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Monitor on Psychology



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The Hot List

Resources, opportunities, and news for psychologists from APA



XAVIER LORENZO/GETTY IMAGES

YOUTH MENTAL HEALTH

Encouraging Healthy Social Media Use Among Teens

Navigating an ever-changing social media landscape is daunting, especially for parents trying to ensure their teens' use of various platforms is not detrimental to their well-being. APA teamed up with Commonsense Media to develop an interactive quiz for its audience of more than 147 million families. "How Social Media Savvy Is Your Child?" comprises seven questions for parents about their teen's online habits, covering topics like communicating with respect, keeping online interactions safe, and how to identify harmful, hateful, and misleading content. Answers to each question include evidence-based tips that direct parents to APA resources on healthy teen social media use and misinformation.

www.commonsensemedia.org/articles/quiz-how-social-media-savvy-is-your-child

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PRESIDENTIAL ELECTION

Choose the Nominees for APA's 2027 President

Cast your vote: In early March, all APA members with email addresses on record received nomination ballots for APA's 2026 president-elect and 2027 president. Use the electronic ballot's search function to explore the names of APA members and nominate up to five candidates for president. Voting closes April 17.

Learn more at www.apa.org/about/governance/elections

TRAINING

APA PsycTherapy Platform

APA's streaming video platform, APA PsycTherapy, provides clinicians, counselors, instructors, and trainees the opportunity to sharpen their skills by observing candid, unscripted psychotherapy sessions featuring renowned therapists. This is an invaluable tool for honing skills and learning the latest science-backed psychotherapy techniques. Users can browse more than 900 videos covering 100 therapy approaches and 245 topics.

www.apa.org/pubs/databases/psytherapy

CONVENTION

Register for APA 2025 "Perspectives Power Possibilities"



APA 2025 takes place in Denver, Colorado, Aug. 7–9, 2025. APA's Annual Convention showcases the breadth and depth of psychology with sessions that are valuable and enriching for practitioners, researchers, academics, students, and more. This year's theme, "Perspectives Power Possibilities," celebrates the diverse perspectives and expertise of psychologists from every background who enable endless possibilities for our field. Early bird registration runs April 23 through June 4, 2025.

https://convention.apa.org

PUBLISHING TOOLS

Updated EDI Toolkit for Journal Editors

The second edition of the *Equity, Diversity, and Inclusion (EDI) Toolkit for Journal Editors* is now available. With this updated resource, journal editors have the guidance they need to champion equitable and inclusive practices throughout the research and publication process. The toolkit includes an expanded checklist of 45 actionable steps, recommendations on positionality statements and equitable citation practices, real-world examples from APA-published journals and articles, and more.

www.apa.org/pubs/authors/equity-diversity-inclusion-toolkit

MENTORING

Psychology Summer Institute

APA's annual Psychology Summer Institute (PSI) is now accepting applications. This weeklong intensive training offers a unique opportunity for advanced doctoral students and early-career psychologists to work with experienced mentors to develop projects such as grant proposals, postdoctoral fellowships, dissertations, treatment programs, publications, or program evaluations that address critical issues faced by underrepresented communities. The application deadline is April 15.

https://ldi.apa.org/programs/minority-fellowship-program/psi

ESSENTIAL RESOURCE

APA/APASI Response Center

Recent and proposed policy changes are creating significant challenges for psychologists across research, education, and practice. These changes strike at the core of psychological science and practice, affecting not just your daily work but the fundamental principles that guide our discipline. APA is committed to being a resource and support for you, our members, as you navigate these significant policy changes.

Monitor developments and learn how to join in the effort at https://updates.apaservices.org.

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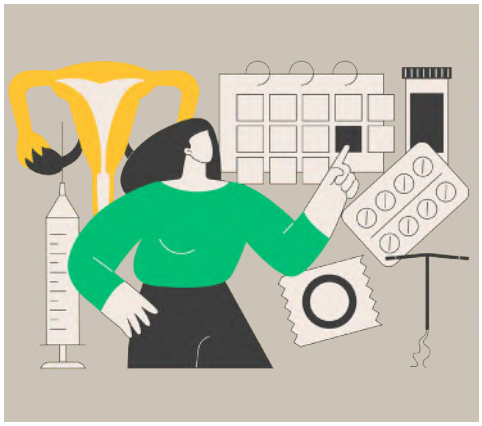
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April/May 2025



50 Birth Control and the Brain

For many, the pros of hormonal contraceptive use still far outweigh the cons, but new research on how birth control pills affect the developing brain, stress responses, and health can help women make informed decisions.



58 Therapy Through Tabletop Role-Playing Games

Tabletop role-playing games as a form of group therapy have shown promise for treating anxiety, depression, attention-deficit/hyperactivity disorder, and more.



42 Building Better Media for Kids *(cover)*

Psychology researchers are shaping educational media reaching millions of children throughout the world.

ON THE COVER: AMR BO SHANAB/GETTY IMAGES

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Change Is in the Air

We can meet change by balancing new possibilities with the acknowledgment of uncertainty and loss



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

BY DEBRA KAWAHARA, PhD

CHANGE IS ONE of the predictable aspects of life. Some change happens because we decide it is needed and necessary; some change happens regardless of whether we want it to or not. Much of our work as psychologists is about helping others to manage change and being an agent of change ourselves. Yet change may be hard, even for us.

For leaders, the hardest part of managing change is guiding others through hesitancy and fear of the unknown. The word "resistance" is often used, referring not necessarily to the resistance to change but the resistance to loss. What do I stand to lose? What does it mean to me? How does this affect who I am and what I do?

There are five core types of losses:

1. **Safety:** Safety is a basic need. The more predictable our lives, the safer we feel. When our or others' safety is threatened, the more we grasp for predictability and the status quo.

2. **Freedom:** We want to have autonomy and power to make decisions.

3. **Status:** The higher status we hold, the more we push back if we stand to lose it.

4. **Belonging:** We have a need to belong and to be accepted.

5. **Fairness:** When decisions threaten a sense of fairness and equity, frustration and upset can ensue.

When change occurs, we have to question who we are and our core identity, especially if the change requires us to give up something important to us.

As we enter into times of change, there is a juxtaposition of a new future and the losses of what has been. It is the latter that needs to be acknowledged. As we embark into a new future together, it will be up to each of us to decide how to approach the change. Think about your core identity and values that have guided you and how these can still ground you and your work. These will continue to be the essence of who you are and what you do. Similarly, APA's mission remains central to our work: "to promote the advancement, communication, and application of psychological science and knowledge to benefit society and improve lives." While change and losses are hard, I believe that we are resilient and we can come together to make the world a better place to live. ■



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Pursuing Scientific Excellence

APA continues to innovate in improving research and sharing science with the public

BY ARTHUR C. EVANS JR., PhD



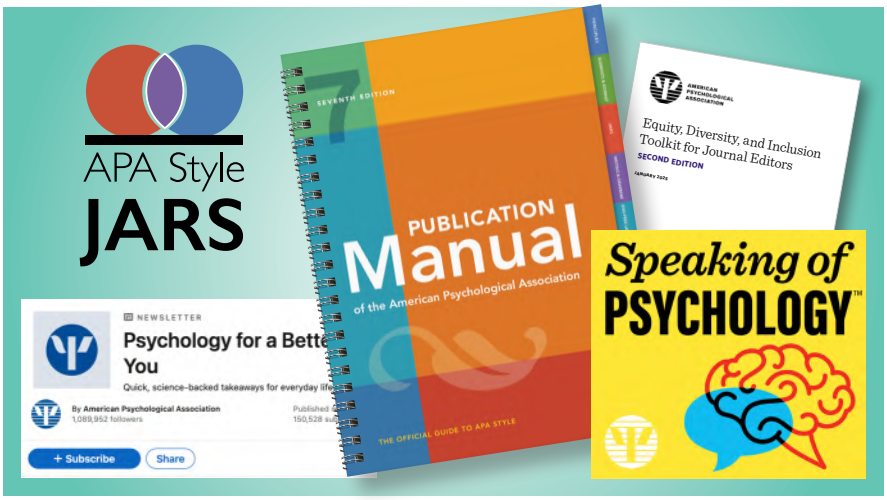
Arthur C. Evans Jr., PhD, is the chief executive officer of APA. You can follow him on LinkedIn.

AS AN ORGANIZATION, we believe that scientific excellence benefits our entire field and is critical for the public good. In an era of widespread misinformation and growing skepticism toward science, the pursuit of scientific excellence is more important than ever.

Here are some ways APA is supporting this work.

■ **Advancing methodological innovation.** We continuously work to improve standards and procedures for conducting and reporting research. For instance, APA's Science Training Sessions cover a range of tools and techniques that support cutting edge psychological research, from advanced data analysis to media trainings for scientists. APA's Journal Article Reporting Standards (JARS) offer guidance to authors, reviewers, and editors about information to include in different types of manuscripts. In 2024, 95% of articles accepted by APA journals adhered to JARS, helping to enhance scientific rigor, reproducibility, and methodological integrity.

■ **Incorporating diverse perspectives.** We promote greater demographic and viewpoint diversity in psychological research because we see it as integral to our field's scientific rigor and relevance. APA's EDI Toolkit for Journal Editors offers nearly 50 actionable recommendations to promote equity and inclusion in their journals. Simple steps like requiring author contribution statements and encouraging student co-reviewers can help broaden author representation and reduce bias.



■ **Increasing access to psychological science.** Sharing research through scholarly journals is important but often fails to reach those outside our field. Scientific excellence cannot be achieved if our research does not reach those who need it. APA routinely issues press releases on research from our 90 peer-reviewed journals to engage reporters across a broad range of topics. APA's *amicus brief* program supplies state and federal courts with science-based briefs on critical topics such as the reliability of eyewitness testimony. APA also publishes *Psychology for a Better You* and *Six Things Psychologists are Talking About,* e-newsletters sharing quick, science-backed takeaways and insights for everyday life in accessible, jargon-free language. The public hunger for this information is clear: More than 100,000 people subscribed to *Psychology for a Better You* on its launch day. And APA's Speaking of Psychology podcast has more than 20 million downloads, primarily by members of the public.

As psychologists, we know that the quality of our science impacts our ability to improve lives. This is our moment to lead by example, to show how rigorous research illuminates paths forward, and to reinforce psychology's essential role in creating a better world. ■

In Brief

Snapshots of the latest psychological research

COMPILED BY CHRIS PALMER, PhD



Children whose mothers model behaviors such as sensitivity and responsiveness during mother-child playtime are more likely to show the same skills with their friends.

MOMO PRODUCTIONS/GETTY IMAGES

Modeling playtime

A mother's interactions with her child can shape how the child plays with other children, suggests research in *Developmental Psychology.* Researchers observed 128 mothers in the United States playing with their 32-month-old children in a single playroom lab session. Six months later, the researchers observed the children interacting with kids they had never met, and then when the children were ages 58 and 66 months playing with a close friend. During all interactions, the researchers focused on the children's responsiveness (being receptive to play suggestions) and assertiveness (initiating play or proposing ideas for games). During the mother-child playtime, the researchers also noted the mothers' sensitivity to their children's interests and requests. Children whose mothers balanced sensitivity and responsiveness in play were more likely to show the same skills with their friends. Similarly, children who were assertive during play when their mothers were responsive were more likely to be assertive with new acquaintances.

DOI: 10.1037/dev0001809

Social support short-circuits suicide ideation

People struggling with mental health symptoms are less likely to think about suicide if they have a social support network in place, according to research in *Psychological Services*. Researchers surveyed 4,436 U.S. veterans and 13,994 nonveterans about their mental health symptoms (post-traumatic stress, anxiety, alcohol use, depression), current suicide ideation, and perceived level of social support from a significant other, a friend, or family members. They found that perceived social support was more protective against suicide ideation for those with lower levels of mental health symptoms than for those with higher symptom levels. Findings were consistent across veterans and nonveterans, men and women, social support sources, and mental health symptoms. The findings indicate that individuals with lower severity of mental health symptoms may benefit from strategies aimed at increasing perceived social support more than those with higher symptom severity.

DOI: 10.1037/ser0000849

Family proximity and community values

People who live near their relatives have a stronger sense of community and harsher attitudes toward transgressive behavior, indicates research in the *Journal of Personality and Social Psychology*. Across six studies, researchers surveyed 3,301 people in the United States, Ghana, and the Philippines about their relatives' proximity, their social and personal identities, and their attitudes about social issues. They found that people who live close to their family, or who even imagine residing near family, were more likely to engage in extreme pro-group behavior (e.g., willingness to serve their country in a war); believe that people are fundamentally connected to others; identify themselves as more connected to, and trusting of, their community and neighbors but less connected to foreigners; condemn antisocial behaviors (e.g., support the death penalty for murder); and, because of increased worry about inbreeding, judge sibling incest as significantly more morally wrong.

DOI: 10.1037/pspa0000428

People who live close to their family tend to feel more connected to their community but less connected to foreigners.

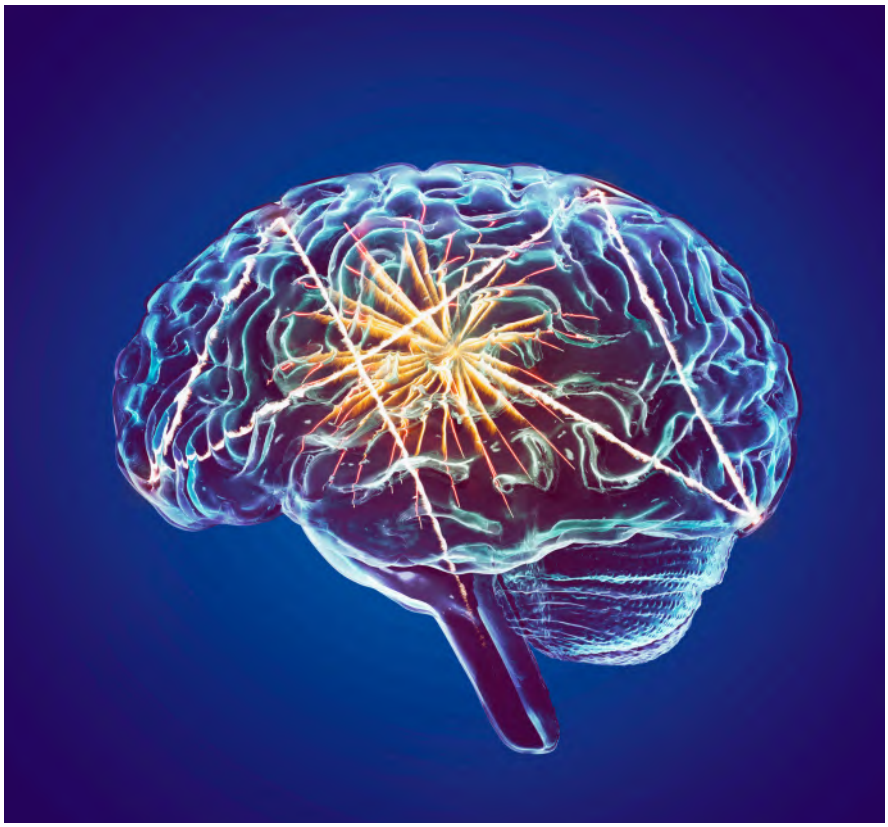


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Parental conflict and social media addiction

A poor relationship with parents during adolescence, characterized by low parental monitoring and lots of conflict, can contribute to the development of social media addiction in adulthood, suggests research in the *Canadian Journal of Behavioural Science*. Researchers surveyed 322 participants in Canada about monitoring by and conflicts with their parents at three key developmental stages: adolescence (age 15), emerging adulthood (age 25), and adulthood (age 30). Lower levels of parental monitoring when participants were 15 years old were associated with greater use of chat sites, which predicted increased social media involvement at age 25 and, ultimately, greater likelihood of social media addiction at age 30. This finding suggests that early online behaviors, influenced by parental factors, can have lasting effects on social media habits. In contrast, parent–adolescent conflicts were directly associated with social media addiction at age 30, but this association was not influenced by chat site use at age 15 or social media involvement at age 25.

DOI: 10.1037/cbs0000428



Transcranial brain stimulation could be an effective at-home remedy, when combined with patients' regular treatment, for major depressive disorder.

HIROSHI WATANABE/GETTY IMAGES

Mild brain zaps ease depression

Gentle brain stimulation could be an effective at-home remedy for treatment-resistant depression, indicates a study in *Nature Medicine*. Researchers trained 174 adults in the United Kingdom and the United States, all of whom had been diagnosed with a major depressive disorder, to use a headset to deliver transcranial direct current stimulation (tDCS), in addition to their regular treatment. Half of the participants were randomly assigned to receive a current of 2 milliamperes—about 0.5% of the energy needed to power a 100-watt light bulb—for 30 minutes, 5 times a week for the first 3 weeks, then 3 times a week for 7 weeks. Participants in a control group wore a sham headset. After 10 weeks, the treatment group's depression symptom scores dropped by 9.41 points, whereas the control group's scores decreased by 7.14 points. Nearly 45% of participants with the active tDCS device experienced a reduction in or recovery from their symptoms, compared with almost 22% of those with the control device.

DOI: 10.1038/s41591-024-03305-y

Don't worry (about happiness), be happy

Research in *Emotion* suggests that worrying too much about happiness can make you feel less happy and even more depressed. Researchers asked 1,815 participants in the United States to complete surveys and diaries over the course of 1 to 11 years that measured the value they placed on happiness as well as three facets of well-being: satisfaction with life, psychological well-being, and depressive symptoms. Not only did aspiring to be happy not predict participants' overall well-being, but being concerned about happiness was heavily associated with lower well-being, including less satisfaction with life and greater symptoms of depression. The findings suggest that the pursuit of happiness does not adversely impact well-being, but focusing too keenly on one's own level of happiness can.

DOI: 10.1037/emo0001381

Get a job to match your personality

Stereotypes about personality traits and occupations are largely true, suggests a study in the *Journal of Applied Psychology*. Researchers asked 68,540 adult participants in Estonia to disclose their primary occupation and answer 198 questions assessing not only the Big Five personality traits (extraversion, neuroticism, openness, agreeableness, and conscientiousness), but also more nuanced traits, such as curiosity, sociability, precision, and emotional stability. The findings revealed that occupations explained 2%–7% of the variance in the Big Five traits but up to 12% of the variance in individual nuanced traits. In general, occupational groups with specific personality demands showed clear differences in personality traits. For instance, participants in social professions like sales scored higher on extraversion. Occupations linked with higher performance demands exhibited more uniformity for specific traits, particularly emotional stability and conscientiousness.

DOI: 10.1037/apl0001249

Runner's high

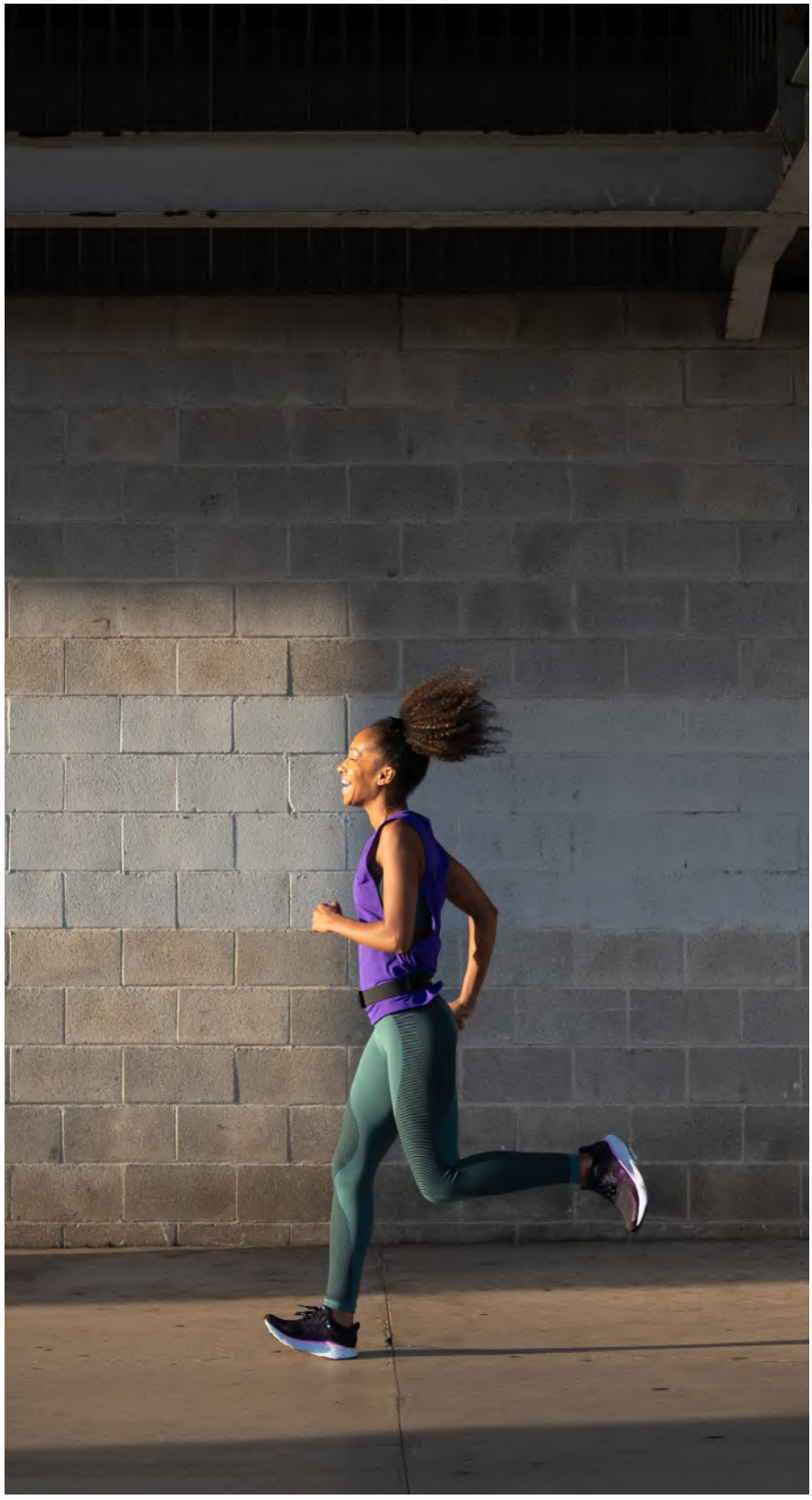
For beginning runners, overestimating the difficulty of a run makes the experience more enjoyable, according to a study in *Sport, Exercise, and Performance Psychology*. Researchers recruited 66 participants in Belgium who were engaged in a "start-to-run" program. Before a daily run, the participants predicted the amount of perceived exertion they would experience. Then, just after the run, they rated how much exertion they perceived experiencing as well as how much pleasure they got out of the run. The researchers found that running pleasure increased when the actual exertion level was less than predicted.

DOI: 10.1037/spy0000362

Text abbreviations signal insincerity

When texting, using full words instead of abbreviations makes people appear more sincere and increases their likelihood of receiving responses, indicates research in the *Journal of Experimental Psychology: General*. In a preliminary survey, researchers found that 99% of respondents reported using texting abbreviations (e.g., "IDK" for "I don't know"), and 84% believed that others would respond well to abbreviations. Then, across eight studies with 5,306 participants—including an analysis of Discord chats, dating scenarios, and conversations among Tinder dating app users from 37 countries—texters who used abbreviations received shorter and fewer responses and were less likely to receive contact information from the other texter. A post-test study with 120 participants found that just 15.8% accurately predicted the researchers' main findings, suggesting that most people are not aware of the detrimental impact of texting abbreviations on perceived effort, responsiveness, and sincerity.

DOI: 10.1037/xge0001684



ABRAHAM GONZALEZ FERNANDEZ/GETTY IMAGES

Running can be more enjoyable for new runners who overestimate how hard a run will be.

More noise, less talk

According to a study in *Developmental Psychology*, the noisier a home's background sounds, the less infants and their mothers interact vocally. Researchers quantified background sounds—television/screens, devices, music, appliances, and transportation/construction—during 1- to 2-hour blocks in 76 homes in the United States with infants 8 to 26 months old. Exposure varied enormously among homes but was stable within a given home across the weeklong study period. On average, infants vocalized during 46% of the intervals without background sound compared with 38% of the intervals containing background sound. Mothers spoke to infants, in turn, during 64% of quiet intervals and 58% of noisy ones. Television/screen sounds, the most dominant background sounds, were associated with the lowest levels of infant vocalizations. Though the differences in noisy and quiet environments were relatively weak in magnitude, the researchers suggest that reduced language interactions can profoundly impact language learning over time.

DOI: 10.1037/dev0001762

Manage symptoms by staying busy

For people with attention-deficit/hyperactivity disorder (ADHD), periods characterized by greater life demands are associated with milder symptoms, suggests research in *The Journal of Clinical Psychiatry*. Researchers analyzed data from 483 participants in the United States, all of whom were diagnosed with ADHD in childhood and tracked for 16 years. Participants were between 7 and 10 years old at the study's start and had follow-up assessments of ADHD symptoms, functional impairments, and treatment usage every 2 years into their mid-20s. Almost 10% of participants achieved sustained complete remission, 15.6% experienced one significant reduction in symptoms that remained stable thereafter, and 11% exhibited consistently high symptoms throughout the study. Most participants (63.8%), though, exhibited fluctuating ADHD, characterized by periods of remission interspersed with recurrences of symptoms. For them, remission was most likely to occur during periods of higher responsibilities at work, school, or home, suggesting that structured, demanding environments may help some people with ADHD manage their symptoms.

DOI: 10.4088/JCP.24m15395

It's not you, it's me

Relationship satisfaction is primarily influenced by one's personality, with partner traits having a negligible impact, suggests research in *Personality and Individual Differences*. Researchers analyzed data from a longitudinal survey of 486 heterosexual couples in Germany. Participants self-assessed their Big Five personality traits at study onset and rated their relationship satisfaction annually over 9 years. The results revealed that participants' own personality traits, not their partner's, were the primary predictors of long-term relationship satisfaction. Neuroticism had a consistently negative impact on satisfaction for both men and women, while conscientiousness positively affected relationship satisfaction for both genders. Extraversion showed a negative association with relationship satisfaction for women but not for men. Agreeableness and openness to experience had no significant impacts.

DOI: 10.1016/j.paid.2024.112887

Climate change distressing youth

Climate change is causing widespread distress among young people, indicates research in *The Lancet Planetary Health*. Researchers surveyed 15,793 individuals in the United States ages 16 to 25 about their climate-related experiences and emotions, political party identification, and beliefs about

Climate-related distress is common among young people, particularly those who have been exposed to severe weather events.



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the causes of, desired and planned actions in response to, and thoughts about the U.S. government's response to climate change. Overall, 85% of respondents said they were at least moderately worried about climate change, and 57.9% were extremely worried. In addition, 42.8% said climate change had adversely impacted their mental health, 38.3% said their feelings about climate change negatively affected their daily life, and 72.8% reported they would likely vote for political candidates who support aggressive climate protection policies. Those reporting exposure to more types of severe weather events, as well as non-Republican political identification, exhibited stronger climate-related distress and desire for action.

DOI: 10.1016/S2542-5196(24)00229-8

Mental exhaustion drives aggression

Prolonged mental fatigue can kick off changes in the brain's frontal cortex that make people more aggressive and uncooperative, according to research in the *Proceedings of the National Academy of Sciences*. Researchers subjected 44 participants in Italy to 45 minutes of fatigue-inducing tasks. Next, the participants underwent electroencephalography (EEG) scans while playing a resource-sharing game that required varying degrees of aggression and cooperation. The fatigued participants were more uncooperative and hostile than a control group not subjected to cognitive fatigue, with a peaceful cooperation rate of only 41% compared with 86% for the non-fatigued group. Furthermore, EEG scans of the fatigued participants showed sleeplike brain activity in areas of the frontal cortex related to decision-making and impulse control. This activity was completely absent in the non-fatigued group. A second study with 403 participants, where EEG was not measured, showed a similar effect of fatigue on behavior.

DOI: 10.1073/pnas.2404213121

Single and loving it

Women are more at peace with being single than men, according to a meta-analysis in *Social Psychological and Personality Science*. Researchers analyzed data from 10 studies representing 5,941 participants at least 18 years old (average age 32) who were not in a romantic relationship when surveyed. Across all measures, women reported a higher level of comfort being single than





One reason women are happier than men with being single may be their greater likelihood of having supportive nonromantic relationships.

men reported. Besides greater happiness with their current romantic relationship status, women were less likely to want a romantic partner, more sexually satisfied, and more satisfied with their lives in general. The researchers hypothesized that single women's greater happiness may reflect their greater likelihood of having supportive relationships beyond romantic relationships. Also, women find heterosexual romantic relationships less rewarding because they perform disproportionately more household chores; their sexual pleasure may be undervalued relative to men's; and as their incomes approach men's, they have less economic incentive to marry.

DOI: 10.1177/19485506241287960

Shakespeare or GPT?

According to research in *Scientific Reports*, people prefer poems written by artificial intelligence (AI) agents to those penned by humans. Researchers presented 1,164 participants in the United States with 10 poems in random order. Five were by 10 well-known poets—including William Shakespeare and Emily Dickinson—and five were by ChatGPT-3.5 in the style of the 10 human poets. The participants performed below chance levels in identifying AI-generated poems. Moreover, they were more likely to think humans had written AI-generated poems than actual human-authored poems. In a second experiment, 696 new participants rated the poems for 14 characteristics, such as quality, beauty, and rhythm. Participants who were told the poems were AI-generated gave lower ratings than those told the poems were human-written, regardless of the poems' true origin. Participants told nothing about authorship rated AI-generated poems higher than human-written ones, perhaps, the researchers suggest, because the relative simplicity of AI-generated poems makes them easier to understand.

DOI: 10.1038/s41598-024-76900-1

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Datapoint

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

More Money for Psychological Research, But the Future is Uncertain

Federal funding for psychological research had been rising

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

IN 2022, the United States directed about $4.6 billion to psychological research (see Figure 1). This amount was 4.9% of that year's total federal research budget of $93.8 billion. Psychological research, as a percentage of total federal research funding, grew 130% over 8 years, increasing from 3.1% in 2014 to 4.9% in 2022 (see Figure 2). Despite that increase, funding for psychological research remains considerably lower than funding for most other fields.

About 96% of psychological research funding came from the National Institutes of Health ($4.4 billion). Smaller amounts came from four agencies: Department of Defense, National Science Foundation, Federal Aviation Administration, and Department of Agriculture. Approximately equal funding was directed toward basic research in psychology ($2.3 billion) and applied research in psychology ($2.3 billion), Continued funding for psychological research depends on federal support.

Figure 1. Federal Research Funding, 2022

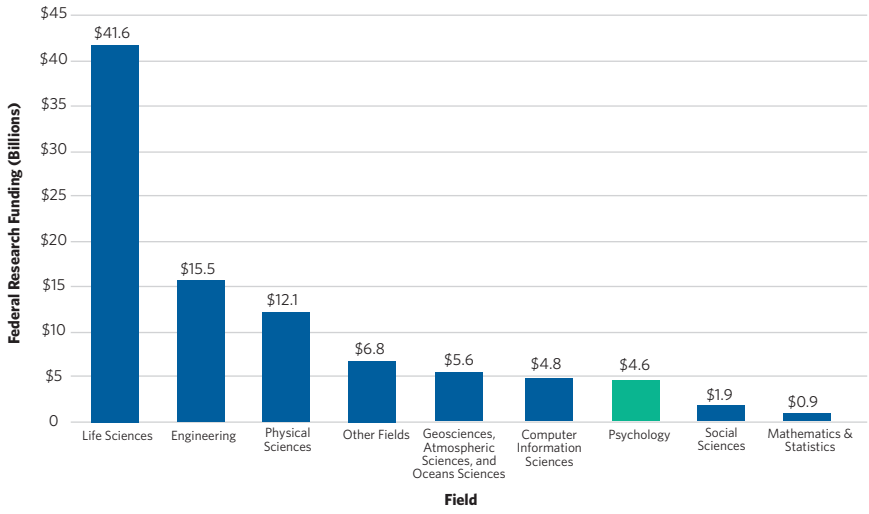
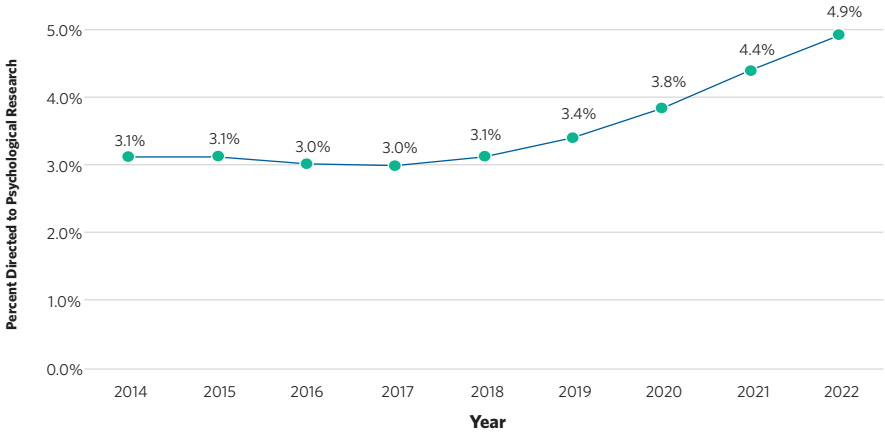


Figure 2. Percent of Federal Research Funding Directed to Psychological Research, 2014–2022



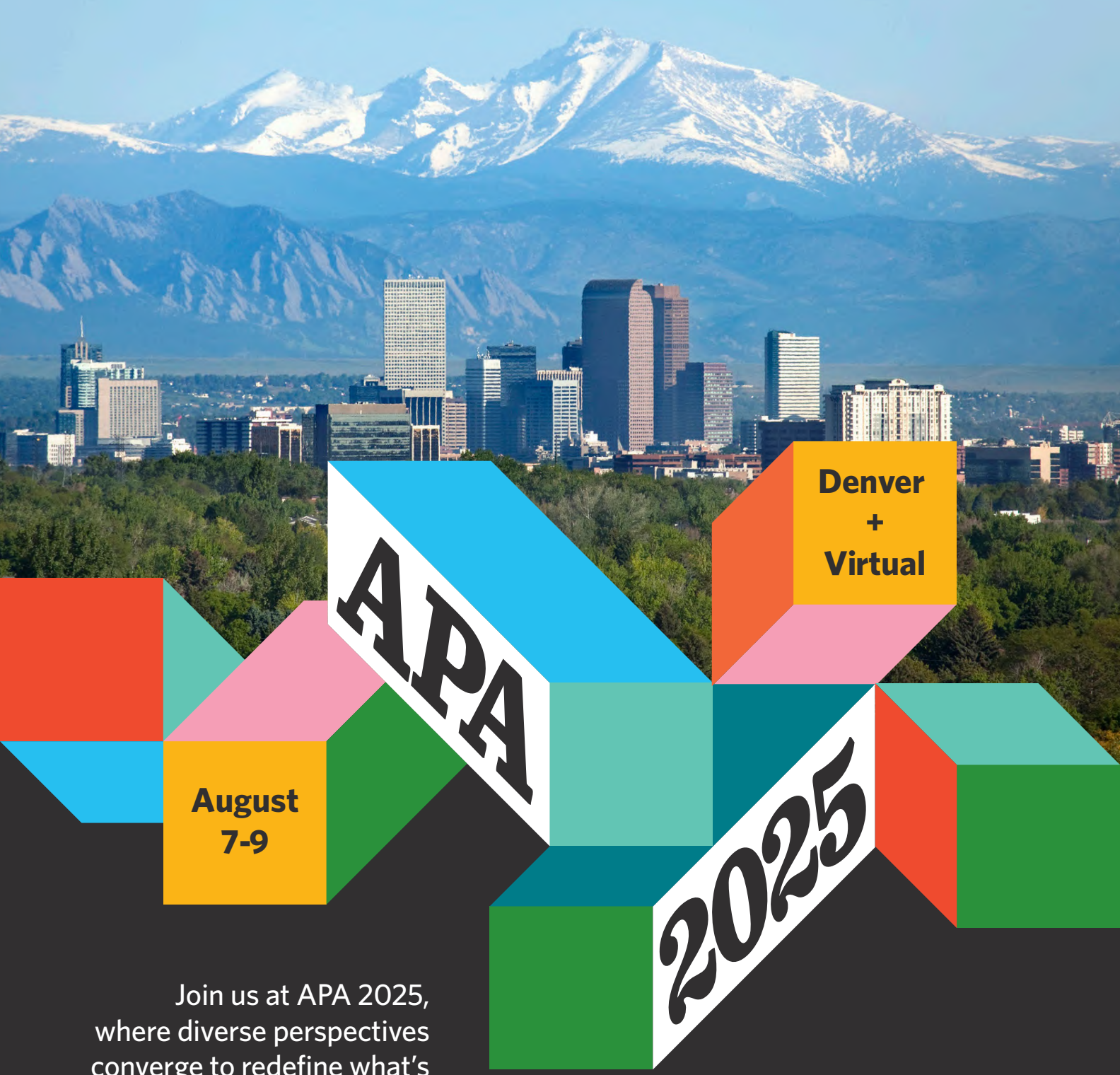
SOURCES

National Science Foundation (NSF), National Center for Science and Engineering Statistics. (2024). *Survey of federal funds for research and development, 2022–2023.* (Tables 24, 28, 33, and 91) https://www.nsf.gov/statistics/srvyfedfunds. Federal research funding represents obligations, which are "the amounts for orders placed, contracts awarded, services received and similar transactions during a given period, regardless of when funds were appropriated and when future payment of money is required." Federal research funding directed to psychological research may be underestimated because of psychology's inclusion in other fields (such as life sciences). Dollar amounts are shown in constant dollars and were not adjusted for inflation. The use of NSF data does not imply NSF endorsement of the research, research methods, or conclusions contained in this report.

See related Datapoints for more about federal research funding:

- Lin et al. (2018, November). Federal research funding for psychology has not kept up with inflation. *Monitor on Psychology, 49*(10), 21. https://www.apa.org/monitor/2018/11/datapoint
- Stamm et al. (2017, April). How much federal funding is directed to research in psychology? *Monitor on Psychology, 48*(4), 15. http://www.apa.org/monitor/2017/04/datapoint

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U.S. Teens Need Far More Support

Friends, families, communities, and mental health professionals all have a part to play in aiding the nearly two in five teens who do not get enough social and emotional support

BY KIRSTEN WEIR

SOCIAL SUPPORT IS sorely lacking for many U.S. teens. Only 58.5% of U.S. teens always or usually receive the social and emotional support they need, according to a report by researchers at the U.S. Centers for Disease Control and Prevention (CDC). The report drew on National Health Interview Survey and National Health Interview Survey–Teen data collected from parents and adolescents in 2021 and 2022.

While almost 2 in 5 teens said they were not getting the support they needed, a whopping 93.1% of parents believed otherwise, reporting their child received adequate social and emotional support. Unfortunately, what parents don't know might hurt them. The CDC survey also found that lack of social support was associated with worse mental and physical health. Teens who reported not having the support they needed also reported worse health and worse sleep and were more likely to report anxiety, depression, and low life satisfaction.

The findings are just one snapshot of the nation's youth, but they align with other worrisome trends. In a 2023 advisory, the U.S. Surgeon General called attention to a national "epidemic" of loneliness and social isolation. Teens are not immune to that societal shift toward seclusion. "Adolescents are affected by the same community and societal forces that lead anyone to feel disconnected," said Mary Ann McCabe, PhD, a clinical child and adolescent psychologist and member-at-large of APA's Board of Directors. Yet teens might need that connection more than anyone else. "Adolescents are the most sensitive to social support. Their brains are developing with a really heightened need for peer belonging and validation," McCabe said.

AT A GLANCE

- Parents and practitioners alike can help children and teens practice a skill that is hard at any age: asking for support.
- While peer support is important for teens, it does not replace the importance of strong relationships with caring adults.
- Psychologists are among those working to boost connections between teens and adult mentors.
- Life in rural communities often presents hurdles that make it particularly hard for teens to access social support and behavioral health services.

The mental health of the nation's youth has famously reached crisis levels, as evidenced by the 2021 U.S. Surgeon General's advisory on youth mental health (*Protecting Youth Mental Health: The U.S. Surgeon General's Advisory*, 2021). To address that crisis, shoring up social and emotional support is crucial—especially for adolescents with distinct risk factors or challenges, such as LGBTQ+ youth and those living in rural areas. And friends, families, communities, and mental health professionals all have a part to play.

Youth at risk

Today's adolescents are wrestling with challenges that their parents' and grandparents' generations did not face, including frequent school shootings, the worsening threats of climate change, and the aftermath of COVID-19 pandemic lockdowns and learning disruptions. "Adolescent social support really took a hit during the pandemic," McCabe said. For many young people, the opportunities for in-person connection have not rebounded.

Yet even before COVID-19, kids were spending less time with friends than they once did. In 2017, American adolescents and young adults spent about 22 fewer minutes per day on social interactions compared with young people in 2003. That adds up to 140 fewer hours of social time each year (Twenge, J. M., & Spitzberg, B. H., *Journal of Applied Social Psychology*, Vol. 50, No. 6, 2020).

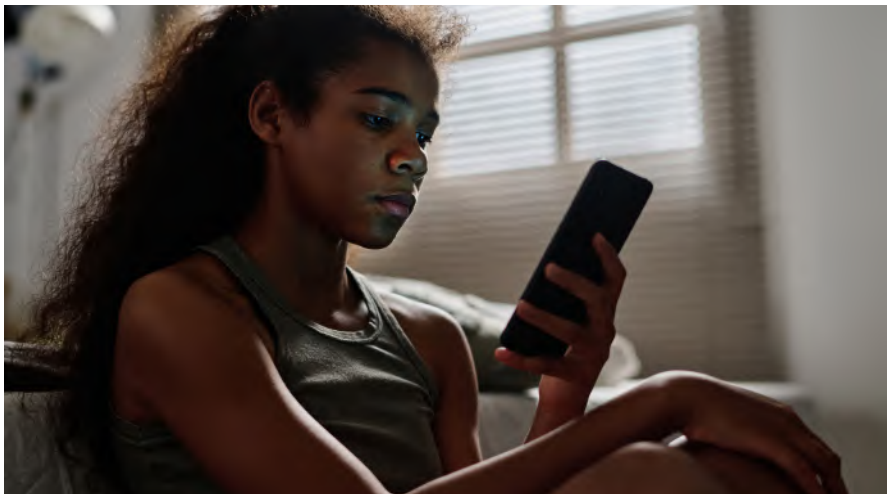
While face time has decreased, screen time has soared. And adolescents who report low in-person social interactions and high social media use report the highest rates of loneliness (Twenge, J. M., et al., *Journal of Social and Personal Relationships*, Vol. 36, No.

6, 2019). "Kids are more 'connected' than ever, yet they feel lonelier," said Sophia Choukas-Bradley, PhD, an associate professor of psychology who studies teens and young adults at the University of Pittsburgh.

There is evidence that digital connections may provide some beneficial opportunities to connect with others and form healthy friendships, especially for kids who are not getting the support they need in their daily lives (*Health Advisory on Social Media Use in Adolescence*, APA, 2023). Yet social media can expose kids to bullying or harmful content, and social interactions on digital platforms are often superficial. "Kids are spending more and more time on social media, but they aren't getting the support from those interactions that they would derive from face-to-face interactions," Choukas-Bradley said.

The kids who are not getting that boost of support may be those who need it most. Girls, LGBTQ+ youth, and kids of color report some of the highest rates of mental health difficulties, according to the CDC's Youth Risk Behavior Survey. They also report low levels of social and emotional support. Less than half of sexual and gender minority teens (43.9%), for example, report always or usually receiving support. "If an adolescent does not feel safe or able to come out and disclose their identity to those around them, then they can't ask for the support they need," Choukas-Bradley said.

Black and Hispanic teens are also less likely to perceive adequate levels of support than White and Asian teens. And boys (64.8%) are more likely than girls (52.0%) to have always or usually received needed support. That could be because young people who identify as female tend to have different social needs than their male counterparts, said Choukas-Bradley. "Girls' friendships are complex. Girls feel a strong need to engage in talking about hard emotions with their peers," she said. "Historically, boys have reported less of a need for those intimate, disclosing conversations. Many boys report that they get their needs met just through hanging out with friends and having shared interests."



Studies find adolescents with low in-person contact and high social media use report the highest levels of loneliness.

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Adults supporting teens

As teens develop, they naturally begin to pull away from their parents. That does not mean a parent's job as support staff is done. Parents continue to be an important source of practical, or "instrumental," support (driving teens where they need to go) as well as emotional support (offering a sympathetic ear at the end of a bad day). "Adolescents very much need those different dimensions of support from their parents," McCabe said. The catch, she added, is that many adolescents would never admit it. "They might argue and debate with everything their parent says but still very much rely on them to empathize with what they're going through," she said.

Indeed, while peer support is important, it does not replace the role of caring adults, said Lisa Damour, PhD, a clinical psychologist specializing in teens and senior adviser to the Schubert Center for Child Studies at Case Western Reserve University in Cleveland, Ohio. "The single most powerful force for adolescent mental health is strong relationships with caring adults. A relationship with a great adult is like the fluoride in the water of adolescent mental health care," she said.

"Teenagers often feel supported not through a conversation but through our steady presence. It's about being around and available."

Lisa Damour, PhD
Clinical psychologist



STRUGGLES UNIQUE TO RURAL YOUTH

Some teenage stressors are nearly universal. But others can be specific to the community a child lives in. Some urban youth may be more likely to experience challenges such as gun violence in their neighborhoods, for instance. Children and teenagers living in rural communities also have their own unique challenges to work through.

Rural youth have a greater incidence of suicide than those in urban areas (Graves, J. M., et al., *JAMA Network Open*, Vol. 3, No. 10, 2020). They also have higher rates of anxiety, depression, and behavior problems (Figas, K., et al., *Findings Brief*, Rural & Minority Health Research Center, November 2022). At the same time, kids in rural areas have less access to behavioral health providers. More than 60% of areas with a shortage of mental health professionals are rural or partially rural (*Child Mental Health: Rural Policy Brief*, CDC, 2024).

Life in rural communities also presents hurdles that make it hard for teens to access social support, especially in areas with fewer socioeconomic resources, said Casey Jo Cottrill, PsyD, a clinical psychologist who serves adolescents in a school-based clinic in the rural Appalachian community of Barbour County, West Virginia. In her community, many young people experience higher rates of poverty and exposure to substance misuse. Many have parents who work long hours or multiple jobs. Teens are often expected to step up to care for younger siblings or older family members, making their way through the week with minimal supervision from supportive adults, Cottrill said.

Economic difficulties and transportation challenges are also common in rural areas. Some of Cottrill's students commute 90 minutes by bus to school each way, then drive an hour to after-school jobs. Others are expected to work on the farm or in the family-owned business outside of school hours. "It's hard enough for them to make time for homework, let alone hanging out with friends," she said.

Too often, any free time spent with friends happens without adults around, often with alcohol involved. To address that risk, Cottrill is part of a community coalition called Bright Futures that aims to reduce substance use in youth—in part by providing healthy opportunities for social connection. The program provides grants for school staff and community members to start clubs on topics ranging from archery to baton twirling. Students receive vouchers that allow them to pay for their uniform or supplies needed to participate. One day a week, the school schedule is adjusted to make time for clubs so that the activities do not interfere with after-school jobs or transportation schedules. The program allows students to connect with one another and with adult mentors at school and in their communities.

Providing such opportunities for connection is an important way to help teens get the support they need. But kids also need to learn the communication and social skills that allow supportive friendships to grow, Cottrill said. "I see a lot of students expressing loneliness, worthlessness, low self-confidence. It's often a cyclical process: 'I feel lonely and worthless; therefore, I have a hard time reaching out to other people.' That, in turn, creates more loneliness and social isolation," she said. "As practitioners, we can work with students to help them build better communication skills and navigate stressful peer situations."

STOCKPLANETS/GETTY IMAGES

As children mature, though, what they need from parents begins to look different. Parents, for instance, often go into problem-solving mode if their teen is struggling. But the child may be seeking validation. That disconnect might explain why most parents think their teens are getting plenty of support, while their children say otherwise. Experts recommend a less-is-more approach to conversations. For instance, instead of urging your child to email their teacher if they think they received an unfair grade—or calling the teacher yourself to complain—it might be more effective to say, "That sounds really frustrating. How do you think you'll handle it?" "As parents our instinct is often to jump in with advice, but it's very rare that that's what teens are looking for—and that's not necessarily what's going to invite them to keep bringing their concerns our way," Damour said.

"When adults envision connecting with a teenager, they often picture a conversation where the teenager bares their soul and the adult says helpful things, and then everybody hugs," Damour added. But teenagers are more likely to feel connected when watching a TV show with their parent or sharing an interest in what is playing on the car radio. "Teenagers often feel supported not through a conversation but through our steady presence. It's about being around and available," she said.

Teachers, coaches, and other non-family mentors also play an important role in supporting youth. Adolescents who have supportive non-parental adults in their lives have been found to have higher levels of academic functioning, better self-esteem, fewer behavioral problems, and lower rates of mental health problems and substance use, as described in a review by Emma Sterrett-Hong, PhD, now an associate professor at the University of Louisville (*American Journal of Community Psychology*, Vol. 48, No. 3–4, 2011).

Psychologists are among those working to boost connections between teens and adult mentors. One such intervention is Relationship Mapping, a new tool developed by Richard Weissbourd, PhD, a psychologist who directs the Making Caring Common Project at the Harvard Graduate School of Education. Relationship Mapping charts the relationships between students and staff, helping to identify which students do not have positive connections with any adults in the school community—a critical first step to reach youth most at risk of falling through the cracks. After a small pilot last school year, Weissbourd and his colleagues are now implementing the tool in a larger sample of U.S. schools and collecting data about its outcomes.

Such programs can do a lot to help kids get the support they need. But in addition to new ideas and interventions, communities should not forget the importance of old-fashioned investments in schools, teacher training programs, and extracurricular activities, Damour said. "We need to be very cautious about cutting arts programming or after-school programming," she added. "So many teenagers are saved by their drama teacher."

Meanwhile, parents and practitioners can continue to help kids develop the social-emotional skills they need to nurture supportive relationships. One way adults can help, Damour said, is by being clear with young people about the kinds of concerns that are too big for kids to tackle on their own, including worries about eating disorders, self-harm, or other serious behaviors. "Kids turn to one another often for support, and they are incredibly good at caring for one another. But sometimes they are so attentive that they try to help friends with challenges that really need to be addressed by adults with professional training," she said.

Parents and practitioners alike can also help children practice a skill that is hard at any age: asking for support. "Most adolescents struggle with being assertive and asking for what they need. We can help them articulate what they feel they're missing, and practice how to ask for it: Is it feeling understood or validated? A sense of belonging at school? Guidance or advice?" McCabe said. "Social support isn't one-size-fits-all." ■

FURTHER READING

Perceived social and emotional support among teenagers: United States, July 2021–December 2022
Zablotsky, B., et al.
National Health Statistics Reports, July 16, 2024

APA recommendations for healthy teen video viewing
APA
November, 2024

Kids' mental health is in crisis. Here's what psychologists are doing to help
Abrams, Z.
Monitor on Psychology, January 2023

Social media brings benefits and risks to teens. Psychology can help identify a path forward
Weir, K.
Monitor on Psychology, September 2023

The Essential Role of Human Factors Psychology in Technology Design

Psychologists are spearheading efforts to integrate human readiness levels into design processes to avoid accidents and human error in a range of industries

BY HEATHER STRINGER

PSYCHOLOGISTS WHO specialize in human factors are trained to make systems and devices safer and more intuitive, but too often they are called in too late—or not at all—in the development process.

A tragic example involves the Boeing 737 Max airliner and the crashes of 2018 and 2019 that killed 346 people. The problems began years earlier when Boeing began developing a more fuel-efficient version of its popular 737. The new design's heavier engine changed the plane's aerodynamics during takeoff, so the company installed software that automatically corrected the position of the plane's nose during flight. By the end of September 2018, Boeing had received orders for nearly 5,000 of the new Max jets. Less than a month later, a 737 Max crashed after takeoff in Indonesia, followed in March by the crash of a second plane after takeoff in Ethiopia.

In both cases, the pilots had not been informed that the software system was running in the background and did not know how to disable the system to take control manually in an emergency.

In the ensuing months, Boeing faced widespread criticism for cutting corners to maximize profits. One of the major missteps was failing to test how pilots would interact with the new software. Incorporating these steps into the development process could have helped to avert the crashes, along with the billions of dollars in core operating losses Boeing has experienced in the years since.

"When organizations bring in these experts early and throughout the design process, we can recognize usability issues and rectify the problems early," said psychologist Judi See, PhD, a systems analyst and human factors engineer at Sandia National Laboratories in Albuquerque, New Mexico. "This can save time, money, and lives."

AT A GLANCE

- Human factors psychologists have played a key role in creating a scale that helps technology developers evaluate whether new systems are safe for human use.
- The human readiness level (HRL) scale can improve safety and business success in cars, airplanes, military equipment, automation powered by artificial intelligence, and many other products.
- Once a grassroots movement, advocates of the HRL scale won major victories at the end of 2024 when the federal government passed legislation requiring use of the scale in defense and aviation industries.

The case for human factors engineering

As the Boeing case illustrates, testing the "human readiness" of technology in cars, health care, consumer products, military equipment, airplanes, and automation powered by artificial intelligence (AI) is not only a safety issue; it can also increase business success, said Mica Endsley, PhD, president of SA Technologies, based in Arizona. "Organizations that incorporate human-centered design into the workflow see a significant return on investment," she said.

According to a study of 300 publicly listed companies in multiple countries, organizations that had high levels of user-centered design—meaning the developers continually tested and iterated design based on feedback from end users—had 32% higher revenue growth than industry counterparts over a 5-year period (Sheppard, B., et al., *McKinsey Quarterly*, 2018).

To help more organizations integrate human factors into decision-making, See formed a joint working group in 2019 with 38 other human systems experts from academia, NASA, the the U.S. Department of Defense, and other organizations to draft a 9-point human readiness level (HRL) scale. Published in 2021, the scale provides a framework to include human factors in research, product testing, production, and deployment (*Human Readiness Level Scale in the System Development Process*, Human Factors and Ergonomics Society, 2021). It was designed to complement and supplement the technology



U.S. Army Reserve combat engineers program their grid coordinates using a Global Positioning System (GPS) during a team-based navigation course in 2015. Incorporating human readiness concepts into the development of such technologies can help ensure their safety and accuracy, as psychologist Pamela Savage-Knepshield, PhD, demonstrated in a usability study for a new Army GPS.

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readiness level scale, or TRL, a 9-point scale widely used throughout the U.S. government, industry, and academia to evaluate the technological maturity of a new product or system.

There are signs that the HRL scale is gaining traction on a federal level. The FAA Reauthorization Act of 2024 includes a section requiring the Federal Aviation Administration (FAA) to review the HRLs and determine how they can be incorporated into FAA procedures to enhance safety. In December 2024, then President Joe Biden also passed the National Defense Authorization Act (NDAA), which includes a section mandating that the Department of Defense report back to Congress on its major programs' use of HRLs.

Building a scale

True to its intent, the HRL scale itself was developed with its users in mind. When See started exploring the possibility of crystallizing the human readiness concept into a usable scale, she knew it would be important to use technical language that engineers would easily understand. Most engineers are familiar with the TRL, whose stages focus on researching and validating a concept, followed by developing a prototype and testing it in a lab, and finally fixing bugs and testing it in a real environment.

The HRL scale mirrors these stages, but it focuses on how humans use the technology. Ideally, developers apply the TRL and HRL scales to projects simultaneously, said See. In other words, they complete level 1 for both scales before moving on to level 2. "It is possible to apply only one scale without the other because they are still separate scales," said See. But "if technical maturity progresses beyond human readiness or vice versa, this signals a need for the program decision-maker to intervene to get back on track."

To evaluate the potential effectiveness of the HRL scale, the working group explored whether it could have prevented problems in historical real-world scenarios, such as the redesign of the Coast Guard's motor rescue lifeboat in the 1990s. The new boats allowed drivers to sit rather than stand, but some could not reach the controls and others hit their knees and shins on the console. Moreover, operators often had to maintain an awkward position for more than 8 hours while navigating in rough seas. More than 50% of crews reported sustaining injuries because of the new design. "The main finding was that the issues could have been detected as early as HRL 1," said See. "This is when developers are in the conceptual phase exploring how people would use the new technology."

Saving lives and minimizing cognitive overload

Pamela Savage-Knepshield, PhD, a psychologist who was part of the HRL working group, had been incorporating human readiness concepts into her work with the U.S. Army for years. When the Army developed a new handheld Global Positioning System (GPS) receiver to help soldiers track the location of enemy forces, she identified a life-threatening risk. During a usability study with 16 soldiers, she asked the soldiers to practice sighting the enemy and estimating coordinates for the enemy's location. The soldiers were told that the batteries in their receivers failed at this point, and they had to replace them. Once the GPS rebooted, they sent the coordinates for an airstrike on the enemy.

"Without realizing it, nearly half of the soldiers called for an airstrike on their own position, and they would have been killed," Savage-Knepshield said. They had not realized the rebooted GPS showed their own coordinates—not the enemy's location—or that they had thus sent

their own coordinates as the target. "As humans, our perceptual system is weak at detecting unexpected visual changes, which is known as change blindness," she said.

Although Savage-Knepshield identified this issue before the new GPS receiver was distributed for wartime use, she had not been consulted until the final stages of the device's development. "Early use of the HRL scale would have caught this problem sooner," she said. The developers could have designed a "present position" screen that looked completely different from the "fire support" screen. But it was too late to make such a change, so the developer added a pop-up warning alerting soldiers that the coordinates showed their present position. This was suboptimal because pop-up messages are frequent and soldiers do not always read them, Savage-Knepshield explained.

Workload, or the cognitive demand on an operator, is also important to consider when designing systems that will be used by humans. "If the users feel exhausted and drained at the end of the day, then we have not designed something that works for them," said psychologist Joan Dodson, PhD, a user experience researcher at Northrop Grumman, a global aerospace, defense, and security company. Dodson's expertise in workload was needed when military personnel operating a camera on an airplane reported being exhausted after flights. To collect the terrain data, they were expected to align images from 25 screens. "If the images did not line up exactly right, the camera would malfunction," said Dodson. "They were terrified that they would jeopardize the mission." Based on Dodson's recommendations, the developer reduced the number of screens to two and simplified the process of aligning the image data.

Dodson is optimistic that the HRL scale will create a universal language to communicate the importance of human factors. "It is easier to justify what [human factors experts] are asking for if we have a scale that can quantitatively prove that we can increase the chances of operational success," she said.

Making cars safer

The self-driving car industry is another field that could benefit from the HRL scale, said Kelly Steelman, PhD, an associate professor in the Department of Psychology and Human Factors at Michigan Technological University. This was evident when four people burned to death in a Tesla because, in the emergency, they could not understand quickly how to override the electronic door lock system and manually open the doors.

Human factors experts are trained to evaluate how automation affects situation awareness, or the ability to perceive and respond to one's surroundings. "When people are driving with automation, they lose awareness of what is happening around them, and they are usually delayed if they need to step in to take control again," said Endsley. In a recent study of Tesla drivers, 46% believed the AI autopilot improved their situation awareness. Yet 45% reported complacency and 15% reported mind wandering and fatigued driving when using the autopilot (Nordhoff, S., et al., *Frontiers in Psychology*, Vol. 14, 2023).

"The HRL scale can help make autonomous vehicles safer as early as the first three levels of the scale," said See. At these levels, human systems experts can clarify the capabilities and limitations of the intended user population and create scenarios that represent how people will interact with the vehicle. These scenarios facilitate user testing to verify the safety and effectiveness of prototype designs before they are manufactured, explained See.

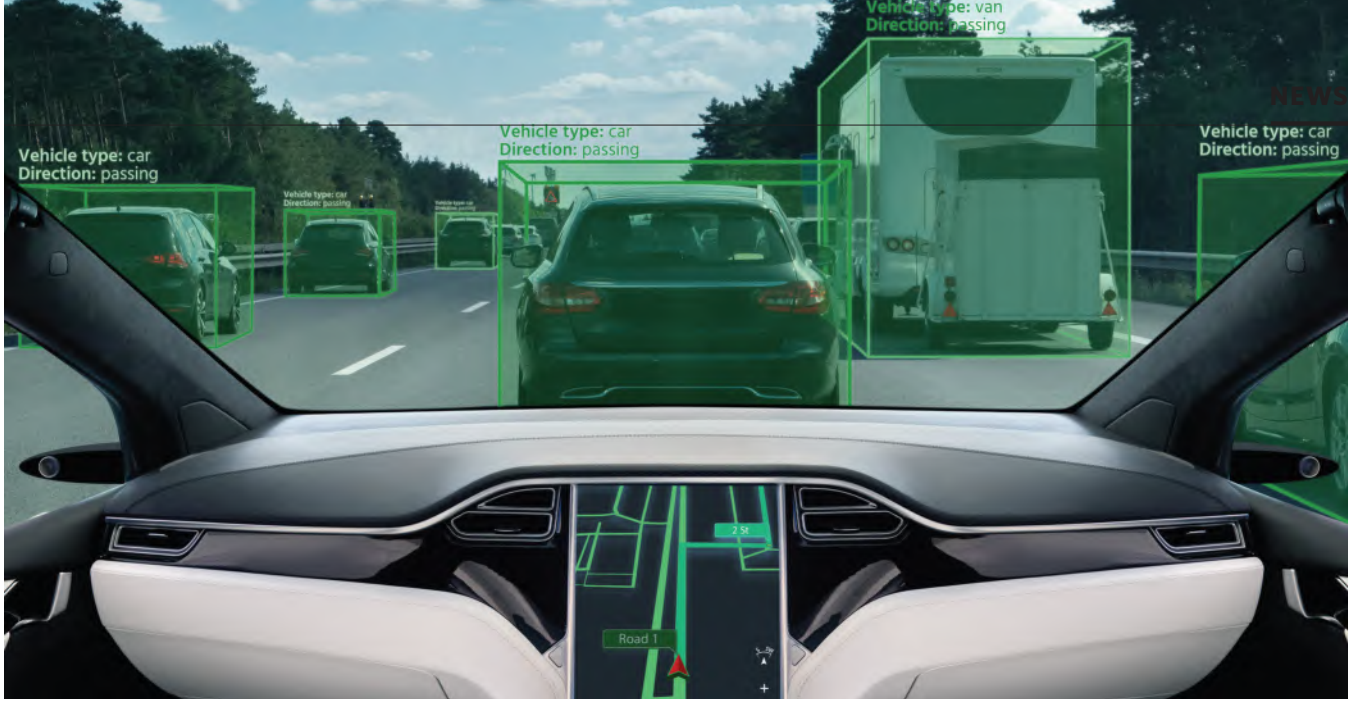
When Steelman was a science policy fellow with the Human Factors and Ergonomics Society, she met with legislators in Washington, D.C., to increase awareness about the field of human factors and how its experts could benefit constituents in Michigan and Wisconsin. She explained how human factors experts could increase the safety of autonomous vehicles and help automakers design charging stations and apps that people can use intuitively.

Clarifying the limitations of AI

As AI revolutionizes finance, health care, transportation, education, and other aspects of society, human factors experts are also eager to see the HRL scale incorporated into the design of related products. The biases and limitations of AI are often not evident to users. For example, chatbots deliver answers in "a confident and unnuanced way that removes critical cues (such as the source of the information)

"In some industries, there is still a mindset that we can solve the world's problems with more and more technology. The danger is that technologies designed without humans in mind are likely to lead to new problems."

Kelly Steelman, PhD
Associate professor at Michigan Technological University



Human factors experts are evaluating how automation in self-driving cars affects their situation awareness. "When people are driving with automation, they lose awareness of what is happening around them, and they are usually delayed if they need to step in to take control again," said Dr. Mica Endsley.

that might allow users to calibrate the accuracy or reliability of its answers," wrote Endsley in a recent paper detailing the risks of AI (*Ergonomics*, Vol. 66, No. 11, 2023). The HRL scale will help developers identify critical requirements for AI systems, such as the source and reliability of information and how to provide this information to users. The scale also clarifies what type of product testing is needed to ensure an AI tool supports human decision-making.

With AI applications proliferating, Holly Handley, PhD, a professor of engineering management and systems engineering at Old Dominion University in Norfolk, Virginia, is exploring whether the HRL scale may need to be modified to accommodate developments in AI. Researchers at the university are using AI tools that identify tumors on X-ray results and investigating how doctors determine if the results are accurate. "For example, it may be necessary to add evaluation questions that address characteristics of AI, such as transparency," said Handley, to clarify what data were used to train a machine learning model and how the model makes predictions.

Although the HRL scale has not yet been adopted on a widespread level, advocates of the tool are optimistic that the FAA and NDAA legislation will generate momentum for it in the private sector, especially among companies that work on government contracts. Psychologists acknowledge that it may take time to change long-standing patterns of doing business, however, despite the potential financial and safety benefits of incorporating HRLs into systems. "In some industries, there is still a mindset that we can solve the world's problems with more and more technology," said Steelman. "The danger is that technologies designed without humans in mind are likely to lead to new problems."

Looking ahead, Steelman also hopes to see the HRL scale improve access to health care, especially for underserved populations. "How can we lower the barriers so people without experience can pull up a Medicare or Medicaid website for the first time and navigate it?" she said. "What if we designed these tools from the beginning thinking about folks who have the biggest learning curves?" ■

FURTHER READING

Human readiness levels promote effective systems integration
Schwartz, B., & Dodson, J. E.
Ergonomics in Design, 2021

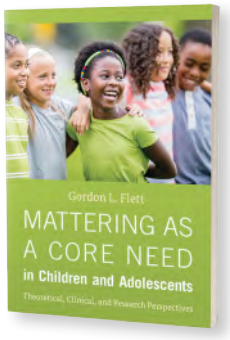
Supporting human-AI teams: Transparency, explainability, and situation awareness
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Human readiness levels and Human Views as tools for user-centered design
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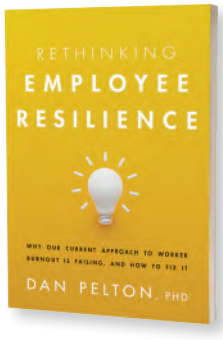


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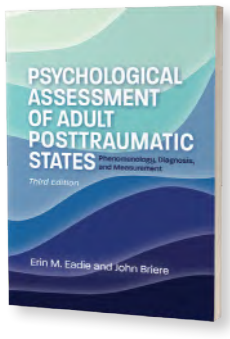


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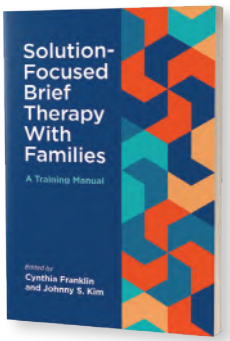


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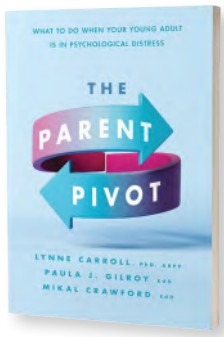


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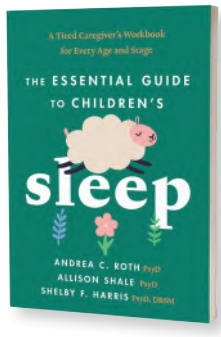


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6 Questions for Kenya Key

Corrections-based clinical psychologist uses restorative justice to improve outcomes for youth in custody

BY EFUA ANDOH

RESTORATIVE JUSTICE is a powerful tool for transforming mental health for justice-involved youth, says Kenya Key, PsyD, a clinical psychologist and Certified Correctional Health Professional–Mental Health (CCHP-MH) in Washington, D.C. As deputy director of health services for the city's Department of Youth Rehabilitation Services, Key is responsible for the behavioral health service delivery system and a restorative justice program for more than 150 youth in custody. Key leads a team that brings critical services to justice-involved youth, many of whom receive acute psychiatric care. Their restorative justice approach promotes healing, accountability, and long-term resolution between victims, offenders, and community members.



PHOTO BY SCOTT SUCHMAN

What are the most pressing issues you encounter in your current role?

In my experience, mental health spaces often don't want to work with young people interfacing with the justice system. We may refer young people who experience suicidality to a hospital, and that facility will often deny admission attributing their suicidality to them just wanting to get out of jail. That pattern is frustrating. It leads to us having to treat all manner of acuity within our settings, which can be very difficult. This is why we need good clinicians—because we are often the beginning and the end for our young people.

How does restorative justice apply to justice-involved youth?

Restorative justice practices focus on healing and problem-solving rather than punishment. They are also inclusive and involve the community. We strive to have those involved in a specific incident to identify the harm caused versus just labeling something as a crime. It's about trying to pull together victims, offenders, and whatever community members support both of those entities to focus on what the victim needs and how the offender may repair the harm that they've done. It is similar to trauma-informed care, where we ask individuals, "What happened to you?" With restorative justice, we ask, "Who has been harmed?" and "What obligations do we have to fix their needs?"

How have restorative justice principles influenced your team's approach to improve outcomes for youth in the system?

When young people come to our facility, we invite their family, support system, or community together for a restorative circle. The circle is a safe space to talk about the harms in their families and relationships and how the young person will address some of those harms during their time with us. We do the same thing before we transition them back into the community. They talk about their growth, what needs have been met for folks who were harmed, what obligations they have fulfilled, and what they will need to do to continue that process. We also use restorative justice within the facility as an alternative to just sanctioning a young person when they do something wrong. Preparatory work involves speaking to the involved parties separately to assess their willingness, their readiness, and their process. It provides background on what happened, what led them to that space, and then brings them together for conversations that create a sense of community. We want young people in our program to see the world through a lens of "We do harm, but we can also repair the harm."

What is hopeful, if anything, for young people within the criminal justice system when it comes to accessing mental health care?

One of our young people was recently

charged as an adult. When I met with him to discuss this significant sentence, he was truly as optimistic as one can be. He said "I've got my tool kit. I remember my restorative justice stuff, so if anything goes down, I will try to use these skills." And this was the piece that both excited me and kind of broke my heart: He said, "If my mom had been able to get these groups that you all gave me, maybe me and my brother wouldn't be locked up right now." I think that we are an unfortunate gateway to healing. Many of the young people in corrections, particularly our Black and Brown men, spend so much time trying to be strong. When they work with us, they have an opportunity to see how they can heal those vulnerable parts of themselves and still survive. That is optimistic for me. We provide an opportunity for our young people to open themselves to healing as they go forward in their lives.

What key transformations would you make to the system to better support youth who need mental health care?

I would unify the system. If we're not communicating and sharing information, it leaves a lot to fall through the cracks. Let's say a young person has touched multiple agencies throughout their life. These may include mental health challenges noticed in school, contact with child welfare agencies or law enforcement, or even hospitalization for mental health issues. There are so many touch points, but all these things stay in separate buckets. While I fully appreciate and respect patient privacy, there's got to be a way to communicate necessary information. What we do now is not working. What if we all communicated earlier in their timeline? There is the adage that "it takes a village to raise a child." When the village has fences up around every house, it doesn't feel like a village anymore.

You have been in this field for 20 years. What keeps you motivated and committed even on your toughest days?

I've learned to appreciate the small wins after young people leave us instead of thinking that success only means going to college and graduating. Did they go back to school consistently? Did they get a job and hold onto that job for 3 months? You know, those kinds of small wins keep me going. At a broader level, what keeps me going is pouring into the field. I used to tell people my biggest wish is for society to work me out of a job—for mental health needs to be met in the community and for mental health not to be criminalized. However, I don't see that happening anytime soon, so it's important to me that we continue to build the supportive pipeline. When people feel effective in this work, they stay in this space. I've trained students and supervised licensed clinicians, and some of my former students are now directors in correctional spaces. It's wonderful to see other people thrive. ■

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Greg Neimeyer, PhD - 1:00 p.m.

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Paula McCall, PhD - 9:00 a.m.

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Protection, Not Prison, for Abuse Survivors

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

Historic ruling ushers in a new era for survivors of violence, exploitation, and trafficking

BY KATHRYN A. LAFORTUNE, JD, PhD, UNIVERSITY OF TULSA COLLEGE OF LAW

ON JAN. 8, 2025, Lisa Moss walked free out of a rural Oklahoma courthouse, with credit for time served, after serving 34 years of a life-without-parole sentence. Moss's brother had shot and killed her domestic abuser in 1990, admittedly at her request, following the repeated rape of Moss and molestation of her daughter. Moss received a harsher sentence than her brother, based upon charges of solicitation and conspiracy to commit murder. No expert was called at the first trial to present evidence of her past trauma, and "battered women syndrome" was not available at the time as a potential defense.

Oklahoma courts have traditionally trapped many survivors in no-win situations, meting out some of the longest sentences in the nation for "failure to protect children" while also punishing women who do defend their children or themselves with lethal force.

Unlike the success of stand-your-ground (SYG) laws for men who have used lethal force in self-defense, women who have used lethal force in defending themselves against abusers face longer sentences, reflecting gender bias in application of SYG laws. Research shows very few successes of these cases at trial, demonstrating an urgent need for alternative solutions.



AT ISSUE

Can past trauma and abuse be considered in cases involving survivors of violence, exploitation, and trafficking and their abusers?

The passage of the Oklahoma Survivors' Act in May 2024 offers new hope to survivors of violence, exploitation, and trafficking. The nonprofit Oklahoma Appleseed Center for Law and Justice encoded defenses for survivors who can show that they were experiencing abuse and fearing for their safety at the time they committed the crime. Appleseed worked with the legislature to encode meaningful reductions in the sentencing ranges for survivors whose crimes are intertwined with their victimization. This act also provides a pathway for people who have been forced into illegal activities, under duress or as victims of trafficking, to clear their names and reclaim their futures. Appleseed has also conducted continuing legal education for attorneys on the nuances of the Oklahoma Survivors' Act.

The act provides definitions for "domestic violence," "post-traumatic stress disorder" (PTSD), and "psychological abuse," and, most important, states that expert testimony from a psychologist may be submitted to the court as evidence showing that the person has been diagnosed with PTSD. Psychologists have a key role to play in the successful implementation of the act because of their knowledge and skills to offer expert testimony on the effects of trauma on the brain and characteristics of decision-making by those who are subject to violence in relationships.

As a result of this legislation, the judge in Moss's case found that domestic violence and sexual assaults were significant contributing factors in her crime and that she had already overserved the new maximum of 30 years under the act. (If she were tried today for this crime, the outcome may have been far different.)

Unfortunately, only two states, New York and now Oklahoma, have passed legislation allowing a history of intimate partner violence to be considered at sentencing or resentencing. Many other states, including Louisiana, Oregon, and Minnesota, have considered but have not passed similar legislation. Such laws could change the trajectory for many teenagers and women, such as Wisconsin child sex trafficking victim Chrystul Kizer, who was sentenced to 11 years in prison for second degree murder after killing her trafficker in self-defense.

As these laws are applied in practice, psychologists have an important role to play in educating the courts about the effect of prolonged abuse on the brain and the equal right to self-defense. ■

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Borderline personality disorder (BPD)—characterized by extreme emotions, unstable relationships, and insecurity, impacting self-view and perceptions of others—is often misunderstood but treatable through psychotherapy.

CE Corner

Treating Patients With Borderline Personality Disorder

BY ALYSON POWELL KEY

BORDERLINE PERSONALITY DISORDER (BPD) is a common but often misunderstood condition, even by seasoned mental health professionals. Fortunately, enhanced diagnostic criteria and training are helping to equip clinicians with the necessary tools to effectively assist patients. And with an accurate diagnosis, BPD is treatable through psychotherapy, according to experts.

First and foremost, BPD impacts how someone views themselves and others. For example, they may see themselves as bad or worthless, and their evaluations of others may change rapidly depending on circumstances—from idealizing to devaluing. The condition is marked by extreme emotions, thinking, and behavior, unstable relationships, and insecurity.

While doctors and scientists do not know what exactly causes BPD, they think that both environmental and biological factors play a role. Research suggests that a history of child abuse or neglect, genetics, and changes in some regions of the brain can trigger the condition.

For example, one study examined how childhood trauma and attachment styles influenced stress responses in women with varying levels of BPD symptoms (Ehrenthal, J. C., et al., *Journal of Personality Disorders*, Vol. 32, No. 6 [Suppl.], 2018). Researchers measured stress responses through biomarkers like cortisol and salivary alpha-amylase (sAA) during a stressful task and found that adverse childhood experiences were linked to altered stress responses, especially when combined with insecure attachment styles. Women who scored higher on an avoidant attachment style—those who suppress their need for connection and struggle to rely on others, especially during stressful times—showed consistently higher levels of sAA, a marker of stress. When combined with childhood trauma, anxious attachment—defined by a doubt in the ability to handle emotions independently and constantly seek reassurance—was associated with less reactive and more blunted cortisol responses, indicating a dampened stress response. In other words, the combination of high childhood trauma and attachment insecurities led to distinct patterns in stress regulation, suggesting that early experiences shape how people cope with stress later in life.

CE CREDITS: 1

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

1. Name the nine criteria listed in the *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition) and how many a patient needs to exhibit to receive a diagnosis of BPD.
2. Explain why BPD is commonly misdiagnosed and how clinicians can avoid misdiagnosis and best treat symptoms.
3. Describe the treatment approach for children and adolescents who are exhibiting symptoms of BPD.

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

A sea change in diagnosing personality disorders

Over the past 25 years, the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*) has refined the diagnostic criteria for BPD and other personality disorders to ensure more reliable and valid diagnoses, eventually dividing personality disorders into three clusters. Each cluster includes a unique set of personality disorders with similarities in symptoms, behaviors, and underlying psychological patterns. Cluster A groups personality disorders with "odd or eccentric" characteristics, such as paranoid personality disorder. Cluster B includes BPD and other personality disorders with dramatic, emotional, or erratic behaviors. Cluster C covers personality disorders with anxious or fearful characteristics, such as avoidant personality disorder.

The current version of the *DSM*, the fifth edition (*DSM-5*), introduced an alternative model for diagnosing these conditions, "a sea change in how we conceptualize personality

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disorders," explained Kenneth Levy, PhD, a clinical psychologist and professor of psychology at The Pennsylvania State University. The model recognizes that people often show traits from multiple personality disorders rather than fitting neatly into just one.

The alternative model was introduced to address problems with the older system, such as overlapping diagnoses and unclear distintions between disorders. Since then, it has generated a large body of research. While some clinicians prefer the alternative approach, it has not been fully adopted into mainstream mental health treatment.

Two main criteria must be met to diagnose BPD under the alternative dimensional model. First, the person must have significant problems in at least two areas of personality functioning: identity, self-direction, empathy, or intimacy. Second, they must display at least four of these traits: emotional instability, anxiety, fear of separation, persistent sadness, impulsiveness, risky behavior, or hostility, and at least one of the traits must be impulsiveness, risky behavior, or hostility.

A third framework, the *International Classification of Diseases* (*ICD*) model for personality disorders, also takes a dimensional approach. It includes five broad trait domains: negative affectivity, detachment, dissociality, disinhibition, and anankastia (obsessive-compulsive tendencies). The *ICD-11* model is even more fully dimensional than the alternative model, requiring clinicians to assess severity first before specifying personality traits. But it still maintains a "borderline pattern" specifier, acknowledging the extensive research and clinical focus on BPD. This helps bridge the gap between the new dimensional model and older diagnostic traditions.

The challenge of accurate diagnosis

BPD is the most commonly diagnosed personality disorder in clinical populations. Studies estimate that it affects about 0.7% to 2.7% of the general population. The prevalence is higher in health care settings—about 6% in primary care, 11% to 12% in outpatient psychiatric clinics, and 22% among psychiatric inpatients. Severe symptoms, including suicidal thoughts and self-harm, often lead people to seek out or require professional help in an emergency room or inpatient unit, which raises the likelihood that they will be diagnosed with BPD. Clinicians in these settings may be more familiar with BPD and better equipped to recognize its symptoms than those in general medical practice.

In the general population, however, BPD is frequently underdiagnosed, and when it overlaps with symptoms of conditions like anxiety, depression, and bipolar disorder, it can lead to misdiagnosis. Symptoms can appear similar, but skilled clinicians can spot distinctions. For example, mood instability tends to be moment-to-moment in people with BPD, with their moods changing much quicker than those of people with bipolar disorder.

Research shows that clinicians miss many BPD cases simply because they do not evaluate for the condition, highlighting the importance of a thorough assessment, including a detailed patient interview and mental health evaluation, medical history, and symptom discussion.

Treatment options and approaches

The main treatment for BPD is psychotherapy; there is currently no medication approved specifically for treating BPD. Therapies designed specifically for BPD, including those listed below, have been shown to improve functioning, reduce symptoms, and may help lower self-harm and depression.

- **Mentalization-based treatment (MBT),** helps people with BPD better understand and manage their emotions and involves both individual and group therapy to improve emotional awareness and empathy for others.

- **Dialectical behavior therapy (DBT)** combines mindfulness with skills to manage emotions and relationships. It focuses on helping people tolerate distressing feelings through individual and group therapy and weekly team consultations with therapists.

KEY POINTS

1. Borderline personality disorder (BPD) is the most commonly diagnosed personality disorder in clinical populations.
2. BPD can be diagnosed when a patient exhibits five or more related symptoms involving self-regulation.
3. Typical treatment includes different therapy options, including dialectical behavior therapy, transference-focused psychotherapy, and mentalization-based treatment.
4. Because the symptoms overlap with other mood disturbances, BPD is often misdiagnosed.

■ **Transference-focused psychotherapy (TFP)** leverages the patient-therapist relationship to help patients recognize unhealthy interpersonal patterns, and the therapist offers clarification and feedback.

■ **Schema therapy (ST)** aims to help people build healthier adult behaviors by addressing four key emotional patterns in BPD: feeling abandoned or abused, anger and impulsivity, emotional detachment, and a critical inner voice. ST uses a mix of cognitive behavioral, psychodynamic, attachment, and emotion-focused techniques.

One study explored how different BPD therapies perform depending on a person's ability to understand their own and others' thoughts and feelings, a skill known as reflective functioning (Keefe, J. R., et al., *Journal of Consulting and Clinical Psychology*, Vol. 91, No. 1, 2023). Researchers looked at four types of treatment: TFP, DBT, supportive psychodynamic therapy (SPT), and community-based care.

They found that patients with low reflective functioning benefited more from TFP or SPT, showing improved symptoms and better reflective functioning. These therapies focus on understanding emotional states and relationships. Patients with high reflective functioning responded better to community-based care and DBT, which involve building specific skills for emotional regulation and interpersonal effectiveness. These findings suggest that matching the type of therapy to a patient's reflective functioning level could enhance treatment outcomes for BPD.

Unfortunately, treatment, regardless of type, isn't effective for everyone. "Patients with high trauma rates or antisocial traits often don't do as well in treatment," Levy said.

Biological factors as well as environmental factors (such as childhood trauma) contribute to the development of borderline personality disorder.



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He added that research is increasingly focused on understanding how treatments for BPD work rather than just if they work. "What changes within the patient? What does the therapist do to enact that change?"

While there are no FDA-approved medications for personality disorders, medication can be used to manage mental health conditions that often accompany BPD, such as depression or anxiety. If a patient is at risk of harming themselves, hospitalization is recommended.

Building a trusting clinician-patient relationship is also critical, said Julia Becker, PsyD, a clinical psychologist and coach who treats college students and adults with a range of mental health issues including borderline personality disorder. Since BPD is marked by unstable relationships characterized by extremes of idealization and devaluation, it can affect the bond between therapist and patient. So, for people with BPD, building a strong therapeutic alliance may require more than just trust and shared goals—it might involve managing this instability.

To explore this, researchers analyzed daily patient ratings of the therapeutic process for 51 patients with BPD and 66 with major depressive disorder who were receiving inpatient treatment and examined the stability of the therapeutic alliance and how it related to treatment outcomes. (Kratzer, L., et al., *Journal of Contemporary Psychotherapy*, Vol. 54, 2024). The findings showed that the alliance was much more unstable for patients with BPD. Interestingly, this instability—when it included periods of breakdown and repair—was linked to better outcomes for BPD patients. This suggests that working through challenges in the therapeutic relationship may play a key role in effective treatment.

Considerations for children and adolescents

Many clinicians are reluctant to diagnose adolescents with BPD because of the common belief that personality is not sufficiently formed during adolescence, so a personality diagnosis would be premature.

However, both the current and older versions of the *DSM* allow providers to diagnose BPD in people younger than 18. And research indicates that many features of BPD are already present and stable in adolescents.

"We used to think that personality disorders couldn't be diagnosed until adulthood, but the features of BPD are remarkably similar in adolescents and adults," said Carla Sharp, PhD, a clinical psychologist and director of the Adolescent Diagnosis Assessment Prevention Treatment Center at the University of Houston.

Like adults, adolescents with BPD experience emotional dysregulation and unstable relationships. But the social environments influencing their symptoms differ. For younger people, parental and peer relationships as well as social media play prominent roles in shaping how symptoms manifest. For example, social media heightens social comparison and identity pressures, which can intensify emotional and interpersonal difficulties. While adults are also susceptible to external influences, the nature of those influences varies, reflecting differences in their social contexts.

It is also important to distinguish the ways that BPD manifests in children and adolescents, according to Sharp. Personality disorders are characterized by an unstable sense of self and impairments in interpersonal functioning; however, children and adolescents are still forming their sense of self and interpersonal skills. In these age groups, clinicians may instead evaluate specific traits or behaviors, such as emotional sensitivity or impulsivity, which could indicate a risk of developing a personality disorder later in life.

Sharp, whose work focuses on personality disorders and other severe psychopathology in adolescents, believes that adolescence is an optimal time to treat BPD "because the brain is still plastic, and social relationships are in flux."

Treatment should consider an adolescent's ongoing development, particularly in identity formation, emotional regulation, and interpersonal relationships, Sharp added. Their impulsivity and emotional sensitivity require tailored interventions that address the challenges of this stage of their lives. For instance, DBT for adolescents often includes parents or other caregivers to enhance communication and reduce family conflict, while MBT also focuses on helping them make sense of themselves and others. While research shows that DBT and MBT improve symptoms in youth with BPD, more research is needed, given that the quality of studies has generally been low, said Sharp.

Identifying cultural and gender biases

Cultural norms can also influence how clinicians interpret symptoms of BPD, leading to potential misdiagnosis. For example, people from more expressive cultures may display intense emotional swings that could be misinterpreted as pathological in less expressive cultures. Conversely, it may be difficult to identify BPD in people who live in cultures where expressive displays are not the norm, not even intense emotions like anger or sadness. "Clinicians might mistakenly diagnose a personality disorder when environmental factors actually explain the behavior, or they may underdiagnose because they're using

DIAGNOSIS

CRITERIA FOR BORDERLINE PERSONALITY DISORDER

The *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition) outlines nine criteria for borderline personality disorder, with a diagnosis usually requiring someone to display five or more of these symptoms:

- Frantic efforts to avoid abandonment, whether real or imagined
- Unstable and intense interpersonal relationships that alternate between extremes of idealization and devaluation
- Markedly and persistently unstable self-image or sense of self
- Impulsivity in at least two areas that are potentially self-damaging, such as spending, substance abuse, reckless driving, sex, or binge eating
- Recurring suicidal behavior, gestures, or threats or self-harming behavior
- Affective instability because of a marked reactivity of mood
- Chronic feelings of emptiness
- Inappropriate, intense anger or difficulty controlling anger
- Transient, stress-related paranoid ideation or severe dissociative symptoms



Research now shows that borderline personality disorder affects men and women equally, challenging previous misconceptions influenced by gender biases and differences in mental health care–seeking behavior.

SEMENTSOVALESIA/GETTY IMAGES

their own biases as the benchmark," explained Vibh Forsythe Cox, PhD, a clinical psychologist and director of the Marsha M. Linehan DBT Clinic at the University of Washington.

Misinterpreting cultural norms and the patient's relationship to them can affect treatment outcomes, turning patients away from therapy or leading to inappropriate treatment plans, Cox added. It is essential that clinicians receive training on cultural humility and ask meaningful, contextual questions, she said. They should aim to understand the patient as an individual rather than making assumptions based on cultural stereotypes.

Cox, who is on the board of the International Society for the Improvement and Teaching of DBT (ISITDBT) and a founding member of the ISITDBT Anti-Racism Committee, encourages clinicians to ask questions like, "What's the best way for me to understand how your emotions show up?" or "How do your emotions differ from those of other people around you or who share your culture?"

Although BPD was once thought to be more common in women, research now shows it affects men and women equally (Bozzatello, P., et al., *Frontiers in Psychiatry*, Vol. 15, 2024). Historically, this misconception arose partly because women are more likely to seek mental health care, leading to their overrepresentation in psychiatric studies. Gender biases in the interpretation of mental health symptoms can also play a role. "Men's anger may be socially acceptable, while women's anger is more likely to be diagnosed as BPD," explained Becker.

Gender bias can also extend to diagnosis. While BPD is equally prevalent in men and women, it is frequently underdiagnosed in men, whose symptoms may instead be labeled antisocial behavior or substance use disorder, for example. As a result, many men with BPD are left untreated or misdiagnosed. Experts say that the solution lies not in reducing care for women but in providing more support for men struggling with BPD.

Combating stigma

Unfortunately, there remains considerable stigma surrounding BPD and its effect on people living with the condition, according to experts. BPD is often misunderstood as being untreatable or inherently linked to chronic dysfunction. This stigma can lead to misdiagnosis or avoidance of a diagnosis altogether, denying patients the chance for effective treatment and augmenting their challenges.

Slowly, the negative perception of BPD is beginning to change, led by younger generations and the voices of those with lived experience who view the condition as treatable. "Younger generations have come to a different understanding of personality disorders. Many have embraced them, understanding that the diagnosis does not mean they are defective or unworthy," Becker said.

Still, misunderstandings persist within the health care system, underscoring the need for more education and training among clinicians. Clinicians must address their own biases about BPD and view it as a treatable disorder rather than a lifelong label. Sharp says there is also a push for frontline clinicians, such as general practitioners, to recognize and treat the condition.

"We need to move past the stigma and train all clinicians to identify and work with BPD symptoms earlier," she said. ■

Building Better Media for Kids

Psychology researchers are shaping the educational media reaching millions of children throughout the world

BY HEATHER STRINGER



AMR BO SHANAB/GETTY IMAGES





AMR BO SHANAB/GETTY IMAGES

TODAY'S YOUNG CHILDREN encounter more media claiming educational benefits than any generation before. Children can access content on mobile devices, tablets, computers, voice assistants powered by artificial intelligence (AI), and more.

Yet the learning and development benefits vary widely among the offerings. In one recent study of 124 commonly downloaded apps marketed as "educational to children," researchers found that most of the apps scored in the lower range in key areas that are critical for learning (Meyer, M., et al., *Journal of Children and Media*, Vol. 15, No. 4, 2021). Children learn most effectively when media facilitates meaningful interaction with characters, can be applied to everyday experiences, and does not include distracting visual and sound effects and advertisements.

Although some media may not be as "educational" as advertised, psychologists see the demand for digital learning content as an opportunity to positively influence millions of children. These tools have the potential to help kids learn valuable skills tied to outcomes later in life, such as educational attainment, future earnings, and well-being. "I am a firm believer in the science of learning," said Kathy Hirsh-Pasek, PhD, a psychology professor at Temple University and a senior fellow at the Brookings Institution. "If we use psychological science as a basis to create media products that capitalize on how human brains learn, we can develop better products and kids will get more out of it."

Using media to bridge gaps in education is more important than ever as evidence uncovers the depth of learning loss because of the COVID-19 pandemic. To study the effects of stay-at-home orders that closed preschools, playgrounds, and other settings for early learning, researchers investigated 672 children born between 2020 and 2021. The data showed that these children had significantly reduced verbal, motor, and overall cognitive performance compared with children born pre-pandemic. Children from lower socioeconomic families were most affected. According to neuroimaging data from the same study, children born during the pandemic also showed reduced brain white matter (Deoni, S., *Biological Psychiatry*, Vol. 91, No. 9, 2022). Other evidence suggests that the pandemic has contributed to significant delays in social-emotional development for young children (Kuehn, L. M., et al., *JAMA Pediatrics*, Vol. 178, No. 2, 2024).

"Quality educational children's media is not a substitute for preschool, but it has the power to mitigate learning loss in the midst of disruption," said Kim Foulds, PhD, vice president of content research and evaluation at Sesame Workshop, a global educational media organization that has incorporated the science of learning into content development since the first season premiered in 1969. (APA is in its sixth year of partnering with Sesame Workshop on content related to children's emotional well-being.) The latest studies reveal that television shows, apps, and interactive

AT A GLANCE

- Using media to bridge gaps in education is more important than ever following COVID-19 pandemic learning loss.
- Scientists are discovering how media that allows viewers to have interactive conversations with characters maximizes learning.
- Researchers and organizations are working to deliver quality educational media to children in regions affected by instability and conflict.
- Many children's apps that are labeled as educational score low in key areas that are critical for learning.

online games can teach numeracy and literacy, as well as social-emotional skills and thinking processes that help children become problem solvers rather than fear failure. Scientists are also discovering how media that allows viewers to converse with characters maximizes learning—and how AI is poised to create these interactive digital experiences.

"Clearly, we do not want our kids to be friends with AI at the expense of their friendships with real kids, but the use of interactive characters in AI could serve as an extra tool in the arsenal to help our kids learn," said Sandra Calvert, PhD, professor emerita of psychology at Georgetown University and director of the Children's Digital Media Center.

Inspiring curiosity to experiment

Leaders at Sesame meet regularly with early childhood educators, researchers, and policymakers to hear what these experts are seeing among children, and this input informs each season's development process. Recently, they shared that children seemed to be losing their sense of wonder and curiosity because preschoolers are under increasing academic pressure, said developmental psychologist Rosemarie Truglio, PhD, senior vice president of curriculum and content at Sesame Workshop. Children are overscheduled, losing the freedom to play, and lacking independence and autonomy. "That was sad for me to hear," Truglio said. "Children are more afraid to experiment and ask questions because they have a fear of failure."

Truglio's team was eager to instill a positive approach to learning that would reignite wonder, curiosity, creativity, and critical thinking in children. "We wanted to help them become problem solvers who persevered in the face of challenges," she said. Sesame had historically focused on content learning, such as letters and numbers, and teaching cognitive processing skills was a new direction for the show.

To create a memorable narrative structure to help kids learn a new cognitive process known as playful problem-solving, Sesame designed stories in which the characters would repeat the refrain "What do we say when we have a problem to solve? I wonder, what if, let's try" with accompanying gestures. In one episode, Rosita and Elmo are creating race ramps for balls, and Elmo's ball rolls down the ramp faster. Rosita wonders why her ball was slower, and they experiment with different ways to make her ramp faster.

Researchers studied 116 preschoolers who watched 12 episodes of *Sesame Street* focused on playful problem-solving, and the most striking impact to investigators was in preschoolers' ability to transfer the processing skills they learned in the show to new contexts in their lives (Fisch, S. M., et al., *Journal of Children and Media*, Vol. 18, No. 3, 2024). This "transfer of knowledge" is typically difficult to achieve in educational media.

In an episode of *Sesame Street* designed to help children learn playful problem-solving, the characters Elmo, Julia, and Rosita are creating race ramps for balls. Elmo's ball rolls down the ramp faster than Rosita's ball does, so they experiment with different ways to make her ramp faster.



IMAGE COURTESY OF SESAME WORKSHOP



Hadi, played by Jordanian actor Rami Delshad, along with (left to right) Grover, Mazooza, and Basma from the Arabic version of *Sesame Street*

Children who watched the playful problem-solving *Sesame Street* episodes showed greater gains in the variety of problem-solving heuristics and the efficiency of their problem-solving process than participants in the control group, who watched episodes from a previous season focused on social-emotional learning and celebrating diversity. "These are the building blocks to create critical, creative, lifelong thinkers," Foulds said. "Evidence shows that children who can practice creative problem-solving tend to perform better academically and have stronger prosocial behavior later in life."

Reaching children in crisis

Sesame is also working with organizations across the globe to reach children living in regions affected by economic instability and local or global conflicts. Sesame partnered with the International Rescue Committee to create an Arabic-language version of *Sesame Street* called *Ahlan Simsim* ("Welcome Sesame" in Arabic), which focused on teaching kids social-emotional skills. The show has been viewed by more than 23 million children across the Middle East and North Africa.

In a study aimed at supporting children affected by the previous Syrian conflict and refugee crisis, children in 108 classrooms in Jordan viewed the show every day for 12 weeks. "Emotion identification and emotion regulation strategies are even more important for children experiencing adversity," said Foulds.

Researchers from New York University's Global TIES for Children program evaluated the intervention, which had positive effects on children's ability to express emotions, such as frustration, nervousness, fear, and loneliness (Global TIES for Children, 2023). Findings also showed positive effects on children's ability to identify others' emotions in a social scenario and apply calming breaths as a strategy to cope with strong emotions.

Researchers at Sesame Workshop recognize that it may not always be feasible for teachers to show a video in the classroom, especially in areas affected by economic instability and conflict. Global TIES for Children evaluated a remote learning program in Lebanon developed by Sesame Workshop and the International Rescue Committee that equips parents and caregivers to help their children learn numbers, letters, and social-emotional skills. Caregivers used educational materials such as workbooks and the *Ahlan Simsim* content with their children for about 40 minutes three times a week. The learning gains after 11 weeks were equivalent to an entire year of preschool (Stringer, H., *Monitor on Psychology*, October 2024; Schwartz, K., et al., *Journal of Research on Educational Effectiveness*, 2024).

Sesame also recently partnered with Global TIES for Children to deliver a 10-minute educational program via WhatsApp on mobile devices to Venezuelan migrants and Colombian children living in communities lacking essential services. Over 19 weeks, families received links twice

KARIM SAHIB/GETTY IMAGES; AMR BO SHANAB/GETTY IMAGES

a week to 10-minute videos to show to their 4-year-old children. Half of the participants opened 9 or more of the 38 links, and half of the families watched less than 50 minutes of programming during the 19 weeks. Although rates of family engagement with the material were relatively low, the results showed positive effects on emotion identification and emotion situation knowledge (Tiwari, P., et al., Global TIES for Children, 2024).

"You can move the needle on these outcomes with something as little as texting a short video," said Kate Schwartz, MPP, PhD, senior research scientist at Global TIES for Children. "This intervention is exciting in that it is amazingly scalable because almost everybody has a smartphone." By the end of 2023, almost 70% of the world's population were smartphone users, and more than 1 billion smartphones were shipped worldwide in 2023 (Statista, June 2024).

Character connection and learning

The latest technology is also boosting the potential for learning because children can increasingly interact with the characters they enjoy. Previous studies have shown that children learn more effectively from shows when they form "parasocial relationships" with characters they deem trustworthy, safe, cute, and a friend—measures of attachment and friendship (Richards, M. N., & Calvert, S. L., *Journal of Children and Media,* Vol. 11, No. 2, 2017). Kids also learn better when they have perceived interactions with the characters in a show rather than passively watching a program. For example, the Nickelodeon character Dora the Explorer may give viewers three objects and ask which one she should use to solve a problem. She will pause to let the viewers answer, and then she tells them which one she will use. This approach promotes a parasocial interaction, a perceived conversation a child has with a character. The limitation of this approach is that children can say anything in this interaction and the show goes on. AI is now creating possibilities that better mimic face-to-face social interactions, which allows for corrective feedback from a character.



Calvert was eager to explore whether learning improved when children reported a close parasocial relationship with Dora and when Dora's responses were contingent upon a child's answers. In a series of studies designed to create an AI prototype, children ages 3 to 5 were asked to help Dora gather items for a birthday party for her cousin Diego by counting items that came down a conveyor belt at a grocery store. The goal was to help children learn the add-1 math concept, such as "What does 4 and 1 make?"

"The stronger the children's attachment and friendship with Dora was, the faster they mastered the math game," Calvert said. Children also answered the math problems more quickly when Dora's responses related directly to their answers to let them know if they had the correct answer or needed to try again (*Child Development,* Vol. 91, No. 5, 2020).

Calvert believes these findings could inform how developers use AI products to help children learn. "Children could potentially select and even create their favorite characters and embed them into interactive educational media shows and games," Calvert said.

In another study of more than 240 children, researchers at the University of California, Irvine, partnered with PBS Kids to develop interactive, science-based videos in which the main character—powered by AI—engaged in conversations with children 4 to 6 years old. In the PBS Kids

show *Elinor Wonders Why*, the main character helps kids learn about aerodynamics in one episode and the process of reptile molting in the second episode. The children watched one version of the show: interactive, pseudo-interactive, or noninteractive. In the interactive format, Elinor asks children questions and provides responsive feedback based on their answers. In the pseudo-interactive version, Elinor poses questions, pauses, and offers a generic response. The noninteractive version lacked both questions and responses. The data showed that the AI-powered character, Elinor, demonstrated outstanding proficiency in deciphering children's speech and accurately understanding the intended meaning. The children in the interactive group performed better on a science assessment after viewing the show than the children in the other two groups (*Journal of Educational Psychology*, Vol. 116, No. 7, 2024).

"This is an exciting time because interaction has always been an important feature in making media educational, especially for young children, and AI allows media to be much more interactive," said Mark Warschauer, PhD, an author of the study and a professor of education at the University of California, Irvine.

Calvert and her colleagues recently explored whether children form parasocial relationships with conversational agents such as Alexa, Google Assistant, and Siri. In a study based on survey responses, parents reported that their children, ages ranging from 3 to 10, personified, became attached to, and treated the conversational assistants much like their favorite embodied media characters (*Human Behavior and Emerging Technologies*, Vol. 3, No. 4, 2021). One third of the questions children asked the agents related to science—such as,"What happens when you die?"—and one third were practical, such as, "What is the weather outside?" The remainder were about the agent—such as,"Are you a princess?"—or cultural, such as, "Can you please tell me about George Washington?"

Though the latest AI interfaces have significant potential to facilitate learning, researchers acknowledge that it is critical to integrate developmental science into the new products. "Educators, parents, and policymakers need to ask what role we want generative AI to play in our children's learning," Calvert said. "We know a considerable amount about the scientific processes for how children learn. An ongoing question is, How can we use that knowledge to inform and develop emerging educational technologies like AI to maximize the skills children will need for success in the 21st century?"

While some people may feel concerned that children form attachments to AI, projecting life into inanimate objects and treating them as humanlike is part of who we are as a species, said Calvert. "But AI should always be considered a supplement to social interaction," she said. "Parents need to make sure that their children's closest emotional relationships are with those who matter the most, with friends who are real peers and with their family members."

What doesn't work

Although technology is increasing the potential for kids to learn from media, psychologists are consulting with media companies to ensure that the content maximizes the chances that kids will learn valuable skills. Educational topics must be central to the plot of the story, said Shalom Fisch, PhD, president and founder of MediaKidz Research & Consulting and a consultant for such companies as Sesame Workshop, Netflix, and PBS. Too often, the educational content is tangential to the narrative (*Children's Learning From Educational Television*, Routledge, 2004). For example, if a show is a mystery to discover who stole a pitcher's lucky baseball cap, the detective could use the concept of rate-time-distance to deduce whether the catcher could have reached the dugout in time to steal the cap, said Fisch. "The goal is that if a kid retells the story to a friend, it shouldn't be possible to tell the story without mentioning the math," Fisch said.

Another common mistake he sees is what he calls the "sitcom trap" of programs that attempt to promote social-emotional learning. When this happens, characters spend most of the episode treating each other badly only to resolve with a quick hug at the end. "Kids walk away remembering the bad behavior because it was more dramatic and memorable," Fisch said. "The trick is to have the problem comprise a small part of the show and spend the bulk of the time finding a solution." In the show *Judge Jodhi* by Big Bad Boo Studios, a 6-year-old girl sets up a makeshift courtroom in her yard to resolve neighborhood disputes. "Usually, kids see one side of a situation and they assume they are right," said Fisch, who has consulted with Big Bad Boo Studios. "In this show, characters utilize critical thinking to question their assumptions, see different sides of an issue, and resolve the dispute."

Psychologist Mariana Díaz-Wionczek, PhD, has guided content producers for PBS Kids and Nickelodeon, and she works to incorporate foundational psychological theories into the programs. For a show called *Alma's Way* for PBS Kids, she encouraged the team to include physical body sensations into Alma's awareness of feelings. In one episode when a character is feeling grumpy, Díaz-Wionczek suggested that Alma describe how someone's shoulders can feel



On the show *Judge Jodhi*, a 6-year-old girl sets up a makeshift courtroom in her yard to resolve neighborhood disputes. The goal is to help kids use critical thinking to question their assumptions and see different sides of an issue—and ultimately resolve the dispute.

IMAGE COURTESY OF BIG BAD BOO STUDIOS

tight, and their stomach can feel like it is in knots when they feel grumpy.

Whether educational media is helping kids identify emotions, solve math problems, or explore how to build a faster race ramp, research suggests that compelling stories are a critical tool when it comes to learning from a screen. One recent study confirmed this when researchers showed preschoolers two different types of previews before an educational television program. In the show, the characters were looking forward to a parade in the park, but the park was too messy to host a parade. The characters used sorting and counting skills to clean up the trash in the park. One preview of the show focused on the math and sorting concepts the viewers would learn during the upcoming episode, while the other preview focused on the plot of the story. The plot-focused preview enhanced the preschoolers' comprehension of both the story and educational concepts, but the concept-focused preview had no effect on comprehension (Jing, M., & Kirkorian, H. L., *Child Development*, Vol. 91, No. 5, 2020).

"An engaging story helps children both receive and remember information more effectively," said Heather Kirkorian, PhD, one of the authors of the study and a professor of human development and family studies at the University of Wisconsin–Madison. "And adding a 60-second preview is one simple way to capitalize on the connection between stories and learning." ■

FURTHER READING

From A to Zari: The impact of *Baghch-e-Simsim* on gender equity attitudes among children and parents in Afghanistan
Foulds, K., et al.
Media, Culture & Society, 2023

iSTART: Adaptive comprehension strategy training and stealth literacy assessment
McNamara, D. S., et al.
International Journal of Human–Computer Interaction, 2023

Screen media exposure and young children's vocabulary learning and development: A meta-analysis
Jing, M., et al.
Child Development, 2023

BIRTH CONTROL AND THE BRAIN

Oral contraceptives are the most used form of hormonal contraception, but much is still unknown about how they affect women's bodies and brains

BY ZARA ABRAMS



STEFANAMER/GETTY IMAGES



BIRTH CONTROL PILLS quite literally changed the course of history, giving women unprecedented control of their fertility and thus more freedom of choice in education, work, and family matters. But the most used form of hormonal contraception was developed before scientists understood the myriad functions hormones play in the body and brain—and some recent findings are highlighting how much is not yet known.

"As a global population we've been taking this pill as a natural experiment, as we've been simultaneously discovering that the impact of estrogen and progesterone is way beyond just pregnancy," said Caitlin Taylor, PhD, a senior scientist at the University of California, Santa Barbara (UCSB), who studies changes in brain structure and function across periods of hormonal transition, including puberty and the menstrual cycle.

Amid growing evidence that links birth control pills with changes in stress responses, cognition, libido, and mood—including an increased risk for depression in adulthood if taken during adolescence—researchers are calling for more attention to the issue.

"We lack basic, mechanistic information about how women's bodies and brains work, and how synthetic hormones interact with normal biological processes," said Summer Mengelkoch, PhD, a postdoctoral fellow in psychology at the University of California, Los Angeles, who studies women's stress responses. "Psychologists have a great opportunity to contribute here," she added, because they are adept at designing experiments to identity both clinical and subclinical effects.

One of the most pressing issues is to understand how synthetic estrogen and progesterone affect brain development, Taylor said, because these drugs were developed and tested with adults but are often given to teenage girls. They are prescribed for reasons other than pregnancy prevention, too, such as to treat dysmenorrhea (heavy, painful periods), polycystic ovary syndrome, and even acne in teenagers.

Research generally does not suggest that the pill is dangerous. For women in many parts of the world, including much of the United States where reproductive freedom is under threat, its benefits still far outweigh potential negative side effects. But age, mental health history, pill formulation, and other factors can lead to significant variability in how people respond.

"Hormonal contraceptives continue to be an incredibly safe and incredibly effective family planning method for many people," said Frances Chen, PhD, a professor of psychology at the University of British Columbia who studies how hormones shape social and emotional health, particularly during adolescence. "But a subset of people may be more vulnerable to their negative side effects. These people deserve a good knowledge base, based on high-quality research, to make informed decisions about their health."



KINGA KRZEMINSKA/GETTY IMAGES

Mental health and the pill

A large and robust literature shows that sex hormones, including estrogen and progesterone, have widespread effects throughout the body and brain, far beyond sex and pregnancy. They play a role in nearly all the body's systems, influencing everything from cardiovascular and immune function to emotion regulation, executive function, and appetite.

"It's only very recently that people have started to ask the question: What does this mean for birth control pills? And since we started asking it, we've begun to find some peculiar things," said Sarah E. Hill, PhD, a professor of psychology at Texas Christian University who studies the role of women's hormones in relationships and health and authored the book *This Is Your Brain on Birth Control*.

One troubling finding: Taking hormonal contraceptives during adolescence is linked to a higher risk of developing major depressive disorder in adulthood, according to research by Chen and her postdoc, Christine Anderl, PhD (*The Journal of Child Psychology and Psychiatry*, Vol. 61, No. 2, 2020; *The Journal of Child Psychology and Psychiatry*, Vol. 63, No. 3, 2022).

"That suggests there may be a long-term effect of these synthetic hormones on the way the brain develops during adolescence—that it's not just about the side effects happening when these drugs are currently in your system," Chen said.

To investigate that link, Chen is now collecting baseline data from teenage girls before they start taking birth control pills, between ages 13 and 15, then tracking them for several years. She and others are also conducting mechanistic studies to start teasing out the biological processes that underlie the newfound association.

A leading theory is that the increased risk for depression stems from an altered stress response among birth control pill users. Studies indicate that women on the pill have a blunted cortisol response: In acute stress tasks, they have a slow rise and a gradual fall of cortisol rather than the classic spike that signifies a healthy stress response. Despite the cortisol differences, these women report feeling at least as much stress as non–pill takers (Sharma, R., et al., *Hormones and Behavior*, Vol. 124, 2020).

Mengelkoch has found that women on the pill also tend to show differences in their inflammatory stress response, which occurs just before the cortisol spike. During a lab-based stress task, the inflammatory response of naturally cycling women was dominated by one cytokine, IL-6, while the response of women on the pill was dominated by another cytokine, known as TNF-alpha. The rise in TNF-alpha was also linked to a decrease in positive mood (*Brain, Behavior, and Immunity*, Vol. 115, 2024).

"It could be the case that hormonal contraceptive use is causing women to have an atypical inflammatory response to stress, which may be related to their depression risk down the line," Mengelkoch said. She is now planning a prospective study of women before they start taking the pill to investigate possible changes in stress-related gene expression.

Understanding how contraception affects mood involves teasing apart subtle changes in affect. Most of what's known so far comes from studies of women with severe premenstrual syndrome and premenstrual dysphoric disorder, who experience high levels of negative affect in the last week of their cycle. When taking the pill, these women report better moods during that week. But Mengelkoch's review of the literature (in press with the *Open Access Journal of Contraception*) suggests a hidden downside: Some women on the pill also experience a small but statistically significant decrease in positive affect earlier in their cycles (Lundin, C., et al., *Psychoneuroendocrinology*, Vol. 76, 2017).

"It hasn't had as much light shined on it because a decrease in positive affect doesn't sound as bad as an increase in negative affect," Mengelkoch said. "But things may feel very different for these women when they go on the pill, and changes in positive affect might not be showing up in studies because we aren't looking for them."

While the science on adolescence remains unclear, research suggests that for adult women depression risk is particularly a concern during the first 2 years of pill use (Johansson, T., et al., *Epidemiology and Psychiatric Sciences*, Vol. 32, 2023).

AT A GLANCE

- Hormonal contraceptives were developed before scientists had a clear understanding of the far-reaching role of hormones in the body and brain.
- New research explores how birth control pills affect the developing brain, stress responses, and health.
- For many, the pros of hormonal contraceptive use still far outweigh the cons, but more evidence can help women make informed decisions about their health.

Moving beyond the mean

Brain scanning research further supports the idea that hormone-driven biological changes could underlie the psychological side effects of birth control. Taylor, her supervisor Emily Jacobs, PhD, an associate professor of psychological and brain sciences at UCSB, and their colleagues have shown that hormones are even linked to daily changes in the structure of a woman's brain.

The group collected brain scans from a woman for 30 consecutive days during a natural menstrual cycle, finding fluctuations in the volume of her hippocampus that correlated with changes in progesterone (*NeuroImage*, Vol. 220, 2020).

"THE PILL'S CONTROL OF HER HORMONE LEVELS WAS QUASHING THE NATURAL FLUCTUATIONS OF THE BRAIN."

CAITLIN TAYLOR, PhD,
Senior scientist at the University of California, Santa Barbara

"We then collected scans while she was on the birth control pill and saw no volume differences across the 30 days we scanned her. That suggests that the pill's control of her hormone levels was quashing the natural fluctuations of the brain," said Taylor, who is now conducting a similar analysis of the whole brain.

It is no surprise, then, that researchers have documented a broad range of psychological changes linked to birth control use. In addition to changes in stress response and depression risk, hormonal contraceptives can lower libido and impact sexual attraction.

Pill use may also alter spatial reasoning, according to research by Adriene Beltz, PhD, an associate professor of psychology at the University of Michigan who studies gendered cognition. In a study that compared men, naturally cycling women, and users of two types of birth control pills, one group of pill users performed slightly better on a 3D mental rotation task than naturally cycling women (*Hormones and Behavior*, Vol. 74, 2015).

"The effects were present but small. We expect to see small effects because we're studying highly complex behaviors that vary among people for so many different reasons," Beltz said.

Another key takeaway from the study: When Beltz ran the analysis without separating hormonal contraceptive users by pill formulation, she found no effects. Not all birth control pills are the same—some use synthetic progestins derived from progesterone, others from testosterone, for example, which can have varying effects throughout the body. Individual factors, such as the number of receptors a woman has for a given hormone, can also lead to different outcomes.

"Studying biology is already really messy, and then adding the idiosyncrasies of these different exogenous hormones makes it even messier," Hill said. "We need to move beyond looking at the mean because averaging all pill users may not tell us anything."

Those complexities were long seen as a reason to exclude women from psychological and biomedical research. Though more studies now include women, researchers often ignore the effects of hormones (lumping all women together regardless of cycle stage or pill use) or minimize them (enrolling women at the start of their menstrual cycles, when they are hormonally most similar to men). Neither of those approaches really capture the complexity of the issue, Hill said.

When it comes to positive and negative affect, Beltz's research shows that daily variations do not differ substantially between men, naturally cycling women, and women on three types of birth control pills. She administered surveys each day for 75 days and found virtually no differences between the groups tested (*Scientific Reports*, Vol. 11, 2021).

"This doesn't mean that hormones don't matter for emotions. Hormones may contribute to variation for some people in some contexts, but not more so—at least systematically—than folks' emotional lives vary from day to day anyway," she said. "And certainly not enough to exclude naturally cycling women or hormonal contraceptive users from scientific research."

When women stop using the pill, most find that their cycles regularize and sex drive rebounds within about 3 months. More research is needed to understand whether the same is true for side effects related to mood and stress response, Mengelkoch said.

WHAT CLINICIANS NEED TO KNOW

The majority of women do not report mental health side effects from the pill.

43.6% of women in one study said they experienced mood changes as a side effect of hormonal contraceptives.



Mood changes were more commonly reported by patients with a history of psychiatric illness.

83% of women in the study reported that their doctor did not mention potential psychological side effects of taking birth control.

Source: Martell, S., et al., *Contraception and Reproductive Medicine*, Vol. 8, No. 9, 2023

Research has found an association between birth control use during adolescence and depression later in life.



Women who took the pill as adolescents were more likely to meet major depressive disorder criteria in adulthood than women who never took the pill or started as adults (suggesting a correlation).

Sources: Anderl, C., et al., *The Journal of Child Psychology and Psychiatry*, Vol. 61, No. 2, 2020; Anderl, C., et al., *The Journal of Child Psychology and Psychiatry*, Vol. 63, No. 3, 2022

Hormonal contraceptives may affect some types of therapy.



Evidence from human studies and animal models suggests that hormonal birth control can interfere with fear conditioning and extinction because of its effects on estrogen production.



That can hinder exposure therapy, used to treat post-traumatic stress disorder, anxiety disorders, and phobias.



More research is needed to understand how this differs across birth control types and may impact therapy outcomes.

Sources: Graham, B. M., & Milad, M. R., *Biological Psychiatry*, Vol. 73, No. 4, 2013; Graham, B. M., *Frontiers in Neuroendocrinology*, Vol. 67, 2022; Bartholomew, M. E., et al., *Learning & Memory*, Vol. 31, No. 12, 2024

-VICTOR-/GETTY IMAGES; RUDZHAN NAGIEV GETTY IMAGES

Speaking up on contraception

At a time when reproductive freedom is at risk in the United States and many women worldwide still lack access to reliable contraception, those who study birth control side effects say they worry that their findings will be taken out of context. Last year, the *Washington Post* reported that social media misinformation about hormonal birth control, promoted in some cases by anti-abortion groups, had swayed women to opt for less reliable forms of contraception, such as cycle tracking.

On the other hand, public discourse about birth control can provide women with the knowledge and confidence they need to approach their doctors about side effects that have long been dismissed.

"For a long time, these complaints have been written off as 'pesky women's issues,'" Mengelkoch said. "Even if these are not life-threatening side effects, or side effects that outweigh those of pregnancy, we should still talk about them."

That disconnect between patients and providers is reflected in research. In a survey of 188 patients conducted by Allison B. Deutch, MD, a reproductive psychiatrist at the New York University (NYU) Langone School of Medicine, and NYU medical student Sarah Martell, 83% reported that their doctor did not mention potential psychological side effects during contraception counseling (*Contraception and Reproductive Medicine*, Vol. 8, No. 9, 2023).

Women also reported having their complaints dismissed by their providers, being discouraged from switching to a different form of birth control or feeling that their providers were playing a "guessing game" about which pill would have the fewest side effects. That's due in part to rushed provider visits, but it is also due in part to a dearth of research that can inform nuanced decision-making about contraception, Deutch said.

"We want patients to feel comfortable talking to their providers and we want providers to feel comfortable talking to their patients," she said. "How do we navigate that in a place where there's so much gray?"

One promising development: digital contraceptive decision aids, which can help with personalization and patient education, typically before or after a doctor's appointment. Mengelkoch, Hill, and their colleagues conducted a trial of one such tool, Tuune, finding that women who used it had better knowledge of contraception and greater self-efficacy around their reproductive health than those who did not use the tool (*BMC Digital Health*, Vol. 1, No. 36, 2023).



VISUAL GENERATION/GETTY IMAGES



FIORDALISO/GETTY IMAGES

Variability matters

So much about women's biology remains unknown. Securing funding for this work can be challenging, Mengelkoch said, because it often does not map onto a particular disease category and has long been undervalued. Former President Biden's 2024 White House Initiative on Women's Health Research, led by psychologist Carolyn Mazure, PhD, of Yale School of Medicine, offered a beacon of hope, but its future is now in question with a new administration in power.

As psychologists and other researchers forge ahead, Hill suggests a three-pronged approach to expanding research in the field. First: Understanding how synthetic hormones impact development is vital and urgent.

"It's absolutely critical that the research gets done on what happens to young girls when we put them on hormonal birth control, before we make it de rigueur for doctors to be prescribing it," Hill said.

Next, women need more information about side effects of pill alternatives, such as intrauterine devices (IUDs), as well as new and better contraception options. Finally, understanding variability—both among contraceptives and the people who use them—will pave the way for a precision medicine approach. For example: Which women are more vulnerable to negative side effects on the pill? How can providers tailor recommendations to a woman's individual hormonal profile?

"Converging findings in the field suggest that variability matters," Beltz said. "We need to map that variability well so we can help maximize the benefits and minimize the negatives for those who want to use hormonal contraception." ■

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Role-Playing Games



as Therapy

Psychologists are improving treatment through tabletop role-playing games

BY ASHLEY ABRAMSON

GIZELA GLAVAS/GETTY IMAGES

PSYCHOLOGISTS FREQUENTLY USE games to connect with, diagnose, and treat children, but some types of gameplay are also proving effective as a therapeutic intervention for teens and adults. Combining aspects of evidence-based interventions such as role-playing, psychodrama, and group psychotherapy, more and more psychologists are using tabletop role-playing games as a treatment modality for all ages. So far, research in the area is limited, but psychologists using the intervention believe it shows promise for improving symptoms of many clinical disorders.

Tabletop role-playing games, or TTRPGs, involve role-playing in an open-ended, story-based game—most notably, Dungeons & Dragons, which celebrated its 50th anniversary in 2024—led by a therapist "dungeon master," or more generally "game master" (GM), who narrates the game and allows players to make decisions that determine outcomes. Therapeutic game groups typically include four to six patients who continue in a series of games for several weeks or months. Many therapists use TTRPGs as a form of group therapy, debriefing with patients at the end of each session. Some clinicians also see their group members individually outside the group. In either case, the goal is to equip participants with therapeutic tools they can apply in real life, from basic social skills to coping mechanisms for anxiety, depression, trauma, and attention-deficit/hyperactivity disorder (ADHD).

The intervention builds on existing psychological research about role-playing, which studies have shown can support mindset change, build self-esteem, and improve interpersonal relationships (Henrich, S., & Worthington, R., *Journal of Creativity in Mental Health*, Vol. 18, No. 3, 2023). Participants play as characters, often co-created with the therapist as a vehicle for addressing therapeutic goals. For example, someone with anxiety may play a courageous character, while another player might create a character that gives them a new perspective, such as one with a different gender or race. Players might also create characters that represent their younger selves as a way to address adverse childhood experiences.

The game master creates scenes in which players embark on a mutual adventure. In therapy, the GM can tweak the game to better support patients' struggles—for example, encouraging an anxious player to take a risk. While this world is imaginary, proponents say it can be a powerful conduit for self-knowledge that enables participants to make lasting changes in their everyday lives. "TTRPGs are essentially a simulation machine," said Jared N. Kilmer, PhD, a clinical psychologist and applied games researcher. "You observe other people, respond to stimuli, and take actions at a much faster pace than in real life." That said, players can also slow down or pause the game to process events with other players or the therapist.

"Trying on" new life skills as a character in one of these simulations is lower stakes than trying something new at work or in school, where results carry the weight of real-world consequences, added Heather Whittall, PsyD, a Colorado-based clinical psychologist who uses TTRPGs with



Drs. Elizabeth and Jared Kilmer demonstrate their game setup for the therapeutic use of Dungeons & Dragons.

JSOLIE/GETTY IMAGES. PHOTO BY DR. ELIZABETH KILMER

AT A GLANCE

- Tabletop role-playing games as a form of group therapy have shown promise for treating anxiety, depression, attention-deficit/hyperactivity disorder, and more.
- Role-playing games require cooperation, which builds real-life coping skills.
- Group game therapy allows therapists to address symptoms in real time and encourages life skills such as collaboration, communication, and conflict management.





patients. "When someone messes up, they don't feel as bad because it was their character," she said. "The consequences become the character's problem."

In the structured environment of gameplay, therapists can ensure players feel emotionally safe to take risks in the game. Megan Connell, PsyD, ABPP, a clinical psychologist and author of *Tabletop Role-Playing Therapy*, leads TTRPG therapy groups for adolescent girls. At the start of new groups, Connell helps players establish topics they don't want to include in the game, such as spiders, drug use, or sexual innuendos (boundary setting is handled differently when therapeutic exposure is necessary, such as in treating phobias). During gameplay, participants use poker chips to communicate that they're uncomfortable with something in the game. Along with creating an environment that feels safer for players, this communication often translates to the ability to set boundaries outside of therapy. "A lot of people I work with aren't used to people respecting their boundaries, so this can be a corrective experience," said Connell.

Joining a game group can make pursuing mental health support feel less intimidating—especially for people hesitant to try traditional therapy, said Elizabeth D. Kilmer, PhD, a Seattle-based clinical psychologist, games researcher, and applied games educator. And because playing a game is intrinsically rewarding, participants may be more likely to stick with the intervention than with

traditional group therapy, which research shows has a high attrition rate.

Therapists can reach additional patients with telehealth. Clinical social worker Heather MacGibbon leads Zoom TTRPG groups in which she plays as a character while a separate therapeutic game master (TGM) leads the game. Because the two are in different rooms, they can chat off-screen about how to meet players' needs in-game. The TGM might message MacGibbon in the game if he wants to lead a player somewhere to help them deal with a particular issue, and the player is not picking up on hints. "It creates opportunities for us to not have to intervene directly, which can help people feel a sense of accomplishment and growth," said MacGibbon.

Because it is so new, tabletop gaming as a therapeutic intervention is still vastly understudied. Yet advocates say TTRPGs show promise for treating a variety of symptoms across several populations. Here are some applications.

Anxiety

Whether a patient has an anxiety disorder or simply faces everyday worries, playing TTRPGs in therapy can help reduce anxious thoughts. In Connell's groups with teenage girls, she helps players create monsters that represent their psychological struggles. In one game, Connell depicted anxiety as a small pixie that projected huge, scary-looking images. Creating images like this helped players reframe their thinking to acknowledge that while worries can feel real, they are often exaggerated and not grounded in reality—an observation they can take into their everyday lives.

The group structure of these games also helps players with social anxiety. When returning to the game after missing a week, one of Connell's socially anxious players wasn't engaging with other players. Connell paused the game so other players could reassure her and share their own struggles with anxious thoughts. This real-time correction helped all the players feel more valued and connected.



Dungeons & Dragons characters created by Drs. Elizabeth and Jared Kilmer's patients.

PHOTOS BY DR. ELIZABETH KILMER

Depression

One evidence-based intervention for depression is behavioral activation, which encourages people to take actions that help improve symptoms. Attending psychotherapy inherently involves behavioral activation because it encourages taking action toward symptom improvement, but TTRPG groups can accelerate this process. Gaming groups tend to build rapport that encourages regular attendance, in contrast to traditional group therapy, where others may not notice if another group member attends or not. This rapport is facilitated by the fact that each character has at least one specific skill—for example, prowess with a weapon or a magical power—that the other players depend on, Jared Kilmer explained.

The long-term progress of the game also encourages a sense of accomplishment, which can be empowering for people with low mood, who may struggle to engage with activities they enjoy.

"To play a character that's helpful and making meaningful contributions to the group can be empowering for players with depression," said Connell.

TTRPGs can also help people identify and apply evidence-based coping tools outside the games. Connell's participants create "depression monsters" weakened by players working together as allies. Collaborating to defeat the monster encourages strengthening social relationships to overcome depression symptoms, a skill players can use in everyday life.

ADHD, impulsivity, aggressive behavior

For people with ADHD, therapeutic TTRPGs offer a chance to practice executive functioning skills and improve attention span. It's one thing to sit quietly at a desk listening to a teacher talk about math or English. Listening to a game master describe details about the mystery you're trying to solve is inherently rewarding, which encourages focus.

TTRPGs can also help players see the natural consequences of their impulsive or aggressive actions, which is often more effective in eliciting behavior change than a therapist's advice, said Whittall. For example, one player who often provoked other players hit a town guard with a weapon for no reason. As game master, Whittall narrated the consequences of this action: All the players would



Grant Sparks, a licensed counselor in Atlanta, creates Dungeons & Dragons scenes that include the obsessions of his players with obsessive-compulsive disorder.

be arrested. When the players next encountered a guard, another player said, "I don't want to go to jail again." That prompted the aggressive player to pause and refrain from impulsive behavior that could negatively impact the direction of the game.

Obsessive-compulsive disorder

TTRPGs can be a powerful intervention for supporting exposure response therapy (ERP), considered the gold standard for treating obsessive-compulsive disorder (OCD). One symptom of OCD is difficulty tolerating uncertainty: Individuals obsess over a particular worry, then they perform compulsive behaviors to alleviate the discomfort of that anxiety. TTRPGs can help players tolerate ambiguity in a safe, supportive environment, according to Brett Merrill, PhD, a clinical psychologist and an associate clinical professor at Brigham Young University.

In the game, players with OCD have agency in decision-making—but much like in life, some results are left to chance. A player may attempt to avoid discomfort in the game, but a roll of the dice or other players' decisions may cause them to experience it anyway. For example, a player may experience intrusive thoughts about accidentally harming another person. In the game, they may want to go back and check that someone they passed by wasn't in danger, but other players may want to keep moving. The therapist can then, in real time, talk the player through their discomfort.

The game can also provide imagined exposures to obsessions, ultimately discouraging players from engaging with compulsions that perpetuate the OCD cycle.

Grant Sparks, a licensed counselor in Atlanta, Georgia, creates scenes that include his OCD players' obsessions. For example, one player in real life avoided potentially dirty or contaminated environments. In the game, Sparks led the TTRPG group through a dark, grungy cave filled with the remains of previous adventurers. While the player did not like walking through it, they persisted to meet the goal of the game. "By the end of the game, they realized the difficult situation wasn't as awful as they thought, which carried over to real-life situations," said Sparks.

Post-traumatic stress disorder

Many people with post-traumatic stress disorder (PTSD) feel uncomfortable being emotionally vulnerable with providers who may not understand their experience. TTRPGs can provide a buffer for those resistant to traditional therapy, connecting them to support in a way that feels less threatening.

"Players can speak about their feelings through the character, which helps them slowly get engaged," said Elizabeth Kilmer. For example, some military veterans were able to build relationships through weekly gameplay, eventually sharing more with other players and their therapist. After the therapy group ended, they started their own TTRPG group at a nearby base to build relationships between active-duty military and veterans.



LANTERNWORKS/GETTY IMAGES; PHOTO BY GRANT SPARKS

The game can also provide opportunities to address PTSD triggers. One of Jared Kilmer's players, a Vietnam War veteran who was triggered by storms, created a character that could summon rain or channel lightning. His fear became a source of power, eventually allowing him to re-contextualize storms in his daily life to reduce the intensity of the trigger.

Autism spectrum disorder

Rigid thinking can be a hallmark of autism. But because TTRPGs are unpredictable, they encourage flexibility. Connell uses this aspect of the game to encourage players to identify areas of black-and-white thinking and try new things so they can see how rigidity might be holding them back from meeting their goals.

Creating and playing a character also provides a way to practice empathy, another area of struggle for autistic people. "We know from research that the more someone identifies with a fictional character, the more empathy they build," said Connell. "By creating a character they see themselves in, players can concretely understand how someone else feels in different situations."

TTRPGs are also a low-risk way for people with autism to work on social skills. William Nation, PhD, a clinical psychologist at Johns Hopkins University, often leads groups of college students on the autism spectrum. Many of these students seek support in helping to build friendships and romantic relationships. The game allows players to practice social skills in real time, with feedback from the therapist and other players. "It feels safer to practice in a game, knowing the consequences won't feel as catastrophic as in real life," said Nation.

Other life skills

Even for players without a clinical diagnosis, TTRPGs can serve as a "sandbox" for personal growth in different areas of life. Allison Battles, PhD, a clinical psychologist in Minneapolis, Minnesota, worked with a player who wanted to address a fear of rejection that kept them from expressing thoughts and feelings to others. "We created a character who knew a lot about history and storytelling, so the player and their character always had unique knowledge to contribute to different situations," said Battles. "The more the player practiced vocalizing in the game, the more confident they became taking initiative in the game and in real life."

Meanwhile, Christopher Carbone, a professional career counselor, cofounder of the *Board Game Academics* journal, and clinical psychology doctorate candidate in Staten Island, New York, used TTRPGs in a college career center as a way for students to explore different vocations and potential majors. A student interested in medicine could play an herbalist, for example, while a history major could play a historian.



LANTERNWORKS/GETTY IMAGES

GETTING STARTED WITH THERAPEUTIC GAMEPLAY

Any treatment modality comes with a learning curve, and tabletop role-playing games, or TTRPGs, can be time-consuming to learn. Many practicing TTRPG therapists have played the game they use in therapy for years, which provides grounding for using it effectively in therapy.

To learn the basics, Vinny Dehili, PhD, a clinical psychologist in Poughkeepsie, New York, who uses TTRPGs in his practice with college students, recommends first simply trying out TTRPGs. Many game stores host beginners' events for people interested in games like Dungeons & Dragons, for instance.

Meanwhile, some therapists lead training groups for therapists who want to incorporate TTRPGs into their practice. Clinical psychologist Allison Battles, PhD, does that as part of her practice in Minneapolis. She advises potential users to keep it simple when they start out, such as beginning with a single space like a tavern or park rather than a sprawling world.

As you experiment with the game, lean on your existing therapeutic skills, Dehili added. If you've ever led a therapy group, for example, you're already familiar with the improvisation and collaboration that TTRPGs require, he said.

Your area of specialty should naturally surface during the therapeutic aspects of the game, Battles said. "If you practice cognitive behavioral therapy or acceptance and commitment therapy, you can take your specialty and weave it into the gameplay," she said. "You're just using what you already know in an adaptable, fun way."



Creating their own TTRPG characters allows players to take risks and learn from the results.

PHOTO BY GRANT SPARKS

One veteran Carbone worked with was unhappy with her job but lacked confidence to apply for a leadership role. The group agreed that she should lead their next adventure so she could practice heading up a group. By leading other players in a pretend adventure—often making decisions on behalf of the group—the player was able to build her self-esteem to the point where she felt deserving of a better job. She landed a new job a few months later.

TTRPGs can also provide an on-ramp for discussions about identity. In one of Merrill's groups, a player chose to play as a changeling who could change form in the game. Another player interpreted the person's changeling character as a symbol of LGBTQ identity, essentially "outing" the player to the group. "We had a conversation about why it's so important not to out other people and how to develop empathy for people with different identities," said Merrill.

Moving forward with TTRPGs

Psychologists who use TTRPGs say the benefits are undeniable, but the intervention has limitations. For example, role-playing may be risky for people with identity inconsistency or more unstable mental health conditions such as dissociative identity disorder, said Sören Henrich, PhD, a lecturer in forensic psychology at Manchester Metropolitan University in England who studies TTRPGs. And for some, TTRPGs are best used in tandem with evidence-based modalities in traditional psychotherapy.

More research is needed about the use of TTRPGs in therapy in general, especially to delineate which components of the game are most therapeutically useful and for what clinical disorders and to determine clinical protocols for helping patients develop characters that lead to desired clinical outcomes and how to properly debrief after the games.

Despite its relative infancy, however, the use of TTRPGs in therapy appears to hold great promise. "This approach is so effective to help people reach their therapeutic goals that I almost see it as unethical to not use it," said Connell. ■

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JONES NIELSEN


FEDORENKO


TURK-BROWNE


JOHNSON


PENEDO

Psychologists in the News

JESSICA JONES NIELSEN, PhD, has been named a professor of psychology at City St George's, University of London, making her the first Black woman professor at the institution. Jones Nielsen's research examines the intersection between physical and mental health and promotes engagement in positive health behaviors.

The National Academy of Sciences awarded Troland Research Awards to two researchers for their contributions to experimental psychology: **EVELINA FEDORENKO, PhD,** Massachusetts Institute of Technology, and **NICHOLAS TURK-BROWNE, PhD,** Yale University. Fedorenko's research focuses on how people understand and produce language, while Turk-Browne's work has an integrative perspective on human cognition, examining how perception and attention influence memories.

ADANNA J. JOHNSON, PhD, has been appointed associate chief academic officer for faculty affairs at the University of the District of Columbia. Johnson most recently served as the first associate vice president for student equity and inclusion at Georgetown University. Her research focuses on cultural competence and cultural approaches to healing and environmental consciousness.

The National Institutes of Health awarded a $21 million grant to a multidisciplinary team of University of Miami (UM) researchers studying factors associated with health outcomes and disease risk in the Hispanic community. The national Hispanic Community Health Study/Study of Latinos (HCHS/SOL) is the most comprehensive, epidemiological longitudinal study among U.S. Hispanics/Latinos. The principal investigators are **FRANK PENEDO, PhD,** a professor of psychology and medicine at UM; **MARIA LLABRE, PhD,** a professor of psychology and education at UM; and **CLAUDIA MARTINEZ, MD,** an associate professor of clinical medicine in the Miller School's Division of Cardiovascular Medicine. The project director is **CHRISTINA CORDERO, PhD,** an assistant professor of psychology at UM.

LAYLI MAPARYAN, PhD, has been appointed the 16th president of the University of Liberia. Prior to her appointment, Maparyan was executive director of the Wellesley Centers for Women and professor of Africana studies at Wellesley College. Her focuses are in the areas of womanism and social identities.

Six psychological scientists were among the 400 researchers who received the Presidential Early Career Award for Scientists and Engineers (PECASE). The PECASE is the highest honor the U.S. government can bestow on scientists and engineers beginning their independent research careers. Congratulations to **ROSELINDE KAISER, PhD,** University of Colorado Boulder; **ALLYSON MACKEY, PhD,** University of Pennsylvania; **MELANIE PELLECCHIA, PhD,** University of Pennsylvania; **JUSTIN PARENT, PhD,** University of Rhode Island; **MAITAL NETA, PhD,** University of Nebraska–Lincoln; and **GAVIN PRICE, PhD,** University of Exeter.

The National Academy of Education announced the addition of 22 education leaders and scholars to the academy, including three psychologists. Congratulations to **MICHELLE FINE, PhD,** The City University of New York; **DREW H. GITOMER, PhD,** Rutgers University–New Brunswick; and **STEPHEN SIRECI, PhD,** University of Massachusetts Amherst.

The University of Kansas (KU) named **MEAGAN PATTERSON, PhD,** as associate vice provost for faculty policy and recognition. Patterson has been with KU's Department of Educational Psychology since 2007. Patterson's research focuses on children's knowledge and attitudes about gender, race, and politics and how adults talk with children about these topics. ■



APA is at the forefront of efforts to build a more sustainable publishing process, including by pioneering editorial fellowships for early-career scholars and hosting public roundtables that confront tough questions about equity in publishing and promotion.

MESH CUBE/GETTY IMAGES

Strengthening and Expanding Access to Scholarly Publishing

"People are saying, 'Peer review is broken, and we need a new system.'" Here's how APA and the research community are reengineering for the long haul.

BY LUCY TU

THE MANTRA "PUBLISH OR PERISH" looms large over academic careers, driving—and piling pressure on—scientists to secure their standing through peer-reviewed publications. These papers have long served as academia's career-defining currency: Where and how often a scientist publishes can determine their job opportunities, tenure prospects, and overall credibility in the field.

But the value of this currency is shifting as academic publishing faces pressing questions about its future. The proliferation of new journals and mounting pushback against the peer-review process have exposed cracks in traditional publishing models. Those tensions came to the fore during the COVID-19 pandemic, when the urgency to share critical findings led many scientists to bypass formal peer review in favor of preprints—early versions of research papers made publicly available before third-party review.

"More and more often since the pandemic, people are saying, 'Peer review is broken, and we need a new system.' It's

time we start having conversations about what specifically isn't working and how we fix those issues," said Lois Jones, peer review director for APA Journals.

The rise of large language models has also thrust science into new territory. Journals are scrambling to draft guidelines for artificial intelligence (AI) use even as debates swirl over whether these tools will spark innovation or breed shortcuts. "Can AI alone produce research or peer reviews right now? Absolutely not," said Jones. "I don't know what those models will look like years in the future, but people will always be needed at the heart of research."

Yet as some aspects of academic publishing quickly evolve, others remain stuck. Disparities in scientific publishing persist despite growing calls for the system to be more transparent, diverse, and equitable. A large-scale analysis of 1 million scientific papers and editorial boards from six major publishers over 2 decades revealed that most countries in Asia, Africa, and South America have far fewer editors than statistically predicted from their share of authorship (Liu, F., et al., *Proceedings of the National Academy of Sciences*, Vol. 120, No. 13, 2023). In psychology, for instance, U.S.-based scholars disproportionately occupy editorial roles, surpassing what would be expected based on the global distribution of senior psychologists. Gender imbalances are equally stark: 76% of psychology journals have editorial boards that are more than 50% male, while only 20% have similarly high female representation (Haeffel, G. J., et al., *Communications Psychology*, Vol. 2, No. 12, 2024; Palser, E. R., et al., *Nature Neuroscience*, Vol. 25, No. 3, 2022).

These issues, old and new, place academic publishing at a tipping point. But as the system faces rapid change, its leaders have a unique opportunity—not just to adapt but to reimagine existing practices and address long-standing inequities. APA and other organizations are at the forefront of efforts to build a more sustainable publishing process, including by pioneering editorial fellowships for early-career scholars and hosting public roundtables that confront tough questions about equity in publishing and promotion.

These programs aim to strengthen the infrastructure of academic publishing while creating new opportunities for underrepresented researchers to advance their careers. "We don't want partial fixes; we need long-term solutions," said Jones. "Those will only come if we have meaningful discussions about what we want academic publishing to look like decades from now."

Evolving challenges in academic publishing

Several trends are reshaping academic publishing: The rise of online-only, open-access platforms has made scholarly research more accessible to a global audience; altmetrics and social media engagement now complement traditional citations as measures of research impact; and researchers and readers alike increasingly prefer concise, interactive formats for sharing and consuming academic work (Pal, A., et al., *Current Medical Research and Opinion*, Vol. 40, No. 4, 2024).

Despite these innovations, journal editors say that peer review remains one of the most essential—and most threatened—elements of the academic ecosystem. As reviewers, scientists volunteer their time and expertise to evaluate other researchers' work, offering feedback and suggestions to improve manuscript quality. In 2020, researchers worldwide dedicated more than 100 million hours, equivalent to 15,000 years, to peer-reviewing. For U.S.-based reviewers, the estimated value of this work exceeds $1.5 billion (Aczel, B., et al., *Research Integrity and Peer Review*, Vol. 6, No. 1, 2021).

However, editors are increasingly struggling to source researchers willing to undertake this uncompensated, time-consuming work. Academic publishing relies on the "norm of reciprocity," the expectation that people should repay favors and acts of goodwill, said Harris Cooper, PhD, a professor emeritus of psychology and neuroscience at Duke University. The expectation is that scientists who submit a paper and receive three peer reviews should, in turn, complete three reviews for others. While this norm has long supported the research infrastructure, it is now straining under the weight of academics' ever-expanding workload.

Some researchers report being inundated with peer review requests, a trend driven by the explosion of scientific journals and increase in overall submissions since the COVID-19 pandemic (Else, H., *Nature*, Dec. 16, 2020). "The volume of review requests many researchers receive is not feasible. I do 30 to 50 ad hoc reviews per year but receive 5 times that many requests," said Katie Witkiewitz, PhD, a professor of psychology at the University of New Mexico and editor of APA's journal *Psychology of Addictive Behaviors*.

Burnout and ongoing disruptions to academics' professional and personal lives have also reduced scientists' availability to review. In a November 2022 *Nature* poll, 75% of researchers reported reducing their weekly work hours since the beginning of the pandemic. (These figures may have shifted as institutions increasingly return to in-person work.) At the time of the

survey, researchers were particularly likely to cut back on reviewing journal articles and grant proposals, as well as attending scientific conferences, with two thirds attributing these changes to burnout (Forrester, N., *Nature,* March 3, 2023).

The result is a lose-lose situation: Journal editors struggle to find reviewers; authors face extensive delays in having their papers reviewed. "You lose more and more expertise when you have to cast a wider net to find reviewers," added Cooper, who also serves as the editor in chief of *American Psychologist*. The first few invited reviewers may be a perfect fit for a paper's specialty, but subsequent reviewers might have less specific expertise. With a shrinking pool of willing reviewers, multiple journals end up approaching the same scientists, leading to less diversity in perspectives overall. "Science as a whole suffers," said Cooper.

These growing challenges intersect with entrenched issues around the accessibility of academic publishing. Many prospective reviewers, particularly early-career scholars and researchers from historically underrepresented backgrounds, lack formal training or opportunities to engage in the peer review process, said Rose Sokol, PhD, APA's journals and books publisher. Without guidance, they may be uncertain about when and how to review or how editors use peer review feedback. "People want to engage with peer review and contribute to their scientific community but might question whether they're the 'right' person for the job. We need more initiatives that say, 'This is a space for you. You're a developing expert. Please join the process,'" said Sokol.

Strengthening peer review

To secure the foundation of academic publishing, peer review needs to become faster, more transparent, and more reliable, Sokol emphasized. Building this stronger system will depend on the collective effort of its stakeholders—publishers, academic institutions, and researchers—each sharing their expertise and resources.

Modern tools are already facilitating this collaboration. For example, editors at APA Journals use a centralized system to monitor reviewer contributions in detail. This system records when reviewers were last invited, how often they accept assignments, and other details to prevent overloading or repeatedly selecting the same individuals. The latest iteration of this platform also captures demographic data, including professional stage, geographic location, and institutional affiliation. Editors do not have access to individual reviewers' information to protect anonymity and user data, but the APA Journals team can see a general overview of the statistics, offering a clearer picture of the diversity within the reviewer pool.

One ongoing hurdle, however, is the undervaluation of peer review in academia. Most universities expect academics to participate in peer review as part of their service to the field yet undervalue this work in hiring or promotion decisions. In fact, a 2018 global survey of 11,800 scientists by Publons, a website where academics can track their editorial contributions, found that 83% of respondents believed professional institutions needed to more explicitly recognize peer review contributions (*Global State of Peer Review*, Publons, 2018).

To help address this issue, APA partners with research databases such as ORCID and Web of Science to track peer review contributions. With these formal, unified records, researchers receive concrete documentation of their peer review work,

Editors are exploring collaborative approaches to strengthen the sustainability of the peer review system and expand access to academic publishing for early-career scholars.



THOMAS BARWICK/GETTY IMAGES

which they can present to their institutions as evidence of their service. While each university ultimately decides how to weigh peer review in tenure evaluations, increasing visibility for reviewers is a critical first step, according to Jones.

In addition, APA journal editors and leadership are developing internal recognition programs to celebrate peer reviewers. Each APA print journal publishes an annual list of reviewers as a public acknowledgment. "Publicly thanking our reviewers is a fundamental part of recognizing their important work," said Jones. "It may seem simple, but if it conveys even a fraction of our appreciation or inspires another scientist to review, it's worth doing."

Witkiewitz is expanding reviewer recognition efforts at *Psychology of Addictive Behaviors* as well. Instead of categorizing all reviewers as "ad hoc," she established a "principal reviewer" role for early-career researchers who commit to reviewing up to six papers per year. "It's a credential they can add to their CV that promotion and grant committees will recognize," Witkiewitz explained. "The title gives them something concrete as a thank-you for their work." The journal also presents annual awards for outstanding peer review contributions; recipients can include the award on their curriculum vitae and receive public recognition on social media.

Editors are also exploring collaborative approaches to strengthen the sustainability of the peer review system and expand access to academic publishing for early-career scholars. For example, in the Collaborative Review Model, an experienced reviewer partners with a graduate student or early-career professional in a mentor-mentee review process. The mentor guides the junior scholar through the academic, ethical, and legal aspects of peer review, while the junior reviewer contributes their unique insights to the feedback. Each reviewer's name is attached to the final report, so all contributors receive credit for their work. By bringing reviewers together to discuss and evaluate research, journals can improve feedback quality, reduce biases, streamline the review process, and enhance transparency.



Most universities expect academics to participate in peer review as part of their service to the field yet undervalue this work in hiring or promotion decisions.

"How do we make the publishing world more accessible? How do we create long-term solutions for peer review? If we can develop programs that address both questions," Jones said, "we're making significant progress."

Promoting equity, diversity, and inclusion in publishing

For many editors and publishing leaders, rethinking the peer review process serves their broader mission of creating a more equitable and inclusive academic publishing landscape. "Science is stronger when we bring more people and perspectives to the table," said Witkiewitz. "We each carry our own value systems and learning histories, so we need to include more voices—not only to make the accept-or-reject decision, but to inform the entire process of evaluating science."

To that end, in 2021, APA Journals released the first edition of its *Equity, Diversity, and Inclusion Toolkit for Journal Editors*, which offers more than 30 concrete actions for editors to promote equity in their journal's practices and systems (the second edition was published in 2025). The toolkit aims to improve inclusivity for researchers while enhancing knowledge for readers. For instance, the toolkit encourages editors to require that authors not only disclose demographic data about research participants but also justify their sampling choices and explain their inclusion efforts. By doing so, readers can better contextualize a study's findings. Nearly a third of APA's journals now require this level of transparency, and from January 2022 to April 2024

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the proportion of journals providing detailed participant descriptions more than doubled—from 17.6% to 51.7%—to include specifics on factors like age, disability, race and ethnicity, and clinical diagnoses (By the Numbers, *Monitor on Psychology*, November/December, 2024).

But improving diversity in academic publishing requires change from the top down, too. "If an editorial board only includes a small range of perspectives, it risks reinforcing a narrow view of what research matters, creating a self-fulfilling cycle," said Boli Reyes-Jaquez, PhD, an assistant professor in psychology at the University of New Hampshire. "Editors are often the gatekeepers of what is published versus what will never see the light."

APA is working to widen those gates. Twenty-six of the APA's core journals now offer 1-year editorial fellowships for scholars from historically excluded groups, creating new avenues for emerging voices to shape academic publishing. Reyes-Jaquez, a 2023 fellowship participant, emphasized that these programs offer invaluable mentorship in the editorial process. "To become a journal editor, you often need access to professional networks that open doors. Without these, many early-career researchers never get a chance to experience the publication process from the other side," he said.

During the fellowship, participants are paired with experienced editors who assist them through every stage of the editorial process for 2 to 12 manuscripts: Fellows learn how to evaluate manuscripts for novelty and impact, invite and assess peer reviews, and shepherd articles through their final edits. Their contributions are formally recognized on the journal's masthead, and, upon successful completion of the program, fellows are invited to join the editorial board where they can become more involved in the publishing process.

To date, more than 135 fellows have served across APA's core journals, with nearly 90 more fellows expected to serve in the 2025 cohort. Ninety-four percent of former fellows reported gaining new knowledge or skills through the program. Now an associate editor for the *Journal of Experimental Psychology: General*, Reyes-Jaquez is leading a special issue for the journal, shaping its content in real time. In his view, the editorial fellowship provided a rare opportunity to gain editorial knowledge while he honed his own research skills. "The program makes you a better editor, of course. But I also know it made me a stronger scientist," Reyes-Jaquez reflected. "Seeing what editors are looking for gave me a new perspective on how to conduct and present my own work."

Looking ahead, APA is exploring innovative ways to incentivize participation in the editorial process, such as granting continuing-education credits for scholars involved in prepublication stages of manuscript review. This initiative draws inspiration from clinical medicine publishing, where similar programs have proven effective in helping researchers at all career stages gain practical knowledge, refine their skills, and enhance their professional practices through editorial and peer review experiences (Kawczak, S., & Mustafa, S., *BMJ Open*, Vol. 10, No. 11, 2020). APA journals have also expanded the number of quarter-time associate editor positions, which require handling approximately 10 manuscripts per year, fewer than the workload for full-time editor roles. These positions offer a pathway for scholars to take on leadership responsibilities while balancing other professional and personal commitments.

As publishing leaders refine their practices, they are placing greater emphasis on transparency, accessibility, and support across all stages of the academic pipeline. Sokol's vision for the future of academic publishing is one that values not just the research itself but also the vibrant community that makes it possible. By embracing these changes, the field can evolve toward a model that upholds rigorous scientific standards while amplifying the range of perspectives that drive knowledge creation. "If someone out there wants to be involved in an APA journal—peer review, setting publication standards, or anything else—but doesn't think they're the right person for it, I'd say, 'Please reach out. Talk to any of us at APA Journals at a conference,'" said Sokol. "Feel confident and step up. We celebrate having new voices in the publishing process." ■

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Squaring Off for Science

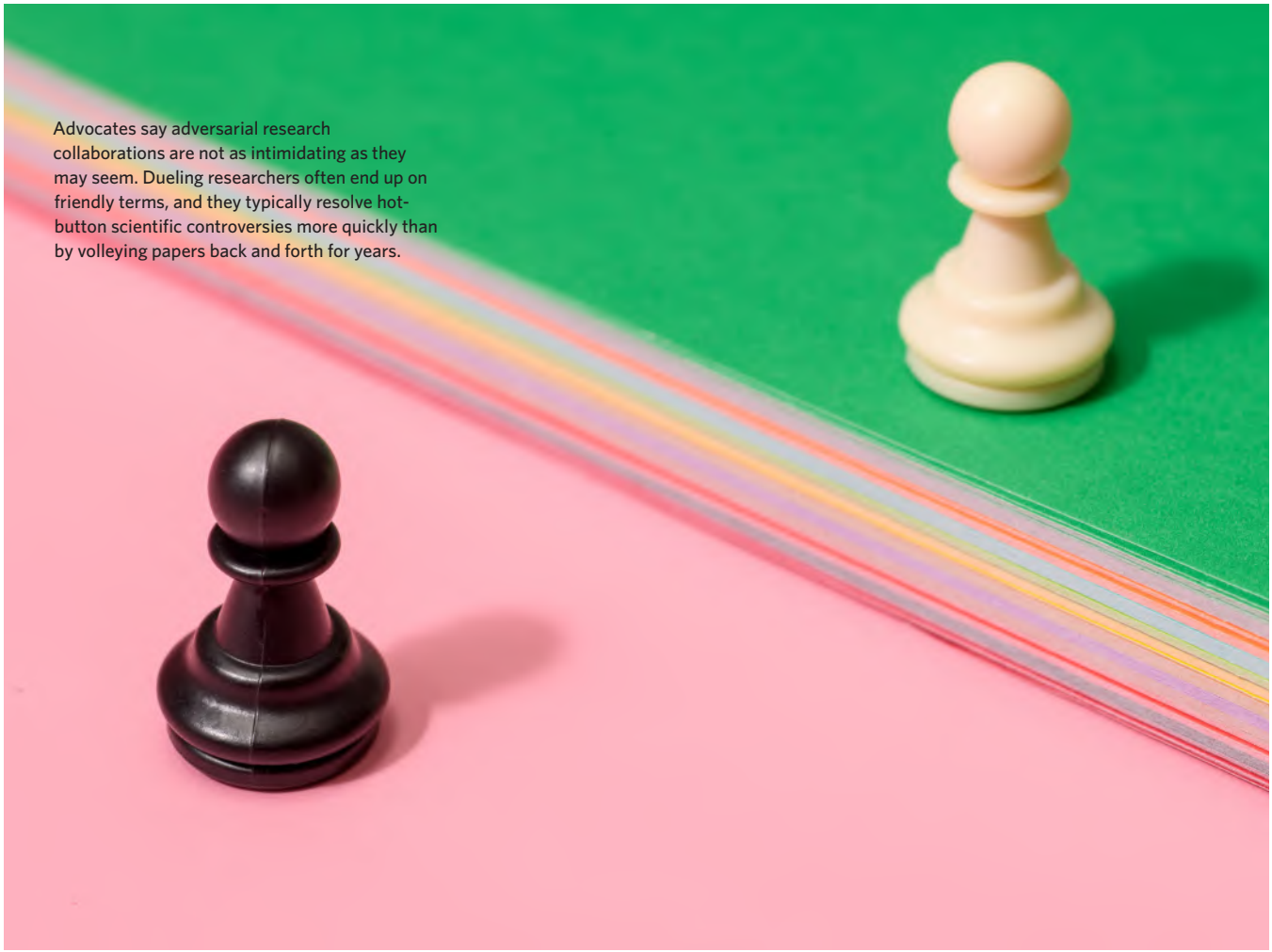
Adversarial collaborations help researchers test the strength of their work by bringing in critics from the start

BY STEPHANIE PAPPAS

THE YEAR WAS 2018, and Cornell University psychologists Wendy Williams, PhD, and Stephen Ceci, PhD, had been volleying papers back and forth with Boston University's economists Shulamit Kahn and Donna Ginther over bias against women in science for what felt like forever. Williams and Ceci kept publishing data suggesting that science, while once unfriendly to women, was now largely fair; Kahn and Ginther kept finding evidence of explicit sexism.

This could have continued, with Kahn and Ginther (the latter is now at the University of Kansas) pressing on with their point of view while Williams and Ceci argued theirs. But instead, the stalemate triggered something different: Williams and Ceci reached out to Kahn and Ginther, asking if they would join them in an adversarial collaboration.

It was a rare request. Adversarial research collaborations are projects in which two (or more) teams with opposing



Advocates say adversarial research collaborations are not as intimidating as they may seem. Dueling researchers often end up on friendly terms, and they typically resolve hot-button scientific controversies more quickly than by volleying papers back and forth for years.

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Rival academics come to see each other as working in good faith, and even if they don't ultimately agree, they often finish a project respecting each other more than they did when they began.

theories, hypotheses, or interpretations of evidence get together to hammer out a mutually acceptable research study that will—ideally—reconcile their differences. Though adversarial collaborations were first developed decades ago, they're still fairly uncommon, often stymied by the extra time, effort, and interpersonal savvy needed to pull them off.

But advocates say these projects are not as scary as they seem. Dueling researchers often end up friendlier than they were when they started, and they typically resolve hot-button scientific controversies much faster than by ping-ponging combative journal articles at each other for years or decades. Williams, Ceci, and Kahn ended up needing nearly 5 years to tackle the question of sexism in science (Ginther had to leave the project because of a job change), but what they published was, Ceci said, "the most accurate, fairest description of what the scientific evidence really shows."

The teams' findings revealed sexism against women in some areas, such as salary disparities, but not in others, such as grant funding and hiring (*Psychological Science in the Public Interest*, Vol. 24, No. 1, 2023). What was exciting, Ceci said, was how these results were received.

"Both [teams] had worked on this issue for decades, and every time either side published something, there was always pushback. If you looked on social media, you could get dogpiled by people on the other side," he said. "When we did the adversarial collaboration, there was none of that. It was really refreshing."

Given that psychologists study many issues of widespread public and political interest, these collaborations could be a tool to increase trust in psychological science across partisan lines, advocates say. They may also be key to breaking impasses over findings with broad societal implications.

Collaborating with the enemy

Adversarial collaborations are an idea first used by psychologists Gary Latham, Miriam Erez, and Edwin Locke to resolve a 1980s dispute about goal-setting (*Journal of Applied Psychology*, Vol. 73, No. 4, 1988) and then independently developed and popularized by Nobel Prize–winning behavioral psychologist Daniel Kahneman in the late 1990s. Kahneman conducted three adversarial collaborations between 1998 and 2003, all of which ended, he wrote, with "new facts accepted by all, narrowed differences of opinion, and considerable mutual respect" (*American Psychologist*, Vol. 58, No. 9, 2003). He argued that the model could bring science closer to the ideal of a cumulative social project.

Today, though, adversarial collaborations are still far from the norm. One reason, said Cory Clark, PhD, a behavioral scientist at the University of Pennsylvania and director of the Adversarial Collaboration Project, is simply that they're hard and time-consuming. Researchers must work with a rival with differing ideas on how to set up experiments, what measures to use, and how to analyze data. Ideally, they will agree on what evidence is needed to convince them that their own position is wrong. Sometimes, an arbiter is necessary to iron out disputes.

Another problem has to do with incentives. Though any science project is ideally a search for truth, Clark said, the realities of scientific publishing often prioritize flashy new findings, and scientific careers often benefit from championing a pet theory or intervention.

"We have a culture of tolerance for scholars publishing information that contradicts other experts," Clark said. "We're totally fine with two, three, four Ivy League professors out there writing books and saying things that directly oppose one another, and we never ask them to explain what's going on and to take their critics seriously."

The Adversarial Collaboration Project aims to support these projects and help researchers tackle them successfully. This includes providing grants, helping researchers from opposite sides of issues connect, and popularizing best practices, such as preregistration and effective moderation.

The advantages of going head-to-head

There are, however, increasing glimmers of interest in adversarial collaborations, including Clark's Adversarial Collaboration Project, which launched in 2021. The APA journal *Decision* recently added registered adversarial collaborations to the type of manuscripts it will accept, according to incoming editor Tim Rakow, PhD, a reader in psychology at King's College London. Authors committing to an adversarial collaboration can receive

an in-principle acceptance for publication in *Decision* on the basis of a strong study proposal before the data are collected, Rakow said.

Other journals that have solicited adversarial collaborations include the *Journal of Experimental Social Psychology, Theory and Society*, and the *Journal of Applied Research in Memory and Cognition.*

Psychology pioneered adversarial collaborations and remains the leader in conducting them, but other fields are showing interest, too. The journal *Public Budgeting & Finance* recently issued a call for adversarial collaboration–based papers for a special issue in 2026 or 2027. The business journal *Academy of Management Perspectives* also announced plans to overhaul its "exchanges" format for debating hot-button issues into adversarial collaborations dubbed "Constructive Confrontations." Clark said she has also been speaking with researchers in nutrition science who are interested in pulling in the adversarial collaboration approach.

These collaborations may also help increase trust in psychological science at a time when politicians are targeting research in equity, diversity, and inclusion as well as other topics of bipartisan disagreement (see January/February 2024 *Monitor*).

"Although it's hard to imagine assuaging some of these people who are pretty far out with their positions, for the most part, I think an adversarial collaboration assuages people who instead of feeling like, 'My side lost,' feel like, 'Okay, my side agreed that this was accurate, and who am I to turn on them now?'" Ceci said.

There are advantages in using adversarial collaborations for less partisan issues, as well. Methodological issues that could stymie a paper in review tend to get worked out in the planning phases of an adversarial collaboration, Rakow said, since authors are prone to challenge one another on their decisions. Challenges can also bring clarity, said Cameron Martel, a doctoral candidate at the MIT Sloan School of Management who was lead author of an adversarial collaboration about whether accuracy prompts work as well to stop conservatives from sharing misinformation as they do for stopping liberals (*Psychological Science*, Vol. 35, No. 4, 2024).



An arbiter can be invaluable in working through the friction that often accompanies adversarial collaborations, by pushing researchers to come to a compromise rather than get stuck at an impasse, for example.

"It made all of us think about exactly what hypotheses we wanted to test and think through exactly what our positions were, what predictions we had, and how to best evaluate them," Martel said.

Working with adversaries can also force authors to truly understand the opposite side's position and to face the limitations of their own claims, Rakow said. Some researchers also say they learn more about how their methods differ from those of their adversaries, details that wouldn't be apparent from publications alone.

This process can be difficult, and interpersonal conflict is one of the biggest fears that keeps people from launching an adversarial collaboration, Clark said. Some collaborations do fall apart. The majority succeed, however, Clark said. "In my experience, relationships tend to get better rather than worse." Rival academics come to see each other as working in good faith, and even if they don't ultimately agree, they often finish a project respecting each other more than they did when they began.

Finding success in antagonism

That was the case for Sander van der Linden, PhD, a social psychologist at the University of Cambridge who was on the opposite side of Martel in the

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adversarial collaboration on accuracy prompts and misinformation. A good deal of friction accompanied that collaboration, both teams agree. Without an arbiter (Clark), the project probably would have fallen apart, said Gordon Pennycook, PhD, a Cornell University psychologist and one of the authors on the study. One key role the arbiter played, the researchers said, was pushing the groups to come to a compromise rather than get stuck at an impasse when disagreements arose.

There was a lot of back-and-forth between the groups about methods and analyses, van der Linden said, and even at the end of the project, the two teams didn't entirely agree on the meaning of their findings. Nevertheless, he said, the joint findings caused him to update his views. And though the groups didn't entirely see eye to eye, they've developed a more collegial relationship since the project, sharing their papers before posting preprints online and giving one another constructive feedback so that their debates don't sprawl into the public square prematurely.

"We joke that what we learned from this project is we all need to get together again and write a paper about something we aren't in conflict about," van der Linden said. "Or maybe even have a movie night or start a band or something and then attempt to try to do this kind of science again."

An arbiter can be invaluable for getting through an adversarial collaboration when passions are high, said Barbara Mellers, PhD, a psychologist at the University of Pennsylvania who acted as an arbiter in two of Kahneman's adversarial collaborations. In one study, Kahneman and his coauthor, German psychologist Ralph Hertwig, got so irritated with one another that they'd only speak through Mellers, she said. Nevertheless, they succeeded in publishing a paper and eventually became friendly.

"People are complex, and the process is going to get difficult," Mellers said. She recommended that arbiters document as much as possible, keep organized, and focus on getting parties to move forward when they hit an impasse. It can often be helpful to choose an arbiter with an interest in open science principles, such as data transparency, Clark said. In one project she worked on, the arbiter blinded the data and ran the analyses herself to ensure neutrality. Arbiters often write large portions of the final paper and are listed as authors.

Adversaries working together need to stay open-minded and humble and be willing to be proven wrong, Pennycook said. For principal investigators who are used to full control in their own labs, this also entails taking a more team-based approach and leaving ego aside. "You don't get to control it," he said. "You have to be a member of a group, genuinely."

Many academics fear that if their findings aren't as solid as they'd hoped, their value will decline, but that's not true, Pennycook said. "We have this model in academia where if you are the person who discovered an effect, your value is tied to that effect," he said. "But actually, your value is tied to the quality of the research that detects whether an effect is there or not ... If I see somebody engage in an adversarial collaboration, my respect for them goes up immediately."

Almost any field could benefit from adversarial collaborations, Clark said, on everything from highly contentious topics like the effect of social media on teens to more basic science like theoretical views of working memory. (And psychology is not unique in benefiting from this method, she added, noting that scholars in many disciplines have approached her: "Apparently there are a lot of really heated debates in the butterfly world.")

Journals and funders could do more to encourage adversarial collaborations, Ceci said. Journals could commission more adversarial papers or offer guaranteed acceptance to preregistered adversarial collaborations. Funders could offer bonuses on grants for principal investigators willing to team up with rivals, funding multi-lab efforts to do adversarial work.

"We should incentivize this," Ceci said. "We should say, 'It's really great that you refuted your decade-long position; that's admirable.' We should reward people for being willing to risk their long-established conclusions." ■

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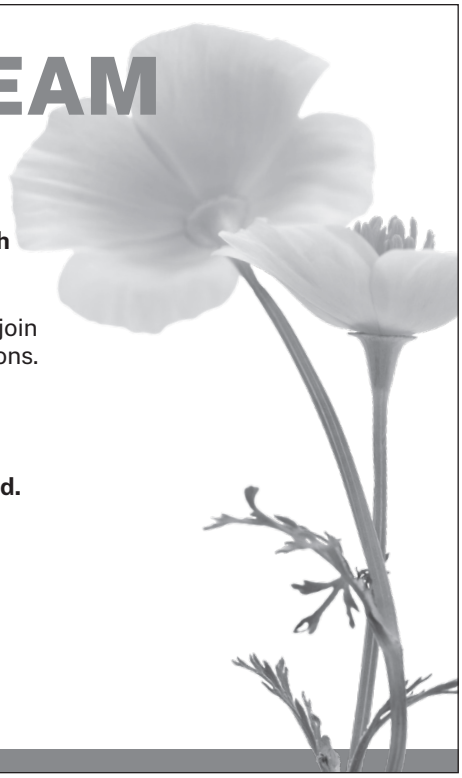
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launched Mental and Behavioral Health Clinic in Meridian, Mississippi. This clinic will play a vital role in expanding access to mental and behavioral health services in the community, while also serving as an essential training facility for MSU students. The clinic will accept insurance, Medicaid, and Medicare, ensuring its services are accessible to a broad range of individuals. MSU-Meridian is a dynamic and expanding campus, committed to providing accessible, high-quality education and fostering community engagement. Located in the heart of East Mississippi, Meridian is celebrated for its rich cultural history, vibrant arts scene, and welcoming atmosphere, making it an ideal place to live and work. Position Overview: The Clinic Director will report to the Head of the Division of Education and lead mental and behavioral health services at the MSU-Meridian campus. Key responsibilities include: Overseeing therapy services, educational programs, workshops, and crisis management for the Meridian area and surrounding counties. Recruiting and supervising clinical and support staff in collaboration with the Division Head. Promoting partnerships with MSU-Meridian faculty and staff. Seeking additional funding and external support. Providing direct clinical services and engaging in teaching responsibilities. Teaching opportunities available, if desired. This position offers a unique opportunity to significantly impact the community while advancing student learning and development. Contact Kimberly Hall: krj4@msstate.edu.

ASSISTANT OR ASSOCIATE PROFESSOR IN CLINICAL PSYCHOLOGY: Mississippi State University-Meridian (MSU-M) is thrilled to announce a tenure-track opportunity for an Assistant or Associate Professor in Clinical Psychology for our PsyD program in Combined Health Service Psychology with concentrations in clinical, counseling, and school psychology. Position Overview: The selected candidate will engage in graduate teaching and advisement, supervise field experiences, conduct research, and participate in service and outreach. Clinical work and research can take place at our new Mental and Behavioral Health Clinic or in local clinical settings. Located in the heart of Meridian, MSU-Meridian serves the educational and health needs of Lauderdale County. The city is known for its cultural heritage, vibrant arts scene, and beautiful outdoor spaces, making it an excellent place to live and work. Qualifications: Doctorate in Psychology or a closely related field with an emphasis in Clinical Psychology. Eligibility for Mississippi licensure as a clinical psychologist. Demonstrated excellence in teaching, research, or service for Associate Professor candidates; potential for excellence for Assistant Professor candidates. ABD candidates will be considered if the degree is completed by August 15, 2025. If you are a dedicated psychologist eager to make an impact, we encourage you to apply! Submit your cover letter, curriculum vitae, transcripts, and references at MSU Jobs under Assistant/Associate Professor (#507402): https://explore.msujobs.msstate.edu/cw/en-us/job/507402/assistantassociate-professor. Join us in shaping the future of mental health care at MSU-Meridian!

NON-TENURE-TRACK ASSISTANT OR ASSOCIATE TEACHING PROFESSOR: Mississippi State University-Meridian (MSU-M) is excited to offer a non-tenure-track Assistant or Associate Teaching Professor position in Psychology for our PsyD program in Combined Health Service Psychology, with concentrations in clinical, counseling, and school psychology. Position Overview: The successful candidate will contribute to graduate teaching, advisement, and supervision of field experiences, and participate in service and outreach. They may also have the opportunity to serve as Training Director and engage in clinical work at the new Mental and Behavioral Health Clinic at MSU-Meridian. Located in the heart of Meridian, MSU-Meridian is a growing campus dedicated to addressing the educational and health needs of Lauderdale County. Meridian offers a rich cultural heritage, vibrant arts scene, and outdoor attractions like The MAX, Bonita Lakes Park, and the historic Dentzel Carousel. Its welcoming, diverse community provides a high quality of life. Qualifications: Doctorate in Psychology or a related field. Eligibility for Mississippi licensure as a psychologist. Excellence in teaching or service for Associate Professor candidates; potential for excellence for Assistant Professor candidates. ABD candidates will be considered if the degree is completed by August 15, 2025. To apply, submit a cover letter, curriculum vitae, transcripts, and references through MSU Jobs: Assistant/Associate Teaching Professor (#507541 or #507542): https://explore.msujobs.msstate.edu. For accommodations, contact Human Resources at (662) 325-3713 or ada@hrm.msstate.edu. Join us at MSU-Meridian to shape the future of mental health care!

OHIO

FACULTY POSITIONS IN THE INSTITUTE FOR MENTAL AND BEHAVIORAL HEALTH RESEARCH AT NATIONWIDE CHILDREN'S HOSPITAL: The Institute for Mental and Behavioral Health Research is located in the state-of-the-art Big Lots Behavioral Health Pavilion and will be hiring for multiple positions from 2025–2027. The mission of faculty within the institute is to conduct innovative translational, clinical and epidemiological research focused on assessment, etiology, prevention, and treatment of mental, emotional and behavioral disorders. About the Faculty Position: Seeking Assistant, Associate, or Full Professor. Highly collaborative researcher with expertise in areas such as m-health, artificial intelligence, data science, genomic medicine, implementation science, school-based intervention, prevention, cost-effectiveness, or evidence-based assessment is strongly encouraged. Content areas of interest include assessment, mood, anxiety, attention problems, externalizing and aggressive behavior, trauma, sleep, early onset psychosis. A generous start-up package is available for highly qualified candidates. Qualifications Required: Doctoral degree in Clinical, School, or Quantitative Psychology, Nursing, Medicine, Health Services Research, or related field. Two years of post-doctoral research training or equivalent experience. Strong track record of publishing in high-quality journals. Current K level or R level federal funding. Applications will be accepted until the position is filled. Send correspondence, including curriculum vitae, a brief statement of research interests, and contact information for three references to Dr. Eric Youngstrom via Patrick.Kennedy@nationwidechildrens.org in Faculty Recruitment.

TENNESSEE

DIRECTOR OF THE PSYCHOLOGICAL SCIENCE AND COUNSELING CLINIC (PSCC) AND CLINICAL ASSISTANT PROFESSOR: The Department of Psychological Science and Counseling at Austin Peay State University (APSU) invites applications for the position of Director of the Psychological Science and Counseling Clinic (PSCC) and Clinical Assistant Professor position in the area of Counseling Psychology with a start date of August 1, 2025. The department also seeks to fill a tenure-track faculty position in the area of Counseling Psychology with a start date of August 1, 2025. The Department of Psychological Science and Counseling is a diverse, dynamic, and collegial environment that in addition to the PsyD program, is home to a large undergraduate program in psychological science, a Master of Science program in Industrial and Organizational Psychology (MSIO), a Master of Science program in Counseling, and a graduate certificate program in Academic Advising. The department is housed within the College of Behavioral and Health Sciences, which affords rich opportunities for interdisciplinary collaborations. Austin Peay State University is located in Clarksville, Tennessee, which Money Magazine rated number 1 in its 2019 Best Places to Live rankings: https://clarksvillenow.com/local/clarksville-named-best-place-to-live-by-money-magazine/. Clarksville is a vibrant, diverse community with a low cost of living, and easy interstate access to nearby Nashville. For additional information about APSU including our mission and vision visit: https://www.apsu.edu/about-apsu/index.php. A doctorate (PsyD or PhD) in Counseling Psychology (preferred) or Clinical Psychology (acceptable) from an APA-accredited program is required for these positions. ABD considered if conferred before August 1, 2025. Applications taken online only at https://www.apsu.edu/human-resources/.

TEXAS

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VIRGINIA

CHILD FOCUSED ASSISTANT CLINICAL PROFESSOR: The Department of Psychology at Virginia Tech is recruiting a clinical child psychologist for a non-tenure-track clinical faculty position within our clinical science PhD training program. Our Clinical Science program is nationally recognized (2017 ABCT Outstanding Training Program) and dually accredited by the American Psychological Association (APA) and the Psychological Clinical Science Accreditation System (PCSAS). Primary responsibilities will include teaching graduate and/or undergraduate students (including but not limited to Child Assessment, Practicum Training and Externship Support, Psychological Disorders of Children), supervising doctoral students on therapy cases and child assessment cases, and supporting the overall mission and activities of the Child Study Center and Psychological Services Center, including contributing to program administration, community outreach, and partnerships with area school districts. The service component of this position will be directed toward efforts directly benefiting the clinical missions of the department and the center. Although research expectations for this position are reduced, there will be opportunities for collaboration with faculty and graduate students affiliated with the Child Study Center and the Department of Psychology, mentoring of undergraduate students on research projects, and utilization of the Child Assessment Clinic database for personal research activities. We seek a colleague with a track record of conducting and supervising child and adolescent therapy and assessment cases. This position, while not tenure track, is funded on non-restricted funds, and has opportunities for promotion (assistant, associate, and full). Contact: esjamie@vt.edu.

CLINICAL PSYCHOLOGIST: Virginia Department of Behavioral Health and Developmental Services (DBHDS) is seeking an experienced Clinical Psychologist to join our team. Responsibilities include evaluating individuals with serious mental disorders, providing, and referring them to necessary services, and collaborating with other disciplines to ensure quality interdisciplinary care. The ideal candidate will participate in planning for effective transitions and continued recovery in a community care setting as well as contribute to departmental, hospital, and statewide committees. In addition, the Clinical Psychologist will prioritize and deliver psychological services, assessments, therapy and lead or co-lead PSR groups. Other duties include conducting initial psychology assessments for admitted patients, making recommendations for treatment plans, attending treatment planning meetings, and completing progress notes. The candidate must also perform forensic evaluations in compliance with legal and professional standards. If you are a dedicated professional who is passionate about providing high-quality mental health services, we encourage you to join our team and help create A Life of Possibilities for All Virginians. Apply online at: https://bit.ly/DBHDSPsychologist.

PUBLICATIONS AND OTHER

PSYCHPROFILER: The PsychProfiler is a reliable and valid DSM-5-TR instrument that screens for 20 psychiatric, psychological, and educational disorders in children and adults. Online and paper, automatically scored, $5 per use. www.psychprofiler.com.

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Laws Prohibiting Discrimination Linked to Better Mental Health Outcomes

States that implemented job protections based on sexual orientation saw better mental health outcomes among sexual minority adults than states that did not implement these protections

BY TORI DEANGELIS



Less than 1 additional day

(from 7.99 days to 8.83 days)

Increase in the mean number of **poor mental health days** in the **past 30 days** reported by **employed sexual minority adults** between 2018 and 2022 who resided in states that implemented **employment protection** for LGBTQ+ workers. The study encompasses the time before and after the 2020 *Bostock v. Clayton County* U.S. Supreme Court decision, which allowed states to extend nondiscrimination protection to sexual minority adults.

2 additional days

(from 7.75 days to 9.75 days)

Increase in the mean number of **poor mental health days** in the past 30 days reported by **employed sexual minority adults** between 2018 and 2022 who worked in states that **did *not* implement *Bostock* protections**.

Less than 4%

(from 26.35% to 29.92%)

Increase in rates of **severe mental distress** between 2018 and 2022 among **employed sexual minority adults** in states that **implemented *Bostock* protections**. Severe mental distress was defined as 14 or more poor mental health days in the previous month. The study time frame also corresponded with the onset of the COVID-19 pandemic, which negatively influenced mental health outcomes overall.

More than 7%

(from 26.53% to 34.26%)

Increase in rates of **severe mental distress** among employed sexual minority adults in states that that **did *not* implement nondiscrimination employment protection** for LGBTQ+ adults.

Source: Liu, M., et al., *JAMA Psychiatry* (online, Jan. 15, 2025). Study compared outcomes on 306,365 participants in states with employment protection and 291,097 participants in control states. Available at https://pubmed.ncbi.nlm.nih.gov/39813024.

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