclusion is an effective way for people with problem gambling to spend less and gamble less. People who self-exclude also report less need for formal treatment. But the overall number of problem gamblers who use self-exclusion is only 15% worldwide (Yakovenko, I., & Hodgins, D. C., *Internet Interventions*, Vol. 23, 2021; Bijker, R., et al., *Current Addiction Reports*, Vol. 10, 2023).

Adolescents may be at particular risk for developing problem gambling because of a tendency to engage in risk-taking behaviors (Chambers, R. A., et al., *The American Journal of Psychiatry*, Vol. 160, No. 6, 2003). Circumventing age restrictions, teens may use parental accounts to gamble, visit foreign casino sites that use cryptocurrency, and use the less-regulated prediction market sites for betting. Starting young is a predictor for later gambling troubles, said Jeffrey Derevensky, PhD, a professor of education and counseling psychology at McGill University who studies youth gambling. Another predictor is an early big win, but "big" is

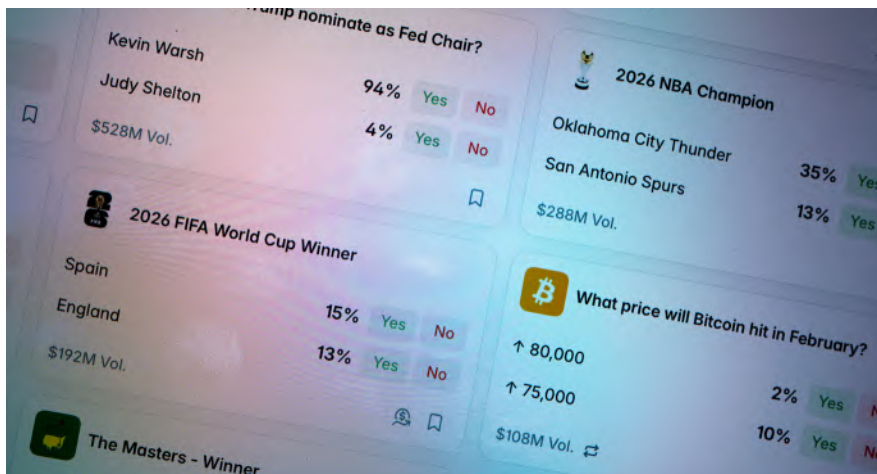
relative. It may take a much smaller monetary amount to suck in teens or young adults than it would take to hook an older, financially established adult, Derevensky said.

Peer influence is another important predictor of problem gambling in adolescent boys, said Michael Robb, PhD, a developmental psychologist and the head of research at Common Sense Media. A recent report by the organization found that 15% of boys who lost less than \$50 a year on gambling or in-game gambling-like activities said peers influenced their behavior; among higher-risk boys who lost more than \$50 a year, 34% cited their peers as one reason they gambled (*Betting on Boys: Understanding Gambling Among Adolescent Boys*, 2026). "We see very strong peer effects in the data," Robb said. "Adolescents are highly influenced by what their peers are doing, so when gambling is present in a friend group, it can start to feel normal within that group."

While that doesn't mean all gambling will lead to problems, early socially reinforced behaviors are linked to a higher likelihood of problematic gambling later, he said.

Gamified features

As mobile gambling has expanded, it has also become more gamified—often offering youth a seamless transition from playing video games to gambling (see July/August 2023 *Monitor*). Apps, once downloaded, tempt users with automatic push notifications and strategies that might feel familiar to users of apps like Duolingo, such as rewards for engaging in long "streaks" of activity. Advertising has flourished, with offers of sign-up bonuses and celebrity influencers: It's nearly impossible to watch an NBA or NFL game without seeing references to sports betting. And whereas sports betting used to



Prediction markets pair politics, sports, and finance on one screen, inviting bets on everything from elections to crypto swings. The breadth of options blurs gambling, investing, and news.

involve a single bet on the outcome of a game, the advent of innumerable prop bets throughout a game makes gambling more continuous, a known risk factor for behavioral addiction.

“A lot of these new gambling games or gambling-like activities are on the higher end of the risk spectrum,” Kim said. Prediction markets tend to have a slower pace than prop betting, paying out on the order of days or months, he said, but they do trigger a “pseudoskill” factor, in which users might feel they have some kind of expertise that will guarantee success. That, too, is a risk factor for problem behavior, Kim said.

Given the proliferation of apps calibrated to ping the brain’s reward system, there are already lawsuits against gambling companies alleging predatory behavior. Kavita Fischer, MD, a Pennsylvania-based psychiatrist, brought one of these suits against a betting company after losing more than \$150,000 on one app over 4 months. The lawsuit alleges that one feature that kept Fischer hooked was a VIP host who offered bonuses and credits to keep coming back, even when Fischer told the host she needed to quit.

“It’s important to realize that

gambling harm can’t be explained just by individual vulnerability,” Fischer said. “The research shows that having higher access to rapid-play apps can increase the risk for a problem.”

Therapeutic solutions

Problematic gambling is indeed more frequent where gambling is easier to access, research shows (Gavriel-Fried, B., et al., *Current Psychology*, Vol. 42, 2023). With the recent liberalization of online gambling in the United States, experts say that inevitably more people will need treatment.

The therapeutic treatment for online problem gambling is similar to what works for traditional gambling disorder. Cognitive behavioral treatments have a strong evidence base, especially when combined with motivational interviewing (Pfund, R. A., et al., *Clinical Psychology Review*, Vol. 105, 2023). This treatment often involves building healthy alternative activities and routines, said David Hodgins, PhD, a clinical psychologist at the University of Calgary who studies gambling.

Clinicians who work with people with problem gambling often help patients set up systems for financial

accountability, including granting access to banking information to trusted family or friends so it’s harder to move money around. “I have to get all the money off my phone, all the apps off my phone, all the social media off my phone,” Fischer said.

State regulatory bodies have long-standing programs for self-exclusion, which allow people to voluntarily register with their state to be banned from casinos and online sportsbooks. Less formally, game-blocking apps such as Gamban can prevent users from accessing thousands of apps and websites.

The trick is catching people before they find themselves in serious financial trouble. Complicating the issue for younger gamblers is the fact that traditional support group programs like Gamblers Anonymous (GA), which can meet in-person or online, aren’t always a good fit. Young digital bettors may find little in common with older casino gamblers, and they may come away feeling less alarmed about their gambling than before when they encounter older group members who are in a deeper financial hole, Derevensky said.

Given how few problem gamblers ever seek formal treatment, researchers need to do more to figure out how to support self-recovery, Hodgins said. One option, he said, is to explore digital models of care, gamifying treatment in the same way apps gamify gambling.

Because gambling disorder is so often comorbid with other mental health conditions, experts suggest adding gambling problems to mental health screening in primary care or mental health care settings. The two-question “lie-bet” questionnaire asks if someone has ever felt the need to bet more and more money and if they have ever had to lie to people close to them about how much they gamble—two warning signs for gambling disorder. More

generally, Fischer said, clinicians can ask open-ended questions about financial stressors or how people spend their money on entertainment. “Any time a psych evaluation is done, it’s an opportunity to catch this,” she said.

Regulating temptation

Opportunities for intervention also abound within the apps themselves. Online gambling operators gather massive amounts of data on user behavior, and some researchers are identifying red flags that may suggest someone could be on their way to developing a problem. The idea is that an algorithm would look for clusters of these behaviors and automatically institute a cooling-off period that stops the user from making bets for a certain amount of time.

Some of these markers of harm include spending more than 4 hours a day gambling, spending large amounts of money gambling or spending more and more money over time, reloading one’s virtual wallet during a gambling session, playing a large variety of games or making bets in wide-ranging amounts, and immediately plowing winnings back into more gambling, said Mark Griffiths, PhD, a chartered psychologist and distinguished emeritus professor of behavioral addictions at Nottingham Trent University in the United Kingdom. Problem gamblers also often gamble early in the morning or late at night, Derevensky said. An American who bets on daytime Ping-Pong matches in China might be on a bad path, for example.

Voluntary limit-setting on betting is one of the most effective safer-gambling strategies, Griffiths said (*Acta Psychologica*, Vol. 262, 2026). Psychological research also suggests that mandatory cooling-off periods are helpful, Griffiths said, with longer cool-off periods working better than

shorter ones (*International Journal of Mental Health and Addiction*, Vol. 22, 2024). In contrast to mandatory cooling-off periods, pop-up notifications that nudge users to voluntarily take a break often work in lab studies but tend to have little effect in the real world, Griffiths said (*Frontiers in Psychiatry*, Vol. 11, 2021).

Almost all states require operators to offer voluntary cooling-off periods of hours, days, or weeks and financial limit setting, but legislation mandating cool-off periods is rarer. One caveat to cooling-off periods and mandatory breaks is that there is no clear insight into how having access to multiple accounts affects behavior. It’s possible that people might hop from one app to another or spread bets over multiple apps to get around limits, Griffiths said.

Supporting prevention

The expansion of gambling has far outpaced society’s ability to respond. Even those who seek help may find that they face long waiting lists for qualified clinicians. One serious bottleneck is the availability of Spanish-speaking providers who specialize in gambling addiction, said Michael Campos, PhD, a clinical psychologist in private practice in Los Angeles.

Another missing piece is prevention programs for youth, said Corbin Evans, deputy chief of science and technology on APA’s Advocacy team. APA Advocacy is exploring partnerships with colleges and universities to work on this issue, he said.

APA is also advocating for legislation to ensure that some of the tax money collected from online gambling operations goes to gambling addiction treatment and prevention. The bipartisan Providing Opportunities for Individuals in Need of Treatment and Support (POINTS) Act, introduced into the House of Representatives in

March 2026, would use federal excise tax dollars to fund prevention, treatment, and recovery to the tune of \$100 million a year.

Studies have identified evidence-based harm reduction advice for gamblers, Hodgins said, with some of the most important messages being that it’s safest to gamble no more than weekly, to play no more than two types of games, and to spend no more than 1% of the family income on gambling (Keshani, I. M., et al., *International Journal of Mental Health and Addiction*, 2026). Communicating this advice to the public might help people set healthy limits, he said.

How these messages will land among those who move between gaming, online gambling, prediction markets, and other risky financial arenas remains to be seen. It’s also not clear whether gambling-related messaging will resonate with users of prediction markets, as they may not identify as gamblers at all. Given the newness of these markets, Kim said, there is still a lot to learn about potential risks and harms. ■

FURTHER READING

The prevalence of gambling and problematic gambling: A systematic review and meta-analysis

Tran, L. T., et al.
The Lancet Public Health, 2024

Who makes in-play bets? Investigating the demographics, psychological characteristics, and gambling-related harms of in-play sports bettors

Vieira, J. L., et al.
Journal of Behavioral Addictions, 2023

Using “markers of harm” to track risky gambling in two cohorts of online sports bettors

McAuliffe, W. H. B., et al.
Journal of Gambling Studies, 2022



AMERICAN
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APA ELECTIONS

Meet the Candidates for 2028 APA President

APA members nominated the following
finalists who will appear on the ballot
Aug. 3–Sept. 16.

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Meet the Candidates for APA's 2028 President

Members will elect the association's next president this summer

MEMBER NOMINATIONS ARE IN. Following are the president-elect candidates. Read on for more information on each candidate's experience and priorities. Find additional information on the candidates on the President-Elect Ballot by scanning the QR code on the previous page or visiting <https://my.apa.org> between Aug. 3 and Sept. 16. The winning psychologist will serve as APA's 2027 president-elect and 2028 president.

Candice Nicole Hargons, PhD



Championing Resilience and Psychology can be the key to solving society's most enduring challenges. To unlock our potential, we must move past the era of silos and into an era of collective impact. As a unifying force, my platform is built on the unwavering belief in what APA CAN DO together to empower all

psychologists.

Together, we will show the WORLD and LOCAL COMMUNITIES what APA CAN DO in the fight for human rights. We have a common enemy, and it's not each other: It's systemic intersectional oppression. We will use our science and skills to identify these systems and resulting wounds, work toward eradicating them, and collaboratively build something better.

Together, we will show PRACTITIONERS and SCIENTISTS what APA CAN DO to illustrate their work is interdependent and indispensable. We will advocate with insurance companies for fair reimbursement policies that support the sustainability of psychological practice, and we won't stand down while research funding is eliminated. We will connect leading psychologists from science and practice with media experts to replace public mis/disinformation with our timely peer-reviewed and clinical experience-based evidence.

Together, we will show STUDENTS and ECPs how APA CAN pass the baton into their capable hands. We will address limitations in training and mentorship, modernizing it so they are prepared to pursue imaginative and fulfilling psychology careers in both emerging and traditional arenas.

Across states, provinces, and territories, our communities are calling on us to improve mental health where they need it most.

Across the career life span, whether you are a researcher, educator, clinician, consultant, trainee, entrepreneur, or administrator, you have a critical role in this moment.

Drawing on my leadership experience at the student (American Psychological Association of Graduate Students), state (Kentucky Psychological Association), Div. 17 (Society of Counseling Psychology), university, Council of Representatives, and APA Board of Directors levels, I am well prepared to work together.

Let's realize psychology's potential and show what APA + CAN DO.

Candidates' statements reflect their own views and do not represent the positions of APA or APA Services, Inc.

Chuck Hollister, PhD



I'm running for APA president-elect to ensure the concerns of everyday psychologists—across practice, research, academia, consulting, public service, and among our students—are not just heard but fought for.

Fellow psychologists: Worried about declining reimbursement, scope of practice, insurance hassles, job insecurity, edu-

cational costs, your cash-pay practice, consulting effectively, or research funding? You deserve a president who will fight for your professional and economic success. Better reimbursement serves the public by expanding access to timely, qualified care.

We need to:

- Educate a public that too often does not understand who we are or the value we bring.
- Fight for fair reimbursement, time-free CPT codes, access to extenders, and fair insurance practices.
- Advocate for reliable research funding.
- Support doctoral students who may want market-relevant training in areas like law, technology, business, prescribing, and administration alongside their psychology training, without extending time in school.
- Allow psychologists, like physicians, to graduate before internship and participate more fully in Medicare-reimbursable care during training.

For our communities: SPTAs and divisions deserve a stronger voice, deeper respect, genuine collaboration with national leadership, and the financial footing to do the work that matters. Let's identify promising state legislation and apply those models nationally and in other states. We also need to draw on the content expertise our divisions offer.

Leading with science: Science is how we earn trust, drive change, and show why psychology matters. We must make more practice-relevant, clinically useful science accessible to providers.

Uniting for impact: We do not have to agree on everything. We do need mutual respect, serious listening, and a shared commitment to psychology's future.

If not now, when?

Margaret Bull Kovera, PhD



Psychology stands at a pivotal moment with many of the most pressing challenges arising not from within our field but from powerful external forces that demand a unified and courageous response. As a member of the APA Board of Directors and a candidate for president-elect, I believe we must meet

this moment together—united and unafraid.

The rapid proliferation of AI chatbots and digital companions claiming therapeutic benefit presents both promise and risk. APA must lead in advancing rigorous research on their effectiveness, limitations, and potential harms, while also serving as a trusted voice to educate the public about their responsible use.

At the same time, we must safeguard APA's role in accrediting programs that train health service psychologists. Efforts by federal and state actors to remove diversity, equity, and inclusion from education threaten the multicultural competence that is essential to effective care. We must stand firm in defense of these standards.

Equally urgent is the need to protect the scientific foundation of our discipline. Proposals to cut funding at the National Institutes of Health and eliminate the Directorate for the Social, Behavioral, and Economic Sciences at the National Science Foundation would cause lasting harm to advancing psychological science. Our practice, applied work, education, and public impact all depend on sustained investment in research.

Finally, we must ensure that graduate training remains accessible and that students pursuing that training are adequately funded—through federal loans, fellowships, and other mechanisms—so that individuals from all backgrounds have an equitable path into psychology.

These challenges are real, but so is our capacity to handle it together. United in purpose and unafraid of the work ahead, we can protect what matters most and ensure a vibrant future for psychology.

5 Questions for Joan Orpella, PhD

A professional violinist-turned-neuroscientist investigates the neural mechanisms underlying speech production and its pathology

BY EFUA ANDOH

FOR NEARLY 2 decades, Joan Orpella, PhD, was a professional violinist and pedagogue. When a diagnosis of focal dystonia—a neurological condition that causes involuntary muscle contractions—ended that career, he shifted his passion to research on speech and language. Now an assistant professor of neuroscience at Georgetown University Medical Center, Dr. Orpella investigates the neural mechanisms underlying speech production, perception, and pathology.

What first drew you toward studying the neural mechanisms behind speech?

I was always fascinated by how we learn—not just to play a musical instrument but also to use music as a means to communicate, to convey emotions and sensations, and to move people, often in profound ways. That curiosity about music making naturally extended to speech and language. While they differ in important respects, speech and music can also be seen as complementary systems of communication. And, like music, learning to speak requires an extraordinary degree of motor coordination, something achieved

only through sustained practice. In that sense, my career as a cognitive neuroscientist is almost a continuation of my former life as a musician.

How has your musical background shaped your research?

One fundamental similarity between playing an instrument and speaking is that both involve auditory goals. We aim to produce a particular sound or utterance. Yet the actions that will achieve these goals are defined in motor terms. So, the brain must constantly translate what

we want to hear and communicate that into the movements required to produce those sounds. Establishing such sensorimotor links with maximal automaticity and minimal friction is one of the main goals of our daily practice as musicians. But it's also an essential component

when we speak and when we learn to speak. It also works in the opposite direction, from the motor to the sensory. As a violinist, you don't just react to the sounds you produce. You're constantly trying to anticipate them,

predicting what particular movements will sound like before you make them, to make sure that you'll hit the right notes and produce the intended sounds. Speech production works much the same way. We rely on predictive mechanisms that allow us to anticipate the sensory consequences of our vocal tract movements. This helps us to plan and produce consistently accurate and intelligible speech. Understanding how the brain learns and seamlessly implements these sensorimotor integration processes is one of the core questions we are pursuing in the lab. These questions are relevant to basic science and are also important because of the many ways these delicate neural processes can break down during development or after brain injury or stroke.

What does neuroscience reveal about stuttering?

Regarding what underlies stuttering moments, converging evidence points to anomalies within the brain network that supports speech production. What remains unclear is how these anomalies translate into actual stuttering events and how they account for the variability when stuttering occurs. One major challenge in neuroimaging research on stuttering has been reliably eliciting sufficient stuttering in the lab to study what happens in the brain during those moments. In collaboration with researchers at New York University, our lab has developed an experimental design that allows us to obtain balanced amounts of stuttered and fluent speech from individuals who stutter. Using this new design and high-resolution



PHOTO BY SCOTT SUCHMAN

neuroimaging, we're beginning to identify the neural dynamics underlying stuttered speech. The results are very promising in indicating a dysregulation of the speech motor network occurring already during speech planning, prior to overt stuttering. One possibility, supported by growing evidence, is that predictive mechanisms critical for planning and production are disrupted. If the brain's ability to anticipate the sensory consequences of speech movements is compromised, the system may become unstable, increasing the likelihood of fluency breakdowns.

The underlying causes of stuttering are less well understood, but several interesting theories have been proposed. We're currently investigating how genetic mutations found in approximately 15% to 18% of individuals who stutter may lead to the structural and functional anomalies we observe in the speech network. Our goal is to identify the neural signatures associated with these mutations and to understand how the mutations might contribute to the development and persistence of stuttering. By clarifying that neurobiological pathway, we hope to shed light on broader mechanisms underlying the disorder.

What research projects are you most excited about?

The lab is currently engaged in various projects investigating different aspects of speech perception and production, spearheaded by two outstanding postdoctoral researchers, Dr. Chantal Oderbolz and Dr. Neeraj Kumar. I'm particularly enthusiastic about the project on the neural basis of persistent developmental stuttering because of its potential to yield important insights into the disorder at multiple levels by bridging genetics, cellular-molecular, and cognitive neuroscience. The project also seeks to link brain structure and function in individuals who stutter in unprecedented ways. Another project I'm very excited about, led by Dr. Oderbolz, examines the speech perception side of things. Specifically, we're investigating how distributed brain representations of different components of speech—such as segmental phonology, prosody, and syntax—work together and connect with our knowledge and understanding of the world so we can extract the speaker's intended meaning.

How do you hope your research will ultimately translate into clinical impact?

Our research aims to deepen our understanding of the neural mechanisms supporting speech production and perception. The intention is always that, by understanding these processes and mechanisms more precisely, we can contribute to more accurate diagnostics and targeted interventions for those who need them. I believe that the field of neuromodulation offers a promising avenue for translating our findings in the near future to promote recovery and return to function—a mission that lies at the heart of our work here at Georgetown University Medical Center.

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Speech or Conduct? Conversion Therapy Bans

"Judicial Notebook"
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A Supreme Court case examines First Amendment protections in therapy

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

THE SUPREME COURT'S 8–1 ruling in *Chiles v. Salazar* will have far-reaching implications for the well-being of LGBTQ+ youth, the field of psychology, and regulatory mental health practice. In a March 31 decision, authored by Justice Neil Gorsuch, the court held that Colorado's law prohibiting licensed mental health professionals from engaging in "conversion therapy" with minors must be reviewed under strict scrutiny, as the law was found to regulate speech in violation of the First Amendment.

Conversion therapy, also known as sexual orientation and gender identity change efforts (SOGICE), refers to practices seeking to change an individual's sexual orientation or gender identity based on the belief that being lesbian, gay, bisexual, transgender, or queer is a mental illness or sinful, and therefore can be changed (Haldeman, D. C., *Journal of Gay and Lesbian Psychotherapy*, Vol. 5, 2002). Studies have revealed conversion therapy fails to change sexual orientation or gender identity while producing a host of serious negative outcomes, including depression, anxiety, adverse physical health outcomes, self-hatred, isolation, and suicidality (Davison, G. C., & Walden, K. R., *Annual Review of Clinical Psychology*, Vol. 20, 2024; Gibb, J. K., et al., *JAMA Network Open*, Vol. 8, No. 5, 2025). LGBTQ+ youth are particularly vulnerable, as youth who undergo SOGICE are more than twice as likely to attempt suicide compared with those who do not (Green, A. E., et al., *American Journal of Public Health*, Vol. 110, No. 8, 2020). These are not side effects of well-intentioned but flawed treatment—they are the predictable consequences of a practice rooted in pathologizing identity.

To date, numerous professional organizations, including APA, the American Medical Association, the American Psychiatric Association, and the American Academy of Pediatrics (AAP), have condemned SOGICE as both ineffective and harmful. Over the years, APA divisions, including Div. 44, (Society for the Psychology of Sexual

Orientation and Gender Diversity), have made position statements and resolutions regarding the use of appropriate, affirmative therapeutic responses (APA, 1997; 2009; 2024; Flinn, R. E., *Journal of Counseling Psychology*, Vol. 72, No. 5, 2025; SAMHSA, 2015). The court did not question the well-established scientific consensus that conversion therapy is harmful; however, it noted the core issue for debate was whether the state may restrict one viewpoint in favor of another.

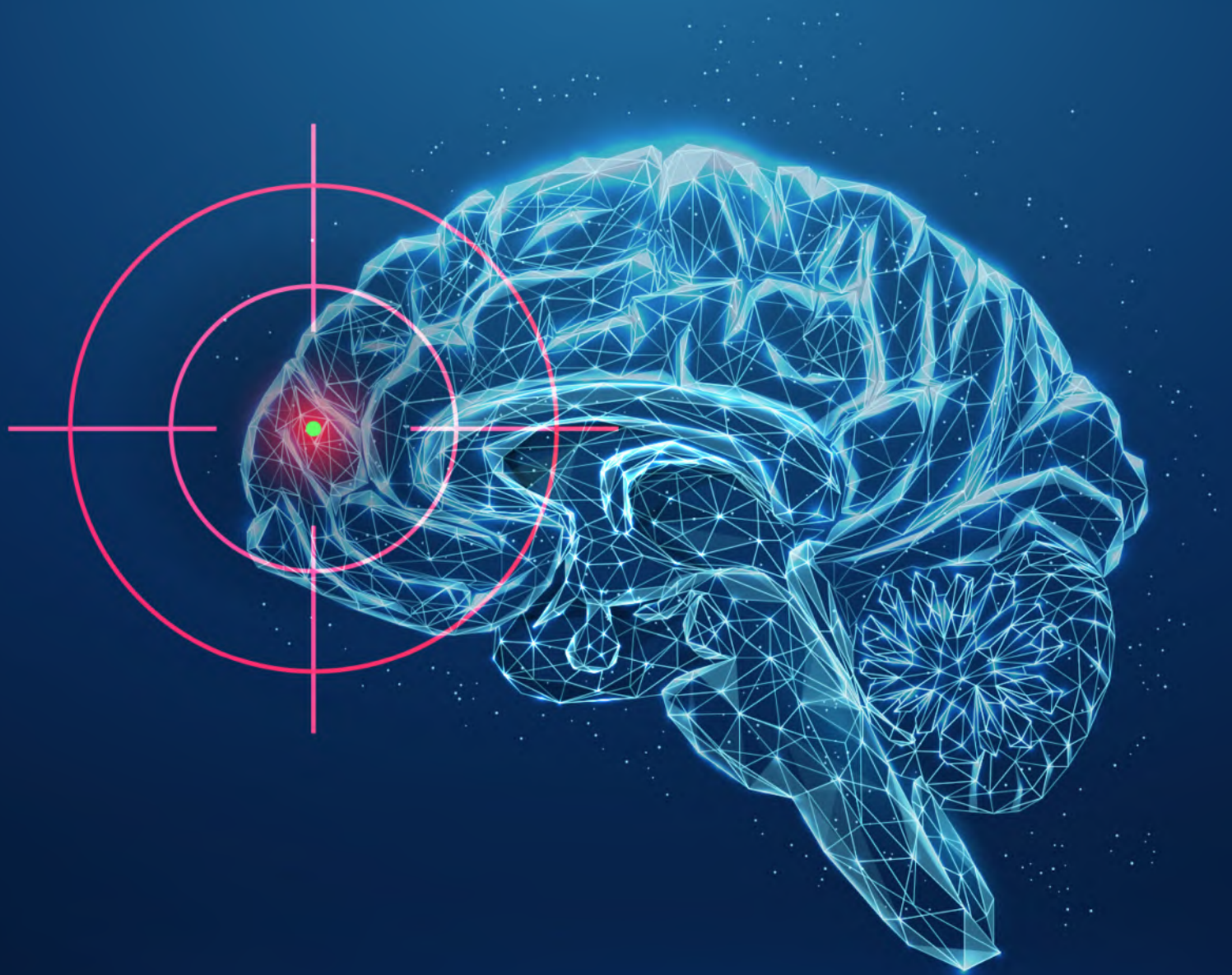
The *Chiles* ruling raises serious concerns beyond SOGICE. By classifying therapy as protected speech, the court has called into question states' broader authority to enforce evidence-based standards of care for any health profession that delivers services through verbal communication. Justice Ketanji Brown Jackson was the lone dissenter, arguing that states have long held authority to regulate the practice of medicine and psychology, including talk therapy. As APA CEO Arthur C. Evans Jr. noted in response to the ruling, the unresolved question of whether states can regulate what licensed mental health professionals say to patients will determine not only the fate of conversion therapy bans but the ability of licensing boards to protect consumers across the mental health professions.

Ultimately, APA's Ethical Principles of Psychologists and Code of Conduct (2017) are clear: Psychologists are obligated to avoid harm and respect the dignity and rights of those they serve. Conversion therapy violates each of these principles as it pathologizes identity and operates outside the bounds of empirically supported practice. The *Chiles* ruling does not change the ethical obligations of mental health professionals; it makes advocacy for those obligations more urgent than ever. Psychologists, licensing boards, and professional organizations must continue to engage in evidence-driven practices, train future practitioners in affirmative approaches, and advocate for legislative protections for LGBTQ+ youth. ■



AT ISSUE

Does the First Amendment shield professional conduct as protected speech?



CE Corner

What Works, What's New, and What's Next: Using Brain Stimulation to Treat Mental Illness

BY KIRSTEN WEIR

THE UNITED STATES Food and Drug Administration (FDA) cleared transcranial magnetic stimulation (TMS) for major depressive disorder in 2008, yet skepticism among clinicians lingered for years.

But evidence for its benefits has continued to grow as the treatment has evolved and expanded in new directions. Now, clinicians view neuromodulation—the process of delivering targeted electrical stimulation to the brain to normalize abnormal neural circuitry—as a valuable tool for understanding and treating a growing list of neuropsychiatric disorders.

Today's newer TMS technologies can reach more deeply into the brain, and updated protocols are shrinking treatment times from weeks to days. TMS has also been extended to other conditions beyond depression in adults. The therapy is now approved for obsessive-compulsive disorder (OCD), migraines, and smoking cessation, and in 2024 it was cleared as an adjunctive treatment for depression in adolescents starting at age 15. Meanwhile, researchers are exploring TMS as a tool in other mental health disorders, such as eating disorders and post-traumatic stress disorder (PTSD), and even in neurological conditions such as mild cognitive impairment, Alzheimer's disease, and autism.

Clinicians and patients are drawn to TMS for a variety of reasons. It is noninvasive, administered through an electromagnetic coil placed on the scalp. The devices deliver magnetic pulses that generate an electric current in the brain. While the practice can cause transient headaches and scalp discomfort, the risk of serious complications—such as seizures—is very low. And TMS can be effective when

other treatments, such as antidepressants or psychotherapy, have failed.

TMS requires a prescription and is therefore typically provided by medical professionals, although clinical psychologists with specialized training may be able to offer the procedure in states that grant them prescription privileges.

Yet psychologists come into contact with TMS in many other ways—referring patients for TMS, engaging in research to better understand and improve the treatment, and as a part of the multidisciplinary teams that deliver it.

“This is a treatment that really does well with interdisciplinary, integrated health care teams,” said Shawn McClintock, PhD, a clinical neuropsychologist, professor of psychiatry, and scientific director of the Perot Foundation Neuroscience Translational Research Center in the O'Donnell Brain Institute at University of Texas Southwestern Medical Center. “Psychology is a discipline that has a lot to offer for the continual evolution and use of TMS.”

Resetting circuits

Disorders of the brain were once framed as chemical imbalances or faulty brain regions. Increasingly, they are thought of as disorders of brain circuits. “Many disorders of the mind and brain can at least at some level be viewed as disorders of brain circuits,” said Michael Leuchter, MD, an assistant professor at the University of California, Los Angeles, Semel Institute for Neuroscience and Human Behavior. Depression, for instance, is often linked to disrupted connectivity between the left dorsolateral prefrontal cortex (DLPFC) and subgenual anterior cingulate

CE CREDITS: 1

Learning objectives

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

- 1** Explain how transcranial magnetic stimulation (TMS) affects brain circuits to treat psychological symptoms.
- 2** Discuss which conditions have FDA clearance to be treated with TMS.
- 3** Describe emerging research to extend TMS to new indications and make the treatment more personalized and precise.

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

KEY POINTS

1

TMS is approved to treat depression in adults and adolescents, as well as obsessive-compulsive disorder, smoking cessation, and migraines.

2

TMS uses magnetic pulses to generate an electric current that can repair disrupted brain circuits.

3

New protocols and approaches in development aim to make TMS more personalized to a patient's symptoms.

cortex (sgACC). “TMS interfaces with illness at the level of the brain circuit and more or less ‘rewires’ how it operates,” said Leuchter, who uses TMS as a treatment for his psychiatric patients and studies it as a treatment for Alzheimer’s disease. “The circuit-based approach is not inherently better or worse than therapy or medications; it just starts at an entirely different level.”

The new focus on circuits dovetails with a shift toward a more symptoms-based view of mental illness. Instead of targeting a particular disorder, clinicians increasingly target specific symptoms that, in many cases, extend across diagnoses. In depression, for example, dysphoric symptoms such as sadness and anhedonia might respond best to stimulation of one circuit, while anxiety and somatic symptoms might respond to stimulation of another (Siddiqi, S. H., et al., *The American Journal of Psychiatry*, Vol. 177, No. 5, 2020).

“This will clean up a lot of the messiness we have in clinical psychology, where people can’t agree on a diagnosis,” said Desmond Oathes, PhD, a clinical psychologist who directs

the Center for Brain Imaging and Stimulation at the University of Pennsylvania Perelman School of Medicine. “Maybe the diagnosis is not even that important. If we have a treatment that’s focused on a particular symptom, we can narrow that down and personalize the approach for better outcomes.”

TMS is a flexible tool. Depending on the protocol, it can inhibit activity in overactive networks or enhance activity in sluggish circuits. A variety of devices and approaches have been granted clearance by the FDA (see “Expanding the Treatment Toolkit: FDA-Approved and Cleared Medical Devices,” APA Services, Inc., 2026). Standard protocols for treating depression delivered the electromagnetic pulses across 4 to 6 weeks. But newer approaches have shrunk that window, with some delivering multiple daily treatments for 5 or 6 consecutive days.

Given the variety of devices and protocols, firm estimates of response rates are hard to determine. Yet clinicians and researchers who administer the treatment say the improvements can be striking. “We see a lot of people who have been suffering for a long time get their lives back,” Leuchter said.

Research also indicates that the treatment is helpful in patients of all ages. In a study of adolescents and young adults who received TMS for major depressive disorder, nearly 70% reported meaningful improvement and 30% achieved remission (Croarkin, P. E., et al., *JAACAP Open*, Vol. 3, No. 4, 2025). Leuchter’s research, meanwhile, shows that TMS response rates are at least as high in older adults as in younger adults (*International Psychogeriatrics*, Vol. 36, No. 11, 2024). “There was a time in TMS research when it was thought we

really couldn’t treat older adults past the age of 65 or so, because of atrophy of the brain,” McClintock said. “As newer evidence has come about, we see that TMS can be used in adults across the life span.”

Still, researchers have more work to do to determine who is likely to respond well to TMS and which brain regions to target. A recent umbrella review concluded that much of the research on TMS was vulnerable to bias and small-study effects and that more work is needed to clarify the benefits of TMS in different patient populations (Brini, S., et al., *Clinical Psychology Review*, Vol. 100, 2023).

Yet the patchy findings do not necessarily suggest that there are people unlikely to respond to TMS, Oathes said. “In my opinion, it is more the case that we haven’t found the right target for that person, and we need to revise our personalization strategy depending on what we learn about the patient.”

Precision TMS

TMS involves placing the device against the scalp, where it sends short, intense electromagnetic pulses into the brain. But the traditional approach is not highly personalized. Instead of using neuroimaging to identify the brain region providers hope to target, they use a tape measure to identify the spot on the scalp that is likely to correspond with the brain target, or sweet spot, beneath. “It’s actually miraculous that it works,” said Andrada Neacsu, PhD, a clinical psychologist at Duke University who studies TMS.

Newer methods take a more tailored approach. In 2022, the FDA cleared the Stanford neuromodulation therapy protocol, a depression treatment that uses resting-state brain imaging data to identify a target in the brain. Using fMRI, providers



Clinicians and patients are drawn to transcranial magnetic stimulation because it is noninvasive, low risk, and often effective when other treatments, such as antidepressants or psychotherapy, have failed.

measure correlations in brain activity between the left DLPFC and the sgACC to determine where to focus the magnetic pulses. In addition to the more individualized approach, the protocol is notable because it delivers the treatment in 10 sessions per day over a 5-day period instead of the traditional weeks-long protocol. In an early trial of the approach, 19 of 21 patients achieved remission criteria (Cole, E. J., et al., *The American Journal of Psychiatry*, Vol. 177, No. 8, 2020).

Psychological scientists are working to make TMS even more precise. “We think that taking actual brain

measurements in response to TMS pulses is a really promising avenue to make the treatment better,” Oathes said. In a study being prepared for publication, he compared standard scalp-based TMS to an fMRI-guided protocol he developed. The imaging-guided approach was more effective at relieving depression symptoms, he found (*MedRxiv*, 2024). At the end of the 10-session treatment, 68% of people in the fMRI-guided group showed clinical improvement, compared with 59% of the scalp-target group. “But if you track patients over time, those who have the nonindividualized approach tend to get worse,

whereas [fMRI-guided] patients tend to further improve. At 6 months, there is more than a 30% difference in symptom improvement between those two groups,” he added.

Neacsiu is undertaking similar work. While the Stanford protocol relies on scans of patients’ brains while they are at rest, she hopes that TMS outcomes could be improved by assessing brain function while people are actively engaged in relevant tasks. In one study, for instance, she asks participants to use techniques that help them downregulate distress while they are in the scanner. “We’re trying to see exactly what areas connect

when you're engaged in that task so we can pick a target based on those functional imaging results," she said.

TMS could also boost the impact of behavioral interventions. In an ongoing study, Neacsiu teaches cognitive restructuring—a skill from cognitive behavioral therapy—to people with emotion dysregulation, regardless of their diagnosis. Then, she applies TMS to the circuits involved to boost the efficacy of the intervention (*Psychotherapy and Psychosomatics*, Vol. 91, No. 2, 2022). A parallel project uses the same approach to help people with misophonia, an intense negative reaction to certain sounds, such as chewing or breathing. In preliminary research, Neacsiu found that the combination of TMS and cognitive restructuring was more effective at reducing the severity of misophonia than either intervention alone (*Journal of Affective Disorders*, Vol. 350, 2024).

"Our behavioral interventions are fantastic, but they are cumbersome, and patients need to do a lot of work to learn how to apply them," Neacsiu said. In a recent study, she lays out a blueprint for enhancing their efficacy with TMS (*Behavioural Brain Research*, Vol. 508, 2026). "The goal is to use neuromodulation to enhance the effects of that skills practice, to lead to better connectivity, so that learning can happen faster and the participant will be more likely to use the skill in the future," she said.

Better brain states

That research highlights another important trend in TMS: bringing more psychological science to bear on neuromodulation. To date there has been little attention paid to the psychological state a person is in while undergoing TMS treatment for depression. But early findings indicate that state

could matter a lot. Oathes's research on depression suggests that participants who watch relaxing nature videos in combination with TMS experience better outcomes than do participants who engage in cognitive exercises.

More work is needed to understand such state differences, but they make sense to Neacsiu. "TMS is a blunt tool—it doesn't know what it's doing in the brain. It's critical what state the brain is in before administering the treatment," she said. She cringes to hear about some patients scrolling their phones during TMS treatments. "If they start thinking about bad things in the news, that could set their brain up in the context of enhancing rumination," she added. "Every neuromodulation practice should bring in a clinical psychologist who can understand how the person might respond to the context that they're in, and to make sure that patients are also receiving [complementary] evidence-based behavioral treatments."

There is a precedent for combining TMS with behavioral interventions, she added. In OCD, for example, the standard TMS protocol prepares patients for treatment using structured tools from exposure and response prevention, an established, evidence-based behavioral intervention for the disorder. And in smoking cessation, clinicians induce cravings through cue induction before applying TMS. "The idea is to get the brain into a state where it's more receptive to neuromodulation, by targeting the circuitry affected by the disorder," Neacsiu said.

As researchers continue to optimize TMS for depression, scientists are also investigating the therapy for a variety of other conditions, including anxiety disorders, PTSD, and substance use disorders. It also shows promise for neurological disease. Evidence suggests that TMS leads to cognitive improvements in patients with mild cognitive impairment and

As researchers continue to optimize TMS for depression, scientists are also investigating the therapy for a variety of other conditions, including anxiety disorders, PTSD, and substance use disorders.



Alzheimer's disease, in both short- and long-term assessments (Yan, Y., et al., *Frontiers in Neurology*, Vol. 14, 2023).

Leuchter is among those scientists exploring TMS as a treatment for Alzheimer's. The tool seems to help brain regions that have been disconnected by the disease begin communicating again, he said. "The idea is that we can target brain networks to reregulate some of the rhythms that have been thrown off by the disease—like putting a conductor back in front of an orchestra."

He is also studying TMS in autistic people with treatment-resistant depression. Behavioral interventions can be more complicated in autistic patients who have difficulties with interpersonal interactions, he noted, and they can respond less predictably to psychiatric medications than neurotypical people. "The things we typically rely on in psychology and psychiatry are less reliable in autism, so it's very exciting to have a tool that has the potential to intervene in a very specific, mechanistically guided way for depression in autism," he said.

behavioral interventions, and more. "Psychologists have amazing training in assessment and experimental methods, and we can definitely be part of the team treating patients and advancing the science of TMS," Oathes said. ■

CLINICIANS AND RESEARCHERS WHO ADMINISTER THE TREATMENT SAY THE IMPROVEMENTS CAN BE STRIKING. "WE SEE A LOT OF PEOPLE WHO HAVE BEEN SUFFERING FOR A LONG TIME GET THEIR LIVES BACK."

Michael Leuchter, MD

Assistant professor at the University of California, Los Angeles

Others are investigating the use of TMS with autistic people. James McPartland, PhD, a clinical psychologist and professor of child psychiatry and psychology at the Yale Child Study Center, is using TMS to target the superior temporal sulcus. This brain region is involved in social cognition and social perception, functions that many autistic people find challenging. In preliminary work using eye-tracking technology, he has found that after stimulating this region with TMS, autistic people are more likely to look to the eyes when viewing images of faces. "We're not interested in this as a way to homogenize autistic people to make sure they make eye contact the way nonautistic people do," he emphasized. "But for many people on the spectrum, this is something that gives them trouble by their own accounts, and it might be useful for them."

Time will tell whether TMS will prove valuable in treating patients with autism or Alzheimer's disease. But in the present, clinical psychologists have a role to play by referring patients who might benefit from TMS to reputable providers. Unfortunately, some private clinics have sprung up that offer TMS for diagnoses such as attention-deficit/hyperactivity disorder or insomnia that are not supported by the evidence, McClintock said. "TMS is not a panacea," he said. "I encourage clinicians to do their homework so they can separate fact from fiction about TMS and, if they're going to refer a patient for TMS, make sure they're comfortable with that person's level of expertise and experience."

Psychologists also have much to offer neuromodulation treatment teams—assessing patient symptoms, measuring clinical outcomes, providing complementary

FURTHER RESOURCES

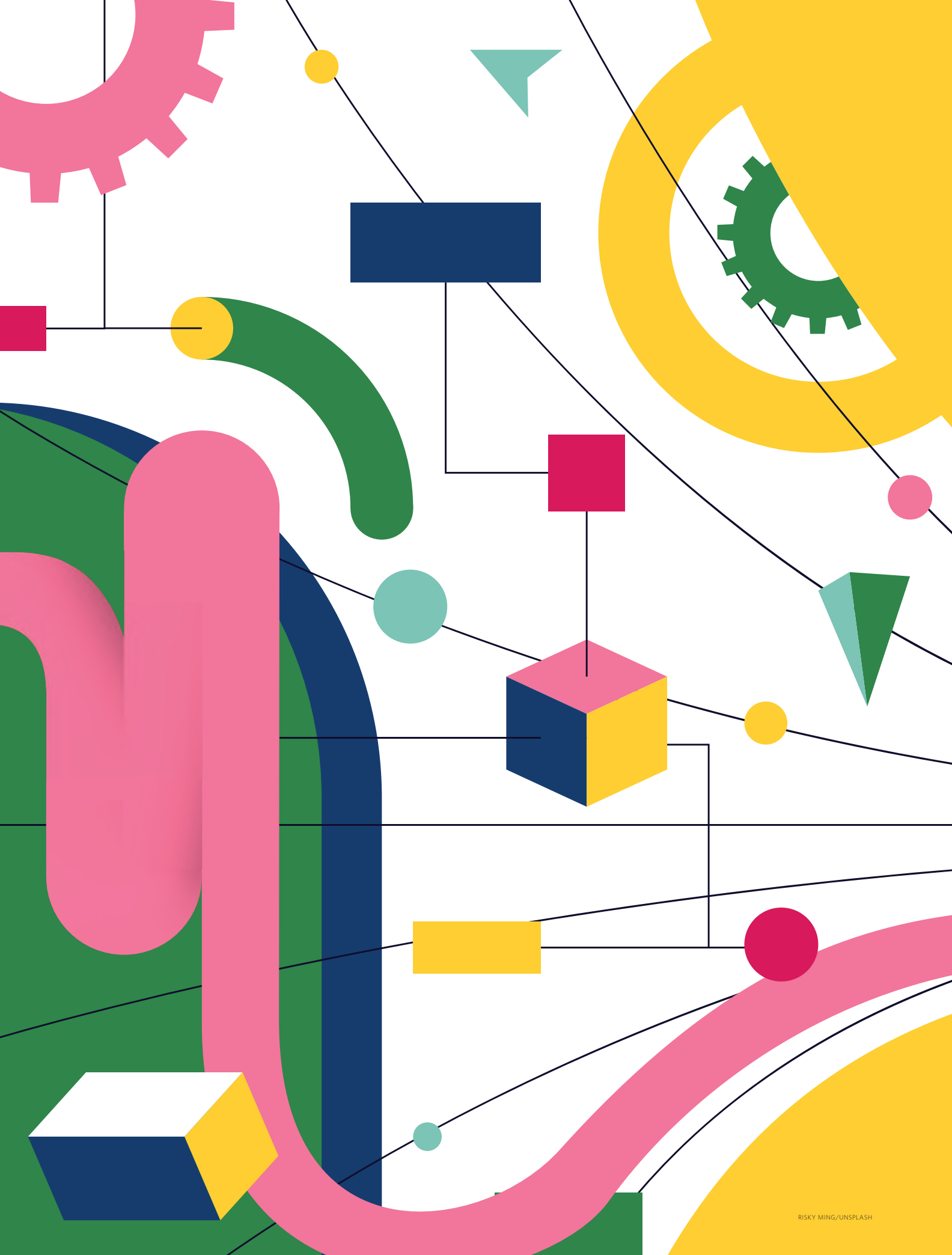
Consensus review and considerations on TMS to treat depression: A comprehensive update endorsed by the National Network of Depression Centers, the Clinical TMS Society, and the International Federation of Clinical Neurophysiology
Trapp, N. T., et al.
Clinical Neurophysiology, 2025

Non-invasively targeting, probing and modulating a deep brain circuit for depression alleviation
Oathes, D. J., et al.
Nature Mental Health, 2023

The promise of brain stimulation treatments for depression, with Sarah Lisanby, MD, and Diana Daniele
Speaking of Psychology, APA, 2023

Expanding the treatment toolkit: FDA-approved and cleared medical devices
APA Services, Inc., 2026

FDA clears transcranial magnetic stimulation (TMS) for youth, and a shorter version for adults
APA Services, Inc., 2025



How AI Is Reshaping *Human Skills* and *Thinking*

Can regular AI use in work and daily life
impact job skills and key cognitive abilities?

BY ZARA ABRAMS



IN MANY AREAS of work and life, generative AI tools offer such great gains in efficiency—and even creativity—that using them is hard to resist. That rapid uptake has sparked a debate: Will relying on AI weaken our cognitive skills—or can it enhance them?

“There’s clear evidence that people can perform many tasks better with AI. The question is: What happens to our skills if we start relying on it regularly?” said Brooke Macnamara, PhD, an associate professor of psychological sciences at Purdue University who studies how we acquire skills and how they can degrade if we don’t keep them sharp.

While some early research suggests certain skills may weaken if we too-readily offload them to AI (Budzyń, K., et al., *The Lancet Gastroenterology & Hepatology*, Vol. 10, No. 10, 2025), other studies suggest the link is more complex. Passive use can lead to skill decay, but more structured, deliberate use may actually boost critical thinking and creativity.

Psychologists and other researchers are now studying how people interact with AI and identifying design and use patterns that strengthen—rather than erode—core human capabilities. That work is starting to show that the benefits of AI largely depend on how human-AI collaboration is structured.

“The key issue is not whether but how AI is used. The difference lies less

in the technology itself and more in the user,” said Jackson G. Lu, PhD, an associate professor of work and organization studies at the Massachusetts Institute of Technology (MIT) who studies generative AI use in the workplace.

Deliberate use of AI is particularly important because unlike many technologies that preceded it, AI can do more than just discrete tasks. These systems also give us the chance to offload cognitive tasks central to who we are as humans, such as critical thinking, judgment, and creativity.

“One of the things that’s seductive but also troubling about generative AI is the ability to offload much more executive functioning than we have in the past,” said Nita Farahany, PhD, JD, a professor of law and philosophy at Duke University who studies the legal, ethical, and social questions raised by emerging technologies. “What does it mean for society if humans are passively receiving information but no longer able to critically interrogate it?”

Most experts agree that while today’s AI systems are highly capable of recombining existing knowledge, they cannot generate true breakthroughs. When entirely original problems arise, such as the emergence of a novel coronavirus, human ingenuity must be sharp enough to solve them, Macnamara said. The challenge now is how to use AI to improve efficiency without eroding the human skills that foster competence, autonomy, and innovation.

Why we offload

We offload cognitive tasks all the time—from storing phone contacts to setting calendar reminders—to free up mental resources for use elsewhere. This process, known as cognitive offloading, refers to using external

tools or resources to reduce the mental effort required for a task.

When deciding whether to offload, we weigh factors such as our goals for the task and whether a tool might perform it better than we can. Another driver: If cognitive offloading saves us effort, it becomes particularly appealing.

“There’s a general consensus that people are ‘cognitive misers’—if a task can be done with less cognitive labor, we tend to take that option,” said Evan Risko, PhD, a professor of psychology at the University of Waterloo in Ontario, Canada, who studies cognitive offloading, referencing a 1984 theory by social psychologists Susan Fiske, PhD, and Shelley Taylor, PhD.

Research on memory offloading shows it can improve performance when people have access to the stored information, such as making a grocery list and bringing it to the store, said Lauren Richmond, PhD, an associate professor of cognitive science at Stony Brook University of the State University of New York who also studies cognitive offloading. But if, for some reason, we unexpectedly don’t have access to the stored information (if we leave the grocery list at home, for example), we tend to recall less than if we had relied solely on memory (Grinschgl, S., et al., *Quarterly Journal of Experimental Psychology*, Vol. 74, No. 9, 2021).

Our history with other technologies shows what can happen to skills when we offload them. For example, research has linked GPS use to a weaker sense of direction when people must navigate on their own, with evidence of decline over time (Miola, L., et al., *Journal of Environmental Psychology*, Vol. 99, 2024; Dahmani, L., & Bohbot, V. D., *Scientific Reports*, Vol. 10, 2020).

“We essentially become passive passengers following directions without processing and synthesizing

AT A GLANCE:

- Some evidence suggests that heavy reliance on generative AI can reduce critical thinking and job-specific skills.
- Using AI in a structured way can help optimize human-machine collaboration, preserving human abilities while improving AI output.
- Many questions remain unanswered about how AI use affects cognition and the brain.



“Imagine you have a candle. If you tell AI to improve it, you’ll get a candle that shines brighter and longer, costs less, and probably has the best design. But AI will not make the leap from candle to light bulb. ***That is out-of-the-box thinking***—a type of creative thinking that AI, which is based on pattern recognition, cannot do.”

Michael Gerlich, PhD

Professor and head of executive education,
Swiss Business School, Zurich

information,” Macnamara said. “But if a technology is very good and almost always available, maybe that’s a skill we’re willing to lose.”

AI and critical thinking

Early research on AI suggests that large language models (LLMs) have the power to alter cognition much like GPS—encouraging passive consumption rather than active engagement—but across a broader set of cognitive skills.

Critical thinking is one example. In a study of 319 knowledge workers led by researchers at Microsoft and Carnegie Mellon University, participants who had more confidence in generative AI also said they engaged in less critical thinking when they used it to complete work tasks. These tasks included developing new ideas, learning about new topics, and getting guidance when making a decision (Lee, H. P., et al., *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems*, No. 1121, 2025).

“At the moment, most interactions between people and generative AI are transactional. You ask a question; you get an answer; you move on,” said Mutlu Cukurova, PhD, a professor of learning and artificial intelligence at University College London who studies human-AI interaction. “Unfortunately, these types of interactions are more likely to lead to cognitive atrophy than cognitive development.”

In a series of experiments led by Shiri Melumad, PhD, an associate professor of marketing at the Wharton School of the University of Pennsylvania, participants conducted research on a topic, such as how to plant a vegetable garden, then wrote advice for an imagined friend. For their research, writers used either a traditional Google search or an AI tool, such as ChatGPT or Google’s AI

overview. Writers using the AI tools spent less time searching and wrote shorter, less detailed summaries. Readers rated the advice from the AI-informed writers as less helpful, less trustworthy, and less likely to be adopted than that of the writers who did their own internet research (*PNAS Nexus*, Vol. 4, No. 10, 2025).

“People learn best when they engage in active exploration, problem-solving, and sensemaking,” Melumad said. “With LLM summaries, this process is completed on our behalf, which transforms learning from an active to a more passive process.”

Using electroencephalography, researchers from MIT examined brain activity during essay writing to further explore these effects. Participants who wrote essays using an LLM had weaker neural connectivity during the task than those who used a search engine or no outside tools. The findings have not yet been peer reviewed (Kosmyna, N., et al., *arXiv*, 2025).

“Research suggests that the use of AI, mediated by cognitive offloading, can lead to a reduction in critical thinking,” said Michael Gerlich, PhD, a professor and head of executive education at the Swiss Business School in Zurich who studies AI and cognitive offloading. “But that’s largely a consequence of how people are using these tools. When used more deliberately, AI can actually enhance critical thinking.”

To test this theory, Gerlich asked 150 participants to write essays on the pros and cons of democracy under three conditions: without AI, using ChatGPT with no guidance, or using ChatGPT with structured prompts designed to encourage deeper thinking. The prompts helped users reflect independently, conduct targeted research, construct and critically review an argument, and revise their work as needed. Essays produced with

structured prompting received the highest scores from expert reviewers (*Data*, Vol. 10, No. 11, 2025).

When using an LLM for support, Gerlich recommends flipping the conventional prompting strategy on its head. Rather than providing as much information as possible up front, start by thinking through the problem yourself. When you need additional data, ask pointed questions without revealing details about the broader project. Once you’ve reached an answer on your own, give the AI both the question and your solution and ask for feedback. Gerlich said this approach encourages active engagement and helps mitigate anchoring—where an early answer shapes or biases the thinking that follows—by preventing AI output from steering human reasoning.

Offloading at work

In the workplace, research is starting to tease out how, and for whom, strategic use of LLMs could boost cognitive outcomes such as creativity. Lu, of MIT, and his colleagues studied 250 employees of a technology consulting firm in China who were randomly assigned to either receive access to ChatGPT or work without it for one week at a time when ChatGPT was not yet publicly available in China. Separately, employees completed surveys assessing their metacognitive skills, which involve actively monitoring and regulating one’s thinking to complete tasks and achieve goals.

Work done by employees with access to ChatGPT was rated as being more creative by supervisors and external reviewers, particularly when those employees also scored high on metacognitive skills. These employees appeared better able to use AI to generate ideas, switch between

TEACHING CONNECTIONS

LESSONS ON AI, COGNITION, AND HUMAN SKILLS

The following prompts (organized by topic) can support psychology educators in discussing how AI use affects human cognition, skill development, and behavior.

1. **Cognition and memory** The article describes *cognitive offloading* as using external tools to reduce mental effort and cites research linking GPS use to a weaker sense of direction over time. Using what you know about memory encoding, retrieval, and the role of effortful processing in learning, explain why offloading a cognitive task to AI might impair performance when that tool is unavailable. Under what conditions might offloading enhance rather than hinder cognitive performance?

Reinforces: *memory systems, encoding and retrieval, effortful processing versus automatic processing, and the role of practice in skill acquisition*

2. **Thinking, problem-solving, and creativity** Researchers in this article distinguish between AI's ability to assemble existing knowledge and humans' capacity for truly original thinking—as illustrated by the “candle to light bulb” analogy. Using what you know about convergent and divergent thinking, creativity, and problem-solving, evaluate this claim. What cognitive processes does AI appear to support and which does it appear to undermine? What does this suggest about how humans can best utilize AI?

Reinforces: *convergent and divergent thinking, creativity, problem-solving strategies, and metacognition*

3. **Motivation and learning** The article describes a study in which employees with high metacognitive skills used AI more deliberately and produced more creative work than those with lower metacognitive skills. Using what you know about intrinsic motivation, self-regulated learning, and metacognition, explain why metacognitive ability might determine whether AI supports or undermines skill development. What roles do organizational incentives play in shaping how workers engage with AI?

Reinforces: *metacognition, self-regulated learning, intrinsic and extrinsic motivation, and organizational behavior*

4. **Biological bases of behavior** When MIT researchers used EEG to measure brain activity of subjects writing essays with or without AI assistance, they found weaker neural connectivity in the subjects using AI to write compared with those not using AI. Using what you know about neural plasticity, the role of effortful cognitive engagement in brain development, and research methods in neuroscience, evaluate the significance of these findings. What are the limitations of this research and what questions remain unanswered about how AI use affects the brain?

Reinforces: *neural plasticity, EEG methodology, brain-behavior relationships, and evaluating preliminary research*

5. **Social and organizational contexts of behavior** The article argues that whether AI leads to upskilling or de-skilling depends less on the technology itself than on the incentive structures organizations create. Drawing on concepts from industrial and organizational (I/O) psychology and social influence, analyze how workplace norms, psychological safety, and performance incentives shape individual decisions about AI use. What responsibility do organizations bear for the cognitive consequences of AI adoption among their employees?

Reinforces: *I/O psychology, social norms, psychological safety, and the role of context in shaping behavior*

perspectives, and retrieve useful information (*Journal of Applied Psychology*, Vol. 110, No. 12, 2025).

“Our findings suggest that employees higher in metacognition are more likely to use generative AI deliberately rather than passively,” said Lu, adding that these nuances can help companies consider when and how humans and AI may collaborate to optimize results.

Research is also exploring whether using AI affects specialized job skills, including experts' ability to analyze medical images, legal documents, and financial transactions once AI assistance is taken away.

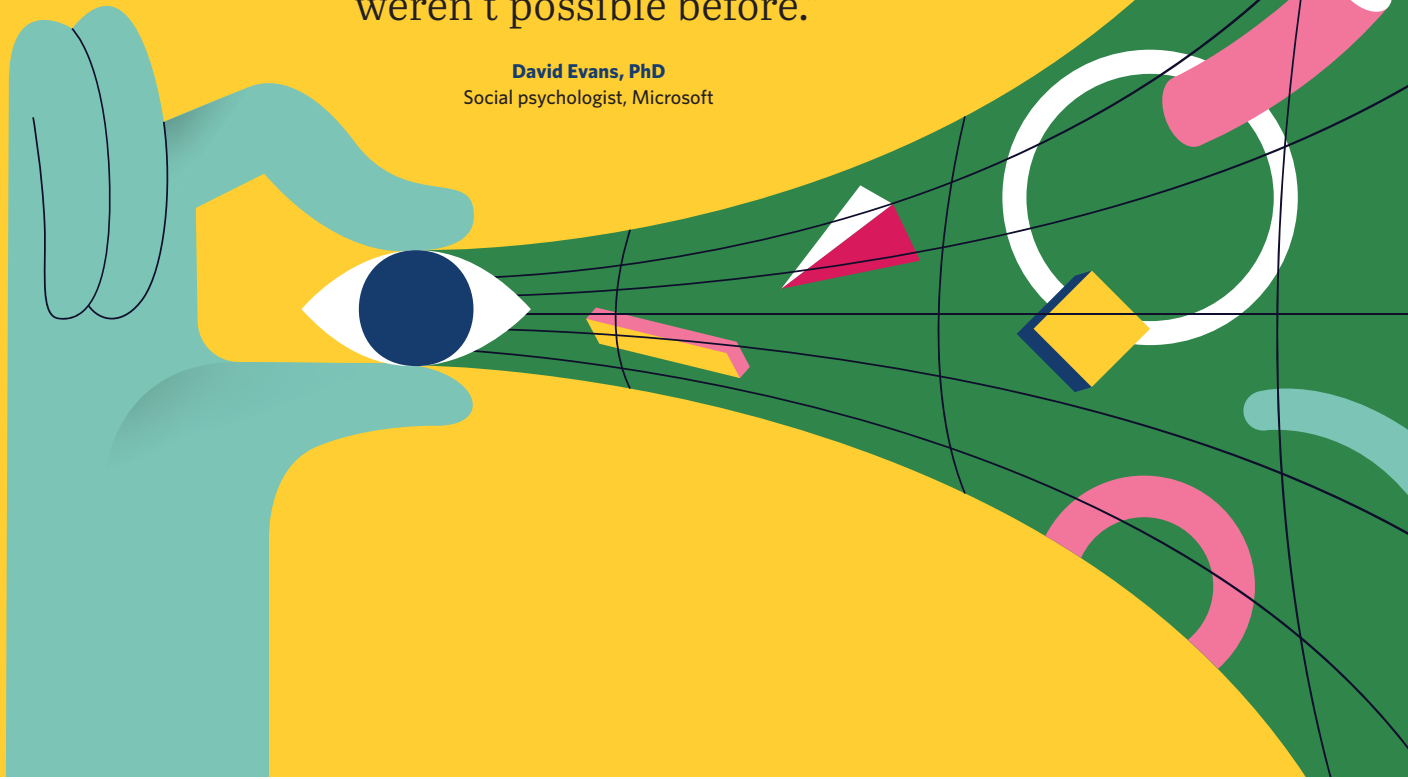
In Poland, researchers in a natural experiment—a real-world study that observes changes already occurring—measured how well physicians could detect polyps on colonoscopies without AI assistance both before and after AI tools were added to their workflow. The polyp-detection rate without AI assistance fell 6 percentage points, from 28.4% to 22.4%, in the 3 months after the AI system was introduced (Budzyń, K., et al., *The Lancet Gastroenterology & Hepatology*, Vol. 10, No. 10, 2025).

With funding from the National Science Foundation, Macnamara is further investigating skill decay in medical settings. Focusing on AI-assisted radiology and laparoscopic (minimally invasive) surgery, she is exploring three questions: When a skill has already been learned, does using an AI assistant lead to skill decay? If clinicians train with AI, do they learn the skill as deeply as those who train without it? And finally, does using AI make clinicians overconfident in their abilities?

These studies point to a new challenge for organizations—not just whether to adopt AI but how to use it strategically alongside human strengths, Lu said. Part of the answer involves deciding which tasks to

“It comes down to how we use the extra time that AI gives us. We might do more of the same, we might do less, but we might also *follow our curiosity to learn and upskill* in ways that weren’t possible before.”

David Evans, PhD
Social psychologist, Microsoft



offload. Cukurova suggests performing a “task analysis” for each employee, separating tasks that simply need to be completed (such as drafting routine legal memos) from those that involve essential learning (such as analyzing case law to build a legal argument). Psychologists and learning scientists can help guide these decisions by identifying the cognitive processes involved.

An employee’s prior knowledge and experience also matter. Experts are generally better equipped to critically evaluate AI outputs, whereas novices may struggle to do so. For example, an experienced lawyer using AI to find novel outputs can better spot flawed reasoning than a first-year law student can, Farahany said. Like an intern, AI can support work, but it

cannot replace the judgment needed to catch mistakes, edit weak ideas, or recognize when something has gone wrong. In practice, however, organizations may not always know which employees have enough experience to use AI independently and which still need to build foundational skills.

“The problem is that it’s not always easy for employers to distinguish between novice workers and experienced ones,” Cukurova said.

Without clear guidance, employees with high workloads and those who fear losing their jobs may also turn to AI for support or to gain a competitive advantage, said Mindy Shoss, PhD, a professor of psychology at the University of Central Florida who studies AI use through an industrial and organizational lens. Organizations

tend to be most successful when they set clear norms and guardrails for AI use, she said.

“When incentives are vague, you can end up with a chaotic situation where people are sending AI-generated content back and forth, but no one is quite sure how it’s being used or evaluated,” Shoss said, describing what some have called “AI slop.”

Upskilling

Employees across many workplaces are experimenting with AI in real time. At Microsoft, David Evans, PhD, a social psychologist who conducts market research, regularly uses LLMs for literature reviews and to help publicize and disseminate findings. He says AI is leading to upskilling just as often as de-skilling—he replaces a

skill he uses less with another one he wants to develop.

“It comes down to how we use the extra time that AI gives us,” Evans said. “We might do more of the same, we might do less, but we might also follow our curiosity to learn and upskill in ways that weren’t possible before.”

AI can support upskilling, but only when it is used deliberately, Lu said. Rather than passively offloading, workers can use AI to streamline tasks such as searching for, organizing, and digesting information. That frees up cognitive resources, which can then be redirected toward higher-order thinking.

Organizations also help determine whether AI supports upskilling or simply accelerates output, Shoss said. Workers are more likely to embrace AI as a tool for growth when employers provide opportunities for learning and development, which workers often view as a sign of organizational support (Rothwell, J., “The American Upskilling Study Shows Workers Want Skills Training,” Amazon News, Sept. 9, 2021). They are also more likely to build new skills when given the time, psychological safety, and incentives to experiment with AI in thoughtful ways.

“AI does not inherently lead people to build new skills,” Shoss said. “If people are overloaded or feel pressure to simply produce more, AI will be used to speed up existing work. Organizations therefore need to create time and incentives for employees to explore, learn, and build on their existing strengths.”

Still, Farahany said the choice whether to de-skill or upskill ultimately lies with the individual. She chooses to offload certain tasks—such as using AI to sort and prioritize emails—but devotes the extra time to

learning new skills, such as taking a sewing class with her daughter.

“What happens when we start to go into passive mode of receiving rather than generating is that our overall competence starts to erode,” Farahany said.

Rethinking incentives

As individuals, we bear responsibility for keeping our cognitive skills sharp. Users should be mindful of which tasks they offload and how much of their learning becomes passive, Farahany said. But it’s also important for leaders to consider how current incentive structures shape choices around AI use.

“In most organizations, there’s a powerful incentive for employees to produce output as quickly as possible,” Farahany said. “You may want to foster your critical thinking skills, but you’re penalized for doing so.”

If the focus is on efficiency rather than quality, AI can produce results that are fast and acceptable—but mediocre, Gerlich said. Over time, that is likely to erode both company culture and the bottom line.

On a broader scale, the stakes extend beyond individual workers and organizations. If people continue to outsource core cognitive tasks to AI, experts worry it could gradually weaken the human capacity for creativity and innovation.

“Imagine you have a candle. If you tell AI to improve it, you’ll get a candle that shines brighter and longer, costs less, and probably has the best design,” Gerlich said. “But AI will not make the leap from candle to light bulb. That is out-of-the-box thinking—a type of creative thinking that AI, which is based on pattern recognition, cannot do.”

Maintaining those human capabilities may ultimately depend less on the technology itself than on the

structures and incentives shaping how it is used.

“The only way we preserve human competence over time is by rethinking our system of incentives so that they not only support short-term output but longer-term flourishing as well,” Farahany said. ■

FURTHER READING

Does using artificial intelligence assistance accelerate skill decay and hinder skill development without performers' awareness?

Macnamara, B., et al.
Cognitive Research: Principles and Implications, 2024

Thinking—Fast, slow, and artificial: How AI is reshaping human reasoning and the rise of cognitive surrender

Shaw, S. D., & Nave, G.
PsyArXiv, 2026

From artificial intelligence to augmented intelligence: A shift in perspective, application, and conceptualization of AI

French, A. M., & Shim, J. P.
Information Systems Frontiers, 2025

Beyond the binary: How automation and augmentation are combining to reshape work

Sigelman, M., et al.
The Burning Glass Institute, 2026

Generative artificial intelligence reliance and executive function attenuation: Behavioral evidence of cognitive offload in high-use adults

Baldeo, S.
Technology, Mind, and Behavior, 2026



Is Seeing Believing?

Psychological research is illuminating the power—
and limits—of our sensory processing systems

BY KIRSTEN WEIR

DESPITE THE ADAGE “seeing is believing,” what you see isn’t always what you get. Consider the viral dress photo of 2015 that split viewers into two camps: one who said the dress was white and gold and one who said it was black and blue. More than just a fun optical illusion, the phenomenon highlighted how multiple people can look at the same image or event and walk away with strikingly different interpretations. Such differences in perception can take on far greater weight when the stakes are high. To some viewers, police body camera footage can show blatant use of excessive force, while others watch the same clip and see an officer acting responsibly. Whose reality is the “real” one?

The human visual system is riddled with shortcomings. Our foveal vision—the area directly in front of us that we see with the greatest clarity and precision—makes up just a few degrees of our visual field.

AT A GLANCE:

- Sensory perception is more sophisticated than many people give it credit for, but it’s also prone to errors that influence our understanding of the world.
- Factors such as preexisting beliefs can affect what we pay attention to, causing two people who witness the same scene or event to reach different conclusions.
- Inattention blindness causes people to overlook stimuli in their environments. Research suggests that it has more to do with features of the environment than with individual differences in personality or cognition.
- So-called failures of attention are the price we pay for a perceptual system that is optimized to process a steady stream of sensory information.

Everything outside that area, our peripheral vision, enters our eyes and brains in a somewhat degraded form. “All of that stuff we don’t see is the unknown unknowns, things we aren’t even aware we’re missing,” said Emily Balcetis, PhD, a social psychologist at New York University.

Our other senses are subject to the same limitations. Where one fan hears Elton John sing about a tiny dancer, another one hums along to “hold me closer, Tony Danza.” We all make sense of the world in our own unique ways.

“How we perceive and respond to any given situation is a function of what is out there in the world but also of what we as individuals bring to the table. We have goals and desires, we have fears and anxieties, and we also have beliefs that are important to us,” said Yuan Chang Leong, PhD, an assistant professor of psychology at the University of Chicago. “From the early stages of what we choose to look at to how we interpret it, bias can creep in at every stage.”

From the moment a newborn opens their eyes and hears their mother’s voice, sensory input is foundational to the human experience. As the science of perception evolves, researchers are learning more about how we make sense of the world around us and why two people’s perceptions can differ so dramatically. Those questions matter for us as individuals and for our shared reality as members of a society. “Polarization is pulling at the threads that keep us together. If we can’t even be on the same page about whether we see the problems, we’ll be really slow at trying to solve them,” Balcetis said.

A man wearing a yellow jacket, dark trousers, and a black bowler hat stands on a sandy beach, looking out at the ocean. His shadow is cast on the sand. The ocean is a deep blue with white-capped waves breaking near the shore. The sky is a pale blue with soft, white clouds.

**“Your brain has
the opportunity
to *bias itself* to
see one thing
versus another.”**

Yuan Chang Leong, PhD

Assistant professor of psychology, University of Chicago

Sensory shortcomings

Perception is typically considered a foundational function, a lower-level process than cognition. Yet in some ways, perception is more sophisticated than it's often given credit for, said Brian Scholl, PhD, a professor of psychology at Yale University. "There's a sense that you can just open your eyes and recognize what you're looking at. But that is the result of tremendous computational processing in your mind," he said.

In a dynamic scene, your eyes and brain are processing information about color, shape, motion, and orientation. At the same time, your brain is combining those features with your expectations about the world. Some of Scholl's research, for example, has explored intuitive physics—how we can sense, at a glance, if a block tower is about to tumble or a scrap of fabric is likely to flutter in the wind or fall stiffly to the ground (*Journal of Vision*,

Vol. 16, No. 12, 2016; *Psychological Science*, Vol. 34, No. 1, 2023). "You pack a lot more into seeing something than is typically thought," he added.

And vision, of course, is only one piece of that complex puzzle. In recent years, sensory scientists have gotten better at understanding how our senses work in concert, said Ladan Shams, PhD, a professor of psychology, bioengineering, and neuroscience at the University of California, Los Angeles. For a long time, people operated under the assumption that each sense functioned in isolation, she said, when they actually interact with one another in intricate ways. In a forthcoming paper, Shams and colleagues suggest that multisensory information is integrated even before it is encoded in memory (*PsyArXiv*, 2025). "Interaction between the senses is the rule rather than the exception," she said.

Such interactions are constantly in flux. You may rely most on what you see when the visual input is very reliable. But if you're driving on a foggy day, you may rely more on the sound of approaching cars than the glow of their headlights without ever realizing you've made the shift. Those interactions within our perceptual system can affect the way we perceive the world, from person to person and from day to day.

With so much information to process and parse, the sensory system is also subject to errors. "I tell my undergrads that everyone should take a course on perception because then we can all appreciate the shortcomings and the vulnerabilities in the way our perceptual system works," Shams said. "It's the best we have, but it's just one source of information, and we should be aware that it is not always reflecting reality."

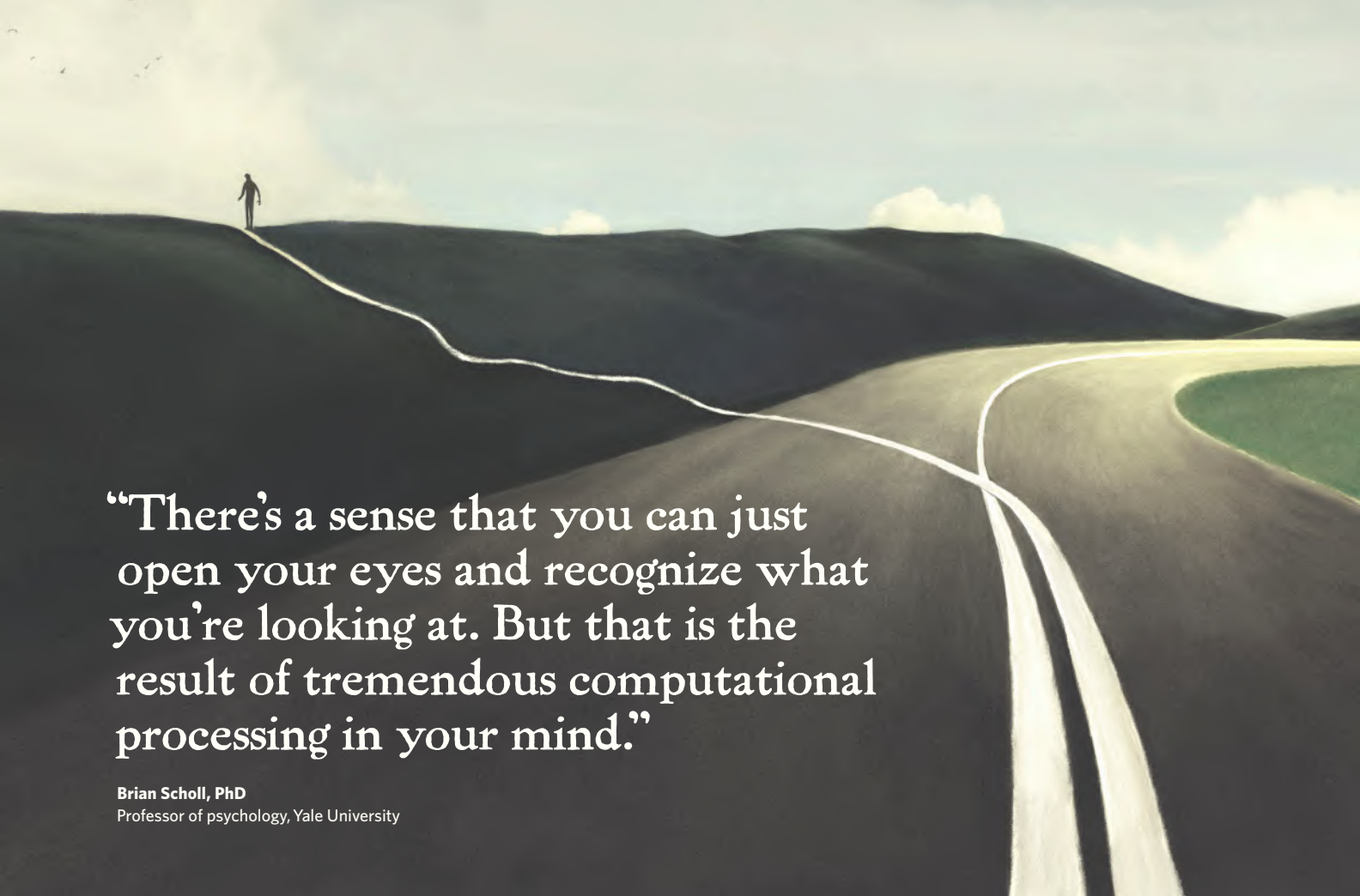
Paying attention

One limiting factor is the information we individually tune in to. Our motivations and desires can exert powerful influence over what sensory information we focus on, often without our conscious awareness. Leong and his colleagues demonstrated this in a series of studies. They collected neuroimaging data while showing participants images created by morphing together faces and scenes in varying proportions—chosen because faces and scenes elicit distinct patterns of brain activity. The researchers motivated participants to want to see one versus the other by telling them they could win money if the image was more face or more scene.

When the images were ambiguous—roughly half scene and half face—people were motivated to see whichever subject would win them the prize. But they weren't just claiming they saw it to pocket the cash. Their motivation to see faces (to win money) led those participants' brains to actually exhibit more activity in face-processing areas and less activity in areas tasked with processing scenes. When motivated to see scenes, the reverse was true (*Trends in Cognitive Sciences*, Vol. 30, No. 1, 2026). This is similar to unconscious bias in that both involve expectations shaping what we perceive. But whereas unconscious bias is driven by prior learned associations, this effect reflects how our moment-to-moment motivations can influence us to see what we want to see.

"When you want to see something, the part of your brain associated with that thing becomes more active," Leong explained. "Your brain has the opportunity to bias itself to see one thing versus another, and one way it might do this is to direct your attention to the aspects of the world that favor the interpretation you desire."





“There’s a sense that you can just open your eyes and recognize what you’re looking at. But that is the result of tremendous computational processing in your mind.”

Brian Scholl, PhD
Professor of psychology, Yale University

Balcetis has shown how this difference in attention can play out in real-life scenarios. In a classic example, she and her colleagues showed participants a video of an altercation between a police officer and a civilian, asking the viewers to make judgments about whether the officer used excessive force. Unsurprisingly, people who identified with the officer and described themselves as more pro-police were less likely to say the officer did anything wrong. “But what’s interesting is that this intuitive effect is contingent upon where they’re looking,” Balcetis said.

To understand how participants viewed the interaction, the researchers covertly mapped their gazes with eye-tracking technology. The more a participant identified with the officer, the more time they tended to spend looking at the officer. And the more that they looked at the officer, the more

their preexisting beliefs about him influenced their judgments (*Journal of Experimental Psychology: General*, Vol. 143, No. 6, 2014). Viewers who did not align with the police, by contrast, were more likely to look at the civilian. By essentially tuning out half of the interaction, viewers on either side of the spectrum were susceptible to missing key details. “That’s part of the reason we have polarization, because I’m seeing different things than you’re seeing,” Balcetis said. “That means I understand the case facts differently than you do, which leads me to feel justified in reaching a conclusion about who’s culpable that’s different from yours.”

When the researchers instructed participants to pay equal attention to both characters, however, viewers changed their visual orientation—and reached more similar conclusions about the officer’s culpability. The instructions didn’t alter people’s

preexisting opinions of police officers, but they did lead viewers on both sides of the spectrum to meet closer to the middle in their judgments of culpability. “The polarization as a function of their prior beliefs goes away,” Balcetis said.

Unfortunately, we don’t seem to be inclined to look at an event in new ways, even when given a chance, Balcetis added. People tend to repeat their same patterns of looking when watching a video for a second or third time. “Which means we’re not doing what economists would say is the rational approach of trying to fill in gaps when we have opportunities to gain new insight,” she said. “Why? Probably because people don’t realize there are unknown unknowns. They’re not aware that their eyes are not giving them the full picture, and they don’t know that they should correct.”

Gorillas and dots

Our attention can fail us in other ways, as the famous “invisible gorilla” study of inattention blindness vividly demonstrated. The study tasked participants with counting rapid basketball passes between players on a given team. While focused on tracking passes, about half of the participants failed to notice a person in a gorilla suit walk past the players (Simons, D. J., & Chabris, C. F., *Perception*, Vol. 28, No. 9, 1999). In the years since, researchers have fleshed out more details about how and why we can miss the proverbial elephant—or in this case, ape—in the room.

One somewhat surprising finding has been that the tendency to notice or not doesn’t seem to be linked to individual factors like personality or cognitive prowess, said Dan Simons, PhD, a professor of psychology at the University of Illinois who cocreated the original gorilla

experiment. Simons recently coauthored a meta-analysis of individual differences in inattention blindness (*Psychonomic Bulletin & Review*, Vol. 31, 2024) and also led a large-scale study on individual differences (in press, *Royal Society Open Science*). “The short answer is that individual differences in personality don’t predict inattention blindness at all, and the same seems to be largely true for cognitive abilities. You’re not more likely to notice if you’re smarter or have better working memory or better executive control,” he said.

What does seem to matter are your goals and the demands of the task itself. If the unexpected thing is similar to what you’re paying attention to, you’re more likely to notice it. You’re more apt to see the gorilla if you’re counting passes between players in black shirts versus those in the white shirts, for example. While similarity matters, familiarity might not. In one

experiment, Simons and his student Yifan Ding flashed flags on the screen while participants were engaged in a computer task. Participants were no more or less likely to notice flags from their own countries versus unfamiliar flags, suggesting that familiarity with visual stimuli doesn’t generally affect one’s ability to notice them (*Journal of Cognition*, Vol. 7, No. 1, 2024).

Inattention blindness plays out in the real world, too. It’s why a driver focused on the traffic light doesn’t notice a bike in the crosswalk, but their passenger does. In some ways, Simons added, the problem isn’t what we fail to notice. “The bigger danger here is not that we don’t always see everything. It’s that we think we do,” he said. “Because we’re only aware of the things we happen to see, and we don’t actually realize how often we miss things, we tend to think that our experiences are more complete and accurate than they actually are.”



Changing minds

Inattention blindness and similar lapses are often thought of as failures of attention, Simons said, but he characterizes them differently. “We have a limited ability to pay attention to everything around us. If we want to not be constantly distracted by things we don’t care about, that ability to zero in on what we want to do is remarkable and essential,” he said.

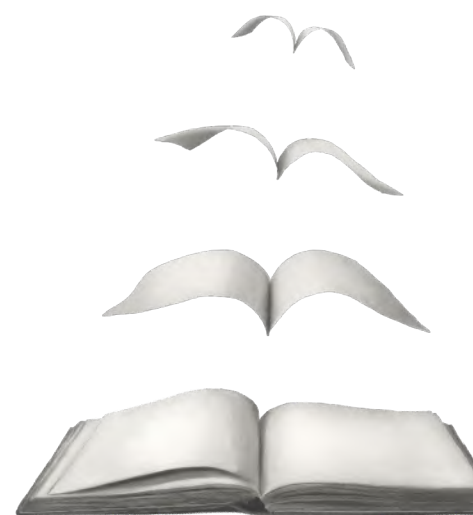
Indeed, so-called failures of perception are a feature, not a bug. Using Bayesian models, Shams and her colleagues have shown that perceptual systems are statistically optimized to process the dizzying assortment of sensory information in our environments as efficiently as possible (*Neuroscience & Biobehavioral Reviews*, Vol. 137, 2022). Some glitches in the system are the price we pay for a brain that can, in a split second, process a sound, determine which direction it came from, match the sound to the object that caused it, determine where the object is moving, and decide how to react. “The brain solves [problems] in an optimal way,” Shams said, “combining expectations and your model of the world—acquired over the course of your lifetime and the course of evolution—together with input from any given moment.”

Just as a computer changes its outputs when new data are entered, the brain can also revise its interpretations of the world when new information becomes available. In other words, minds can change. Emily Finn, PhD, a cognitive neuroscientist at Dartmouth College, has studied how interpretations change with new sensory inputs. In a recent study, she used fMRI to scan participants’ brains while they listened to an audio story with a big twist in the middle. When participants listened to the recording a second time, they experienced very different

patterns of brain activity, specifically during the half of the story leading up to the twist (*PNAS*, Vol. 123, No. 11, 2026). “It’s the same auditory information coming through your ears, but you have a totally different framework that you bring to understanding the information,” Finn said.

In another study, she’s exploring how other people’s interpretations of sensory input can push your own understanding in one direction or another. She shows participants photos of ambiguous scenes and asks them to fill in the blanks of a story about the characters pictured. Then the researchers tell the participants about another person’s interpretation, which can be very similar to or very different from their own. Preliminary results suggest that people exposed to an alternate perspective show very different patterns of brain activation when they view the image a second time. “Pretty much the entire brain looks different when you have this alternative perspective,” Finn said.

For a long time, she added, cognitive psychology has largely focused on finding principles that are true for all minds. “I think we’re finally taking the tools we’ve developed in the experimental tradition of psychology to apply to these thorny questions about subjective experience,” she said. It can be unsettling to feel like you’re living in an alternate reality from other people. But variety lies at the heart of creativity and innovation and problem-solving, Finn said, and we’d all be better off approaching differences in interpretation with curiosity rather than assuming malicious intent. “My hope is that we’ll use these tools not to somehow homogenize how everyone is thinking,” she added, “but rather to understand why variability arises—and when it might actually be a good thing.” ■



FURTHER RESOURCES

Shielded perspectives: How visual attention moderates the link between social identity and biased judgments about police
Qu-Lee, J., & Balcells, E.
Social and Personality Psychology Compass, 2024

Video evidence and eyewitness accounts: Why people see different things
Mogensen, J. F.
Scientific American, Jan. 26, 2026

Perceptual learning: Policy insights from basic research to real-world applications
Seitz, A. R., et al.
Policy Insights from the Behavioral and Brain Sciences, 2023

How our brain makes sense of a noisy world, with Nina Kraus, PhD
Speaking of Psychology, APA, 2022

Cognition does not affect perception: Evaluating the evidence for “top-down” effects
Firestone, C., & Scholl, B. J.
Behavioral and Brain Sciences, 2016



Volunteering

and Other Kind Acts

Help the Helper, Too

Research shows that people who volunteer or perform other acts of kindness are happier, less depressed, and less lonely than others

BY TORI DEANGELIS



IT'S EASY TO FIND HEADLINES about how lonely, isolated, and polarized people have become. But research suggests a powerful antidote to this trend: engaging in prosocial behavior, whether volunteering at an animal shelter or performing acts of kindness like donating blood, giving to charities, or even smiling at a stranger on the street.

These studies find that generous behavior boasts a range of rewards, including better mental health, greater happiness, and even better physical health and longer life. And actually, generous actions are exceedingly common: An estimated 73% of the world's adults regularly engage in acts of generosity, including volunteering time, donating money, and helping strangers, according to the 2024 World Giving Index, a survey conducted by the Charities Aid Foundation, a leading international charity.

Researchers are also discovering that there is an important social reason that people like to give: Performing generous acts boosts a sense of connection, allowing people to break out of their personal bubbles and focus more on other people's concerns than on their own.

While it's true that people are driven by a range of motivations, "the overwhelming majority of people truly have the capacity to care about other people and to be genuinely motivated by their welfare," said Abby Marsh, PhD, a psychology professor at Georgetown

University who studies highly altruistic behavior. "We also know that there is a really strong relationship between well-being and altruism and that the relationship goes both ways."

The effects of generous behavior

Researchers are using a range of methods to study these issues. Lara Aknin, PhD, a professor of social psychology at Simon Fraser University in Vancouver, British Columbia, and colleagues have repeatedly found that people report greater happiness when they've spent money or given goodies to others than when they've kept these things for themselves. That holds for college students (*Science*, Vol. 319, No. 5870, 2008; *Journal of Personality and Social Psychology*, Vol. 119, No. 2, 2020), former inmates and at-risk youth (*Journal of Experimental Social Psychology*, Vol. 82, 2019), and people with lower incomes living in remote rural areas (*Journal of Experimental Psychology: General*, Vol. 144, No. 4, 2015). And in a study using Gallup data on 136 countries, Aknin and colleagues found that prosocial giving was strongly related to happiness in most countries regardless of their wealth or poverty (*Journal of Personality and Social Psychology*, Vol. 104, No. 4, 2013).

Likewise, giving to others can ease depression, anxiety, and loneliness, finds a study by Naomi Eisenberger, PhD, a professor of psychology at the University of California, Los Angeles, and her graduate student Maria Naclerio. Over a 2-week period, the team randomized 777 people to

perform self-chosen acts of kindness toward themselves or others, or to go about their lives as usual (*Emotion*, Vol. 26, No. 1, 2026). At the end of the study, depression scores fell for people who were kind to themselves. But those who performed kind acts for others felt not only less depressed but also less anxious and lonely. That difference was explained by the fact that their actions helped them feel more connected to others, said Naclerio. "And we know that feelings of connection are critical for mental health," she said.

AT A GLANCE

- Volunteering and performing other acts of kindness boost happiness and reduce depression and anxiety—benefits driven by feeling more connected to others.
- Kind acts toward others outperform self-focused interventions in helping people feel less depressed, less anxious, and more satisfied with life.
- Giving to others is enhanced when people feel it's a choice and when they can see their contribution makes a difference.



ROBERTO WESTBROOK/GETTY IMAGES; EKATERINA ROMANOVA/GETTY IMAGES; PREVIOUS PAGES: VISUAL VIC/GETTY IMAGES; EKATERINA ROMANOVA/GETTY IMAGES



“There is a really strong relationship between well-being and altruism and the relationship goes both ways.”

Abby Marsh, PhD

Professor of psychology and neuroscience, Georgetown University

In a similar vein, generous behavior can reduce loneliness in populations that may need connection the most, finds sociologist Dawn Carr, PhD, director of the Claude Pepper Center at Florida State University. She and colleagues examined the effects of volunteering among 5,882 older adults, all of whom were married at the start of the study. But over 4 years, some participants lost their spouses while others remained continuously married (*The Journals of Gerontology: Series B*, Vol. 73, No. 3, 2018).

On average, people who became widowed felt lonelier than those whose spouses were still alive. But those who began volunteering for 2 or more hours a week didn't experience that same spike in loneliness; their loneliness levels were the same as those who remained continuously married and were doing a similar amount of volunteer work. If they volunteered for less than 2 hours a week, these effects did not hold up, suggesting that the commitment of volunteering helped mitigate loneliness, Carr noted.

“Volunteering remains among the most potent and protective behaviors in later life,” she said, “and one of the few shown to be associated with improved outcomes after spousal loss.”

There are further reasons that volunteering might be powerful medicine for older adults, research finds. Cheng-Cheng Niu, a second-year graduate student, and Jing Yu, PhD, a professor of psychology, both of Southwest University in China, used prospective data collected over

10 years in a series of surveys to add to long-standing research showing a relationship between volunteering and better cognitive functioning (*Psychology and Aging*, advance online publication, 2026).

Specifically, they examined data from the University of Michigan's Health and Retirement Study, a longitudinal panel study completed by

14,521 older adults between 2010 and 2020. They found that when individuals increased the amount of time they volunteered, they showed subsequent improvements in objective memory (memory assessed on formal tests). And having good objective memory at one study point didn't predict who would volunteer at the next point, indicating that something about

volunteering itself seemed to enhance objective memory.

The researchers also found that older adults with better subjective memory (self-perceptions of their memory abilities) at one study point were more likely to report increased volunteering at the next survey, but that this type of memory improved only when the volunteer activity was formal and structured.

Advocates say that volunteer activities can be tailored and promoted to appeal to older adults and to benefit their health.



Volunteering among older adults may even promote longevity, other research finds. To glean possible reasons why, Julia Nakamura, a postdoctoral fellow at Harvard University's Human Flourishing Program, and colleagues also used prospective data from the Health and Retirement Study to examine four waves of information on 9,662 participants between 2008 and 2018 (*Health Psychology*, Vol. 44, No. 5, 2025).

Over time, the team found that volunteering was associated with a reduced risk of mortality, and that this relationship was partially explained by improvements in physical health and in social factors such as having more contact with friends and spending more time helping friends, neighbors, and relatives.

Together, these findings suggest ways that volunteer activities could be tailored and promoted to appeal to older adults and to benefit their health, Niu and Nakamura noted. For instance, Niu's findings suggest the benefits of prioritizing programs that are well structured, are easily accessible, and have clearly defined roles and systematic feedback mechanisms. In addition, designers could create promotion campaigns aimed at bolstering older adults' confidence in their memory abilities, Niu said. Meanwhile, Nakamura's research points to the potential in further exploring the power of volunteer opportunities that promote social engagement.

"Volunteering remains among the *most potent and protective behaviors* in later life, and one of the few shown to be associated with improved outcomes after spousal loss."

Dawn C. Carr, PhD

Director, Claude Pepper Center, Florida State University

Using evidence-based information like this could have double benefits, Nakamura added. On the one hand, it could help improve the effectiveness of volunteering programs, and on the other, it could "support greater health and longevity in our rapidly aging population," she said.

A way out of depression?

Researchers are also looking into why acts of kindness might help mitigate depression and anxiety. In a study by Jennifer Cheavens, PhD, a professor of clinical psychology at The Ohio State University and her then graduate student David Cregg, PhD, now at the South Texas Veterans Health Care System, the team randomized 122 people with elevated depression or anxiety to one of three conditions: keeping thought records that challenged their negative thinking, a common cognitive behavioral technique; engaging in pleasant events with people they liked; or performing small acts of kindness of their choice (*Journal of Positive Psychology*, Vol. 18, No. 6, 2023).

They found, as have other researchers, that those who performed kind acts were more likely than both other groups to feel connected to others and to feel greater life satisfaction and less depression and anxiety than the group that kept thought records. But the team also demonstrated why this sense of connection might be so potent for people with depression: It was related to a reduced focus on themselves. In Cheavens's view, that's because both keeping thought records and engaging with others, even in the context of pleasant events, can invite the self-scrutiny that tends to bedevil people who are depressed.

"But when you're doing a kind deed for another person, you are of necessity focusing on them, not you," she said. "So, those who did nice things for others had to switch from thinking, What is wrong with me? or What are they thinking about me? to What would make them happy?" she said.

Fostering prosocial actions

Psychologists are also looking into psychological and motivational factors that may facilitate generous behavior. One is having a choice in the matter. In a paper in the *Journal of Personality and Social Psychology* (Vol. 98, No. 2, 2010), Netta Weinstein, PhD, and Richard Ryan, PhD, of the University of Rochester examined the influence of choice on people's perceptions of giving. Over four experiments, they found that when people gave voluntarily, they experienced greater autonomy, relatedness, and competence than if they did so under a mandate, which in turn enhanced their sense of well-being. In another study,



Countries whose citizens show high levels of interpersonal cooperative behavior are more likely to solve large-scale environmental problems, research shows.

William Harbaugh, PhD, of the University of Oregon, and colleagues found that when people gave freely to a local charity, the brain's reward centers lit up more than when they were required to make a donation (*Science*, Vol. 316, No. 5831, 2007).

People's happiness levels are also heightened when they feel their generosity has made a difference, psychologists find. In a set of studies reported in the *Journal of Economic Behavior & Organization* (Vol. 88, 2013), Aknin and colleagues found that people who gave to a charity that provided a concrete promise for improving children's health experienced greater happiness than those donating to a children's charity with a more abstract mission.

The bigger picture

Still others are testing whether larger cultural and societal factors influence people to volunteer or perform other prosocial acts. In a large-scale international study reported in *PNAS* (Vol. 118, No. 35, 2021), a team of 65 researchers headed by Niels van Doesum, PhD, of Leiden University in the Netherlands, compared how the level of social mindfulness—defined as “low cost” cooperative interpersonal behavior where individuals consider the needs and

perspectives of others but without a big cost to themselves—differed across nations.

To get at these differences, the team gave socially mindful decision-making tasks to 8,534 people across 31 industrialized countries and regions. For example, participants were shown a plate with one red apple and three green apples and asked to pick one. Choosing a green apple would leave the next person with more options, while taking the red apple would remove that choice—a more selfish, less prosocial action.

There was a good deal of variability in how populations responded, with Japan, Austria, and Mexico showing the highest levels of prosociality; India, Turkey, and Indonesia the lowest; and the United States lying somewhere in between. While the study didn't find many large associations between these differences and actions taken at the country-wide level, they did find that countries with more prosocial responses were more likely to achieve environmental goals than others, as measured by a framework of indicators ranging from safe drinking water to policy-related climate change efforts. These results “raise the idea that low-cost cooperation and kindness at the individual level may also be relevant to global problems,” according to the study's authors.

"When you're doing a kind deed for another person, you are of necessity *focusing on them, not you.*"

Jennifer S. Cheavens, PhD

Professor of clinical psychology, The Ohio State University

Further exploring the link between prosocial actions and culture is a team headed by social psychologist Dominic Abrams, PhD, director of the Centre for the Study of Group Processes at the University of Kent in England. In an analysis of secondary data from two large-scale, longitudinal social surveys, the U.K. Understanding Society Household Longitudinal Study and the Nuffield Foundation's *Beyond Us and Them* report, of which Abrams was principal investigator, the team found a bidirectional relationship between volunteering and social cohesion, or the sense of solidarity and connection

that people feel with their local area and society at large. So, the more that people felt part of a cohesive community, the more likely they were to volunteer to support others, and the more that people volunteered to support others, the more they came to feel they were part of a cohesive community (*Social Indicators Research*, Vol. 171, 2024).

In the *Beyond Us and Them* study, Abrams and fellow researchers also examined the effects of investments by the U.K. government intended to foster social cohesion during the COVID-19 pandemic. They found that

in six regions of England that received government funds to enhance cohesion, residents were better able to sustain social engagement activities like volunteering, to sustain levels of interpersonal trust and trust in the government, and to exhibit lower levels of prejudice, than those that had not received that funding.

"Taken together, this research not only shows that greater cohesion produces more trust and volunteering but that the reverse is also true—that trust and volunteering produce greater social cohesion, creating a kind of virtuous circle," Abrams said. ■

Research shows that volunteering and trust are closely related, with regular volunteers feeling more social cohesion and vice versa.



FURTHER READING

Selflessness as a potential buffer against depression: Investigating its impact on depressogenic schemas and identity threat

Stinus, C., & Beriot, S.
Psychology of Consciousness: Theory, Research, and Practice, 2026

Age moderates the association between helping and meaning in daily life

Chen, E. Y., et al.
Emotion, 2026

Volunteering in prisons: A systematic review and narrative synthesis

Wu, L., et al.
Public Health, 2023

Volunteering: The life you save might be your own: The wellness benefits of social beneficence

Cordes, S., & Campbell, B. H.
Otolaryngologic Clinics of North America, 2025



KOLLMANN



GADSDEN



REID-ARNDT



BASKIN



JIMERSON

Psychologists in the News

SHERRY KOLLMANN, PhD, has been named president of Vermont State University and vice chancellor of the Vermont State Colleges System. She brings more than 25 years of experience across higher education, business, and public service and currently serves as chancellor of the New Mexico State University Global Campus. Her scholarship focuses on digital learning systems, learning science, faculty motivation, and inclusive, equity-centered education, with particular attention to underserved and rural communities.

The American Educational Research Association honored **VIVIAN GADSDEN, PhD**, William T. Carter Professor Emerita of Child Development and Education at the University of Pennsylvania, with two distinctions: the Distinguished Contributions to Research in Education Award and the Dr. Felice J. Levine Distinguished Contributions to Mentoring in Research and Leadership Award. She is recognized for her influential research on learning and literacy across the life course, with a focus on advancing equity and opportunity for children and families in historically marginalized communities.

STEPHANIE REID-ARNDT, PhD, has been appointed dean of the College of Health Sciences at the University of Missouri,

where she currently serves as senior associate dean and professor. A clinical psychologist and rehabilitation neuropsychologist, her research focuses on cognitive and executive functioning challenges among cancer survivors and individuals with traumatic brain injury.

MONICA L. BASKIN, PhD, has been appointed interim director of the Virginia Commonwealth University Massey Comprehensive Cancer Center. She currently serves as the center's deputy director of research and as associate dean for cancer innovation in the VCU School of Medicine. Baskin holds faculty appointments in the divisions of hematology, oncology, and palliative care in the medical school and in social and behavioral sciences in the School of Public Health. Her research emphasizes community-engaged strategies to better understand and address lifestyle-related factors in cancer prevention and control.

SHANE R. JIMERSON, PhD, of the University of California, Santa Barbara's Gevirtz Graduate School of Education, has received the 2026 Presidential Award for Distinguished Leadership and Contributions from the National Association of School Psychologists. The honor recognizes his sustained leadership

and impact on the field, including his influential tenure as editor of the *School Psychology Review*, where he strengthened the journal's scholarly impact, advanced research that informs practice and policy, and promoted accessibility, diversity, equity, and inclusion in school psychology scholarship.

The American Association for the Advancement of Science (AAAS) has chosen its 2025 Honorary Fellows. Congratulations to the new AAAS fellows in the Section on Psychology: **ÖZLEM N. AYDUK, PhD**, University of California, Berkeley; **GEORGE A. BONANNO, PhD**, Teachers College, Columbia University; **HILARY COON, PhD**, University of Utah; **ALICE CRONIN-GOLOMB, PhD**, Boston University; **JONATHAN D. CRYSTAL, PhD**, Indiana University Bloomington; **AMANDA B. DIEKMAN, PhD**, Indiana University Bloomington; **ELISSA SARAH EPEL, PhD**, University of California, San Francisco; **SHELLY L. GABLE, PhD**, University of California, Santa Barbara; **NADINE J. KASLOW, PhD**, Emory University; **ELIZABETH A. KENSINGER, PhD**, Boston College; **ARTHUR F. KRAMER, PhD**, University of Illinois at Urbana-Champaign; **SARA JO NIXON, PhD**, University of Florida College of Medicine; and **KEVIN N. OCHSNER, PhD**, Columbia University. ■



Psychologists are essential partners on integrated specialty care teams, delivering evidence-based behavioral interventions that improve clinical outcomes, reduce costs, and support value-based care.

Tackling Complex Conditions With Behavioral Health

Psychologists are gaining a foothold in the specialty side of health care, not only as providers of psychological and behavioral services but as administrators, researchers, and leaders as well

BY TORI DEANGELIS

PSYCHOLOGISTS ARE MOVING into a niche area with significant growth potential: integrated specialty care, or team-based care, provided in medical specialty areas such as oncology, diabetes, cardiology, chronic pain management, and many others. It's an area of increasing need and opportunity, both because of its scope—medical specialists currently make up at least 60% of the physician workforce, according to Statistica, a data analytics system—and because specialty care patients' issues consume the lion's share of overall health care dollars, according to the Peterson-KFF Health System Tracker, an online hub that analyzes the performance of the U.S. health care system.

Psychologists are essential members of these teams, particularly given their ability to deliver evidence-based behavioral interventions that improve clinical outcomes, reduce total cost of care, and support value-based payment models that emphasize quality over volume of care, said Amy Walters, PhD, director of behavioral health services at St. Luke's Humphreys Diabetes Center in Meridian, Idaho, and a member of APA's Integrated Specialty Care (ISC) Advisory Group, a work group striving to increase the presence and impact of psychologists in specialty care.

"Many specialty care practices want patients to make a lot of health behavior changes—to work on improving their

sleep, their eating habits, their physical activity, and their stress levels,” said Walters. “Psychologists can help them make and sustain those changes as well as support their social and emotional health.”

Psychologists take on other important roles in these settings as well, said Wendy Ward, PhD, a veteran integrated care psychologist who is now associate provost for faculty at the University of Arkansas for Medical Sciences College of Medicine in Little Rock. These roles include clinical and program leadership, education and training leadership, research and scholarly leadership, assessment and evaluation, quality and outcomes improvement, administration and operations, financial stewardship, interprofessional team building, and strategic partnership development.

“We have a spectrum of skills that are really needed,” she said.

For all these reasons, specialty care psychologists are highly valued by physicians and patients alike. But getting adequately reimbursed and trained remains challenging, said Erin Swedish, PhD, MBA, APA’s director of health integration and head of APA’s ISC advisory group.

At present, reimbursement remains largely tied to fee-for-service structures that inadequately capture the full scope of psychologists’ contributions, including care coordination, team-based consultation, and population health management, she said.

In addition, major health care funders like the Centers for Medicare and Medicaid Services continue to view psychologists strictly as mental health providers rather than as behavioral health experts who also treat the behavioral aspects of medical conditions and chronic disease management, not to mention substance abuse issues, said Stephen Gillaspie, PhD, director of health and health care at APA. “We

LEND YOUR VOICE

HELP SHAPE THE FUTURE OF PSYCHOLOGY IN HEALTH CARE

The APA Integrated Specialty Care Advisory Group seeks data from psychologists who work in primary and specialty integrated care settings, to learn more about current practice models, payment structures, productivity expectations, and financing realities across medical settings. The data will be used to support advocacy efforts, presentations, and scholarly publications related to workforce conditions and compensation structures in psychology and integrated care.

Your input is welcome and valued. To take part, complete the short anonymous survey at this link: https://mcwisc.co1.qualtrics.com/jfe/form/SV_bgEk4FjvTA9khDM. For further questions, contact Erin Swedish, PhD, MBA, at Eschwedish@apa.org.

have a role to play in mitigating those disease processes whether a patient has a mental health condition or not,” he said.

Fortunately, health care trends are moving toward models more favorable to psychologists’ holistic training, and APA is tapping into these trends in its advocacy and policy work, Swedish said. For instance, there is increased emphasis on population- and value-based care, where providers are paid for health outcomes, quality of care, and cost efficiency rather than on the volume of services provided. Likewise, there is a greater national effort to integrate behavioral health into health care systems in general. These trends align with the broader federal and commercial payer movements toward supporting behavioral health integration, which recognizes the role of behavioral interventions in improving outcomes for chronic medical conditions, Swedish said.

These directions suggest that integrated specialty care “is one of the most important frontiers for psychology,” Swedish said. “When psychologists are embedded in medical settings, we don’t just treat behavioral health—we improve medical outcomes, patient adherence, and whole person care.”

Specialty versus primary care

APA data show that about 14% of licensed psychologists call clinical health psychology their major specialty. While it’s unknown how many of these providers work in integrated specialty care, the APA ISC advisory group has discovered that psychologists work in at least 41 medical specialty areas and 137 subspecialty areas. The group is also surveying members of Div. 38 (Society for Health Psychology) to learn more about psychologists’ tasks, hours, practices, and models in these settings (see sidebar).

Integrated specialty care psychologists note that while specialty care is similar to primary care, there are key differences. Both roles involve working together with medical teams, understanding the culture and language of medicine, and using evidence-based interventions like cognitive behavioral therapy (CBT) and acceptance and commitment therapy (ACT) to address patients’ psychological needs and foster healthy lifestyle change. However, psychologists in specialty care practice with a more defined scope and work with patients who have more serious, chronic health problems than the average primary care patient. Because of these problems, the patients often have

higher levels of depression and anxiety as well.

“These are patients who have been diagnosed with one, if not multiple, chronic health conditions, so they’re really struggling with their health,” Walters said.

A foot in every door

These complexities are challenges that integrated specialty care psychologists take on wholeheartedly. An example is Shannon Virtue, PsyD, who is passionate about her work in two related roles at ChristianaCare, a large regional health care system based in Wilmington, Delaware.

In one of these roles, she is an integrated member of the oncology team, where she helps cancer patients cope with active treatment and then adjust afterward. She also supports caregivers and fosters cancer prevention through group treatments like tobacco-cessation programs.

“Cancer can and does touch people across all walks of life, whether by direct impact or indirect impact on a loved one,” she said. “Psychology can make a huge difference in all these levels of care.”

As an oncology team member, Virtue also regularly consults with medical providers on how to better communicate with and treat patients who are dealing with medical anxiety and other treatment-related issues. Being able to coordinate with providers in real time also means patients don’t have to hassle with disjointed schedules or unnecessary travel at a time when they are physically and emotionally depleted.

“The nice thing about being on site is that we can coordinate or piggyback off of other appointments,” she said.

In her other role, Virtue serves as clinical leader of ChristianaCare’s embedded psychology program, where

she oversees psychologists embedded in several of the system’s specialty clinics and helps them build, tailor, and implement their services. One bariatric psychologist, for example, recently sought Virtue’s help in launching a psychological support group for patients newly out of surgery, which she saw as an important but untapped window for intervention.

“I thought that was a great clinical idea, and I wanted to support that growth with her,” said Virtue.

Meanwhile, Laurie Ivey, PsyD, serves as director of integrated behavioral health at the University of Colorado’s Anschutz Medical Campus, where she oversees psychologists who are integrated into specialty areas such as physical medicine and rehabilitation, transplant, burn and frostbite, bariatrics, transgender health, and functional neurological disorders.

Ivey also provides clinical services to patients in the campus’s Sleep Medicine Clinic who have been referred by specialists including ear,

nose, and throat physicians, neurologists, and pulmonologists. She enjoys helping untangle the puzzle pieces of how patients’ diverse health conditions are related to sleep problems and vice versa. While her main treatment approach is CBT for insomnia, or CBT-I, patients often have related behavioral issues such as struggling to get off sleep medications, adjusting to CPAP machines, and coping with trauma histories that exacerbate sleep disturbances.

“As psychologists, we know that nothing is separate—that people come in with everything they’ve experienced,” she said.

Ivey also likes collaborating with medical providers to solve issues with both medical and psychological aspects. If a patient is struggling to get off a sleep medication, for example, she works with their physician to find an interim medication and then with the patient to lower their fear about giving up the original medication. “That kind of teamwork is really valuable,” she said.

Patients benefit from psychological support that addresses every dimension of their health, leading to better outcomes and a higher quality of life.



RESOURCES

Why hire a psychologist? A case for psychologists in integrated care

APA Integrated Specialty Care Advisory Group, October 2025

Pro tips for building a specialty care integrated practice

APA Integrated Specialty Care Awareness Committee December 2024

Integrated care is an opportunity and an imperative

DeAngelis, T.
Monitor on Psychology,
January/February 2026

Thanks to their wide-ranging expertise, it is not uncommon for psychologists in these settings to also be tapped for leadership roles. Kathleen Ashton, PhD, ABPP, who worked for 20 years in bariatrics and oncology at the Cleveland Clinic in Cleveland, Ohio, was recently scouted to start a psycho-oncology program at MetroHealth, the main hospital serving low-income patients in the city.

“It’s very exciting because I get to start from scratch and build a program the way I like,” she said. To do that, Ashton has learned about the program’s needs, built relationships with staff, coordinated all of the hospital’s oncology clinics to allow patients to see psychologists on the same day as their medical treatments, and expanded access by building group programs and digital interventions such as a virtual CBT group for breast cancer survivors called Thrive Forward. She plans to continue that work and to get interns on board to help.

Working with people who have limited resources but high medical needs is extremely rewarding, added Ashton, who is also lead psychologist for the hospital’s blood and bone marrow

transplant program. “Patients are really happy to be here, and they absolutely understand the quality of help they are getting,” she said. “They want to take advantage of that, and they’re lovely to work with because they’re motivated and they can see the value in having this kind of care.”

Psychologists have also been proactive in helping systems recognize and remunerate their value. A leader in this domain is Ward, who before her role at the University of Arkansas for Medical Sciences was an integrated specialty care psychologist working with pediatric obesity patients at the Arkansas Children’s Hospital in Little Rock. Taking her strong training in communication, education, research, and clinical service model design, she persuaded the hospital to expand and integrate the psychology service throughout the system.

“The hospital felt that we had documented how much our services were needed beyond simply reimbursed billing, so they put money behind the resource,” said Ward. In fact, her approach—which entails learning a clinic’s needs, understanding implementation issues, finding a champion, launching a pilot, and assessing progress over time—was eventually adopted by 41 other specialty clinics at the hospital (*Clinical Child Psychology and Psychiatry*, Vol. 26, No. 2, 2021). In the meantime, Ward’s students have gone on to replicate the model at many other sites both nationally and abroad.

Training for what’s ahead

Integrated specialty care work is exciting and rewarding, but these psychologists also say more training opportunities are needed. Many doctoral programs still lack foundations in integrated care, and many seasoned psychologists had to gain their knowledge

piecemeal along the way. Ashton, for example, entered integrated care somewhat by accident while in graduate school, when she applied for a rotation in women’s post-traumatic stress disorder at the Veterans Administration (VA). When that wasn’t available, she took a rotation in primary care health psychology instead and ended up loving the work. Her interest in health psychology led to a health psychology internship at the VA and a health psychology postdoctoral fellowship at the Cleveland Clinic, with supervised specialty training in a variety of health psychology specialties including bariatrics, sleep management, and oncology. She’s continued that work as a staff member at the Cleveland Clinic and now at MetroHealth.

Fortunately, outside formal training opportunities are on the rise. For predoctoral psychology students and recent graduates, there is an increasing number of relevant practica, postdocs, fellowships, and internships available in larger medical centers and health systems. And while there are fewer formal opportunities for mid- and late-career psychologists, there are many ways to gain knowledge in the area. One is to get involved in organizations relevant to the specialty one is interested in: Ashton, for example, actively participates in APA Div. 38 and in the American Psychosocial Oncology Society. Such organizations can provide high-level specialty continuing education with other specialists in health psychology, as well as opportunities to network and stay abreast of developments in the field, she noted.

Ashton also recommends getting board-certified in health psychology. The credential demonstrates a high level of training and competence in this specific area of psychology and “communicates this expertise to the hospital and the public,” she said.

Once a psychologist is established on a site, there are multiple additional opportunities to get up to speed in one's medical specialty area, Walters said. This can include attending medical conferences in one's specialty area, as well as on-site educational programs, grand rounds, and tumor boards, where multidisciplinary teams of cancer specialists meet to discuss complex cancer cases. In her specialty area of diabetes, Walters has attended the same trainings as certified diabetes educators and pharmaceutical reps, as well as weekly endocrinology case meetings focused on the most challenging cases. Thanks to this input, "I'm learning about all of these more complex conditions," she said.

In general, the idea is to learn as much as one can about the medical aspects of an area while remaining in your zone of expertise, Ashton added. "It's important to be well versed in the medical specialty you are working in and to work closely with the medical team," she said.

The business of specialty care

Integrated specialty care psychologists uniformly report on how valued they feel in these settings, but as noted, payment is still an issue. What is needed, leaders in the area say, is work on multiple fronts to change billing codes, the way that psychologists are paid, and the way that systems and providers view psychologists' range of expertise.

Some of that work is happening at APA, where Swedish's office is developing, refining, and expanding on billing codes so that psychologists in these settings can charge more comprehensively for their services (see October 2025 *Monitor*). Likewise, a bill heavily championed by APA that is pending in Congress—the Connecting Our Medical Providers with Links to Expand Tailored and Effective Care

Act, or COMPLETE Care Act (S. 931/H.R. 2509)—includes key provisions that would improve integration of psychologists in primary and specialty care settings. These include providing technical and financial assistance to help primary care practices adopt integrated care models and supporting greater integration of behavioral health providers to improve the management of chronic care conditions (see January 2026 *Monitor*). If enacted, these provisions would help address long-standing structural barriers to integrating psychologists into team-based medical care, Swedish noted.

Meanwhile, APA ISC advisory group members and individual psychologists are promoting messaging intended to show the pivotal role that psychologists can play in the health care movement known as the "quadruple aim," originally promulgated by the Institute for Healthcare Improvement. This framework seeks to bolster population health, reduce costs, enhance the patient experience, and improve provider well-being—aims that psychologists are well positioned to fill, said Walters.

APA's Gillaspie is exploring a related advocacy avenue, demonstrating that psychologists are behavioral health experts who are adept at addressing not only mental illness but also prevention, early intervention, and wellness, as well as cultural phenomena associated with mental health problems, such as social media and AI.

"When others see psychologists as only dealing with mental health problems, I think that puts us in a box," he said.

Finally, to better make the case that integrated care psychologists can improve care and reduce costs, providers in these roles are gathering data at their sites with the aim of eventually turning it into formal research.

In Ivey's Denver setting, for example, psychologists are conducting evaluations that show their work is related to successful bariatric and transplant surgeries and keeping post-op patients from extensive hospital stays. At MetroHealth in Cleveland, Ashton is tracking quality of life and mood throughout patients' treatment and showing that both improve with psychological care. And in Idaho, Walters is documenting how her services help patients with diabetes or obesity eat healthier foods, consume fewer sugary drinks, get more exercise, and lose their depression.

Working in this space gives psychologists a golden opportunity to improve the nation's health and quality of life while lowering costs—and it needs more providers, Ward added.

"The integrated specialty arena is a dynamic, exciting, fulfilling place to be," she said. "I would encourage psychologists who haven't been exposed to this work—even more senior psychologists—to put a toe in the water and try it." ■

FURTHER READING

Role distinctions and role overlap among behavioral health providers

Ward, W. L., et al.
Journal of Clinical Psychology in Medical Settings, 2023

Factors underlying positive and negative attitudes toward integrated care among psychologists and varied stakeholders

O'Kane, T. W., et al.
Training and Education in Professional Psychology, 2026

Behavioral health integration and specialty medical care: Opportunities for applying knowledge from primary care integration

Ivey, L. C., et al.
Families, Systems, & Health, 2023



Psychologists provide the essential framework to help patients redefine boundaries, process betrayal, and navigate relational healing or separation.

How Psychologists Help Patients Heal From Infidelity

As apps, social media, and AI make affairs easier to pursue and harder to define, psychologists with this expertise are in demand

BY ANNA MEDARIS

ACCORDING TO the U.S. Bureau of Labor Statistics, demand for marriage and family therapists is expected to grow 13% in the next decade, much faster than the 3% average for all occupations. And when it comes to practitioners with expertise in infidelity specifically, Galena Rhoades, PhD, a private practitioner in Denver who directs the University of Denver's Institute for Relationship Science, said she only has a "small Rolodex" of well-equipped therapists to refer patients to when her

cheating caseload is full. "We see high numbers of couples experiencing infidelity, and there are great approaches to working with them," she said, "[but] there really aren't a lot of people who have that training and experience."

It's difficult to know whether straying beyond a primary relationship has actually become more prevalent over the years, or whether it has become easier. Sure, there are more ways to stray—dating apps make the next hookup just a swipe away, websites like OnlyFans make

porn more interactive, and AI makes robots often feel more compassionate and flirtatious than real-life lovers. But Americans are also reporting having less sex overall, according to a report by the Institute for Family Studies, and there seems to be fewer monogamous relationships to be unfaithful in. One 2023 YouGov survey of 1,000 American adults found that nearly half (45%) of respondents described their ideal relationship as something other than “completely monogamous.”

Regardless of how widespread infidelity actually is, one 2025 survey from the conservative think tank American Enterprise Institute found that 57% of young women and 44% of young men at least think infidelity is “common” or “extremely common.”

“In today’s world, it just takes a click of the button to connect. Is cheating when you have intercourse with somebody, or is it when you are secretly chatting? There are so many degrees of crossing the line,” said Janis Spring, PhD, a best-selling author and clinical psychologist with a private practice in Westport, Connecticut, specializing in intimacy, trust, and forgiveness. “[But] in terms of the trauma, the devastation felt by the hurt partner, I don’t think anything has really changed,” Spring added.

Psychologists, then, have an important role to play in helping people in all kinds of relationships navigate how they define, prevent, and recover from infidelity. Here’s what to know if you want to become one of them.

The causes and consequences of cheating

What constitutes cheating? Definitions vary and evolve. In one narrative review of the research, two therapists summarized the various definitions of infidelity as “any type

of secret emotional, sexual or romantic behavior that violates the exclusivity that romantic relationships have by definition” (Rokach, A., & Chan, S. H., *International Journal of Environmental Research and Public Health*, Vol. 20, No. 5, 2023).

Other research shows that while people are more likely to consider physical indiscretions infidelity than emotional or digital ones, the definition largely comes down to how committed partners understand it for themselves—and how overstepping those boundaries makes them feel (Schneider, S., *Emotions and Society*, advance online publication, 2025).

In partnerships where there’s no extreme or coercive control, Spring boils it down to this: “If your partner were in the room witnessing what you are doing, and they were feeling extremely uncomfortable, you might consider that you’re doing something wrong. In other words, see it through their eyes.”

However infidelity is defined, there is a vast range of reasons why people cheat and just as many reactions that can follow. In a 2019 study, social-personality psychologist Dylan Selterman, PhD, and colleagues found that motivations can generally be grouped into two buckets: those involving the relationship at hand (like being angry with your partner or feeling disconnected from them) and those unrelated to the relationship (like wanting sexual variety or giving into temptation while under the influence) (*Journal of Sex Research*, Vol. 56, No. 3, 2019).

Those driving factors, in turn, help predict what happens next, the researchers found. “When people cheat as a function of some kind of relationship deficits, they are more likely to confess their affairs to their partners and also more likely to break

up [with the partner],” said Selterman, who serves as the director of research and resource development at the non-profit Heterodox Academy. In contrast, said Selterman, when people cheat for other reasons, they are more likely to keep it a secret and ultimately try to stay with the original partner. One message to clinical psychologists, then, is that “there are lots of different motivations for infidelity, not all of which are a sign of something bad in the relationship,” Selterman said.

Similarly, in his 2023 study looking at Ashley Madison users, Selterman and others found that people who actively sought out affairs weren’t primarily doing so because they were unhappy with their relationships (*Archives of Sexual Behavior*, Vol. 52, 2023). And in fact, the affairs didn’t seem to have a strong negative impact on their unions or make the straying partners feel particularly remorseful. And while those findings could be discouraging to faithful partners (“I did everything ‘right’ and my loved one still cheated on me”), Selterman proposes a different viewpoint: “My partner had an affair, but that doesn’t mean our relationship is doomed.”

Affairs are hardly harmless, however. The betrayal can lead to emotional dysregulation for both victims and perpetrators, bringing up feelings including anger, insecurity, shame, guilt, jealousy, and sadness. Research has also shown that, in addition to relationship dissolution, being cheated on can lead to depressive symptoms and lower self-esteem (Rokach, A., & Chan, S. H., *International Journal of Environmental Research and Public Health*, Vol. 20, No. 5, 2023). One 2024 study found that people who had been betrayed had poorer physical health years later, even if they had strong social support from other, healthy

relationships. The result was particularly salient for low-income and ethnic minority study subjects (Hoy, E. Q. W., & Oh, V. Y. S., *Journal of Social and Personal Relationships*, Vol. 41, No. 12, 2024).

“When you discover your partner has been unfaithful, you don’t just lose your partner,” Spring said. “You don’t just lose the idea of what you thought you shared with this person. You lose something more basic and essential. You [can] lose yourself.”

And sadly, some of Rhoades’s work finds that patterns can perpetuate. In one study, her team found that people who cheated in their last relationship were more likely to cheat in their next one—and people who were betrayed in their last relationship were more likely to get similarly hurt in the next one. “We often see that within relationships, couples get stuck in certain dynamics or patterns, but to see that happening across relationships is interesting,” Rhoades said. “Hopefully, it’s the case that good things also get repeated across relationships.”

It’s complicated

Working with people who cheat and those they’ve betrayed isn’t like other mental health and relationship complications, experts say. If couples therapy is more active than individual therapy—with a dynamic playing out in real time rather than just being talked about—then couples therapy involving infidelity is even more intense than couples therapy without it. With an affair, there’s a crisis. There’s urgency.

“When couples [without infidelity as a presenting issue] come to therapy in my practice, oftentimes they’ve been facing conflict and a lack of connection for quite some time,” Rhoades said. “And with infidelity, that may be the case, but there has also been an

event that has sparked them coming to therapy.” Rhoades has found that like a rock-bottom moment motivating someone with substance use disorder to turn their life around, a relationship transgression can “give us the opportunity to make greater change.”

Spring said her work is also rewarding because she attracts a self-selected population that wants to make that change. By contrast, if someone cheats and their partner ends the relationship, that pair isn’t showing up in her clinic. In general, “the couples who are calling me—one person has fallen off the beam, they’ve gotten involved with somebody else, and they don’t want to be with that other person. They love their partner, and they want to make good at home,” Spring said. “So it’s a highly motivated and directed group of people.”

That doesn’t mean helping them move forward is easy, straightforward, or one size fits all. Sometimes partners repair the rupture and get stronger. Sometimes they decide to part ways. Sometimes—typically only

if sexual temptation or mismatched sex drive is addressed before a transgression occurs—they explore altering their relationship agreement, like considering an open relationship or some other system by which both partners’ needs can be addressed.

“Some couples have managed to navigate [conflict] not by breaking up but by saying, ‘I’m going to pursue sex outside the marriage in a way that is open and discussed and cocreated rather than by me sneaking around with the pool boy,’” said Matt Zakreski, PsyD, a clinical psychologist in New Jersey who specializes in working with neurodiverse and queer patients, including on issues related to infidelity. It all comes down to “clear, compassionate communication,” he said.

There are multiple reputable ways therapists can guide patients toward healing. When compared with treatment-as-usual approaches including methods like eclectic/integrative therapy, emotion-focused therapy, psychodynamic therapy, systems-based therapy, and trauma-informed therapy,

FURTHER TRAINING

COUPLES THERAPY FOR LICENSED PSYCHOLOGISTS

For psychologists who wish to undertake postdoctoral training in couples therapy, there are a number of options.

- APA Div. 43 (Society for Couple and Family Psychology) encourages licensed psychologists to seek postgraduate instruction and possibly board certification from the American Board of Couple and Family Psychology.
- Gottman Institute’s online course “Treating Affairs and Trauma” provides clinicians with an “unbiased roadmap to compassionately serve” and give hope to patients after a relationship collapse.
- The American Association for Marriage and Family Therapy’s continuing-education programming includes access to the latest insights from the Systemic Family Therapy Conference.
- The Ackerman Institute for the Family offers “innovative clinical services, state-of-the-art training programs, cutting-edge research initiatives, and professional leadership” around couple and family therapy.

the Gottman method has been shown to significantly improve relationship satisfaction for both partners and to reduce the unfaithful partner's propensity toward leaving the relationship entirely (Irvine, T. J., et al., *The Family Journal*, Vol. 32, No. 1, 2023). Developed by psychologists John Gottman, PhD, and Julie Gottman, PhD, the protocol involves reviving trust through three phases: atone (including allowing the person who cheated to take responsibility), attune (including addressing relationship problems that preceded the betrayal), and attach (including helping the pair reattach in loving ways).

Another approach, developed by psychologists Kristina Coop Gordon, PhD, Donald H. Baucom, PhD, and Douglas K. Snyder, PhD, also involves three stages but views the affair's impact through the lens of trauma (*Journal of Cognitive Psychotherapy*, Vol. 20, No. 4, 2006). Guided by this protocol, therapists first help partners "contain the damage," Rhoades said, such as by ensuring the relationship with the affair partner has ended, then work through what led to the infidelity to begin with, and finally come to a decision about how they want their future relationship to look—if they decide to stay together at all. The framework, which can also be applied in individual therapy, recognizes that "betrayal can often lead to feelings and experiences that look like PTSD that may require some attention and treatment on its own," Rhoades said.

Spring offers yet another approach, specifically for people who've been cheated on. Despite research generally showing a link between forgiveness and relationship satisfaction, her 2004 book, *How Can I Forgive You? The Courage to Forgive, the Freedom Not To*, remains "radical," she said, because it gives those who've been hurt the

option *not* to forgive (Braithwaite, S. R., et al., *Journal of Family Psychology*, Vol. 25, No. 4, 2011). "Genuine forgiveness must be earned by the unfaithful partner, but if that person isn't willing to understand the pain they've caused you and take the steps to earn your trust and forgiveness, then forgiveness is a cheap gift and it means nothing," said Spring, who published an updated edition of the book with Michael Spring in 2022 (Harper Paperbacks). "So, you can heal yourself without forgiving."

No matter the method psychologists call upon when working with people dealing with infidelity, it's important that they take on a stance of curiosity, Zakreski said. "We don't sit from a place of judgment; we sit from a place of trying to understand what's going on," he said. Doing that, he added, "helps our clients move forward in a more empowered way."

Building skills

Just like there's no one profile of a cheater, there is no single way to move through the aftermath. Likewise, there is no universal answer to whether partners stay or go.

Given the complexity of these situations, psychologists benefit from additional training in this area. Currently, however, there is no singular training or referral pipeline for psychologists who want to carve out a specialty in the space.

"It's so hard in this field because we often just get self-referrals," Rhoades said. After all, most people in or seeking therapy for infidelity are tight-lipped about the situation, which makes word-of-mouth referrals rarer than, say, therapy for a less-stigmatized issue like anxiety. "While specialized training can support providers in doing this work," Rhoades added, "there's not really an

established referral network that clinicians can plug into to build referrals in that area."

It comes down to skills practice, which may come before you think you're ready. In that case, Zakreski said, do what his mentor told him to do when anything shows up in therapy that you're not sure how to deal with. "People come to us and they bare their souls," he says, "and when you can say to them from a place of authenticity—'I don't know how to solve this, but I'm going to be here with you and we'll figure it out together'—sometimes that's actually more effective than having the 'right' answer." ■

FURTHER READING

After the affair: Healing the pain and rebuilding trust when a partner has been unfaithful [3rd ed.]

Spring, J., & Spring, M.
Harper Collins, 2020

Getting past the affair: A program to help you cope, heal, and move on—together or apart [2nd ed.]

Snyder, D. K., et al.
Guilford Press, 2023

Are internet affairs different?

Smith, B. L.
Monitor on Psychology,
March 2011



Dr. Nina Ekholm Fry (right) conducts equine therapy with a patient. Horses not only offer patients the benefits of animal interaction, they also move therapy into a calming, natural environment.

Using Animals in Therapeutic Practice

Animals can help build comfort and trust in a variety of settings, from individual therapy to inpatient. Here's how to harness the power of four-legged friends to enhance patient trust and well-being.

BY STEPHANIE PAPPAS

HUMAN-ANIMAL INTERACTIONS can have a profound effect on human mental health: Decades of research suggest that contact with animals can lower stress, reduce anxiety, and foster feelings of safety (Matijczak, A., et al., *Emotion*, Vol. 24, No. 2, 2024). For example, studies show that adopting dogs reduced loneliness, cortisol levels, and negative emotions in war veterans (Adler, R. H., et al., *Traumatology*, Vol. 30, No. 4, 2024); visits from animals

reduced anxiety in men undergoing inpatient substance use treatment (Scott, T. M. T., & Kirnan, J., *The Humanistic Psychologist*, Vol. 51, No. 2, 2023); equine interactions in therapy helped kids with ADHD improve executive function (Helmer, A., et al., *Clinical Neuropsychiatry*, Vol. 21, No. 1, 2024); and college students who petted dogs or cats for 10 minutes saw a significant drop in cortisol levels (Pendry, P., & Vandagriff, J. L., *AERA Open*, Vol. 5, No. 2, 2019).

Findings like these help explain why psychologists and related health care professionals are increasingly integrating animals—dogs and other domesticated species—into a range of therapeutic settings, including individual counseling, inpatient psychiatric units, schools, and hospitals.

“While therapy animals are not necessarily an intervention by themselves, when you use them appropriately in therapy with evidence-based care, they can really have some great results,” said Erica Force, PhD, a licensed psychologist and a lead psychological services provider for the U.S. Olympic & Paralympic Committee (USOPC).

Bringing animals into practice

“Therapy animals” is a catch-all term describing animals that are integrated into one-on-one or group therapy with a trained mental health professional or animals that interact with humans at places such as residential treatment facilities, schools, or airports. Phrases like “dog therapy” or “horse therapy” are misleading because the animal is not the therapist, said Nina Ekholm Fry, director of equine programs at University of Denver’s Institute for Human-Animal Connection. The definition of the service is “always based on the credential of the person,” she said (see sidebar on page 85).

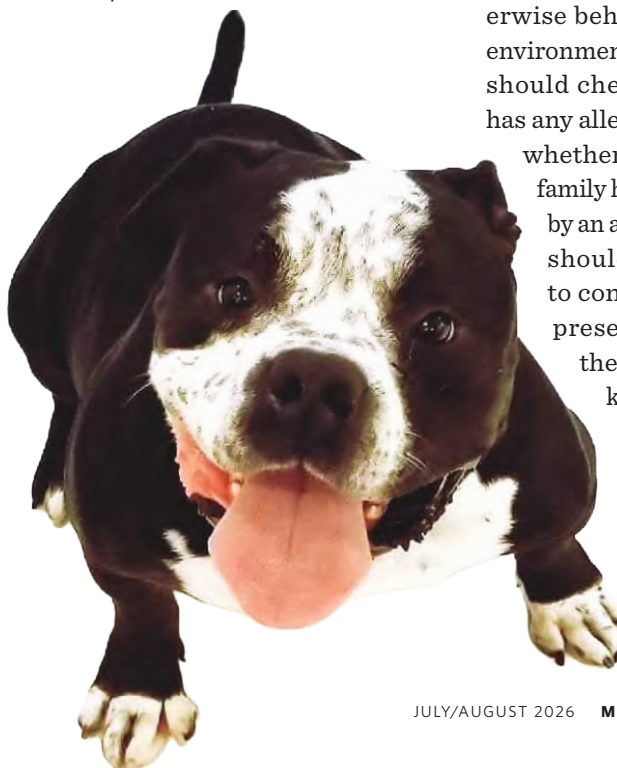
Thus, many mental health professionals prefer a description that focuses first on the intervention, such as “psychotherapy with animal interaction” when talking about bringing animals into practice, or “visiting animals” to describe support animals that aren’t involved in a specific intervention. For trained psychologists, this framing highlights the idea that animals are a way to enhance other evidence-based treatments rather than treatments unto themselves.

One common place for a therapy animal is within one-on-one therapy. The psychologist or other mental health professional has control over the space and can customize it to accommodate both animal and patient. Well-trained animals bring a perceived nonjudgmental, friendly presence to the room, making individual therapy more emotionally comfortable for patients and help establish trust, said Katherine Compitus, DSW, LCSW-R, a social worker and certified animal-assisted intervention specialist at New York University.

“It’s like fast-forwarding the therapeutic alliance,” said Compitus, whose pit bull, Chompy, is a regular presence in her office.

However, it’s important to prepare for integrating the animal, said Compitus. The therapist should seek training from a reputable organization such as the Association of Animal-Assisted Intervention Professionals or the Institute for

Dr. Katherine Compitus’s therapy dog, Chompy, establishes such a trusting rapport with patients that they often talk directly to Chompy instead of Dr. Compitus.



FURTHER RESOURCES

Pet Partners

Association of Animal-Assisted Intervention Professionals

Social Aspects of Human-Animal Interactions Graduate Certificate, Colorado State University

Human-Animal Interaction APA Div. 17, Section 13 (Society of Counseling Psychology)

Human-Animal Connection at the University of Denver. It’s important to pursue training geared toward professionals rather than volunteers, as volunteer certifications cover limited activities and typically only include liability for animals working for a few hours at a time.

When deciding whether animal interactions in therapy are appropriate, psychologists should ensure that their animal is calm and friendly, is able to ignore distractions, and otherwise behaves safely in a clinical environment, Force said. Therapists should check to see if the patient has any allergies, animal phobias, or whether they or anyone in their family has been bitten or attacked by an animal in the past. Patients should have the opportunity to consent to an animal being present before the animal is there. It’s also important to keep in mind potential cultural influences regarding relationships with animals, said Melissa Trevathan-Minnis, PhD, a counseling psychologist at National

University in San Diego and animal rescue worker whose rescue pup and trained therapy dog, Athena, often sits with her in sessions in her private practice in Austin, Texas. For example, some interpretations of Islam view dogs as being unclean.

If the patient gives their consent, the therapy animal's presence should be intentionally incorporated into treatment, Compitus said. For some practitioners, the animal's presence simply acts as an icebreaker, giving patients something to focus on during difficult conversations. Other providers will establish particular tasks and activities, such as teaching the animal a new trick in order to help the patient develop self-efficacy. Petting a dog, cat, or guinea pig can be part of a grounding exercise in body awareness.

"There is such a physiological connection to petting a dog," Trevathan-Minnis said. "Having that touch, that tactile sensation, the rhythm."

Animals should be carefully selected and trained to be willing to interact, as patients might experience a disinterested animal as a rejection. If the animal needs a break or refuses to participate in a particular exercise, however, it's important not to force anything, Trevathan-Minnis added. This flexibility is both basic ethics for animal welfare and important for building trust with the patient, who is watching how the psychologist treats their pet partner.

"We're not modeling good consent and good consideration of the comfort of everyone involved if we don't prioritize the animal," Trevathan-Minnis said. Forcing an unwilling animal to participate could send a message to the patient that their boundaries won't be respected, either.

Once such considerations are met, animals can bring important extras



Dr. Erica Force and her therapy dog, Ike, show off their plaque received in 2014 during her stint providing sport and performance psychology services in the U.S. Air Force.

to the therapy interaction. Compitus once worked with a teenage boy with an extensive trauma history who had a hard time articulating his story to her. "But he told Chompy," Compitus said. "And I just happened to be in the room when he did that." The dog acted as a buffer to the initial conversation, making it easier for the boy to continue

opening up to Compitus herself.

Animals can also work magic with elite athletes, who are often under pressure to balance the challenges of competition with other life responsibilities, Force added. Animal interaction "activates our parasympathetic nervous system so emotions are regulated better and anxiety goes down,"

Force said. “And when that happens, there’s an openness in the therapeutic process.”

Animals also have the potential to expand the settings for psychotherapy, said Ekholm Fry. Integrating equine interactions, for example, can mean getting the patient outside into a natural environment. “All of a sudden you have all this potential for more people to be or become comfortable in therapy,” she said.

Other settings

Beyond independent practice, there are numerous other settings where psychologists are, or could be, incorporating animals into practice, including inpatient psychiatric units, schools, hospitals, and assisted living facilities. When animals are part of therapeutic interventions in these settings, they are generally considered therapy animals. When they are in the role of a visitor to lift moods, many professionals prefer to call them “wellness animals” or “visiting animals.”

Either way, research shows clear benefits of bringing animals onto the scene: In outpatient occupational therapy, for example, therapy dogs have been shown to improve social interactions for children with Down syndrome (Gomes, C. M. S., et al., *Anthrozoös*, Vol. 37, No. 6, 2024). For dementia patients who are reluctant to eat, adding a fish tank to the dining room of an extended care facility has been shown to increase food consumption, leading residents to gain an average of 2.2 pounds from before the fish tank was added (*Alzheimer Disease & Associated Disorders*, Vol. 27, No. 4, 2013). The fish tank had a noticeable social impact on residents, as well, said Alan Beck, ScD, a professor emeritus of the human-animal bond at Purdue University who co-led that research. For instance, some residents broke their usual mealtime silence to comment on the fish.

In schools, meanwhile, a recent review found that interactions with school support dogs improved

students’ self-perceptions, decreased their cortisol levels, and fostered greater empathy and more positive social behavior toward fellow students (Wintermantel, L., et al., *Educational and Developmental Psychologist*, Vol. 41, No. 1, 2024).

Dogs have even been associated with improved reading scores in young children: Elementary students who read aloud to dogs in a school program showed higher reading scores and more enthusiasm for reading compared with same-grade students at those schools who were not in the program (*Early Childhood Education Journal*, Vol. 46, No.1, 2018). The intervention was particularly helpful for kids who struggled to read and those learning English as a second language, said Jean Kirnan, PhD, an industrial and organizational psychologist at the College of New Jersey who led that research. “The dog is nonjudgmental,” Kirnan said. “The dog just loves you.”

Although research on the therapeutic use of animals other than dogs and horses is slim, this particular intervention has been expanded to include other species. For example, a mother-daughter team in Denver brings their registered therapy bunny to the library once a month so kids can read to it, said Laura Ackerman, vice chair of the board of directors at Denver Pet Partners, a local affiliate of the national Pet Partners organization that provides education and training for volunteer-animal teams, composed of a volunteer and their therapy-delivering pet.

A volunteer-animal team can sometimes support psychologists who don’t have their own animal in their interventions in these settings, said Susan Horecki, director of programs at Denver Pet Partners. These settings all have different protocols and confidentiality and safety considerations.

TYPES OF ANIMAL ROLES

There is no single agreed-upon terminology for animal roles in human health care settings, but some categories do have legal definitions. Others can be used interchangeably depending on the setting and provider.

Service animals: Dogs and miniature horses trained to perform specific tasks for a person with a disability as defined in the Americans with Disabilities Act (ADA). They may accompany a person with a disability at home and in public and are protected under several federal laws, including the ADA, the Fair Housing Act, the Air Carrier Access Act, and the Individuals with Disabilities Education Act.

Emotional support animals: These animals require no training but alleviate a symptom or effect of a disability as defined in the ADA.

Therapy animals: These trained animals are integrated into the work of a qualified health professional in the provision of a structured, goal-directed treatment.

Wellness or visiting animals: These are alternatives names for “therapy animals” that are not part of an evidence-based care plan but provide social interaction or comfort at places like hospitals, schools, airports, or extended care facilities.



Dr. Melissa Trevathan-Minnis's therapy dog, Athena, often joins her when meeting with patients.

Many schools send permission slip-style consent forms home to parents, said Taylor Chastain Griffin, PhD, a research psychologist and national director of animal-assisted interventions advancement at Pet Partners. In hospitals and nursing facilities, where patients and residents may have weakened immune systems, it's important to take precautions to reduce the risk of zoonotic disease or other germ transmission. These precautions include ample hand sanitization, bathing the animal before and after visits, and making shorter visits so that animals see fewer patients at one time, Griffin said.

Animals for emotional support

Even therapists who don't integrate animals into practice may need to be familiar with the human-animal bond because of how their patients lean on animal companions at home. In some cases, patients may ask psychologists to write them a letter documenting

their need for an emotional support animal (ESA). Under the Fair Housing Act, ESAs are defined as animals that provide emotional support or alleviate a symptom or effect of a disability. Patients with a disability may benefit from having an animal for comfort and companionship, or simply because the animal motivates them to get out of bed each day.

Clinicians don't need specific knowledge about the individual animal to write an ESA letter that is ethically and legally acceptable according to federal guidance, said Ekholm Fry. Their role is simply to document that the person indeed has a disability, as defined under the Americans with Disabilities Act (ADA). The letter must also demonstrate that there is a relationship between the disability and the need for an assistance animal. For example, a patient with depression might benefit from having a dog because the dog requires care each day, motivating the person to stick to a routine and go outside for walks.

Clinicians are not generally legally liable for their patients' ESAs as the animal is owned by the patient, said Ekholm Fry. Federally, ESA accommodations are limited to housing access. State law and individual entities, such as colleges, may allow other accommodations.

That said, some states put restrictions on who can provide an ESA letter. Colorado, for example, requires that the mental health professional has seen the patient in person. California requires a 30-day preexisting patient-provider relationship.

Once you know the appropriate regulations, composing the letter requires information that mental health professionals can gather by using tried-and-true clinical interview skills, like how the animal makes the person feel and how the animal alleviates the

symptoms of their disability, Ekholm Fry said.

"We ask the client: What feels easier when your animal is around? What does your animal help you manage? What would change if your dog could not live with you?" she said. "It's all based on the research pointing to the importance and impact of having animals in our lives." ■

FURTHER READING

The role of animal assisted therapy in the rehabilitation of mental health disorders: A systemic literature review
Arsovski, D.
Perspectives on Integrative Medicine, 2024

Conceptualization of psychotherapy incorporating equine interactions in the United States
Ekholm Fry, N.
Human-Animal Interaction Bulletin, 2021

Defining terms used for animals working in support roles for people with support needs
Howell, T. J., et al.
Animals, 2022

How dogs think: The growing field of dog cognition explores what makes the human-canine bond so special
Abrams, Z.
Monitor on Psychology, October 2025



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Feelings About Aging Tied to Income, Age Group

Wealthy older Americans are more likely to say they're aging very well compared with their same-age peers with less income, but all older adults hold more positive views of aging than those younger than 65.

BY TORI DEANGELIS

61%

Percentage of U.S. **upper-income adults** 65 and older who say they're **aging extremely or very well**, compared with **51%** of middle-class peers and **39%** of lower-income peers.

49%

Percentage of all U.S. adults ages 65 and older who say they're aging well or extremely well, compared with only **30%** of those **younger than 65** who expect to age similarly well.

45%

Percentage of U.S. adults **younger than 65** who aren't confident they'll have **enough income and assets** to last through their retirement years or say they **won't be able to retire** at all.



Source: Lin, L., & Horowitz, J. M. (2025, November 8). How Americans are thinking about aging. Pew Research Center survey of 8,750 U.S. adults conducted Sept. 2-8, 2025. <https://www.pewresearch.org/social-trends/2025/11/06/how-americans-are-thinking-about-aging>

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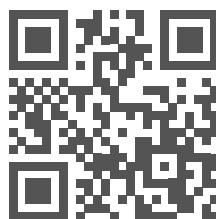
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The image displays the Zanda software interface. On the left, a cartoon bee character is shown. The main area features a calendar view with appointments for various practitioners like John Smith, Tom Summers, Christopher Wake, Susan Lewis, Airana Weber, Ashley Johnson, Cole Travis, James Smith, Linda Crawford, Miles Teller, Alan Barney, Denis Richards, Lana Halfway, Alexa McGraw, and Scooter Gradley. Overlaid on the calendar are three AI-powered features: a 'Treatment recorded' audio player showing a 43:47 recording, a prompt 'Please summarize the treatment plan.', and a 'Treatment plan summary' box stating 'Key elements include continued session attendance, implementation of...'. On the right, a 'BizzyAI SOAP Note Draft' form is visible, with fields for Subjective, Objective, Assessment, and Plan, each with a horizontal bar for text entry. At the bottom of the form are 'Save note' and 'Refine' buttons.

APA members get 50% off (incl. AI Scribe) for 6 months + 500 SMS credits*

Get started at zandahealth.com/APA-US

★★★★★
4.7 from 1,000+ practitioners

**Zanda has reduced
my workload by 15-20%.
That time back is massive."**

— Mark L. Private Practice Owner



*New customers only

