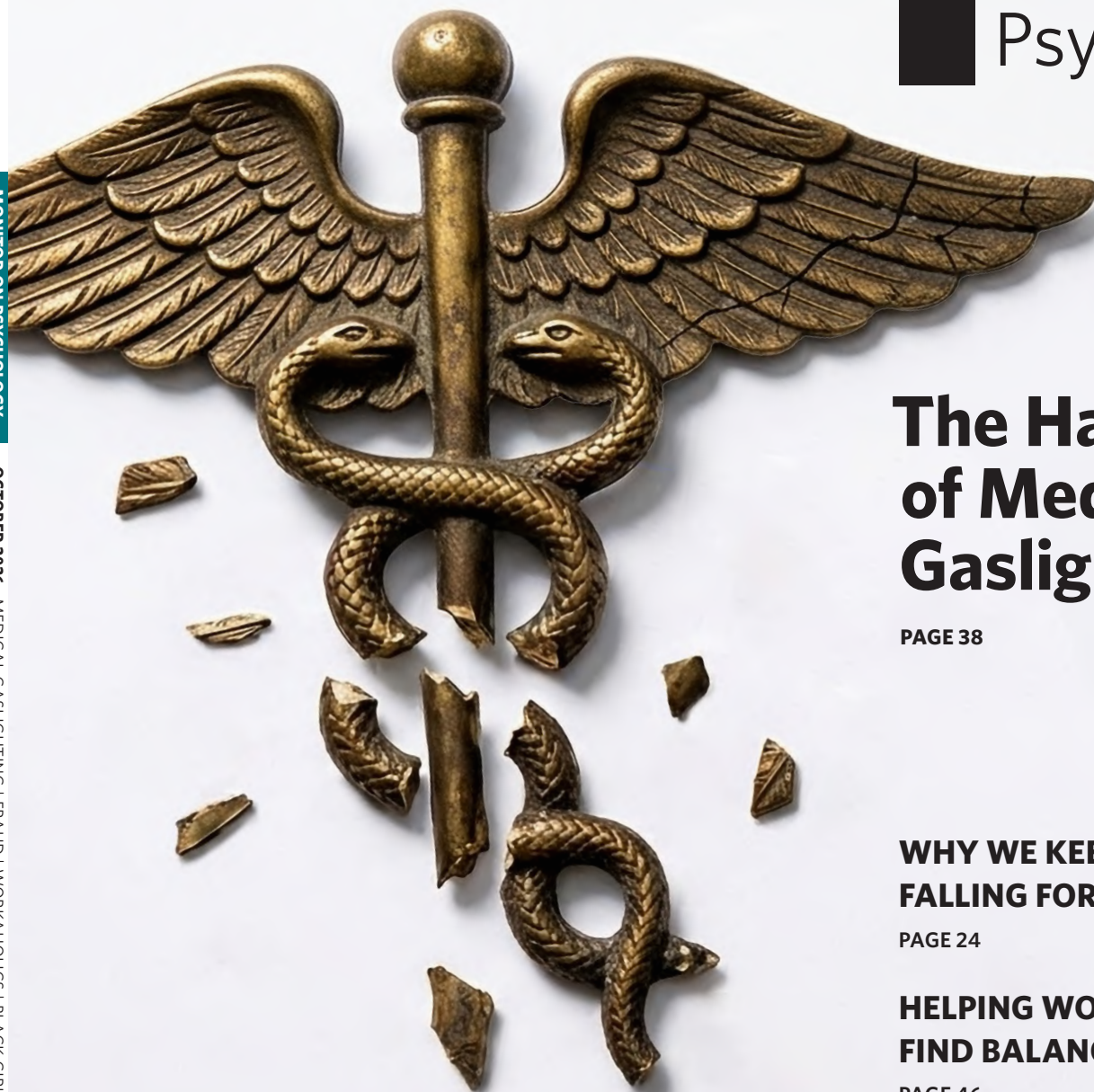




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The Hot List

Resources, opportunities, and news
for psychologists from APA



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STANDARDS STEEPED IN SCIENCE

New Policy and Guidelines Approved at APA 2026

APA's Council of Representatives approved two new sets of guidelines and four resolutions at the APA 2026 convention in Washington, D.C.:

- Guidelines for Education and Training Competencies for Doctoral-Level Psychology Practice in Primary Care Settings
- Guidelines on Diagnosis of Intellectual Disability in Forensic Settings
- Policy and Position Statement on the Use of Seclusion and Restraint: Avoiding Institutional Harm and Promoting Evidence-Based Practices in Psychiatric Settings
- Resolution on Family Caregivers
- Resolution to Prioritize the Elimination of Gender-Based Violence Against Women and Marginalized Populations
- Resolution on the Psychological and Developmental Impacts of Immigration-Related Enforcement, Detention, and Forced Deportation

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October 2026



46 Helping Workaholics Find Balance

With an employment culture that celebrates round-the-clock responsiveness, psychologists are studying the causes, consequences, and coping mechanisms for compulsive overwork.



54 New Research on Black Girlhood Expands Developmental Science

Researchers are moving away from a focus on what's going wrong for Black girls to what's working for them.



38 The Harms of Medical Gaslighting *(cover)*

Awareness of “medical gaslighting” and “medical invalidation”—terms used to describe when health care providers call into question the reality of a patient’s symptoms—has gained momentum in recent years. Psychologists are leading efforts to educate providers about medical invalidation and how to better support patients who are suffering from conditions that are difficult to diagnose and treat.

ON THE COVER: GENERATED BY GOOGLE GEMINI

CONTINUING EDUCATION

Building Genetic Literacy to Help Patients Navigate Results, Risk, and Concern

As genetic testing becomes more prevalent in mental health care, psychologists need sufficient genetic literacy to help patients interpret results accurately and navigate ethical concerns—from privacy risks and historical eugenics connections to unequal access and ancestry bias in research databases. Building this competency is essential to ensure patients understand both what genetic findings can meaningfully reveal about psychiatric risk and, critically, what they cannot (see page 32).

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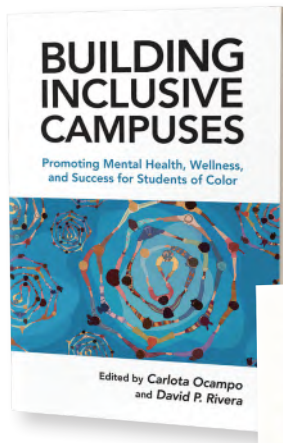
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AMERICAN PSYCHOLOGICAL ASSOCIATION

New Releases from APA Books



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Promoting Mental Health, Wellness, and Success for Students of Color

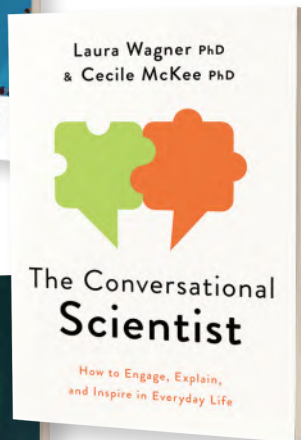
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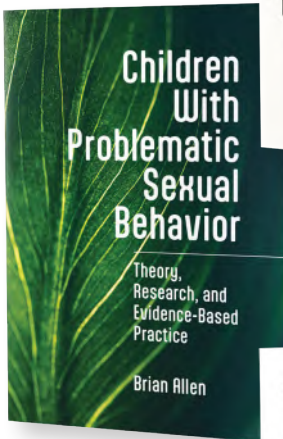
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Children With Problematic Sexual Behavior

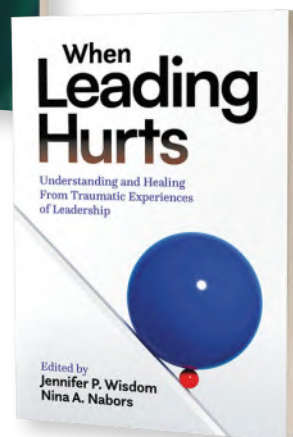
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Holding Steady

Tending to our own sustainability bolsters our capacity

BY WENDI WILLIAMS, PhD



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

MY CONVICTION that wellness is a manifestation of justice has deepened this year. Ideas like this are easy to affirm in calm seasons and tested when the season turns hard. To hold steady is not to pretend everything is fine. It is to refuse the two false exits hard seasons offer: burning ourselves out in the name of the work and withdrawing from it in the name of self-protection. Neither serves the people who need us. Both mistake exhaustion for commitment, comfort for care.

We are practicing on ground that will not stay still. Funding shifting beneath long-term studies. Policies changing who receives care and who provides it. Colleagues updating CVs they never expected to open. Students asking whether the field they study will resemble the one they enter.

Caring for ourselves is not merely about feeling good. It sustains us through difficulty. Wellness is not a luxury. It is essential infrastructure, the condition of our capacity to do this work well.

And yet we are trained to defer it. Our profession produces the science that counters this thinking yet still socializes us to violate our own rest. As students, we learned rest could come only after finals, and as professionals, after the last client is seen, grant submitted. The message outlasts the training: Care can wait until the busy season ends. But it never ends. Always one more thing.

Holding steady is a collective discipline. None of us metabolizes this moment alone. We steady one another in consultation groups, in mentorship, in naming what is hard. Tending to our sustainability protects our capacity to keep showing up. A field that grinds down its people cannot keep its promises to the public. Our wellness is not separate from our ethics. It is the condition of them.

I am asking us to treat our steadiness as professional work, not personal indulgence. Say plainly what this

season is costing you because unnamed costs compound in silence. The people who care most are most at risk of overextending; the work's importance becomes the reason they refuse to rest. When a field relies on that, it manufactures inequity out of dedication. Keep your hands in the work but at the pace of endurance, not panic.

The ground will keep shifting. What we owe one another does not. We hold steady not because the storm is small but because we intend to still be standing, together, when it breaks. ■

Those who care most are most at risk of overextending. Pursue a pace of endurance, not panic.





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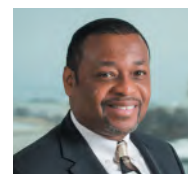


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Challenging Assumptions

The inaugural summit on Black boys' and men's mental health models how psychology can better serve overlooked populations

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](#)

THE INAUGURAL Black Boys and Men Mental Health Summit this past July (see page 20) brought together more than 150 people to reimagine how we support Black boys' and men's mental health. The convening was significant in its own right. But I left recognizing it as something more: an exemplar of the principles needed to guide our work with any population psychology has not effectively understood or served.

Meeting this obligation requires courage and intentionality at every level: as individuals, as a field, and as a society.

■ **As individuals, we cannot be passive participants in a field that inadequately serves any one group.**

We owe active attention to every population we support and study—not only those closest to our own experience or expertise. Throughout my career, I have recognized it is critical to go beyond typical approaches to meet the needs of frequently misunderstood or overlooked populations, like rural and LGBTQ+ communities. Health inequity, whether by neglect or convenience, is not something any of us can accept as someone else's problem to solve.

■ **As a field, we must be willing to reject our own orthodoxies.**

Serving all populations well requires challenging long-standing, often unspoken assumptions we treat as

settled—for example, that the medical model is the singular framework for addressing health, when it does not adequately reach all populations or address the range of factors that shape health and well-being. This also means owning psychology's contribution to approaches that fall short, not just pointing to systems beyond our field. APA endorsing a population health approach is one example of how we move in this direction.

■ **As a society, we must reject perpetuating the stereotypes that directly and indirectly undermine health and well-being.** I rarely talk about Black boys' and men's mental health from a deficit perspective; I talk

about their mental strength and how we build upon it, which opens more opportunities to promote behavioral activation, resilience, and well-being. But rejecting false narratives takes more than understanding. It takes the willingness to see people differently and the courage to transform systems and structures so they reflect people's realities and strengths.

None of this is easy, and none of it is optional. We must be vigilant, intentional, and willing to question what we know. The summit illustrated what this looks like in practice. The work now is to carry that example forward, for this population and for every population psychology is called to understand and serve. ■

Attendees at the inaugural Black Boys and Men Mental Health Summit in College Park, Maryland



In Brief

COMPILED BY ANNA MIKULAK, PhD

People may overlook unlikely events in financial forecasts

When making predictions about financial and economic outcomes, people tend to neglect low-probability events, according to research in the *Journal of Experimental Psychology: Applied*. Findings indicate that people create simplified financial forecasts, treating the most probable events as near certain while underestimating the potential impact of less probable events. In four online experiments, participants read scenarios about a foreign government that was considering increasing its public spending. The scenarios included information about how changes in public spending might affect economic outcomes like stock market values.

For example, in one scenario, participants learned that a 70% chance of increased public spending was unlikely to lead to higher stock value, while a less likely 30% chance of decreased public spending was likely to raise stock value. When asked to predict future stock values, participants, including financial experts, essentially ignored the less probable event—even though it was the one likely to move the market. According to the researchers, additional studies can help us understand this cognitive bias and ways to overcome it, supporting more informed financial and economic decision-making.

DOI: 10.1037/xap0000576



MALTE MUELLER/GETTY IMAGES

Learning about risks before rewards can shape people's choices

When we have to make a decision, we often gather information and weigh the risks and benefits before making it. Does the order in which we learn about risks and benefits matter? A series of experiments in the *Journal of Experimental Psychology: General* suggests most people tend to seek out information about potential risks first, and this preference may shape the decisions they make. In one experiment, 288 participants received \$1 that they could use to buy a lottery ticket. They then selected what to see first, either the lottery amount (reward) or the odds of winning (risk). About 74% of participants opted to see the odds first, and those who did so were less likely to buy a ticket. In another online experiment, people who chose to see risk information first were more likely to withdraw from the decision-making process early, without seeing all the available information. The researchers posit that seeing risks first may make an opportunity seem less valuable and, therefore, less appealing.

DOI: 10.1037/xge0001941

Ingroup bias sways children's preference for native speakers

Research suggests that English-speaking children tend to favor English speakers over people who speak other languages. Researchers wondered if this was because the participants actively liked the people who spoke their native tongue or because they actively disliked people who did not. In a study in *Developmental Psychology*, 82 English-speaking 6-year-olds listened to clips of people

speaking either English or Korean, a language they did not know. They rated how much they liked each speaker and whether the speaker

would know about familiar and unfamiliar objects. Although the 6-year-olds tended to like English speakers more, and considered them more knowledgeable, they did not dislike Korean speakers. Their liking for Korean speakers was associated with how knowledgeable they thought the speakers were. The findings provide evidence for ingroup favoritism rather than outgroup bias as the reason for children's preference for native speakers. The researchers note that early childhood may offer a critical developmental window for shaping inclusive attitudes before outgroup biases take root.

DOI: 10.1037/dev0002198

Math anxiety is linked with social context across countries

Math anxiety is both an individual response and a social phenomenon, according to data from 371,019 15-year-olds in 69 countries. The findings, published in the *Journal of Educational Psychology*, are based on data from the 2022 Programme for International Student Assessment (PISA). Researchers examined how teens' math anxiety related to their own performance as well as to their peers' math anxiety and performance. Analyses indicated that teens with higher levels of math anxiety tended to have lower performance; they also tended to have peers with greater math anxiety and higher levels of performance—a combination that can arise in high-achieving, high-pressure classrooms. These links were especially strong for girls. Students in high-income and high-performance countries tended to have lower math anxiety overall, but their performance was more strongly linked to that of

Teens with higher levels of math anxiety tend to have lower performance.



their peers. The findings suggest that addressing math anxiety may require interventions that go beyond the individual to address broader classroom, school, and social environments.

DOI: 10.1037/edu0001023

For older children, friendship and loyalty go together

Children's understanding of the obligations of friendship appears to evolve over time, shaping the dynamics of their relationships and interpersonal conflicts. In one study, published in *Developmental Psychology*, 124 children ages 4 to 11 heard a story about a child, Alex, who had a kite. Alex declined to let friends and acquaintances use the kite at recess. Older children tended to think that Alex's friends would be more upset by Alex's decision than the acquaintances would be, suggesting that they saw Alex's decision as a breach of loyalty owed to one's friends. In a different study, older children also reasoned in the opposite direction—from feelings back to the relationship: In that study, 10- and 11-year-olds tended to infer that a child who was upset that a peer treated them no better than anyone else was probably a friend rather than an acquaintance, reasoning that only a friend would expect that kind of loyalty; 6- and 7-year-olds did not make this inference.

DOI: 10.1037/dev0002205

Mixed learning may feel easier when it matches learning goals

If you want to learn to differentiate items that are easily confused for one another, research suggests that you may do better if you study items from different categories mixed together rather than studying items category by category. However, learners often find that this mixed, or interleaved, approach feels more difficult. To help it feel less difficult, research in the

Journal of Educational Psychology suggests that giving learners a targeted learning goal—to look for the differences between categories—can help them reap the benefits of interleaved sequences, thereby making the learning feel easier. In one online experiment, 142 participants were tasked with learning the styles of six artists based on 36 landscape paintings. Some participants studied the paintings grouped (“blocked”) by artist (each batch consisted of paintings made by a single artist); others saw the paintings interleaved (each batch consisted of paintings that were each made by a different artist). Overall, participants who studied the interleaved batches were better at matching the artists to their paintings. Furthermore, those

who were told to pay attention to the artists' differences found the interleaved sequence to be less difficult and the blocked sequence more difficult. The findings suggest that aligning a learning goal with the approach may make learning feel easier.

DOI: 10.1037/edu0001028

People often try multiple strategies to regulate emotions

Deploying emotion regulation strategies can help us adjust our thoughts, feelings, and behaviors according to a specific goal or situation. While studies typically examine emotion regulation strategies separately, people often call on multiple strategies at a time or in sequence, a phenomenon called polyregulation. To understand



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polyregulation in everyday life, researchers prompted 179 adults to report on recent events and their responses to those events multiple times a day over a 14-day period. The findings, published in *Emotion*, indicate that the participants used multiple regulation strategies regularly and slightly more often than they used a single-strategy approach. Specifically, they were more likely to use polyregulation when they felt greater negative emotion, when the event felt important, and when they were around others. Although polyregulation was common, participants found it more effortful and more difficult, but not more successful, than single-strategy emotion regulation. Additional studies can clarify whether individual differences in emotion-regulation flexibility play a role in polyregulation use and experiences.

DOI: 10.1037/emo0001684

Identity-based mindsets shape our perception of difficult tasks

When we encounter a difficult task, we might interpret difficulty as a signal of how important and relevant the task is to us, or we might see difficulty as a signal that the task is not worth our time and is thus irrelevant to us. A series of experiments in the *Journal of Personality and Social Psychology* suggests that the two interpretations have different consequences for how we think about time and subsequent goal-related behavior. In two online experiments, some participants thought about a time when they felt a difficult task was important and worthwhile, while other participants thought about a time when they felt a difficult task or goal was not for them and not worth their effort. The participants who thought about difficulty as a signal of irrelevance were more

likely to think about time as a limited resource; they were also less engaged and performed worse on a subsequent reading comprehension task. The findings suggest that the identity-based mindset we bring to a difficult task may influence whether we feel we have time for it and want to engage with it.

DOI: 10.1037/pspa0000487

How do baseball batters coordinate rapid responses in real time?

Skilled baseball players make hitting look easy, coordinating sophisticated sensorimotor responses to variable inputs under incredible time pressure. How does this happen? To find out, researchers designed a realistic virtual reality batting task in which 18 college baseball players hit pitches of varying speeds and locations. The batters wore head-mounted displays and

Research suggests that batters who train on pitches with at least 400 milliseconds from pitch to swing may boost real-time performance.



used regulation bats with 14 reflective markers, allowing for real-time movement tracking. Analyses indicated that the batters consistently hit the ball when they had at least 425 milliseconds (ms) to respond; their hit rate and timing accuracy decreased noticeably when time-to-contact (the time left before the ball reaches the plate) dropped below 400 ms. With faster pitches, batters tended to start their swings earlier but did not shorten the length of their swings, suggesting predictive timing adjustments. While batters' swing trajectories tended to align with the location of the pitch, the trajectories diverged later and more widely with faster pitches, indicating mid-swing corrections. The findings, published in the *Journal of Experimental Psychology: Human*

Perception and Performance, point to rapid integration between predictive processes and visuomotor feedback (the split-second adjustments the batter makes based on what they see), with a threshold at around 400 ms. The researchers suggest that training around this threshold may boost real-time performance.

DOI: 10.1037/xhp0001436

Our ability to recognize things may transcend modalities

Recognizing that something is a chair or a car is typically easy to do, but distinguishing between similar-looking chairs or cars requires fine-grained recognition abilities. Research indicates that people who are good at this type of visual recognition for one category of object tend to be good at it for

other types of objects, suggesting a domain-general ability. Findings in the *Journal of Experimental Psychology: General* suggest this ability may also translate across sensory modalities. Data from 262 participants indicate a strong correlation between participants' ability to recognize and distinguish similar visual objects and their ability to recognize and distinguish similar sounds. While both abilities were linked with general cognitive ability, the correlation between them remained even after the researchers accounted for cognitive ability. Together, the findings suggest that our ability to recognize and discriminate similar items may reflect a more fundamental ability that emerges across modalities.

DOI: 10.1037/xge0001931

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📺 Research suggests that Japanese pop songs increased in both high- and low-arousal positive emotions from 1968 to 2005, while American pop songs decreased slightly in high-arousal positive emotions.

Why does time boost working memory performance?

On working memory tasks, people tend to perform better when they have some time between the items they are supposed to memorize. Is this because the gap allows them to maintain the items they have already seen? Or does it allow for renewal of cognitive resources, enhancing memory for the items they are about to see? Findings from four experiments, published in the *Journal of Experimental Psychology: Learning, Memory, and Cognition*, suggest that time has proactive benefits for working memory performance but only when that time is free and unfilled. In one online experiment, 143 young adults memorized a series of English consonants, each of which was displayed for 300

milliseconds (ms). Some participants encountered a gap in the task containing either a separate spatial reasoning task, a short (500 ms) break, or a long (2,500 ms) break. The longer break seemed to improve participants' recall for consonants that came after the gap, while the separate spatial reasoning task tended to impair memory for the consonants that came before. According to the researchers, the findings suggest that time and cognitive load have interactive effects on working memory.

DOI: 10.1037/xlm0001635

Personality may influence job satisfaction, and vice versa

Personality traits predict certain work outcomes, but research in the *Journal of Applied Psychology*

suggests that work experiences may also predict changes in personality traits. The researchers conducted a meta-analysis of 11 longitudinal studies with data from more than 142,000 participants. The findings indicate that increases in a person's job satisfaction were linked with increased levels of two personality traits: conscientiousness and emotional stability. Increases in conscientiousness and emotional stability were also linked with subsequent increases in job satisfaction. The researchers obtained similar findings in their own 3-year longitudinal study of 2,176 participants in Germany, which indicated that job context also made a difference. For example, higher job satisfaction was more strongly linked with emotional stability for people whose jobs required strong social skills or intensive social interactions. The researchers note that fostering work environments that boost job satisfaction may support a virtuous cycle, enhancing employees' experiences and their job performance.

DOI: 10.1037/apl0001388

📺 Popular songs reflect cultural differences in emotions

Research has shown cultural differences in people's ideal emotions, or how they want to feel: While people from European American backgrounds tend to want to feel high-arousal positive emotions, like enthusiasm and excitement, people from Asian American and East Asian backgrounds favor low-arousal positive emotions, such as feeling relaxed and peaceful. Do these cultural differences translate to specific cultural products like pop music? Using natural language processing, researchers estimated the emotional content of song lyrics from the 100 most popular songs in the United States

and Japan from 1968 to 2005. Overall, the songs featured higher levels of ideal positive emotions than actual positive emotions. Pop songs from the United States had relatively higher levels of high-arousal positive emotions (ideal and actual), while those from Japan had higher levels of low-arousal positive emotions (ideal and actual). The findings, published in *Emotion*, indicate that Japanese pop songs increased in both high- and low-arousal positive emotions over time, while American pop songs decreased slightly in high-arousal positive emotions. Future studies can explore whether these emotional differences also translate to other aspects of songs, such as tempo and key.

DOI: 10.1037/emo0001688

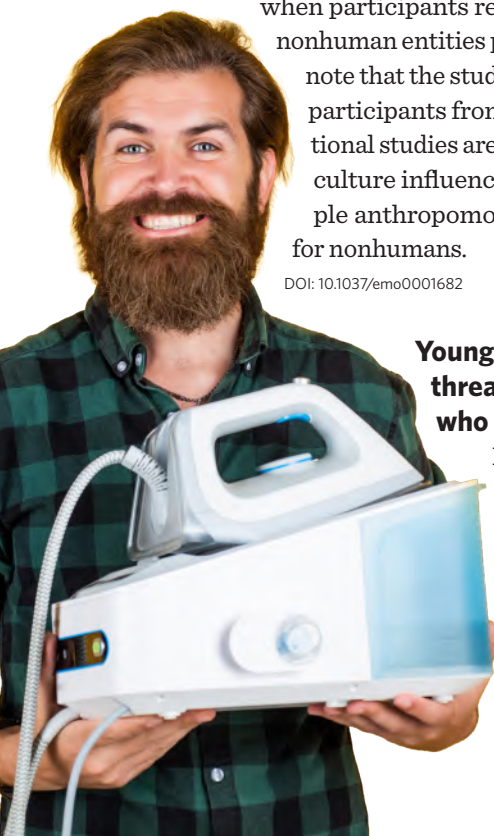
Anthropomorphism may drive our gratitude for things

Have you ever thanked your coffee maker for delivering your daily dose of caffeine or a tree for providing a shady canopy to sit under? While a coffee maker and a tree are unquestionably not human, a series of five studies published in *Emotion* suggests we may feel gratitude for these kinds of nonhuman entities because we anthropomorphize them, endowing them with humanlike agency that includes both intentionality and responsiveness. Study participants who read prompts that anthropomorphized nonhuman entities—including computers, the Amazon rainforest, and the Kuroshio ocean current—were more likely to see these entities as responsive, which was, in turn, linked with their feelings of gratitude and intention to reciprocate. These effects were even stronger when participants read about the benefits the nonhuman entities provided. The researchers note that the study samples were limited to participants from the United States; additional studies are needed to determine how culture influences whether and how people anthropomorphize and feel gratitude for nonhumans.

DOI: 10.1037/emo0001682

Younger adults feel threatened by older adults who feel 'young at heart'

Research in *Psychology and Aging* suggests that younger people may feel threatened by older adults who say they feel considerably younger than they are. In one



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online experiment, 213 participants ages 18 to 34 read vignettes about older adults and rated them on various characteristics. Notably, the older adults' subjective age varied across vignettes—some said they felt their age, while others said they felt 20 or 40 years younger than their age. Participants considered young-feeling older adults to be more competent, but they also saw them as violating stereotypes about how the participants thought older adults should behave, including the idea that older people, regardless of their financial circumstances, should “make way” for younger workers. Stereotype violation led these young participants to like the older person less, want to interact with them less, and see them as less warm. Another experiment with participants ages 18 to 55 yielded similar results, suggesting these perceptions are not limited to the youngest adults. Understanding this mechanism, one more possible driver of ageist behavior toward older adults, may help researchers design interventions to counter it.

DOI: 10.1037/pag0000994

Cooperation is common, and underestimated, around the globe

Around the world, people show an inclination toward cooperation, but the factors that influence decisions to cooperate vary across countries, according to research in *Science*. The findings draw on data from 101,123 people in 125 countries, gathered through the 2021–2022 Gallup World Poll. For this study, pairs of respondents from each country completed a simple cooperation task. Each person would earn some money if they chose to cooperate, but they would earn even more if they did not. If both participants chose to cooperate, additional

money would be donated to fight climate change. Globally, cooperation was high, with about 69% of participants forgoing additional gain in favor of the common good. The decision to cooperate was linked with the belief that one's compatriots would do so, although the strength of this association varied across countries. In general, most respondents underestimated the degree to which their compatriots would cooperate; receiving information that highlighted the common good helped shift these estimates slightly higher. The researchers suggest that locally tailored interventions may boost cooperation estimates even more, bringing people's perceptions in line with reality.

DOI: 10.1126/science.aec9483

Remote jobs linked with more time alone, worse mental health

While the ability to work remotely may hold many benefits for employees, it may also pose risks to their mental health, according to findings in *Science*. Researchers investigated changes in lifestyle and well-being among 588,322 respondents across five nationally representative surveys, comparing data before the COVID-19 pandemic (2011–2019) and after the height of the pandemic (2022–2024). Using a “remotability” index, they determined which of the respondents' jobs could probably be done remotely (e.g., software engineering and marketing) and which could not (e.g., mechanical engineering and nursing). Analyses indicated that people in remotable jobs spent an additional hour alone each workday, on average, compared with people in non-remotable jobs. People in remotable jobs were also more likely to spend the day entirely alone, less likely to engage in social activities after work, and more likely to have signs of

mental distress. Isolation and mental distress were especially likely among people who lived alone. The researchers suggest that studies investigating the relationship between remote work and well-being may help people decide which types of work and work environments are right for them.

DOI: 10.1126/science.aec7671

As tasks become automatic, the brain shifts how it processes them

A study in the *Journal of Cognitive Neuroscience* suggests that the brain circuits supporting object categorization shift with extended practice, moving away from attention-based prefrontal processing over time. Using a mobile app, participants learned how to categorize morphed car images that they had never seen before. The researchers used brain imaging to examine task-related activity when participants were in the early learning phase (1 to 2 weeks of training) and the later learning phase (4 to 8 more weeks of training). While visual areas in the ventral occipitotemporal cortex (vOTC), a region involved in recognizing objects, were tuned to the car shapes in the early learning phase, they became tuned to the car categories in the later learning phase. The connection between the vOTC and the prefrontal cortex, an attention-related region, weakened with extended training, suggesting lower attentional demands, and this was associated with more accurate categorization while performing a second visual task at the same time. In addition, the connection between the vOTC and the premotor cortex, which helps plan movement, strengthened over time. The findings highlight practice-based shifts in brain processing that may help the task become automatic over time.

DOI: 10.1162/JOCN.a.2618

Datapoint

How Much Do Psychology Degree Holders Earn?

Those with psychology doctoral degrees have higher earning potential

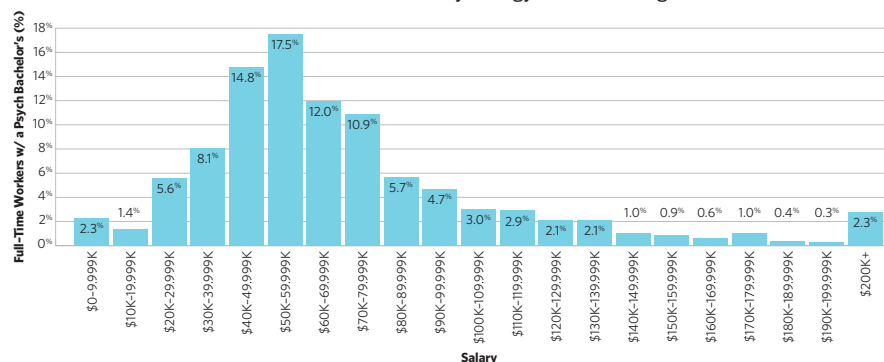
BY CORY PAGE, MPH, MPP, KAREN STAMM, PhD, AND MERON ASSEFA, MS

News on
psychologists'
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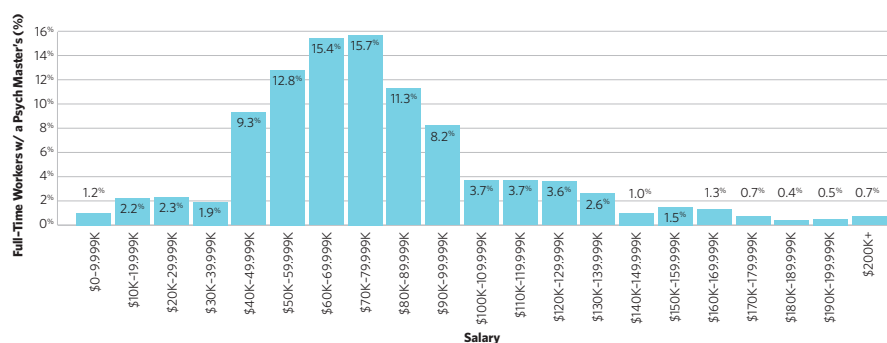
ACCORDING TO THE most recent data available (2023), psychology degrees pay off most strongly at the doctoral level.

- Salaries of individuals with psychology degrees in the United States vary widely, with those who have advanced degrees tending to earn more.^{1,2}
- The median annual salaries of psychology bachelor's, master's, and doctoral and professional degree holders in 2023 were \$60,000, \$72,000, and \$110,000, respectively.²
- About 36% of bachelor's degree holders earned at least \$72,000, the median salary of master's degree holders.
- About 14% of bachelor's degree holders and 16% of master's degree holders earned at least \$110,000, the median salary for doctoral or professional degree holders.
- About 3% of bachelor's degree holders, 1% of master's degree holders, and 7% of doctoral degree holders earned more than \$200,000 per year. ■

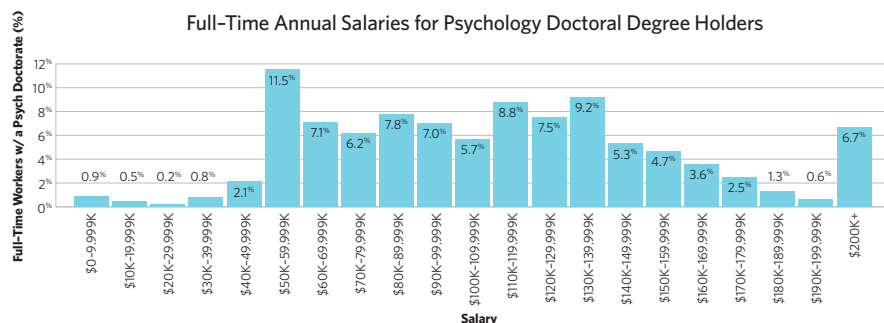
Full-Time Annual Salaries for Psychology Bachelor's Degree Holders



Full-Time Annual Salaries for Psychology Master's Degree Holders



Full-Time Annual Salaries for Psychology Doctoral Degree Holders



REFERENCES

- National Science Foundation, National Center for Science and Engineering Statistics. (2025). 2023 National Survey of College Graduates [public use data file]. <https://nces.nsf.gov/pubs/nsf25322> Note: Data include psychology degree holders working across a wide range of work sectors and occupation types, including psychology- and non-psychology-related jobs.
- This report includes full-time (35 hours per week or more) annual salaries. These salaries have not been adjusted for inflation. Salaries greater than \$200,000 were combined in the last interval. For psychology doctoral degree holders, the \$50,000–\$59,999 salary interval contains a single case with a large weight that represents 3% of the weighted sample size. The inclusion or removal of the single case did not change the median salary and had minimal impact on the 25th and 75th percentiles. The salary intervals represent thousands of dollars (ex. \$10K-19,999K = 10,000-19,999).

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Summit Champions Mental Health for Black Boys and Men

The inaugural gathering, sponsored by five national health and community organizations, champions Black boys and men's mental health

BY EFUA ANDOH

AT A TIME when Black boys and men continue to face disproportionate mental health challenges, 150 clinicians, researchers, policymakers, elected officials, educators, faith leaders, cultural influencers, and youth advocates gathered for the inaugural Black Boys and Men Mental Health Summit in College Park, Maryland. Their goal for the July meeting was ambitious: to create a strengths-based, actionable framework to support the mental health and well-being of Black boys and men. Its cross-disciplinary design was intentional, focusing the conversation on the institutions, relationships, and systems that shape the daily lives of Black boys and men.

"There are things we need to do differently if we are going to reach Black men and boys, not just from a clinical standpoint but from a societal standpoint," said Arthur C. Evans Jr., PhD, APA's CEO. "The only way you can effectively deal with mental health is to have a real understanding of the context in which people are living and have interventions that address the drivers of their mental health challenges."

"This gathering is more than a conference. It is a movement. We have gathered wisdom, built connections, and brought together distinguished figures, but most importantly, we have affirmed a powerful truth," said Todd Jenkins, PhD, APA's acting chief diversity officer, whose team organized the

summit. "When we invest in the mental wellness of our boys and men, we invest in the future of our families, our communities, and our legacy. As our elders taught us, we are our brothers' keepers."

The summit was the brainchild of Evans and fellow CEOs Georges Benjamin, MD, of the American Public Health Association, Daniel Gillison Jr. of the National Alliance on Mental Illness, Anthony Estreet, PhD, of the National Association of Social Workers, and Shawn Boynes, formerly of the American Counseling Association. During a casual dinner in September 2023, they reflected on how their positions as Black men leading major national mental and public health organizations presented a watershed opportunity to elevate the mental health of Black men nationwide. In the months that followed, Marketa Wills, MD, CEO of the American Psychiatric Association and Taft Parsons, III, MD, vice president and chief psychiatric officer of CVS Health, joined their coalition. Their respective organizations sponsored the July summit in partnership with the Prince George's County chapter of 100 Black Men of America—a nationwide civic organization focused on mentoring and empowering Black youth.

The summit unfolded against a difficult policy and economic backdrop—including economic uncertainty, political hostility toward equity, diversity, and inclusion, and decreased

funding for psychological science and health equity research. These add to the long-standing structural disadvantages that impact Black boys and men. Several speakers pointed to the cumulative effects of racial stress and trauma, which lead to poor outcomes for Black men's emotional and physical well-being, as well as their prospects for equitable education and employment.

The research bears this out. Black boys as young as 10 are perceived as older and less innocent than their White peers (Goff, P. A., et al., *Journal of Personality and Social Psychology*, Vol. 106, No. 4, 2014). That pattern follows them into school, where teachers often mislabel Black children as angrier than their classmates (Cooke, A. N., & Halberstadt, A. G., *Cognition and Emotion*, Vol. 35, No. 7, 2021). They are disciplined, suspended, and expelled at disproportionate rates and fed into the school-to-prison pipeline (Brislin, S. J., et al., *Journal of the American Academy of Child & Adolescent Psychiatry*, Vol. 63, No. 12, 2024; Simon, T., & Cofield, D., *Journal of African American Males in Education*, Vol. 17, No. 1, 2026). Suicide rates have also risen significantly in recent years, spiking by 60% for adolescent Black boys between 2001 and 2017 (Robinson, W. L., et al., *Annual Review of Clinical Psychology*, Vol. 18, 2022) and 26% for adult Black men between 2018 and 2023 (Adams,



The coalition of CEOs and masterminds of the inaugural Black Boys and Men Mental Health Summit at College Park, Maryland, in July (from left to right): Daniel H. Gillison Jr., CEO, National Alliance on Mental Illness; Dr. Georges C. Benjamin, CEO, American Public Health Association; Dr. Arthur C. Evans Jr., CEO, APA; Dr. Taft Parsons III, vice president and chief psychiatric officer, CVS Health; and Dr. Marketa Wills, CEO, American Psychiatric Association.

L. B., et al., *American Journal of Men's Health*, Vol. 20, No. 1, 2026). More research is needed to better understand how overlapping forms of discrimination and oppression may be driving this surge. Despite these risks, the summit's focus was not just on adversity but on possibility.

Wills said that she sees this moment as urgent, one that calls for collective impact and change. "Our Black men and boys are our future, yet they face unprecedented challenges. Those in leadership have a responsibility to invest in them so they can thrive. This is a pivotal moment for action. Investing in their mental health today will yield dividends for generations to come."

Drawing on the call of Martin Luther King Jr., PhD, to choose "community" over "chaos," Milton Jones Jr., board chair of both the United Negro College Fund and 100 Black Men of America, urged attendees to strengthen their organizations,

leadership, and partnerships in ways that could produce lasting change.

One of the summit's most powerful conversations paired Evans with author, minister, and Vanderbilt University professor Michael Eric Dyson, PhD. During their discussion, Dyson highlighted key mental health hurdles for boys and men: "You have a shortage of providers. There is an expectation of masculinity that operates in a particular fashion. We also know that stigma associated with pursuing positive reinforcement and affirmation for mental health exists not only in the Black church but more broadly in the culture." Dyson encouraged practitioners to partner with faith communities to position mental health care not only as something to be accessed during moments of crisis but as part of everyday "maintenance and preservation" of mental wellness.

Summit work groups were charged with identifying actionable solutions that could be implemented at scale

across domains and sectors and would result in practices, programs, partnerships, and policies aimed at improving the overall well-being of Black boys and men.

Notable recommendations included integrating mental health conversations into spaces where Black boys and men naturally build community, such as barbershops and churches; engaging with providers and paraprofessionals to build competence in culturally responsive care; and creating networks of healing spaces known as "home places" that can serve as culturally affirming refuges from the discrimination and dehumanization Black boys and men face. The full list of recommendations will soon be published and used to inform policy and system priorities. For example, ideas that emerged from the work groups will help shape inter-generational mentorship models that can be piloted with community-based organizations, such as 100 Black Men of America.

Howard C. Stevenson, PhD, a psychologist and University of Pennsylvania professor, described how he uses his Calculate, Locate, Communicate, Breathe, and Exhale (CLCBE) method to help youth manage and recover from racial trauma. The tool combines mindfulness, interoceptive awareness, and emotion regulation as skills to manage emotional distress throughout the life span. It can also be vital in high-stakes moments. "We can use this with boys who literally get stopped by the cops and don't remember their first move," Stevenson said. Stevenson uses role-play and CLCBE to help prepare youth to survive a variety of common high-stress encounters.

Benjamin reminded attendees that at the end of the day, the goal is not "to create a beautiful report that collects dust on a shelf." To prevent that outcome, Benjamin emphasized the need

for the CEO coalition and its partners to continue to press the issues raised and to track tangible progress. “I think what makes this unique is the serious group of leaders that we have together. Our success will be measured by our continuing to find things that we can work on collaboratively together.”

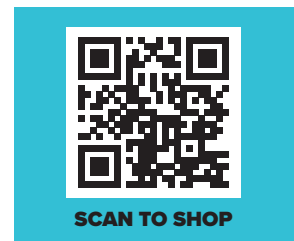
Gillison struck a hopeful note as the summit concluded. “Young boys and men can see that the 100 Black Men of America, APA, and other organizations are coming to the table,” he said. “That we care, are engaged, and want the best for them. If we can give them the tools to see the best of themselves and to take care of their full selves—not just the physical but also the mental—this initiative is going to be an incredible success.” ■



Summit hosts, presenters, and attendees pushed for change at the inaugural event.



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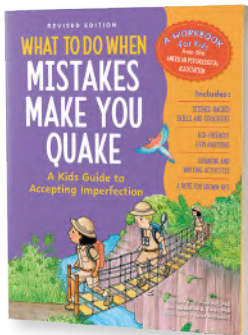
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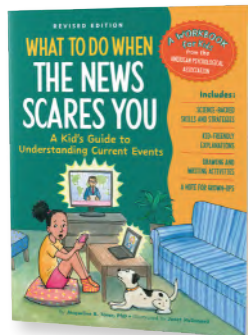
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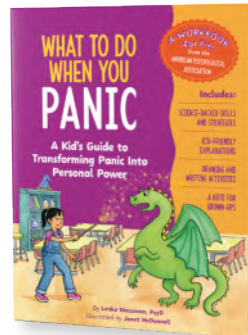
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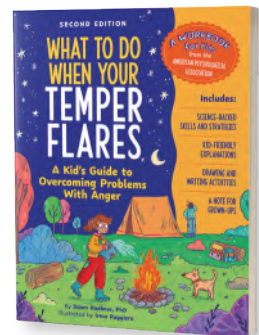
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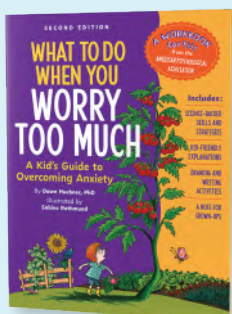
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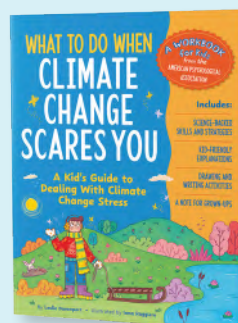
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Why We Keep Falling for Fraud

Psychologists are looking more closely at how fraud spreads and the psychological interventions that can help

BY ASHLEY ABRAMSON

FRAUD IS AN increasingly widespread risk. Nearly 4 in 10 American adults report having been a victim of fraud, and many more adults (58%) say they worry about becoming a target, according to a 2026 AARP research report. The *2025 Internet Crime Report* from the U.S. Federal Bureau of Investigation (FBI) shows cyber-enabled crimes defrauded Americans of nearly \$21 billion in 2025, a \$4 billion increase from 2024. Banks have been stepping up their efforts as front-line defenders, interrupting suspicious withdrawals and transfers—reflecting a growing recognition that fraud has outpaced traditional prevention measures and has far-reaching impacts on individuals' finances and well-being.

Psychologists posit that many victims experience lasting mental and emotional effects. “It’s often a very traumatic experience, and our

culture tends to blame the victim,” said Stacey Wood, PhD, a professor of psychology at Scripps College in Claremont, California, where she conducts research on financial scams and fraud, specifically on the cognitive processes that underlie financial and legal decisions. “I frequently see a constellation of symptoms in people who have been defrauded, including negative thoughts about their own capacity, anxiety, depression, and worsened relationships with their support system,” she said. And research suggests that being defrauded once is a risk factor for a second or third round of fraud, which can compound the financial and emotional effects (DeLiema, M., et al., *Journal of Elder Abuse & Neglect*, Vol. 36, No. 3, 2024).

Experts agree that more research and systemic change is urgently needed to blunt the rise and growing cost of these crimes, as well as more awareness among psychologists of the lasting effects of fraud on people's mental health. More research is also needed on ways to bolster people's resilience and lower their susceptibility. “The real magic can happen if there are organizations involved with prevention,” said Yaniv Hanoch, PhD, a professor of decision science at the University of Wolverhampton in the United Kingdom who studies decision-making and risk-taking. The rapid acceleration of fraud in today's technological landscape exposes the limits of these organizations' systems,

which still rely heavily on individual vigilance, Hanoch said. “Social networking sites, banks, telecommunication companies, and governments should carry the heavy burden.”

Why fraud is rampant

Anyone can commit fraud, but today many large-scale scams are led by criminal organizations that use layered psychological techniques to draw in vulnerable victims. “It’s not a mom-and-pop operation,” said Hanoch. “It’s organized crime, often led by big players in the field and terrorist organizations.” Federal agencies such as the U.S. Department of Treasury and the FBI have reported extensively that terrorist organizations often fund their operations through criminal activity that includes credit card and check fraud. Compounding the issue, technology “makes it easier for fraudsters to operate at scale,” said Christopher Chabris, PhD, a professor and the director of decision sciences at the Geisinger Research Institute in Danville, Pennsylvania, and coauthor of *Nobody's Fool: Why We Get Taken In and What We Can Do About It*.

The smartphone is a single point of entry for many scammers, who can easily reach victims through calls, texts, and email via one device most people always carry with them. In recent years, artificial intelligence (AI) has proven an especially powerful fraud accelerator. The FBI in its *2025 Internet Crime Report* noted that \$893 million of total

AT A GLANCE

- Research shows that scammers stole more than \$21 billion from Americans via cybercrimes in 2025, a marked increase from the previous year.
- Technological advancements, strategic targeting of individuals, and psychological principles known to influence decision-making are key factors in the proliferation of fraud.
- Though psychology has stayed on the periphery of fraud prevention, psychologists can help by consulting with organizations, normalizing patients' experiences and building better decision-making skills.



As scammers exploit technology to steal billions, psychologists are advising organizations on fraud prevention and helping people think clearly under pressure.

fraud losses that year were linked to AI. *The New York Times* reported in May 2026 that fraudsters often use AI to create fake ads and web stores purporting to sell in-demand brands and items. Criminals can more easily conduct live video or audio calls using a realistic avatar and deepfake voice to impersonate trusted individuals and institutions. According to a 2026 press release from the Federal Trade Commission, imposter scams comprised 1 in 3 reported scams in 2025: People reported losing \$3.5 billion to such scams, with almost \$1 billion lost to bank and government impersonators.

Personal details posted on social media also allow scammers to quickly find sensitive information that can make a scam more believable. A common one is posing as a family member who says they need an immediate wire transfer to get out of trouble, said Hanoch. “If you’re active online, [criminals] can harvest information easily, like your name, family members, and where you travel.”

Psychologists who study decision-making and fraud understand that scammers are relying on established cognitive and psychological

principles, including truth bias, to exploit potential victims. Truth bias describes people’s default assumption that a source or message is credible, especially when we are distracted, rushed, or working with limited information. “We need to believe people for society to function,” said Dan Simons, PhD, a professor of psychology at the University of Illinois Urbana-Champaign and coauthor with Chabris of *Nobody’s Fool*.

Criminals’ use of urgency and time pressure is deliberate because it can interfere with a person’s reasoning ability, Simons said, instilling anxiety that causes people to act before they take a step back to examine the situation (Kelley, N. J., et al., *Computers in Human Behavior*, Vol. 142, No. 107648, 2023). Being forced to make decisions quickly often results in poor performance—in this case, giving money to a criminal.

Distraction often adds another variable to the already complex equation. Scammers tend to strike during times of day when people are likely to be busy, hoping they will have less attentional capacity to consider potential risks. In one qualitative study, interviewed

scam victims reported they were contacted when they were tired, distracted, or busy with work (DeLiema, M., et al., *Victims & Offenders*, Vol. 18, No. 7, 2023). When someone’s working memory is occupied with another task, Chabris said, they are more likely to remember statements—even completely made-up ones—as true rather than as unknown or false.

In one study, participants judged short videos of a speaker’s statements labeled “lie” or “truth.” When a distracting task added cognitive load, they leaned toward calling statements “true,” but only when forced to choose. Given the option to say they were unsure, that bias disappeared (Street, C. N. H., & Kingstone, A., *British Journal of Psychology*, Vol. 108, No. 3, 2017). “In our book, we advise readers to give more consideration to remaining uncertain about things rather than jump to tagging them as true or false,” said Chabris.

Scammers also create vulnerable emotional states to reel people in. Excitement about a prospective opportunity, whether earning fast money, getting a job offer, or meeting a potential date online, can temporarily cloud judgment and lead to irrational decisions. Inciting fear—for example, “If you don’t pay the IRS now, you’ll be arrested”—can also interfere with rational thinking, said Hanoch.

Fraud tactics can include drawing out details about a victim’s personal history, including painful or traumatic experiences, in order to identify emotional vulnerabilities scammers can use to manipulate the person more effectively. Martina Dove, PhD, a psychologist who studies scam techniques and vulnerability and the author of *The Psychology of Fraud, Persuasion and Scam Techniques: Understanding What Makes Us Vulnerable*, recently analyzed scam manuals for Reuters to

help uncover the psychological tactics scammers use to identify vulnerable individuals and build trust through tailored manipulation. “They’ll say, ‘If a victim tells you this, then you need to be this type of person to convince them,’” she said.

Another element of personalization, Simons said, involves introducing scams that are consistent with a person’s expectations. For example, a scammer may target a university professor who is giving an invited address at an out-of-town conference by posing as the organization arranging travel for the conference and collecting credit card information for incidentals.

In one study, a scam victim reported they had filed a whistleblower claim with the Internal Revenue Service (IRS) to report their employer. Later, that participant received a call from an IRS imposter who said he needed to purchase gift cards to process the whistleblower claim (DeLiema, M., et al., *Victims & Offenders*, Vol. 18, No. 7, 2023).

Understanding vulnerability and risk

There is no single personality trait, cognitive habit, or life phase that makes one person vulnerable to fraud and another immune. “There are so many cases of knowledgeable, intelligent people, even experts in psychology and finance, who have been totally taken in by the right scam,” said Chabris.

Cognitive decline among older people is one (*Journal of Alzheimer’s Disease*, Vol. 49, No. 3, 2015). “There could be loss of awareness of being in a scam situation or loss of memory about what a scam is or what it could look like,” said Duke Han, PhD, a professor of psychology, family medicine, gerontology, and neurology at the University of Southern California.

Increased loneliness and social isolation, both common among older

adults, also play a role; elders may pick up the phone more readily or unknowingly lean into the truth bias, hoping to make a social connection. Older people, Han said, are also targeted more because of their cumulative wealth compared with younger counterparts.

Yet young adults are increasingly frequent targets and scam victims, comprising 44% of total scam reports in 2023 (California Department of Financial Protection and Innovation, 2026). Han posits that this demographic’s high social media use and more limited resources and financial experience may be contributing factors. Lack of awareness, Hanoch said, also plays a role—neither young people nor parents and teachers think of young adults as potential fraud targets, so they are less likely to put up safeguards and be cognizant of the possibility the person on the other side is a scammer.

For example, scammers frequently reach out to recent college grads via text message to collect “unpaid tuition”

or offer a cheap apartment and ask to collect a month’s rent without an in-person tour. According to Marti DeLiema, PhD, an assistant professor of social work at the University of Minnesota and the associate director of education at the university’s Center on Healthy Aging and Innovation, scammers also often target job seekers. A common approach involves contacting LinkedIn users, conducting a fake virtual interview, and then convincing them to send money for an application fee or job-related equipment for an opportunity that does not exist.

In her research, DeLiema also found that those experiencing financial fragility—having little to no access to emergency funds—had an increased risk of falling prey to “get rich quick” and other opportunity-based scams (*International Journal of Consumer Studies*, Vol. 47, No. 3, 2023).

Being part of an affinity group—such as certain religious or cultural groups—can also increase vulnerability.

PROTECT YOURSELF

GENERAL ADVICE FOR AVOIDING FRAUD

Verify independently. No matter how credible a potential scam seems, independently verifying credentials is critical. “If someone is purporting to be calling on behalf of a collection agency, independently verify if the contact information is correct or true, and if it’s really the agency contacting you,” said Duke Han, PhD, professor of psychology, family medicine, gerontology, and neurology at the University of Southern California.

Rather than calling the number provided by the caller, verify it through the organization’s official website or another reliable source.

Add friction. Scammers aim to keep victims locked into the conversation so they cannot think logically. Slowing down can disrupt impulsive decision-making. “They narrow your vision as much as possible so you can only hear their voice,” said Yaniv Hanoch, PhD, professor of decision science at the University of Wolverhampton in the United Kingdom.

Rethink the old red flags. Traditional advice, like watching for spelling errors, does not always hold up in the age of artificial intelligence since tools like ChatGPT can generate polished, error-free fraudulent messages, said Martina Dove, PhD, author of *The Psychology of Fraud, Persuasion and Scam Techniques: Understanding What Makes Us Vulnerable*. Instead, learn about common scams and techniques through reliable resources like AARP.

DeLiema has found that scams often circulate through like-minded communities, so scammers may intentionally target members of these groups so that misinformation spreads easily. Research suggests pyramid schemes in particular flourish in areas with identifiable affinity groups, such as religious communities, and specific age groups, such as recently retired people (Bosley, S., & Knorr, M., *Journal of Financial Crime*, Vol. 25, No. 1, 2018).

Overconfidence is another recognized risk factor; in one study, it was one of the strongest predictors of online fraud victimization among adults (Balakrishnan, V., et al., *PLOS One*, 2025). “The more confident you are in your ability to thwart attempts, the more likely you are to be a victim, because you won’t put up guards to protect yourself,” said Hanoch. Dove’s research has also shown that certain behavioral tendencies, such as impulsivity and lack of vigilance, can make people more vulnerable (master’s thesis, University of Portsmouth Department of Psychology, 2018).

Psychologists’ role in fraud prevention

As the fraud landscape grows more complex, psychologists can help play a role in education, advocacy, and supporting victims, whether building awareness of scams among patients and clients or consulting for financial and other organizations. “We need organizations to hire more psychologists to serve as fraud and prevention specialists to look for anomalies, create secure infrastructure, help people understand scam psychology, and make communication about scams more engaging,” said Dove, who has been consulting for nonprofits and other organizations for more than 10 years, applying her research expertise to generate systemic strategies for

scam prevention. For one organization, she developed communication programs focused on scam prevention as well as guidance for family members and friends supporting someone being actively manipulated by a scammer.

Psychologists can also help build awareness of the myriad ways that experiencing fraud can impact people and educate themselves on the best way to talk through risk and suspicious requests (being aware of common scams can help; AARP has a robust online resource). According to Hanoch, psychologists can also create prevention programs that can be implemented in schools.

For those with certain risk factors, anything that addresses the risk factor can mitigate fraud. For example, prompting socially isolated older adults to spend more time with others could reduce the likelihood of falling for a scam. Encouraging friends and family to stay grounded can help counter some people’s tendency to fall for a too-good-to-be-true scenario.

Caution with social media use can also decrease exposure to fraud and make it more difficult for scammers to find sensitive information. “Certain online activities and behaviors can increase the risk of fraud, like posting a lot of personal information and accepting follow requests from people you’ve never met,” said DeLiema.

Mental health professionals can also be mindful about supporting people who have been impacted by scams. There is often very little restitution for scam victims: According to the Global Anti-Scam Alliance’s 2024 *Global State of Scams* report, just 4% of fraud victims receive back any or all of their stolen money—which can significantly affect people’s mental health, contributing to depression, anxiety, and post-traumatic stress. “Even if a judicial system awards damages

proportionate to the financial impact, they don’t often recognize the psychological impact,” said Hanoch.

Mental health professionals should also be attentive to related dynamics, such as damaged relationships and guilt over the impact on loved ones. Victims may have borrowed money from friends or family or unknowingly drawn a loved one into a fraud, which can significantly strain those relationships. They may suffer from anxiety about finances or depression related to questioning their financial responsibility or decision-making ability.

Because every scam and victim are different, there is no single, evidence-based treatment. On a practical level, patients may benefit most from encouragement and support in building financial literacy or credit recovery skills. DeLiema advises adopting a nonjudgmental, normalizing communication style while borrowing from trauma-informed modalities used to treat grief, relationship issues, substance use or gambling disorders, domestic violence, or other chronic victimization populations. “We need to move out of this mindset of blaming victims for their victimization and recognize fraud for the sophisticated crime it is,” she said. ■

FURTHER READING

The scammers’ psychological warfare: A call to arms

Hanoch, Y., et al.
Psychological Science in the Public Interest, 2026

Unraveling financial exploitation in older adults: A multidimensional approach

Weissberger, G., et al.
Innovation in Aging, 2025

Caregiving Is a Bigger Burden for Some Than Others

Women and low-income adults are more likely than men and higher-income adults to care for aging parents and or spouses, and women are more likely than men to say it takes an emotional toll

BY TORI DEANGELIS



Source: Parker, K. (2026, February 26). *Family caregiving in an aging America*. Pew Research Center. Survey of 8,750 U.S. adults conducted Sept. 2-8, 2025. www.pewresearch.org

24%

Percentage of U.S. adults **with a parent age 65 or older** who consider themselves **caregivers** for that parent, regularly helping them with errands, housework or home repairs, health care management, financial management, and personal care. Similarly, **25%** of U.S. adults say they're caregivers of an **aging spouse or partner** who is 65 or older.

39%

Percentage of **lower-income adults** who are caregivers of an aging parent, spouse, or partner, compared with **23%** of middle-income adults and **16%** of upper-income adults. Meanwhile, **28%** of women consider themselves caregivers of an aging parent, spouse, or partner, compared with **23%** of men.

56%

Percentage of men and women caring for an aging parent who say that helping that parent with daily tasks has had a **positive impact on their relationship**. Another **16%** say the impact has been negative, while **28%** were neutral on the topic.

47%

Percentage of women who say caring for an aging parent has had a **negative impact on their emotional well-being**, compared with **30%** of male caretakers of an aging parent. Similarly, **38%** of female caretakers say this caregiving has taken a negative toll on their **physical health**, compared with **26%** of men.

4 Questions for Andrea Bonior

Former *Washington Post* Baggage Check columnist Andrea Bonior, PhD, is using her platform to share psychological insights that can improve people's lives and change how they see things

BY ZARA ABRAMS

WHEN SHE CHOSE a career in clinical psychology, Andrea Bonior, PhD, didn't expect to find herself discussing a tweet from Sesame Street character Elmo on CNN. But in the 2 decades since she completed her degree, Bonior built a media presence that has carried her work far beyond the clinic and the classroom. After 15 years of writing *The Washington Post's* Baggage Check advice column, she is now a widely featured expert on mental health, relationships, current events, and more.

Bonior appears regularly on local and national TV, radio, and podcasts; is often featured in the *The New York Times*, *USA Today*, *Vox*, and dozens of other outlets; and has authored three popular press books. She also runs a private psychotherapy practice in Bethesda, Maryland, and is a teaching professor in the psychology department at Georgetown University.

She uses her public moments to share insights that can improve people's lives or change how they see things. That could be a simple tip for dealing with a difficult colleague, a road map to authentic adult friendships, or warning signs of suicide risk in a loved one.

We spoke with Bonior about her work as a science communicator and the joys and challenges of appearing in the public eye.

How did your media work begin and evolve?

During my doctoral studies at American University, I wanted to engage a part of myself that didn't fit into my coursework, so I started writing an advice column in a web magazine for congressional staffers on Capitol Hill. That led to a very exciting opportunity: I was asked to write the Baggage Check mental health advice column when *The Washington Post* launched their free commuter newspaper, *Express*. At the time, I was completing my postdoc, so I assured my training program that my words were my own and the advice wasn't a substitute for one-on-one care.

At one point, a literary agent contacted me about writing my first book. A few years later, one of my first national TV appearances came through a former student who was a producer on *The Lead with Jake Tapper*. Things kind of snowballed from there. Media begets media once you've shown you can go on set, speak clearly, and connect with an audience.

Your media work spans a broad range of messages, tones, and formats. How do you shift between those while maintaining credibility?

It helps to have a clear guiding principle across everything I do: How can I give people a new insight in a scientifically sound way?

From there, I tailor my message to the audience and the moment, adjusting tone and level of detail as needed. A 2-minute CNN segment, a wellness podcast, and a keynote speech to an industry group each call for a different balance of depth and accessibility.

Another important boundary: I don't speak outside of my expertise, which means I turn down a lot of opportunities. Once people know you as a psychologist, there's a tendency to assume you can comment on anything related to mental or behavioral health. But just like in my clinical practice, I have to work within my expertise. Having taught students about psychological disorders for almost 2 decades, I can explain the basics of *DSM [Diagnostic and Statistical Manual of Mental Disorders]* diagnoses in a television segment, but that doesn't mean I'd position myself as an expert witness on psychosis.

It also means holding firm ethical boundaries—for example, I won't speculate on a diagnosis of a public figure, even though that's a request I get all the time. It can be tempting, especially because you develop relationships with producers and journalists who trust your opinion and want you to go that little bit further.

What challenges can come with increased public visibility?

Our words can sometimes be used against us. Last year, I gave a print interview about how the cuts to the federal workforce were affecting people in the Washington, D.C., area from a mental



PHOTO BY SCOTT SUCHMAN

health standpoint. I talked about how it was—and still is—a devastating and uncertain time for those who have dedicated their lives to government, humanitarian work, and the sciences. I used a particular phrase: “people whose way of life feels under attack.” To me, “way of life” meant values and sense of purpose. But a conservative news outlet homed in on that phrase and turned it into a story about Democrats getting booted off the government’s gravy train. That’s not what I meant or said, but it served that news outlet’s purpose.

You do need a thick skin—and sometimes I struggle with that. Years of writing an advice column helped me learn to handle dissenting opinions. When given respectfully, I welcome critical responses, because I’ve learned a lot from them. But there’s a difference between constructive criticism and hate mail. A few years ago, I wrote an article about helping parents raise children with healthy attitudes toward consent. I got some disturbing hate mail about it, which I always file away in a special folder in case it’s ever needed.

Any therapist has to think about their own boundaries, physical safety, and privacy. But when you’re in the public eye, that turns up the volume immensely—especially at a moment when it somehow feels political to be promoting human values like kindness, empathy, and curiosity.

What lessons and advice about media work would you offer to others who are getting started?

Many of the skills I’ve developed as a clinician and as a teacher have translated into my media work. I learned a lot about my speaking patterns while training to become a therapist when my supervisor reviewed recordings of my sessions. I still find it difficult to watch myself, but being curious about your strengths and deficits can help a lot. For example, if you’ve been invited to appear on a podcast, try recording yourself and listening for verbal tics, like repeating the word “um.” Years and years of teaching 20-year-olds have also helped me see that I can share as many journal articles as I want, but I need to occasionally use humor and real-world examples to make my points hit home.

There are some basics I’ve learned: Wear solid colors on TV, avoid jangly necklaces around the microphone, and stand when recording audio so your voice projects. That’s the simple stuff. The harder work is getting comfortable with yourself and loosening the grip of perfectionism. A lot of times when people get nervous, it’s because they’ve set such high expectations for themselves.

If you’re starting to do media work, think about how you can incorporate your personality. We do need to maintain some boundaries, but letting your own strengths shine through can really enhance this work. Ultimately, you’re making a human connection with the audience—and in this age of uncertainty about AI, those organic, human strengths matter more than ever. ■

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What should the defense know about its reliability and role in criminal prosecutions?

BY JONATHAN P. VALLANO, UNIVERSITY OF PITTSBURGH AT GREENSBURG, AND
BRANDON L. GARRETT, DUKE UNIVERSITY SCHOOL OF LAW

LAW ENFORCEMENT AGENCIES regularly rely on facial recognition technology (FRT) to link images of faces from CCTV footage to possible suspects. It has increasingly become a standard part of investigations; a quarter of U.S. agencies had access to FRT by 2016 (Georgetown Law Center on Privacy & Technology, 2016). By 2024, two million law enforcement searches per year used one vendor alone (*The Record*, June 27, 2024). But only a handful of judges have ruled on what procedures should be in place when FRT is used to identify offenders despite the National Academies of Sciences, Engineering, and Medicine (NAS) highlighting concerns regarding its reliability in criminal prosecutions (NAS, 2024).

Defense lawyers and courts often have no idea law enforcement used FRT to identify a suspect—one reason legal challenges to it remain rare. Few states or localities require disclosure. So, it was especially significant when a Maryland appellate court in *State v. Johnson* (2025) addressed whether the prosecution had an obligation to disclose to the defense that law enforcement initially identified the defendant by using FRT. Only two courts had previously ruled on this issue, with the New Jersey appellate court in *State v. Arteaga* (2023) ruling in favor of disclosing its use to the defense and a Florida appellate court in *Lynch v. State* (2018) ruling against.

In *Johnson*, an individual assaulted a retail employee and stole money from a cash register. To identify potential suspects, law enforcement used surveillance camera footage to place a still image of the perpetrator into an FRT program, which they said produced one suspect: Craig Johnson. Typically, FRT programs are designed to produce lists of candidates.

A search of Johnson's home turned up no physical evidence linking him to the crime or the assailant's distinctive jacket and jeans, though the detective thought a pair of sneakers resembled the assailant's. A week before trial, the defense learned FRT was used to develop Johnson as a suspect and argued that the late disclosure was prejudicial and that a postponement, not a dismissal, was the appropriate remedy. Having already been incarcerated for a year, Johnson opted not to postpone.

At trial, the victim identified Johnson with what she described as 100% certainty. Johnson was convicted but later appealed on the grounds that the prosecution had committed a prejudicial discovery violation by failing to timely disclose that law enforcement had used FRT and how. The Maryland appellate court agreed, explaining: "it would set a terrible precedent if we allowed the state to use FRT to identify Mr. Johnson, disappear all the discoverable bases for that identification, and introduce the identification and its fruits all the same."

Notifying the defense about the use of FRT would then allow the defense to examine—and potentially challenge—its reliability, including how it was used in their case. Although

FRT can be highly accurate under controlled conditions, research shows that it is far from foolproof. Its reliability can be widely variable in real-world situations depending upon the FRT program used, the database or algorithm it uses, and the quality of the input (NAS report; see also Center on Privacy & Technology at Georgetown Law, 2022). Numerous false arrest suits have been filed by people wrongly identified by FRT. Further, an FRT search does not occur in a vacuum:

Law enforcement must still examine the candidates and decide whether any is enough of a "match." Because people are involved in these judgments, bias unavoidably enters the process. And unlike many eyewitness identification procedures, this FRT search process is not informed by clear scientific standards.

It seems inevitable that AI and other emerging tech will increasingly generate evidence used in criminal investigations. Yet it is difficult to imagine a future where such programs are 100% accurate and devoid of human error in all real-world settings. To prevent miscarriages of justice, law enforcement's use of FRT needs more transparency. More research is needed on how reliable different FRT systems are in real-world conditions, how human judgment influences and is influenced by FRT, and on scientifically sound methods for conducting FRT searches, assessing results, and sharing FRT images with eyewitnesses and in court. ■



AT ISSUE

Should the use of FRT be disclosed to the defense to examine its reliability?



The prospect of clear-cut answers sitting in a patient's DNA may be especially appealing in psychology, a field that has long diagnosed conditions via observation and inference.

CE Corner

Building Genetic Literacy to Help Patients Navigate Results, Risk, and Concern

BY LUCY TU

BY THE TIME she turned 30, Nancy* had spent much of her young adulthood wondering whether she might develop bipolar disorder. Her mother had been formally diagnosed in her early 30s, and Nancy knew enough about genetics to understand that family history was meaningful but not enough to understand what that history meant for her own future. When she found a direct-to-consumer genetic test that promised to estimate her likelihood of developing the condition, she paid \$199 and sent in a saliva sample.

Five weeks later, she logged on to the company's online portal to retrieve her results. A two-toned infographic loaded on screen, showing 100 human stick figures, just over three fourths shaded navy blue. Above them appeared a number: a "polygenic risk score," which, the accompanying text explained, placed Nancy in the 78th percentile for genetic risk of bipolar disorder. A footnote clarified that this did not mean Nancy was certain to develop the condition. But what did it mean? she wondered.

More than 250 companies in the United States now offer expansive genetic screening panels directly to consumers; a growing number of these companies claim to assess users' risk of developing mental health conditions or predict which treatments they are most likely to respond to (Wysocki, K., & Osier, N., *Journal of the American Association of Nurse Practitioners*, Vol. 31, No. 3, 2019; Valero, M. V., *Monitor on Psychology*, Vol. 57, No. 4, 2026). For consumers like Nancy, who was her mother's primary caregiver during her final years, these

tests have an intimate appeal. "Having seen what she went through and been by her side during a lot of her most difficult episodes, I really needed to know whether I'd end up having the same illness," Nancy said.

Yet the predictive power of commercial genetic tests like the one Nancy took is contested. The International Society of Psychiatric Genetics (ISPG) has cautioned that many companies' genetic risk estimates are unvalidated and cannot reliably predict whether any individual will develop a condition ("Genetic Testing and Psychiatric Disorders: A Statement from the International Society of Psychiatric Genetics," ISPG, 2019). Increased access to genetic assessment is a double-edged development, according to Aaron Besterman, MD, a child and adolescent psychiatrist who serves as the medical director of the Laura Rodriguez Research Institute. Although genetic testing has useful applications, "in many cases, patients are left to manage genetic information on their own, some of it very unhelpful or even harmful," he said.

Even as the validity and value of some tests remain unclear, the impacts of genetic information are poised to become more visible in psychology. Last July, Florida became the first state to launch a free, voluntary, whole-genome sequencing pilot program for newborns (Sunshine Genetics Act, Fl. Code Ann. § 1004.4211, 2025). The National Institutes of Health has also funded the nation's first multistate genomic newborn screening initiative, set to begin recruitment this year.

CE CREDITS: 1

Learning objectives

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

1

Differentiate the clinical uses and limitations of different types of genetic testing in psychiatric and neurodevelopmental care.

2

Apply communication strategies to explain probabilistic genetic findings, address genetic determinism, and preserve a nuanced understanding of patient risk and prognosis.

3

Identify major ethical, legal, privacy, and equity considerations associated with genetic testing in mental health care.

For more information on earning

CE credit for this article, go to

www.apa.org/ed/ce/resources/ce-corner.

*Name changed at patient's request to protect privacy

KEY POINTS

1

The clinical value of genetic testing in mental health varies by test and condition. Polygenic risk scores may be useful for population-level research, while testing for rare pathogenic variants can help guide medical monitoring and support for some neurodevelopmental conditions.

2

Psychologists need sufficient genetic literacy to support patients who are impacted by genetic testing results, particularly as genetic testing becomes more common in mental health care.

3

Genetic assessment raises significant ethical, legal, and social concerns. Psychologists should recognize ancestry-related limitations in genomic data, unequal access to testing, privacy risks, the limited scope of genetic nondiscrimination laws, and the field's historical relationship with eugenics.

Alongside the expanding commercial presence of genetic testing laboratories, these public health initiatives signal that genetic assessment is moving closer to the center of medical practice, including in mental health care.

In psychology, though, a genetic panel that can reveal something biologically meaningful may have little to offer in practice. “Genetic information can be easily misinterpreted. For instance, you may have a genetic change that increases your risk of Alzheimer’s disease, but many patients will interpret that as, ‘I’m going to get Alzheimer’s.’ And that can be terrifying for patients,” Besterman said. As these genetic tests move from research labs and consumer websites into patients’

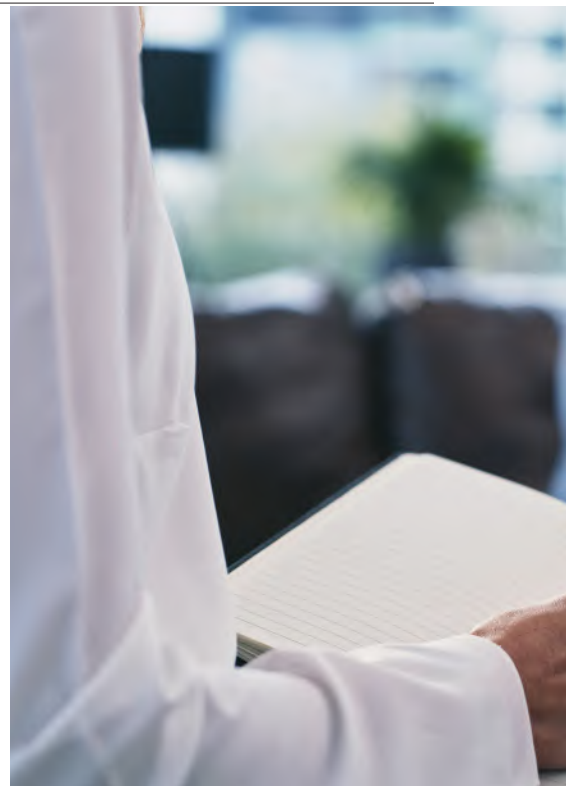
lives, psychologists will be increasingly called on to support patients grappling with the results.

Current uses and limitations of genetic testing

Genetic tests make the future feel like a document you can read. For some conditions—certain cancers, Huntington’s disease, cystic fibrosis—these results are more interpretable. For many mental health conditions, genetic testing is something closer to a weather forecast written in a language that we are still learning to translate.

The prospect of clear-cut answers sitting in a patient’s DNA may be especially appealing in psychology, a field that has long diagnosed conditions via observation and inference. However, most mental health conditions are multifactorial disorders, resulting from interactions among many genes, environmental influences, and lifestyle factors (Grotzinger, A. D., et al., *Nature*, Vol. 649, No. 8096, 2026). There is no clean cleave between the biological and the biographical; a person’s genes and their life experiences are too entangled to assign a mental health condition to one or the other. “Many traits have some kind of genetic contribution. The harder question is, Does this particular genetic finding tell me something I can use for my patient? If it doesn’t do that, you have to be careful about treating it as more meaningful than it is,” Besterman said.

One of genetic testing’s best-known uses is disease-risk prediction. In psychology, its clinical value depends heavily on the condition in question and the type of genetic information being used. Common genetic variants—the kind that direct-to-consumer tests tend to emphasize—are small, widely shared differences in DNA that nudge one’s risk of a particular disease. Each variant shifts the odds by a fraction.



Aggregate enough of them into what scientists call a “polygenic risk score” and the combined result can point to population-level patterns in disease prevalence, flag demographic groups with elevated risk, and help researchers understand the genetic architecture of complex disease.

However, for an individual patient sitting in a clinician’s office, that number’s utility has sharp limits, said Carrie Bearden, PhD, a professor of psychiatry, biobehavioral sciences, and psychology at the University of California, Los Angeles. Professional societies, including the ISPG and the American College of Medical Genetics and Genomics (ACMG), have not endorsed polygenic risk scores for routine use in individual psychiatric care. “A high score can’t diagnose a disorder, and a low score can’t rule one out,” said Bearden.

In contrast, genetic testing for rare genetic variants offers more concrete information about some neurodevelopmental conditions. Unlike common variants scattered across the genome



Psychologists do not need to interpret genetic reports themselves, but they do need enough genetic literacy to help patients separate useful information from noise.

in the thousands, these genetic mutations have stronger, more traceable effects on a person's risk of specific diseases. For example, rare pathogenic variants can be identified in a substantial share of individuals with autism spectrum disorder or intellectual disability, helping clinicians triangulate the root cause of a person's condition. For children with developmental delays, the ACMG recommends *exome sequencing*, which homes in on the small portion of DNA that contains instructions for making proteins, or *genome sequencing*, which scans the entire DNA instruction manual (Manickam, K., et al., *Genetics in Medicine*, Vol. 23, No. 11, 2021).

In these cases, genetic findings may help bring an end to the long diagnostic odyssey—years of appointments and conflicting opinions—that many families endure as they seek to understand their child's condition, said Besterman. Earlier identification can

enable earlier access to interventions like behavioral and occupational therapy or speech and language support. Many rare variants are also pleiotropic, meaning they influence multiple physiological systems. Knowing that a patient's genetic profile includes a rare variant allows health care providers to proactively monitor for associated physical health issues.

Talking about genetic findings with patients

People often view genes as powerful, even fateful, said Gabriel Lázaro-Muñoz, PhD, JD, an associate professor at Harvard Medical School who studies the ethical, legal, and social implications of emerging technologies in neuroscience and genomics. This tendency is especially fraught in psychology, where many mental health conditions are laden with social judgment or misleading stereotypes.

Many psychologists and other mental health professionals are trained to recognize this stigma and may be familiar with appropriate strategies for correcting misconceptions. However, genetic findings can exacerbate stigma by giving it a distinct and false sense of biological permanence, Lázaro-Muñoz said. Eighty-nine percent of psychiatrists surveyed in one study said they believed genomic results could lead to genetic discrimination and decreased expectations for children with high polygenic risk scores (*American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*, Vol. 189, No. 7–8, 2022).

Lázaro-Muñoz believes that addressing *genetic determinism*—the belief that a person's DNA dictates their future—requires a more purposeful vocabulary for discussing the nuanced relationship between genes and mental health, one precise enough to avoid overstating the scientific

evidence while remaining accessible to nonscientists. Rather than saying a gene “causes” a psychiatric condition, clinicians may say genes “contribute to risk” or “help explain part of the picture.”

Clinicians can also lean on evidence-based visual aids for genetic counseling, such as the jar model, to explain mental health risk and resilience (Austin, J. C., *Cold Spring Harbor Perspectives in Medicine*, Vol. 10, No. 6, 2020). In this model, inherited vulnerabilities and life experiences add contents to one's jar, while protective factors can increase the jar's capacity. To experience an active mental health episode, the jar must be full to the top. Someone with a high degree of genetic vulnerability may be more likely to develop a mental health condition than someone with less because the jar has less room before it reaches its limit. They may also develop symptoms earlier because it takes less time for the jar to fill up. But the model leaves room for uncertainty: Genetic risk can raise vulnerability without determining the outcome.

Besterman applies this nondeterministic language in his clinical practice. A genetic finding, he tells parents, is not an absolute prognosis. In the case of autism spectrum disorder, the same rare variant can manifest differently from one patient to another. One child may have substantial support needs; another may be less severely affected, for reasons that genetics alone may not explain. “Autism is a complicated clinical diagnosis, which we build from a combination of observations from parents and health care providers, family history, and many other factors,” Besterman said. Clinicians can use genetic information to guide care while preserving a fuller view of the child's development and future.

Careful explanation can also make room for relief. Besterman has worked with parents who have spent years wondering whether they caused their child's conditions—mothers who replay what they ate during pregnancy or parents who search their memories for a missed sign. “I’ve had parents say, ‘So this wasn’t something I did?’ And with a genetic finding, I can tell a parent with confidence that this was a random event and not their fault in any way,” he said. For those families, a genetic diagnosis may ease a private burden they have carried for years. A genetic finding can also challenge the common misperception that “mental illness is just a willpower issue.”

Psychologists themselves do not need to become genetic specialists or interpret genetic reports, which remain the province of geneticists and genetic counselors. But building sufficient genetic literacy is crucial to help patients separate useful information from noise, Bearden said. She likens the current moment in genetic testing to earlier waves of overclaiming around neuroimaging. Brain scans are powerful research and clinical tools, but their authority can be misused when companies or clinicians promise diagnostic certainty they cannot deliver. “If someone says, ‘This doctor said that they can look at my brain with an MRI and tell me whether I have bipolar disorder,’ we can confidently say, ‘No, they cannot,’” she said. Genetic testing, she suggested, requires similar discernment.

Longer term, Bearden believes the field needs a more structural response. Genetics education should become a more routine part of medical training and clinical psychology training, she said, because these tests are unlikely to remain confined to genetics clinics. In the immediate future, clinicians can build a baseline knowledge of genetics

through resources such as Polygenic Scores Explained, which offers accessible explanations of how polygenic scores are calculated and interpreted, and the Psychiatric Genomics Consortium, which provides guides on psychiatric genetics for patients, clinicians, and researchers.

“If patients are asking whether they should undergo some commercial testing for a psychiatric diagnosis, it’s important for clinicians to have a foundational understanding of what genetics can and can’t do, and how to communicate that to patients,” Bearden said.

Ethical, legal, and social considerations

The relationship between psychology and genetics has never been comfortable. In the early 20th century, observations that psychiatric and developmental conditions seemingly ran in families helped construct the intellectual scaffolding for *eugenics*, an ideology aimed at improving the genetic “quality” of human populations (“Historical Chronology: Examining Psychology’s Contributions to the Belief in Racial Hierarchy and Perpetuation of Inequality for People of Color in U.S.,” APA, 2021). Across the United States and Europe, eugenic ideas were used to justify forced sterilization laws and institutional policies that targeted people with intellectual disabilities, psychiatric patients in state hospitals, and others deemed socially “unfit” (Ilyes, E., *Social and Personality Psychology Compass*, Vol. 14, No. 7, 2020).

Although today’s psychiatric genetics is built on stronger ethical norms, it still must contend with inequality in the systems that produce and apply genetic knowledge, said Lázaro-Muñoz. One of the clearest examples

is the ancestry bias in genomic databases. Genome-wide association studies (GWASs), the large-scale research that supplies much of the data behind polygenic risk scores, have relied disproportionately on participants of European ancestry (Peterson, R. E., et al., *Cell*, Vol. 179, No. 3, 2019). One study found that 71.8% of participants in GWASs from 2005 to 2018 had been recruited from just three countries: the United States, the United Kingdom, and Iceland (Mills, M. C., & Rahal, C., *Communications Biology*, Vol. 2, No. 9, 2019). While large genomics initiatives are now recruiting more diverse cohorts, current tools remain significantly more predictive for people whose ancestries resemble the populations used to build them.

Equity concerns also appear in access to testing. Insurance coverage for psychiatric genetic testing is uneven, and cost barriers are among the most commonly cited reasons families do not follow through with recommended testing (Matalon, D. R., et al., *Genetics in Medicine*, Vol. 25, No. 6, 2023).

In a recent study of health care providers’ experiences with genetic testing as part of autism diagnosis, some practitioners suggested research participation as a way for patients to obtain testing they could not otherwise afford (Wang, A., et al., *PLOS One*, Vol. 19, No. 2, 2024). Enrolling in a study can allow patients to receive testing for free, avoid wait times, or access larger gene panels. But providers were clear that research participation is a stopgap, not a solution.

Lázaro-Muñoz said psychologists should also be prepared to discuss the limits of legal protection for genetic data, particularly given the field’s complicated history in the United States. Since 2008, the Genetic Information Nondiscrimination Act, known as

GINA, has prohibited employers from making job-related decisions based on genetic information and barred health insurers from using genetic data to determine eligibility or cost. However, the statute's reach is narrower than most patients realize, he said. Life, long-term care, and disability insurance fall outside GINA entirely, meaning insurers may use genetic information in coverage and premium decisions, subject to state law. GINA's employment protections also apply only to employers with 15 or more employees, and the law is silent on domains such as banking and housing, leaving individual states to enact their own piecemeal genetic-privacy protections.

"If people feel as though they'll be discriminated against by generating genetic information, and if there aren't the necessary protections for them, they won't want to participate in research studies or use genetic testing services, which can exacerbate existing inequities," Lázaro-Muñoz said. Psychologists do not need to resolve every legal uncertainty themselves, but they should be prepared to explain the basics of existing laws and refer patients for genetic counseling or legal guidance when needed.

Patient concerns around genetic privacy are already surfacing in clinical practice, Lázaro-Muñoz added. In one 2014 survey, 8% of psychiatrists said a patient had asked them to keep genetic findings out of their medical file. Five percent said they had complied (Salm, M., et al., *Journal of Genetic Counseling*, Vol. 23, No. 2, 2014). A forthcoming study by Lázaro-Muñoz and colleagues, which surveyed nearly 300 adolescent patients receiving outpatient mental health care alongside 300 of their caregivers, found similar hesitancy: 20% of adolescents and 29% of caregivers agreed

or strongly agreed that they would not want doctors to include genetic testing results in medical records.

Beyond patient privacy, the 2025 bankruptcy of consumer genetic testing company 23andMe spotlighted the potential for genetic data to be sold outright. A pharmaceutical company initially won the right to buy the company's database of more than 13 million customers' genetic profiles, prompting lawsuits from more than two dozen states and warnings from privacy advocates. Eventually, a bankruptcy judge approved a sale to a nonprofit research institute instead (LoTempio Jr., J. E., et al., *Nature Genetics*, Vol. 57, No. 12, 2025).

Genomic assessment is already reaching mental health clinicians even as the field continues to debate how much of it should be used in care. As early as 2014, 15% of practitioners said patients had asked them specifically about direct-to-consumer genomic testing (Salm, M., et al., *Journal of Genetic Counseling*, Vol. 23, No. 2, 2014). A more recent survey of U.S. child and adolescent psychiatrists found that 62.8% had been asked by a patient or family to order pharmacogenetic testing in the previous year, and 45% rated their knowledge of genetic testing practice guidelines as poor or very poor (Soda, T., et al., *Psychiatry Research*, Vol. 325, No. 115246, 2023).

The cost of genomic sequencing continues to plummet, and direct-to-consumer genetic laboratories are multiplying. As genetic assessment becomes more common, psychologists will need to know how to respond when patients bring results into the clinic and therapy room, or when they ask whether a test is worth undergoing.

That task will require confronting long-standing tensions between psychology and genomic science. For much of the history of genetic testing

in mental health, the two fields circled each other warily—genetics too easily recruited into deterministic arguments about mental health that psychology had spent decades disputing, psychology too quick to dismiss genetic explanations as mere reductionism. "We're at a moment where psychologists can either engage with genetic science or be left behind by it. Neither extreme is best for patients," said Lázaro-Muñoz. Rather than reject genetics or embrace it as a new oracle, psychologists must become the informed guides that patients navigating this information will need. ■

FURTHER READING

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American Journal of Psychiatry, 2025

From basic science to clinical application of polygenic risk scores: A primer

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Winerman, L.
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Researchers are uncovering the hidden harms of medical gaslighting and leading efforts to better support patients with difficult-to-diagnose conditions

BY HEATHER STRINGER

TENS OF MILLIONS of people in the United States live with chronic, complex medical conditions that lack clear biomarkers and are often dismissed by health care providers. This experience is so prevalent that it has become a silent epidemic eroding patient-physician relationships and perpetuating unnecessary disability (Burke, M. J., *JAMA Neurology*, Vol. 76, No. 12, 2019).

In fact, conditions that are not easily designated for a particular illness accounted for the largest share of medical services spending in the United States in 2021, according to a report from the Kaiser Family Foundation. Fifteen percent of medical expenditures were in this category, more than twice as much as cancer and nonmalignant tumors and almost 3 times as much as mental illness (Cox, C., et al., *Health Care Costs and Affordability*, Kaiser Family Foundation, 2025).

These conditions, which include fibromyalgia, long COVID, endometriosis, chronic fatigue syndrome, and autoimmune disorders, put patients at high risk of experiencing “medical gaslighting,” a term used to describe actions that invalidate a patient’s genuine clinical concerns without proper medical evaluation (Ng, I., et



al., *American Journal of Medicine*, Vol. 137, No. 10, 2024). The conditions are often difficult to recognize because many lack objective diagnostic tests that inform clinical diagnosis, or they present as a host of seemingly unrelated symptoms.

Emerging research suggests that this form of dismissal can lead to harmful outcomes, including shame, anxiety about health care visits, avoidance of the health care system, diagnostic delays, and even suicidality for some patients. These burdens also fall heaviest on women, people of color, and individuals with higher weight who already face structural inequities in health care (Shane, K., & Slonim, A. D., *Journal of Racial and Ethnic Health Disparities*, Feb. 4, 2026).

Awareness of medical gaslighting and medical invalidation—both terms used to describe when health care providers call into question the reality of a patient’s symptoms—has

gained momentum in recent years as researchers explore the causes and consequences of these experiences and how to prevent them. Psychologists are leading efforts to educate providers about medical invalidation and how to better support patients who are suffering from conditions that are difficult to diagnose and treat.

“The experience of medical gaslighting is often cumulative, and it can cause lasting psychological harm and hinder patients’ engagement with the health care system,” said Anna Hayburn, PsyD, a clinical health psychologist at the Cleveland Clinic Neuromuscular Center in Cleveland, Ohio, who works with patients with dysautonomia, postural orthostatic tachycardia syndrome (POTS), long COVID, and other conditions involving autonomic dysfunction. “By learning how the experience of medical trauma can influence behavior, providers can incorporate a trauma-informed

AT A GLANCE

- Patients with chronic, diagnostically challenging conditions such as endometriosis, long COVID, and postural orthostatic tachycardia syndrome frequently report that their symptoms are minimized, misattributed, or otherwise invalidated by health care providers.
- Studies link symptom invalidation to psychological distress, reduced trust in health care, and delays in receiving appropriate treatment.
- Psychologists are developing strategies for both patients and providers to reduce stigma related to these illnesses and to better support people who experience medical gaslighting.



“The experience of medical gaslighting is often cumulative, and it can cause **lasting psychological harm and hinder patients’ engagement** with the health care system.”

Anna Hayburn, PsyD

Clinical health psychologist, Cleveland Clinic Neuromuscular Center

approach that rebuilds trust and helps patients receive the care they need.”

The diagnostic odyssey

Tamara Brand was 15 years old when she encountered medical invalidation for the first time. During menstruation, her abdominal pain felt like someone was stabbing her repeatedly, and sometimes it was so severe that she would vomit or pass out. “My doctors told me it was part of being a woman,” said Brand, who lived in a small town in Minnesota at the time. Her mother, who had endometriosis, advocated for her to undergo a procedure that led to a diagnosis, but the pain continued for years despite treatment. Multiple doctors suggested that she become pregnant because this was known to help some women reduce the symptoms of endometriosis.

“Anytime I saw a new doctor, I couldn’t sleep the night before, and I

felt like I was not going to be believed,” said Brand, who is now 46. “I wish I’d had a doctor who took 5 minutes to ask open-ended questions rather than simply looking at my chart to see what I had done for treatment.”

Many researchers of medical gaslighting have encountered medical invalidation personally or worked with patients who were harmed by these interactions. Allyson Bontempo, PhD, a health communication scholar and faculty affiliate at the Center for Prevention Science at Rutgers University, suffers from a complex condition that providers dismissed, and her experience fueled her interest in identifying the processes that lead to symptom invalidation.

She analyzed survey responses from more than 1,000 women with endometriosis, a condition affecting up to 10% of women that is often misdiagnosed because symptoms are

minimized or mistaken for irritable bowel syndrome, pelvic inflammatory disease, or mental health issues. The average diagnosis is 5 to 12 years after the onset of symptoms, with most women consulting three or more health care professionals prior to diagnosis (As-Sanie, S., et al., *JAMA*, Vol. 334, No. 1, 2025).

Bontempo identified eight domains in which providers and patients reported dissimilarities, including

the cause of symptoms, the label for the diagnosis, the impact of the symptoms on patients’ lives, and patients’ motives for seeking a diagnosis (*Qualitative Health Research*, Vol. 35, No. 2, 2025). For example, pain during sex is a common symptom of endometriosis and other conditions, and some patients reported that clinicians attributed the pain to inadequate lubrication during intercourse. Others reported that their clinicians ascribed their symptoms to psychological factors, such as stress, anxiety, depression, or hypochondriasis. Clinicians also contested the severity of women’s symptoms and the subsequent impact on their ability to function at school or work.

Stigma is another factor that increases the risk of symptom invalidation for patients with endometriosis. Women with this condition often confront stigma on three fronts: menstrual



issues, chronic pain, and infertility (*European Journal of Obstetrics & Gynecology and Reproductive Biology: X*, Vol. 19, Article No. 100228, 2023). “Stigma can contribute to diagnostic delay when providers dismiss pain or when people avoid discussing menstrual symptoms,” said Deniz Koças, PhD, an assistant professor in the department of psychology at Pace University in New York City.

The impact of invalidation

To better understand the consequences of invalidating patients’ symptoms, Bontempo reviewed studies representing more than 11,000 patients with 13 conditions known to generate clinical uncertainty (*Psychological Bulletin*, Vol. 151, No. 4, 2025). These conditions included endometriosis, POTS, long COVID, and chronic fatigue syndrome. The data showed that self-doubt was the most prevalent feeling among patients who experienced symptom invalidation, and it was characterized by thoughts such as, Is it all in my head? Am I psychologically making myself have this pain? And, Am I doing it for attention? Negative moral emotions were also common, such as shame, guilt, humiliation, and feeling foolish.

that the criteria will be revised in the future to help patients access mental health treatment.

Elevated risk for marginalized populations

Hayburn’s 2024 paper details a fictional case—based on a composite of real patient experiences—of a young Black patient named Kiara whose experience highlights how medical gaslighting becomes a vehicle for medical trauma. Kiara, 24, started suffering from symptoms of dizziness, chest pain, temperature dysregulation, and increased anxiety after a viral illness in early 2020. She was referred to several specialists, but her labs and testing were normal. When she visited the emergency department after feeling faint because of an unusually high heart rate, clinicians told her the symptoms were because of anxiety. She was given prescriptions for antianxiety and antipsychotic medications.

Throughout the next 2 years, Kiara felt providers often treated her dismissively and with suspicion, and that her gender and race contributed to their perceptions of her as irrational and manipulative. She ultimately started avoiding medical care and turned to cannabis for symptom management. Kiara was finally referred to a neurology team that

“I wish I’d had a doctor who took **5 minutes to ask open-ended questions** rather than simply looking at my chart to see what I had done for treatment.”

Tamara Brand
Endometriosis patient

Hayburn started studying medical gaslighting because many of her patients were suffering from conditions that other providers had dismissed. She coauthored a paper suggesting that the harm people experience as a result of these interactions is often insidious—and that it even mimics the symptoms of post-traumatic stress disorder (PTSD) (*Current Psychology*, Vol. 43, No. 45, 2024).

Many patients have persistent intrusive thoughts or memories of such interactions with health care professionals. “This may present as reactivity, guardedness, or irritability that may be misperceived in subsequent medical encounters,” said Hayburn. “Some people then disengage from health care because of avoidance, while others may overutilize services as a result of health anxiety, such as requesting unnecessary tests or excessive messaging outside of appointments.”

Though this type of medical trauma does not currently meet the diagnostic criteria for a traumatic event, she hopes

diagnosed her with POTS, a condition that causes alterations in blood pressure and heart rate when transitioning from lying down or sitting to standing.

“I worry about how medical gaslighting might reintroduce harms to patients who are already lacking in privilege or respect from providers because of race, gender, or disabilities,” said Devora Shapiro, PhD, HEC-C, an associate professor of medical ethics at Ohio University–Heritage College of Osteopathic Medicine who coauthored the 2024 *Current Psychology* paper with Hayburn. Having multiple marginalized identities like Kiara’s—Black, female, contested illness, and suspected psychological diagnoses—can increase the risk that medical gaslighting will magnify the harms patients have already experienced and delay appropriate treatment.

Psychologists such as Hayburn have also seen how weight stigma—the systemic devaluation of people based on the size of their bodies—can influence how providers respond to patients with complex medical conditions. “I frequently see

patients whose providers told them that they have symptoms because they are overweight when this is likely not the main contributor,” said Hayburn.

Internalizing negative messages from providers can also lead patients to stop engaging in positive behaviors that help them manage their complex, chronic conditions. “When people feel badly about themselves, they often take poorer care of themselves,” said psychologist Rebecca Pearl, PhD, director of the Body Image and Stigma Lab at the University of Florida. “They might think they are lazy or are not worthy of self-care, which can undermine efforts to adhere to a medication regimen or engage in healthy eating and physical activity.”

The benefits of acknowledging uncertainty

While it is difficult to immediately shift away from deeply ingrained societal beliefs that lead to medical gaslighting, psychologists are at the forefront of efforts to prevent these harmful interactions and support patients who have been invalidated. Hayburn teaches medical students at the Cleveland Clinic Lerner College of Medicine that medical gaslighting is a form of trauma and that they will need to rebuild trust with affected patients. One way they can do this is by being clear about the plan of care and following through with the plan. Providers can also be attentive to signs that a patient may have previously experienced medical invalidation, which helps prevent misinterpretation of their concerns or behaviors. These signs could include questioning provider recommendations, delaying or resisting care, or appearing distressed, guarded, or withdrawn (*The American Journal of Medicine*, Vol. 139, No. 2, 2026).

Hayburn acknowledges, however, that providers often work in systems that breed burnout and give them little time with each patient, making it difficult to help people with complicated health conditions—or even to know which patients have suffered this kind of medical trauma. She also encourages medical students to refrain from claiming greater certainty than is warranted and to acknowledge that there are limits to their medical understanding. “Providers might be tempted to reassure patients that nothing is wrong, but patients know if they are sick,” said Bontempo. “Reassurance may provide short-term psychological relief, but it can perpetuate anxiety.” It is also important for doctors to refer the patient to a specialist or consult with other physicians on symptoms if they do not have a medical explanation.

When providers offer platitudes, they need to remember that those can have serious health consequences. If physicians do in fact suspect that patients have a mental health

condition, they need to both refer them to a mental health professional for evaluation and continue to investigate the patient’s symptoms from a medical standpoint, explained Bontempo. Even if a mental health condition is present, it does not automatically rule out the possibility that medical conditions are contributing to a patient’s symptoms as well.

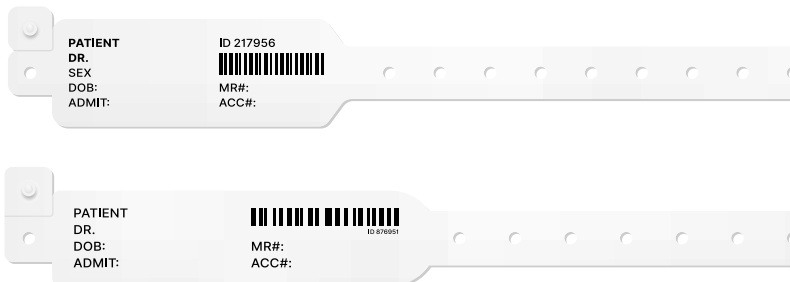
Psychologist James Jackson, PsyD, director of behavioral health at the ICU Recovery Center at Vanderbilt University Medical Center, became aware of medical gaslighting when he started getting referrals for patients with long COVID. He noticed a recurring theme in support groups: Patients knew something was wrong in their bodies, but physicians frequently told them it was anxiety or that they needed more rest. “People were being mildly or aggressively dismissed by sometimes well-meaning providers,” said Jackson, author of *Reclaiming Your Life from Medical Trauma, Recognize the Symptoms, Find Treatment That Works, and Heal Your Brain and Body* (Little, Brown Spark, 2026). “This dynamic helped me begin to understand that medical gaslighting was a profound problem.”

To better support these patients, he enlisted a social worker to help them access resources such as a disability attorney. He also referred patients to providers who were more open to the idea that certain illnesses are not easily diagnosed and may require a lengthy process to find the best treatment approaches.

In addition, Jackson encouraged doctors to discuss their uncertainty with patients. “Patients want to be listened to and respected, and they are aware that their conditions are complicated,” said Jackson. “We need more providers who are willing to admit that they don’t know what is going on, but they are willing to help patients walk through the journey.”

Psychologists are also developing interventions to help patients struggling with stigma and other challenges related to their complex illnesses. Pearl recently led a study of a counseling group formed to reduce internalized health-related stigma among adults with chronic physical health conditions (*JMIR Formative Research*, Vol. 9, 2025). The participants learned about health-related stigma and how to use therapy techniques to change their thoughts, advocate for themselves, and promote healthy behavior. She is conducting a large, randomized controlled trial of the intervention.

Similarly, in medical trauma support groups at the Vanderbilt Critical Illness, Brain Dysfunction, and



TEACHING CONNECTIONS

LESSONS ON MEDICAL GASLIGHTING, STIGMA, AND HEALTH PSYCHOLOGY

The following prompts (organized by topic) can support psychology educators in discussing medical gaslighting, health disparities, and the psychology of chronic illness in the classroom.

1. **Health psychology and the patient-provider relationship** Research links medical gaslighting experiences to shame, self-doubt, avoidance of medical care, and delays in diagnosis. Using what you know about health psychology and the factors that shape health behavior, explain how repeated experiences of medical invalidation might affect a patient's willingness to seek help in the future. What role can psychologists play in rebuilding trust between patients and providers?

Reinforces: *Health psychology, health behavior, patient-provider communication, nonadherence, delay behavior*

2. **Research methods and the study of medical gaslighting** Much of the research on medical gaslighting relies on patient self-report—including surveys, interviews, and qualitative data (information gathered through words and descriptions rather than numbers)—rather than controlled experiments. The article cites a meta-analysis of more than 11,000 patients across 13 conditions, as well as smaller qualitative studies of specific populations such as women with endometriosis. Using what you know about research methods, evaluate the strengths and limitations of these approaches for studying a phenomenon like medical gaslighting. Why might it be difficult to study medical invalidation using experimental methods? What kinds of studies would best help researchers establish whether medical gaslighting causes harm rather than simply being associated with it?

Reinforces: *Research methods, meta-analysis, qualitative versus quantitative research, research ethics, correlation versus causation, and the challenges of studying sensitive or stigmatized topics*

3. **Stigma and its consequences** Patients with conditions like endometriosis, long COVID, and fibromyalgia often face stigma on multiple fronts, including around chronic pain, gender, and weight. The article describes how internalizing these negative messages (absorbing them as beliefs about oneself) can lead patients to disengage from self-care and healthy behaviors. Using what you know about stigma, internalized shame, and self-concept, analyze how stigma operates at both the individual and systemic levels in medical settings. How might psychologists help patients resist internalizing stigma and improve self-efficacy while also working to change provider attitudes?

Reinforces: *Stigma, internalized shame, self-concept, self-efficacy, health belief model, theory of planned behavior, and health disparities*

For more Teaching Connections classroom prompts on this topic, see www.apa.org/monitor.

Survivorship Center, patients learn how to advocate for themselves during appointments with doctors. Jackson encourages patients to bring a partner, friend, or ally to appointments to help validate their symptoms with providers—and discern if medical gaslighting is occurring.

Psychologists like Jackson who see the consequences of medical invalidation share a sense of urgency to train providers and patients to collaborate in managing illnesses that are chronic, medically complex, and heavily stigmatized. “People who have a negative interaction with one provider often stop trusting other providers who did not gaslight them, and this can morph into a pervasive lack of trust,” said Jackson. “Providers can stop this cycle by partnering with patients to seek healing when conditions do not fit inside the traditional categories for diagnosis and treatment.” ■

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Long covid and medical gaslighting: Dismissal, delayed diagnosis, and deferred treatment
Au, L., et al.
SSM—Qualitative Research in Health, 2022

A COM-B and theoretical domains framework mapping of the barriers and facilitators to effective communication and help-seeking among people with, or seeking a diagnosis of, endometriosis
Hearn, J. H., et al.
Journal of Health Communication, 2024



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HELPING WORKAHOLICS FIND BALANCE

With an employment culture that celebrates round-the-clock responsiveness, psychologists are studying the causes, consequences, and coping mechanisms for compulsive overwork

BY ANNA MEDARIS

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LAURA MAYER WAS commuting on the New York City subway one busy Monday morning when her vision started narrowing. Her hand, gripping a metal pole overhead, began slipping with sweat. Her skin turned hot, then cold. When Mayer, then a new podcast executive, stumbled out of the train, she fainted.

But once she regained consciousness and called her husband, who took her to the emergency room, Mayer's thoughts weren't on her health. They were on the meeting she missed. "The nurse took some blood, some urine, my vitals, and I asked for the Wi-Fi password," Mayer wrote in her new book, *Tryhard, A Cautionary Tale of Clocking In and Spinning Out*.

Even after clinicians diagnosed it as a panic attack, Mayer didn't slow

down. A colleague's concern about her unsustainable work pace went unheeded. She proceeded to show up for work the day after her wedding, viewing it, she wrote, as "commitment that nobody could deny." Though she'd quit drinking alcohol years earlier, working, she said, was "the addiction I found while dodging another."

Psychologists vary in how they view—and name—cases like Mayer's. While not an official diagnosis in the *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition), some consider what's colloquially referred to as "workaholism" a behavioral addiction like gambling. Others see it more like a manifestation of obsessive-compulsive disorder or anxiety, and may prefer the term "compulsive overwork." It can alternatively be understood as a surface-level problem burying a deeper insecurity or offering an escape from a trauma the worker doesn't want to face.

Regardless, mental health experts agree that some people are excessively consumed by their work—and remote access to work on all manner of devices normalizes it. The consequences don't only pile up for workers' mental, physical, and relational health; they can be counterintuitively detrimental to their careers, too. "Workaholism is really worth taking seriously," said Malissa Clark, PhD, head of the University of Georgia's Industrial-Organizational Psychology Program who's been

studying the phenomenon for about 15 years. "It has real consequential negative outcomes for individuals, for their partners and families, and for organizations."

Psychologists are poised to help. "Getting caught up in the debates about whether it's an addiction or not is missing the boat a lot of times, particularly when you're on the front lines [doing clinical work]," added Joshua Grubbs, PhD, an associate professor in the University of New Mexico's Department of Psychology who studies the social construction of behavioral addictions. "What you really need to be doing is understanding what's going on in that person's life, what function that behavior is serving, and figuring out: Are they living the life that they want to live, and what would it take to get them there?"

Passion, problem, or financial imperative?

Workaholism doesn't have a universal definition, but organizational psychologists point to two key components: working excessively and working compulsively. Without the second feature, someone could be clocking long hours for any number of reasons, including economic needs. "It's not just about how much you work—it's about whether you have a choice," said Jourdan Travers, LCSW, a licensed clinical social worker at the virtual platform Awake Therapy, where she works closely with her husband and

AT A GLANCE

- "Workaholism" and "work addiction" aren't clinical terms, but psychologists agree that being all-consumed by work leads to real mental, physical, social, and even occupational consequences.
- Compulsive overwork is typically driven by internal forces, like personality type, external forces, like cultural norms or workplace expectations, or both. Access to work through digital devices has dramatically increased its prevalence.
- While there are few established interventions for workaholics, organizational psychologists can help workplaces create environments that discourage overwork behaviors, and clinical psychologists can help workers get to the root of their compulsion and set healthier boundaries.

"Workaholism is really worth taking seriously. It has real consequential negative outcomes for individuals, for their partners and families, and for organizations."

Malissa Clark, PhD

I/O psychology professor, University of Georgia



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business partner, social psychologist Mark Travers, PhD.

Work addiction is also distinct from work engagement, which describes a positive pattern of thoughts and feelings about one's job. While both workaholism and work engagement involve "heavy work investment," research shows a more addictive approach to work negatively affects other areas of the workers' lives (Di Stefano, G., & Gaudiino, M., *Europe's*

Journal of Psychology, Vol. 14, No. 4, 2018). People who are merely highly engaged with their work, by contrast, aren't prevented from immersing themselves in roles and interests outside of their 9-to-5—even if it's more like an 8-to-6.

"The workaholic has this compulsive component like another person addicted to smoking or to junk food or to porn or to gambling; they are obsessed," said Luca Menghini,

PhD, an organizational psychologist and assistant professor in the Department of General Psychology at the University of Padova in Italy, where he studies worker well-being. Workaholics have trouble stopping or detaching from work, he added, and "usually experience negative emotions like guilt or rage or anger when they are prevented from working."

Estimates on how many people fit this mold vary widely since different



SUNDAY 2:14 PM

researchers and cultures use different scales and study different professions. Plus, the hours and intensity with which any one person works varies, depending on their career stage, personal obligations, or even perceived work demands on any one day, Clark's work has found. "Different events or circumstances in our day-to-day lives can activate those aspects of our personality and amplify them," she said.

Still, there's an argument to be made that workaholism—like many behavioral addictions—is more prevalent than in decades past because of access, Grubbs said. Where humans have long reported compulsive sexual behaviors, internet access to porn is a modern phenomenon. Gambling has been around for centuries, but the growing legality of sports gambling on cell phones has increased the risk of problematic use. There have always

been workers who have burnt the candle at both ends, but only in recent history can they do so from bed, the car, or on vacation, thanks to remote work.

"Technology is breaking down the barriers to getting access to these things—regardless of what category of disorder we're talking about. It's a kind of conduit to pathological behavior patterns that didn't exist before," Grubbs said. "That's not inherently bad. It just means that we have to think and adjust how we're approaching these things, because things have changed."

'Killing it' at work

In some of Clark's earlier, pivotal work, she and colleagues demonstrated how workaholism is linked to burnout, work-life conflict, work stress, and decreased physical and mental health (*Journal of Management*, Vol. 42, No. 7, 2016). But when interviewing

members of Workaholics Anonymous for her book, *Never Not Working: Why the Always-On Culture Is Bad for Business—and How to Fix It* (Harvard Business Review Press, 2024), she was still struck by just how consistently self-described workaholics' physical health suffered. "Everyone had health issues—high blood pressure, heart attacks, some even reporting multiple heart attacks—but many of the health issues were autoimmune as well," she said.

Her reflection is borne out in the research, which links workaholism with risk factors for heart disease and other metabolic abnormalities and inflammation (Aziz, S., & Covington, C., *Frontiers in Psychology*, Vol. 15, No. 1345378, 2024). One analysis out of the World Health Organization and the International Labour Organization even found that working 55 or more

hours per week is associated with an estimated 35% higher risk of a stroke and a 17% higher risk of dying from ischemic heart disease, compared with working 35 to 40 hours a week. Though the authors didn't look at the compulsive dimension of workaholism, they concluded that working long hours alone is "responsible for about one-third of the total estimated work-related burden of disease" (Pega, F., et al., *Environment International*, Vol. 154, No. 106595, 2021).

Compulsive working has shorter-term consequences, too. One of Menghini's studies that followed 114 people in various occupations over 10 workdays found that on days that participants reported higher workaholic levels such as working after others have stopped and feeling obligated to work hard, they also were more likely to have higher blood pressure, more emotional exhaustion, and greater sleep disturbances (*Journal of Occupational Health Psychology*, Vol. 29, No. 4, 2024).

Clark's research has found similar, immediate impacts of workaholic behavior. To test a theory that people have both general workaholic tendencies and day-to-day fluctuations in how that plays out, she and colleagues asked 121 employees to complete self-report surveys over the course of 10 working days. They assessed workaholism using measures inspired by various scales, including the Dutch Work Addiction Scale, which asks people to what extent they agree with statements like, "Today I felt compelled to work hard, even when it wasn't enjoyable" and "Today I felt guilty when I wasn't working."

The study authors found that on the days people scored higher in work addiction, they also reported more fatigue and greater relationship tension (*Journal of Occupational Health Psychology*, Vol. 26, No. 5, 2021). Participants' spouses, who were included in the study as well, concurred that home life was strained on their partners' more workaholic days. In a subsequent study interviewing workaholics' partners, "multiple spouses even said, 'I'm thinking about divorce,'" Clark said.

Despite their perceived productivity and dedication, workaholics can negatively affect their workplaces, emerging research shows. In a study from the United Kingdom and Italy, psychologists found that workaholism detaches people from their moral values, making them less likely to speak up when they notice something ethically wrong (Knoll, M., et al., *Journal of Organizational Behavior*, Vol. 46, No. 5, 2025).

More intuitively, it leads to burnout, which is a recipe for subpar work, Travers said. "People assume that [workaholism] leads to success automatically. And maybe, for a time, that is the case," she said. "But it also often leads to burnout, and it also leads to diminished performance."

The making of a workaholic

Workaholism seems to be part nature and part nurture. On the nature side, research including more than 400 workers—some faculty and staff at a university, some employees at a manufacturing plant—found a domino effect: Lower self-esteem led to workaholism, which led to working more hours, which in turn led to increased overall stress (Aziz, S., et al., *Personality and Individual Differences*, Vol. 121, 2017). Other studies have demonstrated a link between certain personality factors, like perfectionism, and work addiction (Kun, B., et al., *Journal of Behavioral Addictions*, Vol. 9, No. 4, 2020). "When your set standard is very high and you struggle to reach that standard every day, that's something that might boost workaholism," Menghini said.

People prone toward compulsive overwork are also often driven, unconsciously or not, by an inability to regulate their moods in a healthier way, Menghini said. "In the cognitive behavioral framework, the idea is that all emotions are important, and if you are feeling a negative emotion, it's better to stay in that emotion, to be aware of that, and to live it. Addicted people tend to avoid these negative emotions by using their object of addiction," he said. "So the gambler goes to gambling, and the workaholic works a lot to avoid negative moods."

Workaholics can be found in any career or workplace at any age, Clark has found. "I've interviewed individuals and partners of workaholics from almost every type of job you could think of, from llama farmer to K-12 teacher to race car driver to the typical ones like consultant or lawyer and doctor," she said.

That said, work addiction is not simply a reflection of individual mental health but often the symptom of a dysfunctional, systemic workplace culture. Workplace expectations and social customs can also interact to heavily influence personal behavior, according to Menghini. In a collective culture like Japan, for instance, working overtime is such a cultural norm that its health consequences have given way to the term *karoshi*, meaning death by overwork. In the Netherlands, meanwhile, it's common practice to leave work when your shift ends—not when the task is complete, as is standard in Italy, Menghini said some colleagues have shared.

The ethos of workplaces and leadership trickles down, too. "If everybody thinks that working more, working longer than the official working hours is fine, it's normal, it's requested, it's rewarded, maybe it's also needed to get the promotion, this will make people [exhibit more workaholic behaviors]," Menghini said.



DAY 7 OF VACATION

“Workaholism is not only a matter of personality—perfectionism, Type A personality—but also of workplace factors such as high work-role overload, work-role conflict, or workplace ‘tele-pressure,’” added Sabine Sonnentag, PhD, chair of work and organizational psychology at the University of Mannheim in Germany, where she studies recovery from job stress. Indeed, some studies show that the more pressure people feel to respond to messages around the clock, the more likely they are to fit a workaholic profile (Gillet, N., et al., *Group & Organization Management*, Vol. 50, No. 3, 2023).

Effective interventions

If workplaces have the ability to foster workaholic behaviors, they also have the ability to foster healthier relationships to work. One of Sonnentag’s studies looked at diary data from 152 employees who recorded things like how well their bosses respected their boundaries and how easily the employees mentally transitioned from work once home. “When leaders support recovery,” Sonnentag said, “employees are more likely to detach from work in the evening and feel more refreshed the next morning” (*Journal of Occupational and Organizational Psychology*, Vol. 97, No. 4, 2024).

One rare clinical trial on workaholism by Mark Griffiths, PhD, a distinguished professor emeritus of behavioral addictions at Nottingham Trent University in the United Kingdom, recruited 73 workaholics as measured through the Bergen Work Addiction Scale, which asks questions like, “How often

during the last year have you worked so much that it has negatively influenced your health?” Griffiths’s team assigned half to a waiting list, and half to a meditation awareness training, or MAT. Those in the latter group attended eight weekly 2-hour sessions that taught various meditation practices and facilitated group discussions. Participants also listened to guided meditations on the other days.

By the end of the program as well as at a 3-month follow-up, the participants had significantly reduced workaholic tendencies and psychological distress, and increased job satisfaction and work engagement. They also worked fewer hours—without hurting performance (*Journal of Behavioral Addictions*, Vol. 6, No. 2, 2017).

The power of such an intervention, the researchers said, is that it can be implemented both at work and at home. “MAT may be a practical and cost-effective workaholism intervention compared with treatments that require a reduction of work responsibilities or segregation from the work environment,” they wrote.

On a strictly individual level, there are very few if any studies of clinical interventions for workaholics. It’s not a diagnosis, nor is research on behavioral addictions well funded in the United States, unlike in many European countries where they’re viewed as serious public health issues. Plus, people may be reluctant to identify or seek help for a socially rewarded behavior. “Organizations like Workaholics Anonymous exist because there’s really not a way to ‘get treatment,’” Clark said.

But psychologists say people who continue to overwork despite negative consequences can find a more sustainable rhythm with the help of a few strategies.

“The first and most important thing that I would do [as a clinical psychologist] is try to understand precisely what it is that work is doing for them in their life,” Grubbs said. Then, he might use acceptance and commitment therapy principles to help someone learn to ride out uncomfortable emotions that come up when they’re not working and take actions that align with their broader goals as well.

Travers takes a similar approach, often using psychodynamic therapy to help overworkers understand what past messages or experiences have led to their current behaviors. For Mayer, the podcast producer, for example, work offered control, stability, and

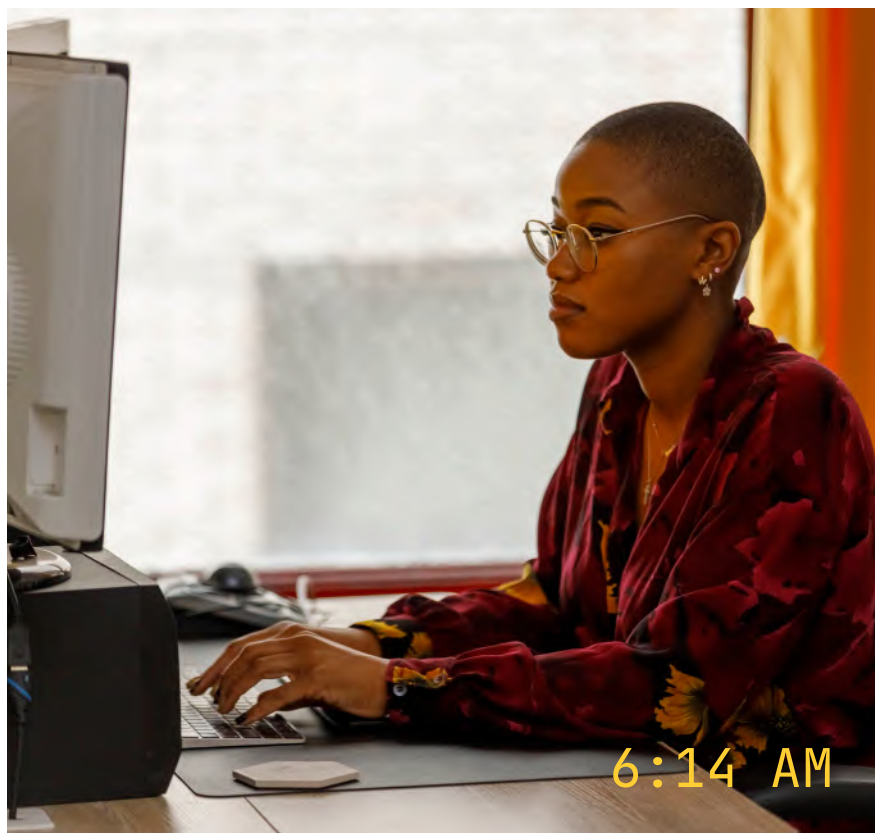
validation—all feelings she said she craved growing up with an alcoholic mother.

While practical changes like taking breaks throughout the day and sticking to predetermined office hours help workaholics, “it’s not just needing better boundaries—it’s what’s your relationship with stillness?” Travers said. “It’s learning to tolerate what comes up when you stop. What are those emotions? Is that boredom? Is that anxiety? Is that self-doubt?”

Using devices like fitness trackers can also help someone who’s prone to workaholism get real-time feedback on how their working styles affect measures like their heart rate and sleep quality. For workaholics who like achievement and tangible results, these sorts of gamified interventions are a natural, albeit potentially flawed, fit, Menghini said. “The

challenging side of it is that as you improve from one session to the other in how well you regulate your physiological processes, this might be something that workaholics get addicted to,” he said.

For her part, Clark—who first became interested in workaholism during graduate school when she personally identified with the issue—said immersing herself in active hobbies like exercise as opposed to passive strategies like meditation most help her manage workaholic tendencies. Sonnentag calls this a mastery experience and identifies it as one of the ways people can recover from work, as well as mentally detaching from work, relaxing during free time, and feeling a sense of control over when you do and don’t work. Not that Clark is a master of work-life balance just yet. Rather, she said, “I’m a work in progress.” ■



FURTHER READING

Chained to the desk (third edition): A guidebook for workaholics, their partners and children, and the clinicians who treat them

Robinson, B. E.
NYU Press, 2014

Never not working: Why the always-on culture is bad for business — and how to fix it

Clark, M.
Harvard Business
Review Press, 2024

Nature, predictors, and outcomes of workers' longitudinal workaholism profiles

Gillet, N., et al.
Group & Organization
Management, 2023



New Research on Black Girlhood

**EXPANDS
DEVELOPMENTAL
SCIENCE**

Researchers are moving away from a focus on what's going wrong for Black girls to what's working for them

BY EFUA ANDOH





IN THE SUMMER OF 2023, 10 Black teen girls gathered at the RiseBoro Community Partnership in Brooklyn to build a first-of-its-kind catalog of the various microaggressions Black girls face because of colorism. Gina Sissoko, PhD—now a clinical psychologist and postdoctoral fellow at the Yale School of Public Health—put the girls in an unfamiliar role: the driver’s seat. They detailed the ways *colorism*, a preference for lighter skin tone, operated in their lives and how to measure it. They then developed a plan to research the topic and fanned out across their community to survey more than 100 other Black girls.

From those data, the girls mapped how colorism permeates Black girlhood across seven domains, from family and school to social media—findings the girls then published in a booklet they designed themselves. The result, dubbed the BlackGIRL Project, reflects a growing movement among researchers to engage Black girls as partners in studying their own experiences—collaborators in the science rather than its subjects. As Sissoko put it, this shift acknowledges Black girls as “the main theorists of their lives.”

From the margins to the center

The BlackGIRL Project is one of more than 100 submissions to a forthcoming special issue on Black girlhood that will

AT A GLANCE

- Researchers are expanding science on Black girls by treating them as knowledge producers, not just subjects of study.
- Emerging methods help researchers gather richer data that challenge long-held assumptions about Black girlhood.
- Black girls share their own experiences of joy, thriving, and colorism in research settings where they feel safe and can develop supportive peer bonds.

“Unless we are actually asking the people most impacted and most marginalized, we will never make the advances in science that we need.”

Gina Sissoko, PhD

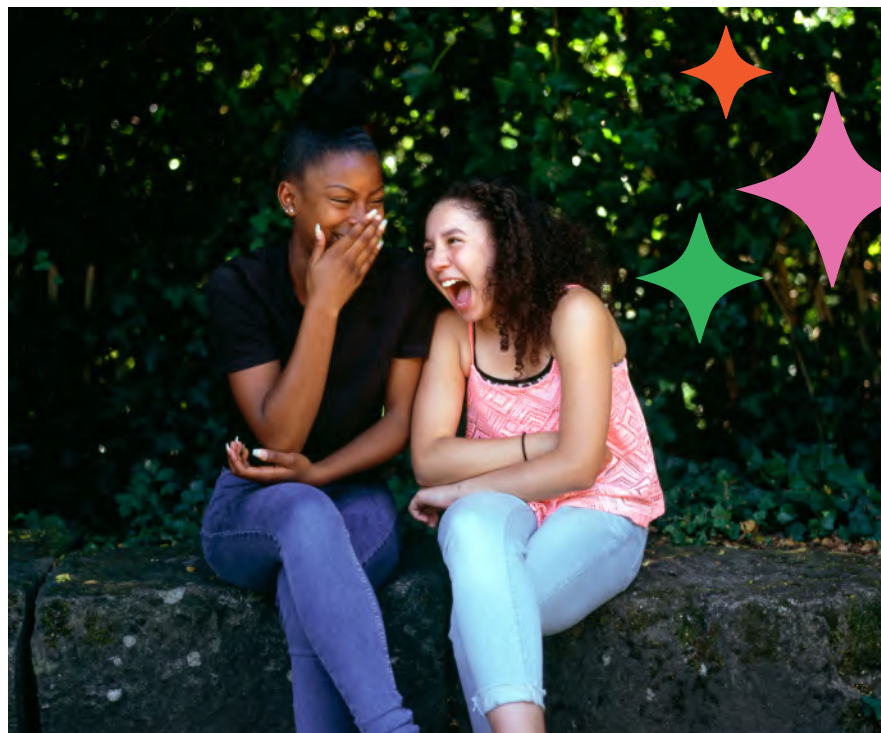
Clinical psychologist and postdoctoral fellow at the Yale School of Public Health

appear in *Developmental Psychology* in late 2026. Lead editor Rona Carter, PhD, an associate professor of psychology at the University of Michigan, said the issue aims to reframe “developmental science so that Black girls are not treated as deviations from a norm but as essential to understanding how development unfolds in real-world settings.”

“So much of what we know about development has been built upon assumptions that don’t fully account for Black girls’ lived experiences, social realities, or the ways they make

meaning of their self-concepts,” Carter said. “When we build on theory that could explain Black girls’ experiences, we often could end up with maybe stronger, more nuanced theories that improve development of science more broadly.”

Seanna Leath, PhD, an associate professor of psychological and brain sciences at Washington University in St. Louis who studies how culture and context influence positive outcomes for Black youth, notes the change in focus. “It signals that Black girlhood



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is not a niche topic or a specialized subarea. It's worthy of serious developmental inquiry."

Previously, when the field has focused on Black girls, it has often been to document what is going awry in terms of the risks they face, educational or social gaps, or behaviors framed as problems. One recent systematic review found just 48 articles focused on Black girls across four major adolescent research journals between 2010 and 2020, many concentrating on what was going wrong for them (Agger, C. A., et al., *Journal of Adolescent Research*, Vol. 39, No. 2, 2024). Black girls were also often folded into broad categories

like "Black women and girls" or "Black youth," or used as a comparison group against their White peers or Black boys—flattening the wide spectrum of their experiences.

Over time, a growing number of scholars have pushed the field to look deeper, building on the foundation of Margaret Beale Spencer, PhD, whose phenomenological variant of ecological systems theory gave the field new tools for understanding how race, ethnicity, and gender shape children's development (*Development and Psychopathology*, Vol. 9, No. 4, 1997).

In the tradition of developmental science (which has always been

interdisciplinary), contemporary researchers on Black girlhood intentionally combine insights from multiple fields—including psychology, education, philosophy, history, and Black and feminist studies—and look at how race and gender shape experiences together, not separately (Halliday, A. S., *The Black Girlhood Studies Collection*, Women's Press, 2019). And they ask different questions: How do Black girls make sense of their experiences, build friendships, navigate school, and find joy? What does it look like when a Black girl thrives—and what has the field missed by not asking sooner?

The wounds of colorism

Sissoko's work with Black girls shows how focusing on research participants' strengths can produce insight even when the topic is painful. It maps the quiet, insidious ways colorism runs through Black girls' lives—and one of its most striking findings is how often the harm comes from within their own community. Colorist jokes, slights, and insults often come from family members and friends, and Black boys were frequently identified as the main perpetrators. The hurt ripples outward, too: Lighter-skinned girls described watching colorism directed toward darker-skinned friends and feeling helpless to stop it—a phenomenon Sissoko calls “vicarious colorism.”

In one finding from the BlackGIRL Project that Sissoko called “earth-shattering,” 83% of the girls surveyed said darker-skinned girls are less likely to be believed when they report abuse. The findings point to a cruel paradox—the same skin that marks Black girls as vulnerable renders them less credible when they experience abuse. Sissoko's experience with the BlackGIRL Project has shaped her core beliefs about how science should work: “Unless we are actually asking the people most impacted and most marginalized, we will never make the advances in science that we need.”

Combating adultification

If Sissoko's work shows how Black girls are misjudged by their skin tone, Carter's research reveals how they are misjudged by their bodies—specifically, how early those bodies begin to change, and how the people around them react. Carter, a developmental psychologist, studies the impact of pubertal development on Black girls, who typically enter puberty earlier than their White, Latine, and Asian peers (*Child Development*, Vol. 90, No. 2, 2019). As a result, research shows that Black girls experience *adultification bias*, in which they are often viewed as older and more sexualized than their White peers (Epstein, R., et al., *Girlhood Interrupted: The Erasure of Black Girls' Childhood*, SSRN, 2017).

Research shows that once a Black girl enters puberty, she is typically treated more harshly—even though she is still a child cognitively and emotionally (Brissett, D., *Pediatrics*, Vol. 155, No. 6, 2025). “Puberty matters not because it's happening earlier biologically, but because of how adults and peers respond to those changes,” said Carter.

To help support girls at this transitional age, Carter developed Double Digits, a community-based program for girls in grades 3, 4, and 5 in Ann Arbor schools. The program brings

Black girls together to learn about and discuss menstruation, body and skin changes, and the stereotypes and expectations they may encounter during puberty. Throughout the program, participants work to develop a positive body image, explore their identities, build healthy coping skills, and strengthen their understanding of healthy relationships.

In an activity called Reflect, Respect, and Celebrate, girls anonymously share their thoughts about their bodies and trace where those ideas came from, for example, social media, classmates, or even adults. At the end of the lesson, each girl receives a key chain that says “Message Detective.” The goal is to encourage them to question those external messages and show them they get to define their beauty and body image on their own terms.

Carter also created a technique she calls Pause and Reframe to help parents, teachers, and other caring adults counteract their own adultification bias. Adults are asked to *pause* their immediate emotional response to a girl's behavior and consider whether they are reacting to her physical maturity rather than her actual developmental stage, then to *reframe* by choosing an interpretation grounded in her true emotional and cognitive

“It signals that Black girlhood is not a niche topic or a specialized subarea. It's worthy of serious developmental inquiry.”

Seanna Leath, PhD

Associate professor of psychological and brain sciences, Washington University in St. Louis



age. A gesture like eye-rolling, Carter noted, may not be defiance or disrespect but a sign of “emotion regulation,” or a girl “trying to negotiate her autonomy.”

Thriving is for all Black girls

The Black Girl Thriving Framework, developed collaboratively by Leath, Misha Ailsworth, PhD, Marketa Burnett, PhD, Lauren Mims, PhD, and a team of graduate student scholars, provides a model for understanding what it looks like when Black girls are given the opportunity to flourish.

The framework emerged from a critical synthesis of more than 100 studies on Black girlhood. “Thriving means more than doing well despite oppression,” said Leath. “Our framework begins with the idea that thriving is multidimensional. It encompasses identity, joy, belonging, agency, self-definition, healthy relationships, and access to affirming environments, and so our framework is multidimensional. We view thriving not as an individual trait but as a relational, cultural, political, and ecological process.”

The framework builds on decades of resilience research by expanding the conversation from how Black girls survive

and adapt to adversity to what it means for them to truly thrive. Leath offered the example of a Black girl earning good grades despite navigating a school environment where she feels unsupported, overlooked, or treated unfairly. She may be demonstrating resilience, but whether she is thriving depends on deeper questions: Do her teachers recognize and support her talents? Does she see people like herself in what she is learning? Does she have friends with whom she can have fun, feel safe, and be herself?

Thriving is not a destination but an ongoing “becoming” shaped by the different environments in a girl’s life, according to Leath. The research team also seeks to broaden scholarship beyond a focus on only two kinds of Black girls—the exceptional and the at-risk. Returning to the earlier example, a Black girl earning good grades should not automatically be assumed to be thriving. “We have high-achieving Black girls,” Leath said, “and regular Black girls who earn C’s [who] also bring something beautiful and gifted to the table.” The model makes room for all of them. “[Thriving] should not become a new narrow standard that only some Black girls can meet,” Leath said.



Through their own lens

Alexandria Onuoha, PhD, an assistant professor of human development and family science at the University of Tennessee, Knoxville, studies what thriving actually looks like in real life. Her photovoice project is participatory research piloted for Black middle school girls in Boston to document their lived experiences through photography. Onuoha gave each participant a camera and asked them to take photos capturing what joy meant to them.

Several themes emerged—artistic expression, beauty and adornment, sisterhood and solidarity, spirituality—captured

in images as ordinary as a girl taking a mirror selfie or making art to “have a moment of stillness.” Onuoha views these everyday acts as part of a long tradition of resistance to *misogynoir*—the unique combination of racism and sexism directed at Black women and girls (Bailey, M., & Trudy, *Feminist Media Studies*, Vol. 18, No. 4, 2018). Taking these photos focused on joy helps girls cultivate that emotion as a strength in response to this societal negativity. Onuoha maps the girls’ photos of joy onto Black antifascist traditions of resistance. “I see their actions as quiet resistance. It may not be protesting,” she said, “but what Black girls are doing is self-preservation.”

Ailsworth, a developmental community psychologist and assistant professor at Cornell University, believes that adequately studying Black girls demands more nontraditional methods. She encourages scholars to consider qualitative and participatory research, which can surface the nuances of developmental processes that large-scale quantitative studies can miss. Ailsworth’s research grows out of her work with the Black Girl Magic Crew, a Nashville, Tennessee-based after-school program she codesigned with Black adolescent girls and ran with educator Taqiyyah Elliott from 2018 to 2025. Approximately 85 girls participated in the program during that period, and Ailsworth’s research suggests that the Black Girl Magic Crew served as a site of psychological safety (Inniss-Thompson, M. N., et al., *Journal of Black Psychology*, Vol. 50, No. 3, 2024).

Ailsworth used the photovoice research method to explore how Black girls understand their own emotional wellness. Working with groups of 4 to 15 individuals, she invited the girls to photograph what being mentally well meant to them. What she received—images of the girls doing favorite activities—was far richer than what she might have gleaned from a survey or a questionnaire with a checklist of symptoms.

“I see their actions as quiet resistance. It may not be protesting, but what Black girls are doing is self-preservation.”

Alexandria Onuoha, PhD

Assistant professor of human development and family science, University of Tennessee, Knoxville

NEW RESEARCH METHODS

MEASURING WHAT MATTERS

When Nicole Joseph, PhD, an associate professor of math education at Vanderbilt University, set out to measure how Black girls see themselves as math learners, she found the existing tools wanting. Most measures of “math identity” treated race and gender separately, if at all. Joseph and her team, consisting of a psychometrician and two graduate assistants, codesigned a new measure from the ground up with a group of Black girls ages 8 to 13—the measuring inclusive constructs of mathematics identity (MICMI) model.

Two of its constructs are, by her account, entirely new: *intersectionality-assets* and *intersectionality-barriers*—the specific strengths and obstacles that come with being a Black girl in a math classroom. For example, Joseph found that Black girls “love to learn mathematics in community”—a more social approach than the traditional American emphasis on individualism, competition, or being quiet and facing forward.

The girls Joseph worked with wanted something more relational. “Black girls are like, Why can’t we sing, or be cracking jokes, or be talking about what we’re doing on our weekend while we are also working on the math?” Joseph said.

Ailsworth realized her data were enriched by her sustained relationship with the girls, in contrast to “a drive-by experience of research.” What the girls wanted, she found, was “a space where they could be respected and celebrated and develop friendships and talk about topics they couldn’t talk about in other spaces.” The field, she added, has much to learn about how Black girls create such spaces for themselves and the best ways to research them. “We have an opportunity to shift our expectations of what is considered to be rigorous. My hope is that we’ll move from these positivistic approaches to ones driven by epistemic justice that honor a variety of ways of knowing and see them as contributing to a bigger picture,” Ailsworth said.

Spaces of their own

Another project seeking to remedy the lack of rich research on Black girls is Teen Talk, Educate, Experience (Teen TEE), a 10-week curriculum program for Black girls in grades 6 through 8 that runs in two middle schools, one

located on Chicago’s North Side and the other on the South Side. Teen TEE was launched in 2019 by Leoandra Onnie Rogers, PhD, an associate professor of comparative human development at the University of Chicago, and Gloria Dotson-Lewis, MSW, of the nonprofit Distinctively Me.

In Teen TEE, groups of 8 to 12 girls discuss how they navigate their lives. Topics include beauty standards; code-switching; relationships with peers, parents, and teachers; and the “isms” that shape their day to day: colorism, adultification bias, and misogyny. As a capstone, each girl creates an “identity map”—a poster-board collage of the people, places, and cultural assets (such as favorite music or hairstyles) that represent her evolving sense of self.

More than 100 students have come through the program, with nearly all participants reporting that the experience feels designed especially for them as Black girls. Amanda-Joy Wright, a doctoral researcher and lead facilitator for the program, noted that often the most significant learning in Teen

TEE emerges from peer-to-peer interactions that develop within the context of adult instruction and support. For example, when participants discussed how hard it was to name their emotions or to feel heard by adults, they began to comfort one another, and they reported at the end of the program how these micro moments with peers were the most impactful for them.

Rogers hopes the field continues to move away from positioning Black girls on the margins of developmental science. “We’ve built an entire science without Black girls,” Rogers said. “We don’t need to take the existing science and do it on Black girls. We need to learn from Black girls in meaningful ways to rebuild developmental science.” ■

FURTHER READING

“I choose joy”: Exploring Black familial joy as a strengths-based coping asset in the United States

Mims, L. C., et al.
Journal of Family Psychology, 2026

“They’re always gonna notice my natural hair”: Identity, intersectionality and resistance among Black girls

Rogers, L. O., et al.
Qualitative Psychology, 2022

Linking structural and psychological adultification: Role inferences underlie adultifying beliefs about Black girls

Pictor, L. E., et al.
Cultural Diversity & Ethnic Minority Psychology, 2026

Fix your crown, queen: Evaluating the effects of a culturally enriched social-emotional learning intervention for Black girls

Scott, M. N., & Collins, T. A.
School Psychology, 2025



CROCKETT



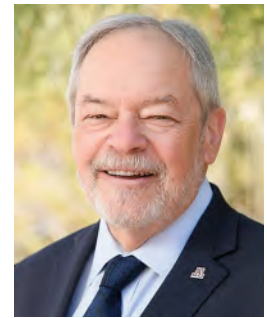
YEATMAN



CARR



CHAVOUS



MARX

Psychologists in the News

The National Academy of Sciences has announced the 2026 recipients of the Troland Research Award, an annual cash prize that commemorates the exceptional achievements of two early-career researchers in experimental psychology. This year's recipients are **M. J. CROCKETT, PhD**, and **JASON D. YEATMAN, PhD**. Crockett is a moral psychologist and neuroscientist at Princeton University, conducting research into the cognitive science of ethics, knowledge, and power, with a particular focus on understanding the nature of injustice. Yeatman is an associate professor at Stanford University, where he directs the Brain Development and Education Lab, combining psychology and neuroscience to study dyslexia in children.

The National Academy of Education has named 19 scholars in education and leadership to its membership. Among these are three psychologists. **PEGGY CARR, PhD**, a developmental psychologist and current visiting professor at the University of Maryland, served as the commissioner of the National Center for Education Statistics from 2021 until 2025. **TABBYE CHAVOUS, PhD**, a professor of education and psychology at the University of Michigan, researches the impact of race and diversity on identity and motivation

processes. **RONALD MARX, PhD**, an educational psychologist currently serving as the dean of education emeritus at the University of Arizona, researches the enhancement of science education in urban schools.

SONIA CHAWLA, PhD, has been named assistant vice president of research integrity at Wayne State University in Detroit, Michigan. Chawla previously served as the assistant vice president of academic research and regulatory compliance and as the director of research compliance at Eastern Michigan University. Her research focuses on child development.

JANNETTE MCMENAMY, PhD, was named associate provost at Fitchburg State University in Massachusetts. McMenemy, who assumed the position in May, is a developmental psychologist and has held several roles at the university throughout her 20-year career. She previously served as chair of the psychology department and dean of the School of Health and Natural Sciences.

JENNIFER MIZE NELSON, PhD, is the new vice chancellor for research and innovation at the University of Nebraska-Lincoln. A clinical child psychologist, she has previously held positions in the

university's psychology department and developmental cognitive neuroscience laboratory. Nelson's research focuses on the relationship between executive control development and physical and mental health.

DAVID LUBINSKI, PhD, has received the Society for Industrial and Organizational Psychology's Dunnette Prize, which recognizes significant and lasting advancements in the field. Lubinski, a professor of psychology at Vanderbilt University in Nashville, Tennessee, is also an investigator at the Vanderbilt Kennedy Center for Research on Human Development. Lubinski's research focuses on precocious youth and talent development.

IRENE M. PEPPERBERG, PhD, has been presented a Lifetime Achievement Award from the Jeremy Collier Foundation for her almost 50 years of work on gray parrot communication and cognition. Pepperberg is a research professor in the Department of Psychological and Brain Sciences at Boston University. The award came with a stipend of \$10,000 to continue her research. Pepperberg studies the learning mechanisms and outcomes of gray parrots and has compared their cognitive abilities with those of young children. ■



Shared reporting standards give researchers a blueprint to produce more transparent studies, cut wasted effort, and broaden the impact of their science.

A Better Way to Report Research

How reporting guidelines can save researchers time, strengthen papers, and improve the reach of their work

BY HEATHER STRINGER

A MANUSCRIPT IS MONTHS into peer review when the decision letter arrives. One reviewer has a simple question: How were participants excluded from the analysis? Another wants more information about how participants were randomized, and a third asks what specific instrument was used to measure an outcome. The study may be sound, but the paper lacks information needed to evaluate it. The result: another round of revisions, delays, and frustration.

For many researchers, reporting guidelines are the difference between a smooth review process and a lengthy exchange of questions that could have been addressed from

the start. These structured checklists help researchers identify the essential information to include in a paper—from how participants were recruited to how data were analyzed. By ensuring key details are not left out, these standards make research easier for reviewers to evaluate and for other scientists to replicate and build on.

Common guidelines for psychologists include the Journal Article Reporting Standards (JARS)—which were developed by APA for psychological research—PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses), CONSORT (CONsolidated Standards of Reporting Trials), and TIDieR (Template for Intervention

Description and Replication). Publications that follow these recommendations also make it easier for practitioners, educators, and policy-makers who are interested in applying interventions to help patients, students, and the public.

While researchers can view these frameworks as a bureaucratic exercise that threatens autonomy, psychologists who have been involved in developing reporting recommendations suggest that in the long run the checklists are beneficial. “By helping me think through the different things I will need to report, they have helped me write better papers and more effectively plan studies,” said Sean Grant, PhD, lead author of a reporting guideline for CONSORT-Social and Psychological Interventions (SPI) 2018 (*Trials*, Vol. 19, No. 406, 2018). “It’s like having a checklist and user’s manual for reporting research. And over time, I have internalized the standards so I apply them naturally when I am reporting studies.”

Reporting standards from PRISMA-Scoping Reviews helped Grant’s team communicate findings more clearly to the public through interactive online dashboards, policy briefs, and press releases. He suspects this was one reason their work on the 4-day school week was recently covered in outlets such as *Education Week*. “The reporting guidelines made us do a better job of providing all the information about what we did in the scoping review,” Grant said. “It gave us more confidence in making claims and disseminating this work because we knew the information was comprehensive.”

Detailed reporting about the population, context, intervention, and comparison condition allows policymakers to better discern whether findings will apply to the people they serve. “A policymaker’s real question isn’t Did this



Structured checklists help researchers identify the essential information to include in a paper—from how participants were recruited to how data were analyzed.

work somewhere? but Will it work here?” said Grant.

Automating compliance checks

Reporting standards started gaining prominence in the mid-1990s as researchers and journal editors recognized that publications often lacked information about how studies were conducted and analyzed because there were few recommendations for reporting research. CONSORT was the first

widely adopted guidance for randomized controlled trials, and since then numerous reporting guidelines have been developed. While researchers are increasingly using these frameworks, evidence suggests that reporting practices are still inconsistent (Lawson, D. O., et al., *Trials*, Vol. 23, No. 671, 2022; Murphy, S. L., et al., *Royal Society Open Science*, Vol. 12, No. 3, 2025). “Very few research-performing organizations teach or require



training on how to report research,” said David Moher, PhD, senior scientist for methodological and implementation research at the Ottawa Hospital Research Institute in Canada. “Most researchers celebrate the funding they receive rather than focusing on how the studies are reported, which influences whether it can be used by others to improve care for patients.”

Interest in using reporting guidelines is likely to increase, though, as experts develop automated tools that quickly verify adherence to standards. One such tool is Metacheck, which scans a manuscript to check a variety

of details, including whether it reports a power analysis—a statistical calculation used to determine how many participants a study needs to have a good chance of detecting an effect.

“For a long time, it has not been possible to check the implementation of reporting standards at scale,” said psychologist Katie Corker, PhD, executive director of ASAPbio (Accelerating Science and Publication in Biology), a researcher-led nonprofit organization focused on making scientific communication more open and transparent. “But AI tools will make it easier for journal editors to enforce the standards and notify researchers when they are out of compliance.”

Choosing guidelines

While the numerous options for guidelines may seem overwhelming, experts agree that study design strongly suggests which ones to use. If the paper is a systematic review or a meta-analysis, researchers typically utilize JARS-Quant (JARS for Quantitative Research Design) or PRISMA, which were developed for reporting how studies were identified, screened, selected, and synthesized; for qualitative meta-analyses, JARS-Qual offers a parallel standard. If the paper is original research—such as an experiment, survey, observational study, qualitative study, or mixed-methods project—researchers often use one of the other JARS guidelines. Researchers often turn to CONSORT-SPI when they are reporting a randomized clinical trial of a social or psychological intervention because the guideline helps authors provide details about how participants were assigned to conditions, how the intervention was delivered, and how outcomes were measured. More broadly, JARS-Quant also includes guidance for reporting clinical trials and studies with random assignment.

The JARS-Quant guidelines, which were originally developed in 2008 and updated in 2018, were designed for psychology researchers who collect data in numerical form and report them through statistical analysis. The tool includes a decision flowchart to help investigators select which table to use based on whether the study involved experimental manipulation, whether it was conducted on a single individual ($N=1$), and whether the researcher used random assignment to place participants in conditions. If a study utilizes experimental manipulation, for example, JARS-Quant directs the researcher to a table listing information to include in the method, results, and discussion section. The method should provide details about comparison conditions—how and when the experimental manipulations were actually administered—including a summary of the instructions. “These checklists force good science and transparency,” said Arthur Nezu, PhD, who was a member of APA’s JARS-Quant Working Group. “You can’t duplicate Grandma’s pumpkin pie recipe if you only get half the recipe.”

In developing these guidelines, Nezu advocated to include an item guiding researchers to report all important adverse events or side effects in each experimental condition. “It is critical to provide as much information as possible because the negative outcomes may affect the likelihood that people will benefit from an intervention,” said Nezu, a distinguished professor emeritus of psychological and brain sciences at Drexel University in Philadelphia. Adverse outcomes could include the number of people who dropped out of the study or whose symptoms worsened.

To ensure he captures adverse events, Nezu has his participants complete a program evaluation asking

"These checklists force good science and transparency. You can't duplicate Grandma's pumpkin pie recipe if you only get half the recipe."

Arthur Nezu, PhD

Distinguished professor emeritus of psychological and brain sciences, Drexel University

them to rate numerous aspects of the experience: the handouts, the cost in terms of time, the effects on other people, the building, the environment, and more. "The intervention itself may be good, but if the temperature in the room is too hot and people cannot pay attention, for example, then this can affect the impact," he said. "We need to provide as much information as possible to practitioners or others who may want to try the intervention."

Researchers may also use more than one guideline when the recommendations serve complementary purposes, explained Grant. For example, someone who is publishing a case study of a new intervention might refer to APA's JARS–Quant for reporting study rationale, participant characteristics, outcome measures, and analytic approach. The researchers might also use TIDieR because it provides more detail on how to describe the intervention itself, such as what materials were used, how many sessions were provided, and how fidelity was assessed.

A turning point for qualitative research

JARS–Qual (JARS for Qualitative Research Design) is one of the primary guidelines available to help report qualitative research findings clearly. Heidi Levitt, PhD, chair of the JARS–Qual Working Group in 2018, was eager to develop this type of standard, given the frequent problematic feedback

she and her colleagues had received from journal reviewers on their qualitative studies. "They were asking for inappropriate things like hypotheses and statistics that are typical for a quantitative study," said Levitt, a professor in the psychology department at the University of Massachusetts Boston. "Sometimes our studies would be rejected for reasons that made no sense or were not reviewed at all, and this greatly concerned me."

She approached leaders at the Society for Qualitative Inquiry in Psychology (SQIP)—a section of Div. 5 (Quantitative and Qualitative Methods)—about this dilemma, and the organization invited her to chair a task force that developed the SQIP recommendations for reviewing and designing qualitative research (*Qualitative Psychology*, Vol. 4, No. 1, 2017). When the group presented their recommendations to APA leadership and at APA and SQIP conferences, the response was positive.

"Initially, there was a question in the research community about whether it was feasible to develop qualitative guidelines, but the people who were skeptics became supporters after our presentations," Levitt said. She was invited to chair the APA task force to develop JARS–Qual, and the group published these standards in the *American Psychologist* in 2018 (Vol. 73, No. 1). That year, the article was the most downloaded article across all 91 APA journals.

The JARS–Qual checklist of items to include in a manuscript differs from quantitative checklists. For instance, researchers are expected to describe how they managed their perspectives and expectations within the research endeavor. This includes critically reflecting on how their own background, assumptions, relationships, and experiences influence the questions they asked, their decisions about data collection, and their development of findings. For example, cisgender, heterosexual researchers studying LGBTQ+ students' experiences of higher education might not be aware of how the current political landscape is influencing learning. To address this limitation, researchers might read about this impact, talk to LGBTQ+ consultants, and seek feedback on findings to improve the questions they ask and the methodological integrity of their analysis. "If you do not deliberately consider how your perspective influences your methods, you might inadvertently limit the types of questions that you ask and miss seeing patterns in your findings," explained Levitt.

Levitt, outgoing editor of *Qualitative Psychology*, believes that reporting standards are increasing the understanding and recognition of qualitative research. Last year, the journal's 5-year impact factor, a metric rating articles published between 2019 and 2023 that were cited in 2024, was 8.9, a statistic showing that, on average, each paper in the journal was cited in other publications about 9 times in that span. This year, for content published between 2020 and 2024 that was cited in 2025, the 5-year impact factor was one of the highest among APA journals at 11.6, with articles having been cited on average even more frequently over the past 5 years.

Rethinking how psychology reports race and culture

Increased attention to racial equity prompted APA to gather a working group to develop standards for reporting race, ethnicity, and culture in journal articles, JARS-REC (JARS for Race, Ethnicity, and Culture). One purpose of these guidelines is to help researchers avoid the *deficit model*—focusing on “problems” when developing research questions related to people of color.

JARS-REC also provides guidelines for more equitable evaluation of study designs. Historically, reviewers often required study designs that used white Americans as a comparison group with people of color regardless of the research question. “This assumes Western culture has a more advanced functional model, but we should avoid this type of implicit or explicit bias,” said Mo Wang, PhD, associate dean for research and strategic initiatives in the Warrington College of Business at the University of Florida and cochair of the JARS-REC Working Group.

The recommendations also include a section on generalizability to help researchers identify and justify the target populations for the study’s finding. “If the study is about depression in Chinese people, in the past researchers were expected to discuss that the findings did not apply in a Western context, but this is not necessary,” Wang said. To address this issue, the JARS-REC states the following: “Recognize that generalizability is always constrained and is not the primary purpose of every study; all studies have a socio-historical-cultural context.”

A training tool for the next generation

Professors who teach research-related courses are also seeing dramatic benefits for students who learn to use reporting guidelines to analyze publications

and design their own studies. “I’ve ruined research for my students because they start to understand that they can’t take findings at face value,” said L.A. Stretch, PhD, a professor at the University of the Cumberlands in Kentucky who teaches her students to use JARS. “They learn to become research detectives by critiquing what was done well, what was missing, and what should have been done.” By referring to the JARS checklists, students can identify when data do not support the implications or discussion, or if a portion of the participants are not reported in the results. Students in her class, for example, have read an article in which authors reported a statistically significant relationship between counseling students’ wellness scores and their self-reported counseling self-efficacy. “But the data did not show that wellness training causes higher competence or that the students’ counseling skills improved,” Stretch said.

Stretch also teaches graduate students to use JARS when they are starting their dissertation. The framework helps them think critically about their theoretical orientation, procedures, recruitment of participants, data collection, and analysis. The guidelines also help junior faculty convert dissertations into papers that can be published. “It’s hard to know how to condense dissertations that are 150 pages or longer into a 20- to 30-page article, and the guideline helps new faculty extract what they need,” she said.

Although Stretch has incorporated JARS into her curriculum since she initially heard about the guidelines in 2021, she is among a minority of professors who are teaching students about reporting guidelines. Stretch and other advocates suspect that lack of awareness about these tools is one of the hurdles preventing more widespread use. “I get excited about teaching graduate

students about these guidelines,” she said. “If we can train the next generation of educators to use them, I believe we will see far-reaching changes in how research is reported and implemented to improve health.” ■

FURTHER RESOURCES

Improving statistical reporting in psychology

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Communications Psychology, 2025

Proposal for a critical appraisal tool for studies using the Delphi method (DCAT)

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Reporting guideline for the early stage clinical evaluation of decision support systems driven by artificial intelligence: DECIDE-AI

Vasey, B., et al.
BMJ, 2022

JARS as a teaching tool: Helping students think and write like scholars

Stretch, L., & Bonfini, J.
APA, 2026



American Indian and Alaska Native individuals often hold deep spiritual traditions, strong connections to land and ancestry, and community-centered worldviews that may differ significantly from Western models of health and healing.

Clinical Considerations for Working With American Indian and Alaska Native Communities

Practitioners unfamiliar with the cultural and historical context of American Indian and Alaska Native communities risk undermining trust. Here is how cultural humility can help close that gap and support better outcomes.

BY ASHLEY ABRAMSON

RURAL COMMUNITIES ARE notoriously underserved, especially when it comes to mental health care. The Psychology Interjurisdictional Compact (PSYPACT), an agreement allowing licensed psychologists to practice telehealth across state lines, can improve access to care—but clinicians from outside areas may not be prepared to work in those communities if they do not understand the local and cultural nuances that can impact mental health and resilience.

The experts quoted in this article agreed on the term “American Indian and Alaska Native” (AI/AN). APA’s Inclusive Language Guide refers to this population as “native American” or “Native North American.”

This awareness is particularly important when working with American Indian and Alaska Native (AI/AN) populations. Providing effective care for these individuals requires non-Native psychologists to understand the cultural, historical, and community contexts that shape patients' experiences.

Another layer of cultural understanding is needed for non-Native psychologists working with AI/AN populations. Beyond their rural identity, AI/AN individuals often hold deep spiritual traditions, strong connections to land and ancestry, and community-centered worldviews that may differ significantly from Western models of health and healing. Present-day racism and transgenerational trauma because of centuries of systemic injustice is another important context that can shape mental health experiences and trust in health care providers.

As a result, typical Western approaches to psychological care may not be effective—and could even impair the therapeutic alliance. “We repeatedly see that Native people don’t show up after their first or second appointment, which could be written off as resistance,” said Iva GreyWolf, PhD, a licensed psychologist in Alaska. “Instead, ask yourself whether you’re creating a welcoming environment for people with a different worldview.”

While psychologists can gain the mindsets, tools, and skills necessary to provide culturally sensitive care through their training, AI/AN populations are underrepresented in the scientific foundations of psychological practice. “Working with Indigenous people requires more analytical prowess in thinking about cultural differences, which may take extra time or even go against one’s existing orientation,” said Joseph Gone, PhD, a

professor of anthropology and global health and social medicine at Harvard University, where he also serves as the faculty director of the Harvard University Native American Program.

Taking steps toward cultural understanding and humility can help build trust and rapport for more positive therapeutic outcomes. Read on to learn more about the best practices for working with AI/AN patients, and how to adopt culturally sensitive approaches to support holistic well-being.

Take the time to learn

Every AI/AN tribe has its own unique practices and beliefs. An American Indian in the southeast United States may see as little in common with an Alaska Native as any two non-Natives from those regions. Taking time to learn about a specific tribe’s history and cultural norms can help build a trusting therapeutic relationship—but psychologists should not rely on patients to explain their culture. “It’s not the job of the community or the

For Indigenous communities, the natural world is not only a geographic entity but also the foundation of spiritual and cultural practice.



DORADALTON/GETTY IMAGES

people in it to teach you about who they are,” said Maria Crouch, PhD, a clinical-community psychologist and assistant professor adjunct at Yale School of Medicine in the Department of Psychiatry. “That re-creates a settler-colonial dynamic, which can be harmful to therapy.”

If you are able, travel to the Indigenous lands to visit local museums or build relationships with community elders (ideally, foster a relationship where you provide value, too—through acts of service and/or gift giving). If you cannot visit in person, read about the people or establish virtual connections with those who live or work in the area. Researching local organizations such as schools, community centers, or health care organizations can also help you encourage community involvement while developing potential referral sources.

Whether or not you visit in person, try to understand and honor the relationship between the people and their land. For Indigenous communities, the natural world is not only a geographic entity but also the foundation of spiritual and cultural practice. “Our communities are the only Americans whose ancestors didn’t immigrate here, and that has an impact on our worldview, and how we feel, think, and behave,” said Justin Douglas McDonald, PhD, a professor of psychology at the University of North Dakota. While it is important to take steps to understand a person’s practices and beliefs early on, the learning process should be ongoing throughout the therapeutic relationship.

Create a safe space

Rather than emphasizing your psychological expertise, create a safe space by centering therapy on the individual’s experience. “Native patients want to know you’re flexible enough to fit

your knowledge in the context of their community,” said Deidre Yellowhair, PhD, a research assistant professor of community behavioral health at the University of New Mexico.

When you are comfortable, share who you are, too. “Native communities believe we’re all connected with one another and the land, so people want to know who you are,” said Crouch. Along with your professional background, consider disclosing where you are from or live now to establish rapport. On the website Whose Land, you can easily search the tribal land where you live now or where you grew up.

Aim to integrate cultural sensitivity in how you speak: Clinical jargon, Gone said, can be alienating, especially for those apt to seek spiritual help from a trusted healer rather than psychological support from a stranger. The pace at which you speak also matters—it can help to follow the patient’s lead. Native people, as a whole, may speak at a slower rate and are generally more comfortable with silence. “We typically view time differently and are comfortable being in the present moment, so someone talking quickly can be overwhelming,” said Crouch.

Be proactive in asking for clarity if needed. AI/AN cultures may have

Clinicians who focus only on hardship risk missing the collective strengths that have carried American Indian and Alaska Native communities through centuries of systemic injustice.



unique ways of nonverbally communicating—for example, in Crouch’s community, people raise their eyebrows to say “yes” and furrow them to indicate “no.”

Take a collaborative approach

Even if you have extensive training in a particular therapy method or treatment modality—or experience with a particular community—it is essential to keep an open mind and be willing to adjust. Therapy with Indigenous communities, Yellowhair said, is most effective when clinicians remain flexible and tailor care to the individual. Rather than assuming an individual with certain symptoms needs a specific intervention, clinicians should apply their own expertise while trusting individuals

receiving care as the experts of their own lives—even if it does not always seem to “make sense.” For example, you may think someone only needs cognitive behavioral therapy to improve, but they may also need practical resources to better their quality of life.

Do not assume that all American Indians and Alaska Natives share the same level of adherence to traditional practices. Even within Indigenous communities, people can have a diverse range of experiences. If cultural identity is important, McDonald said, it is vital to incorporate that context in the assessment or treatment, such as by encouraging connection with community members or tribal elders who can provide guidance and support.

Clinicians should also be aware of and avoid harmful stereotypes that have historically affected AI/AN communities. For example, a since-redacted 1970s study by a non-Native psychologist falsely suggested AI/AN people are genetically susceptible to alcohol use disorder. In fact, Crouch said, they have a high abstinence rate from alcohol compared with other ethnic minority groups.

Look beyond a Western framework

Many of the evidence-based measurements, diagnoses, and treatments psychologists use were not developed based on Native samples or with Native people in mind, said Royleen Ross, PhD, who trained as a clinical psychologist and is a cultural consultant in New Mexico and past president of APA Div. 45, Society for the Psychological Study of Culture, Ethnicity, and Race.

Behavior should be understood within a person’s sociocultural context, not judged through a Western lens. Be careful of how your assessment may

perpetuate bias. For example, you may meet with someone who did not attend high school and does not have what many consider to be a traditional job. Yet in their community, they may be a revered leader with valuable wisdom and experience. “Try to ‘Indigenize’ your criteria when conceptualizing your case rather than understanding the patient through your own Western lens,” said GreyWolf.

At times, your assessment may not cleanly translate between cultures. For example, someone may experience profound, extended grief after the loss of a community elder. In Indigenous communities, Ross said, the idea of family often extends beyond parents and siblings—and the loss of an elder may represent losing important wisdom and healing abilities. Take time to consider the cultural context and influence as you are developing a diagnosis and treatment plan.

The Cultural Formulation Interview in the *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition, Text Revision), or *DSM-5-TR*, is a helpful tool in guiding assessment and diagnosis, Crouch said. “That will help you formulate your case conceptualization about an individual based on their expertise and what they tell you about their lived reality,” she said.

Uplift cultural strengths while addressing systemic oppression

While it is important to recognize and treat the symptoms of systemic abuse and injustices that have impacted AI/AN communities and the effects of transgenerational trauma, hyper-focusing on negative experiences minimizes the strengths that have allowed AI/AN populations to survive and thrive amid centuries of systemic injustices and abuse. “Instead of focusing on what’s wrong, ask yourself,



ADVOCACY

STRENGTHENING AI/AN COMMUNITIES

APA advocates independently and alongside partner organizations for the well-being of American Indian and Alaska Native (AI/AN) communities. Priorities include increased funding for the Indian Health Service, the federal agency within the Department of Health and Human Services responsible for AI/AN health care, and for a stronger AI/AN mental health workforce, built through scholarships for AI/AN psychology students, student housing stipends, and loan forgiveness for AI/AN providers. For more resources and information, visit the Society of Indian Psychologists at <https://www.nativepsychs.org> and follow APA's advocacy alerts at www.apaservices.org/advocacy/news-events/stay-informed.

Why are some Native people doing so well, in spite of what they've been through?" said GreyWolf. When you understand the collective strengths, you can remind individuals about their innate skills and resources and adopt a more strengths-based approach.

If the individual's experience includes the effects of historical and present-day trauma, depersonalizing it can help them understand their struggles within a broader historical context rather than view them as personal failings. "Reminding the person of the systemic injustices facing Indigenous communities for generations can help take away the internalized message of 'I'm broken because I'm brown,'" said Yellowhair. For example, she helps disseminate a parental curriculum to teach parenting skills to those whose older family members were affected by the government-mandated boarding schools and associated abuses of the past century. This guidance helps reframe caregivers' challenges as the result of generational experiences rather than of individual failings. By depersonalizing the challenges, families can begin to heal and practice new parenting skills.

Studies, including Ross's research, show spiritual and cultural practices are protective factors for AI/AN people—particularly in the realm of

intergenerational and transgenerational trauma. "Think about what's already working for your patient and use that in your treatment recommendations," said Ross. That may mean encouraging spiritual or cultural practices, such as attending traditional ceremonies or meeting with a village elder.

When you incorporate Western therapeutic concepts or clinical terms, find and emphasize cultural connection points. For example, draw attention to the mindfulness contained in focusing on beats of a drum during a ceremony. Or if you are explaining emotion regulation to a child, you could describe the self-control it takes to listen to and honor an elder when they are speaking. "We've always had methods for these things built into our cultural practices, and finding ways to connect the dots back to the person's culture can establish a much more meaningful connection," said Yellowhair.

Encouraging cultural connection and culturally sensitive practices can promote "thrivance," a term used in recent literature to describe active flourishing in AI/AN populations. "Resilience requires continued suffering," said Crouch. "Thrivance is the process of reclaiming what was stolen by being who we are." ■

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Community mental health services for American Indians and Alaska Natives: Reconciling evidence-based practice and alter-Native psy-ence
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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 Toller, and Alan Barney. Overlaid on the calendar is a 'Treatment recorded.' audio player showing a waveform and a 43:47 duration. Below the audio player is a yellow button that says 'Please summarize the treatment plan.' and a text box containing a 'Treatment plan summary:' with key elements like 'continued session attendance' and '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 line for text entry. At the bottom of the form are 'Save note' and 'Refine' buttons.

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