OCTOBER 2025

Monitor on Psychology



How Dogs Think

PAGE 42

COPING WHEN LOVED ONES ARE IN WAR ZONES

PAGE 28

TECHNOLOGY IS RESHAPING YOUTH FRIENDSHIPS

PAGE 50

THE EXPANDING REACH OF INTEGRATED CARE

PAGE 58

WALK-AND-TALK THERAPY

PAGE 67

VIRTUAL REALITY IN PRACTICE

PAGE 72

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Monitor on Psychology

A publication of the American Psychological Association

VOLUME 56 | NUMBER 7

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The *Monitor on Psychology* (ISSN-1529-4978) is the magazine of the American Psychological Association (APA) and is published 8 times per year—January/February combined, March, April/May combined, June, July/August combined, September, October, and November/December combined. Publications office, headquarters, and editorial offices are at 750 First St., N.E., Washington, DC 20002-4242. APA purchases only "first publication rights" for photos and illustrations. Therefore, it cannot grant permission to reuse any illustrative material. APA holds the copyright for text material in *Monitor on Psychology* articles. Permission requests to reproduce text material should be addressed to APA, Permissions Office, at the APA address. Telephone numbers: Headquarters (202) 336-5500; TDD (202) 336-6123; Display advertising (202) 336-5714; Classified advertising (202) 336-5564; and Subscriptions (202) 336-5600. The views expressed in the *Monitor on Psychology* are those of the authors and may not reflect the official policies or positions of the American Psychological Association or the *Monitor on Psychology*. No endorsement of those views should be inferred unless specifically identified as the official policy or position of the American Psychological Association. The publication of any advertisement by APA is an endorsement neither of the advertiser nor of the product. APA endorses equal employment opportunity practices, and we reserve the right to edit all copy and to refuse ads that are not in consonance with the principles of Title VII of the Civil Rights Act of 1964. Subscription to the *Monitor on Psychology* ($6) is included in the annual dues and fees for all APA members and student affiliates. Individual subscription rate is $50; individual surface rate is $107; and individual airmail rate is $139. Institutional subscription rate is $93; institutional surface rate is $203; and institutional airmail rate is $235. Single copies are $20 each. For $16 extra, the Monitor on Psychology will be mailed first-class to subscribers in the United States, Canada, and Mexico. For $75 extra, airmail is available to foreign subscribers (other than Canada and Mexico). Periodical postage is paid at Washington, DC, and at additional mailing offices. POSTMASTER: Send address changes to *Monitor on Psychology* Subscriptions Department, 750 First St., N.E., Washington, DC 20002-4242. CANADA SUBSCRIPTIONS: Canada Post Agreement Number 40036331. Send change of address information and blocks of undeliverable copies to PO Box 1051, Fort Erie, ON L2A 6C7. Printed in the United States of America. ©2025 by APA. Address editorial inquiries to the *Monitor on Psychology* editor, and advertising and subscription inquiries to *Monitor on Psychology*/advertising or *Monitor on Psychology*/subscriptions.

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The Hot List

Resources, opportunities, and news for psychologists from APA



APA 2025

Stream Sessions On Demand

APA 2025 featured dynamic sessions on artificial intelligence, immigration, division and polarization, and much more. Registered attendees can stream every session from the Main and Feature Stages on demand through Dec. 3. Don't miss your chance to claim CE credits, watch the sessions you missed, or rewatch your favorites. Plan to join us at APA 2026, Aug. 6–8, in Washington, D.C. Look for updates on registration and the call for proposals on the convention website:

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DIGITAL MENTAL HEALTH

APA Launches Tech Review Program

APA Labs' technology review program awards badges to technologies that best meet the criteria for safety, compliance, usability, and clinical value. Log in with your APA account to access our library of evaluated mental and behavioral health technologies at apa.orchahealth.com/en-US/digital-solutions-library

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Something Happened to Our Mom



Claire's life turns upside down after her mom's car accident. Although Mom's body heals, she is not herself, and Claire's responsibility for her younger brother grows. Eventually, Mom reveals she is struggling with an addiction to pain medication. From the *New York Times* bestselling authors of *Something Happened in Our Town*, *Something Happened to Our Mom* helps children understand substance use disorders and includes guidance for parents and caregivers to start difficult conversations. Get the book at www.apa.org/pubs/magination/something-happened-to-our-mom

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Learn more about the landmark studies that continue to shape the field of psychology. APA's Breakthrough Research series revisits pivotal journal articles that have created a ripple effect and continue to inspire innovation in today's scientists. Read the discoveries from self-determination theory, the Stroop effect, the implicit association test, and more at apa.org/research-practice/conduct-research/breakthrough-research

BEST PRACTICES

Four New Guidelines Approved at APA 2025

APA's Council of Representatives approved four new sets of guidelines at the APA 2025 convention in Denver in August:

- *Guidelines for Clinical Supervision in Health Service Psychology*
- *Guidelines for Psychology's Role in Pediatric to Adult Health Care Transition*
- *Guidelines for Psychologists in the Assessment of Trauma in Adults*
- *Guidelines for Psychologists' Involvement in Pharmacological Issues*

Find all of APA's clinical and professional practice guidelines at www.apa.org/practice/guidelines

TOP OF MIND

Six Things Psychologists Are Talking About

Get the twice-a-month e-newsletter summarizing the latest psychology news and trends, current research, and much more. You'll receive insights from APA and other news sources that you can apply in your life and work. Subscribe for free at www.apa.org/monitor/six-things

ESSENTIAL LISTENING

Wealth, Empathy, and Entitlement

Can money make you mean? Research suggests that wealth and power shape people's beliefs and behavior—sometimes in surprising ways. In this episode of *Speaking of Psychology*, Paul Piff, PhD (University of California, Irvine), explores how money, power, and status influence fairness, empathy, and happiness. Listen to the episode on your go-to podcast platform or at www.apa.org/news/podcasts/speaking-of-psychology/wealth-empathy



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October 2025



50 Technology Is Transforming Youth Friendships

Psychologists are helping young people balance healthy and meaningful connections in a fast-moving technology landscape.



58 Integrated Care Is Proving Its Worth and Growing in Scope

Read everything you need to know about integrated care, the remaining barriers to implementing it more widely, and how and why psychologists should get involved.



42 How Dogs Think *(cover)*

The companionship of dogs has added meaning to human lives for thousands of years. Now, the growing field of dog cognition is exploring what makes the human-canine bond so special.

ON THE COVER: JESS WEALLEANS/GETTY IMAGES

CONTENTS



CONTINUNG EDUCATION

Forty percent of youth receive care for a chronic health condition. For many, health outcomes suffer during the transition from pediatric to adult care. Learn about APA's new *Guidelines for Psychology's Role in Pediatric to Adult Health Care Transition*, which details psychologists' roles in facilitating the transfer (see page 36).

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2 The Hot List
8 President's Column
10 Update From the CEO

RESEARCH

11 In Brief
19 Datapoint
32 By the Numbers

NEWS

20 Assault on U.S. Psychological Science Drives Talent Overseas
24 Creating Postvention Plans to Support Communities After Suicide
28 How to Cope When Loved Ones Are in Conflict Zones
35 Judicial Notebook

PEOPLE

33 6 Questions for Suzanne Bell
66 Psychologists in the News

CE CORNER

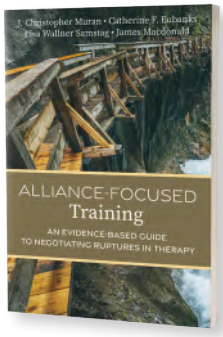
36 New Guidelines for Psychology's Role in Pediatric-to-Adult Health Care Transitions

CAREER

67 Taking Therapy Outside
72 Expanding Uses for Virtual Reality in Practice

AMERICAN PSYCHOLOGICAL ASSOCIATION

New Releases from APA Books

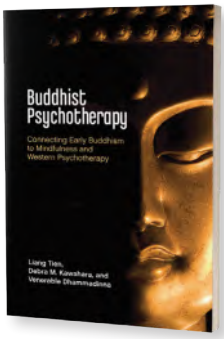


Alliance-Focused Training

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J. CHRISTOPHER MURAN, CATHERINE F. EUBANKS, LISA WALLNER SAMSTAG, AND JAMES MACDONALD

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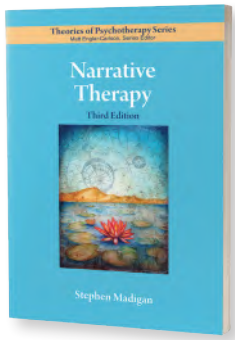


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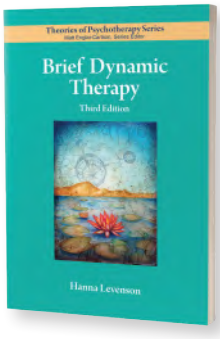


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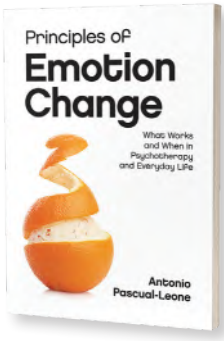


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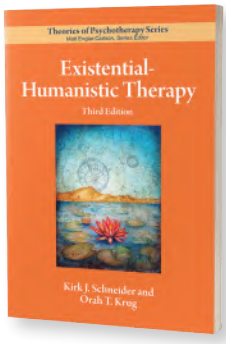


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ANTONIO PASCUAL-LEONE

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Rooted in the Present

Dare to practice gratitude amid brokenness

BY DEBRA KAWAHARA, PhD



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.

IN A WORLD increasingly marked by fragmentation and unpredictability—with shifting political landscapes, climate emergencies, persistent conflicts, and the lingering ache of collective and personal loss—it might feel counterintuitive to pause for gratitude. And yet, that is precisely what this moment calls for.

Gratitude is not a denial of hardship; rather, it is a powerful, intentional stance against despair. It is the quiet courage to notice beauty amid brokenness, to honor progress while bearing witness to pain. For us in psychology, gratitude is also a practice that is deeply intertwined with resilience and well-being—individually, communally, and systemically.

Today, I invite us to reflect on the people who inspire us, the communities who uplift us, and the enduring values that ground us. I am grateful for the colleagues who bring relentless curiosity and compassion to their work. I am grateful for the mentors and mentees who challenge convention with insight and courage. I am grateful for you—for believing in the possibility of transformation even when the horizon is obscured.

Let us also be grateful for this field itself: a discipline that bridges science and soul, that evolves in relationship with culture, and that dares to examine not just pathology but also healing, equity, and the full depth of the human condition.

Gratitude, practiced with awareness, becomes a kind of resistance—a reminder that amid chaos, there is still clarity in purpose, power in community, and hope in each breath. We may not be able to quiet every storm, but we can choose to remain steadfast, open-hearted, and kind.

Together, may we continue building a profession—and a world—fueled not only by what is urgent but also by what is humane and just. ■



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Global Psychology, Shared Solutions

As psychology confronts shared global challenges, APA's international partnerships are shaping more impactful, inclusive, and innovative solutions—both in the U.S. and abroad



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

BY ARTHUR C. EVANS JR., PhD

AS PSYCHOLOGY CONFRONTS shared global challenges, the American Psychological Association's international partnerships are shaping more impactful, inclusive, and innovative solutions—both in the U.S. and abroad.

In our increasingly interconnected world, APA has deepened its commitment to fostering international relationships. We now maintain formal partnerships with psychological associations in nearly 80 countries. Through summits addressing critical societal issues, meetings at the United Nations, and global conferences, we are learning from one another—strengthening psychology worldwide.

From these exchanges, three insights stand out.

■ **First, psychology's challenges are strikingly universal.** From low- to high-income nations, across all continents, psychologists are working to apply psychological science to society's most pressing needs. We are addressing the stigma that keeps people from seeking mental health care and working to broaden public understanding of psychology's unique contributions. While the contours of these issues may vary from country to country, the challenges are fundamentally the same. Our ability to learn from each other as we tackle them will be critical to our collective success.

■ **Second, countries vary in how psychology is positioned within their societies.** In Norway, psychology plays a central role in shaping government decision-making in health and education. Indonesia has embedded psychologists into prevention and early intervention programs within its national health system. In South Africa, psychologists help frame national debates on pressing social issues. These examples offer valuable lessons in how psychology's role can be elevated in shaping solutions and ensuring the public understands the value of psychological expertise.

■ **Third, global partnerships broaden our perspective by revealing blind spots.** Many countries are wrestling with digitalization and the integration of AI into psychological science and practice. The European Federation of Psychologists' Associations, for instance, has created a six-point framework to guide its response. Learning from such approaches helps us refine our own strategies and ensures APA stays at the forefront of emerging issues. Likewise, when we share lessons learned with our global colleagues, they may gain insights that advance their work.

Global partnerships remind us that when psychology organizations tackle issues together, we magnify our collective impact. Our colleagues abroad serve as both mirrors and teachers—reflecting our strengths, exposing our blind spots, and pointing us toward possibilities we may not see on our own.

Given the universal challenges we face, psychology's global perspective is not just valuable—it is essential. ■

APA now has formal partnerships with psychological associations in nearly 80 countries, engaging in critical meetings and summits aimed at tackling societal issues.



VLADIMIR OMELCHENKO/GETTY IMAGES

In Brief

COMPILED BY CHRIS PALMER, PhD



Acts of kindness and compassion may strengthen relationships and life satisfaction, suggest studies in the United States and China.

ESTERSINHACHE FOTOGRAFÍA/GETTY IMAGES

Higher morals, greater happiness?

People considered good tend to be happier, suggests research in the *Journal of Personality and Social Psychology*. Across three studies conducted in the United States and China involving 1,499 participants, individuals judged as more moral (i.e., more compassionate, honest, and fair) by others also reported higher levels of well-being and meaning in life. These associations were independent of the participants' likability, religious beliefs, gender, and age. The studies indicate that highly moral individuals may feel happier in part because they have better relationships with others. Furthermore, acting in line with one's values may boost the sense of life satisfaction and purpose.

DOI: 10.1037/pspp0000539

Implicit biases shift over time

People's knee-jerk reactions to certain topics can change over time, whether in tandem with their more controllable feelings or in opposition to them, suggests research in the *Journal of Experimental Psychology: General*. Researchers surveyed more than 1.4 million participants in 34 countries about attitudes regarding age, body weight, sexual orientation, race, and skin tone over 11 years, from 2009 to 2019. In each category, the participants' explicit preferences toward the nondominant group became less negative over time. The changes to people's gut feelings—or implicit attitudes (as measured by a timed task in which people quickly paired words and images)—were more varied, however. They became less negative about sexual orientation (less pro-straight/anti-gay), more negative about skin tone (more pro–light skin/anti–dark skin), and stayed about the same regarding age, body weight, and race.

DOI: 10.1037/xge0001746

Can generative AI boost creativity?

Research in the *Journal of Applied Psychology* indicates that generative artificial intelligence (AI) might boost employee creativity—but only for those who actively reflect on and adapt how they use it. Researchers randomly assigned 250 employees in the United States either to use the AI tool ChatGPT or not. Those with access to ChatGPT were rated as more creative by both supervisors and outside evaluators, but only if they used metacognitive strategies, such as planning, monitoring, and evaluating their own performance. The study also found that ChatGPT offered benefits that support job performance and creativity, like providing information, enabling effective task switching, and allowing mental breaks. However, these advantages only helped employees with strong metacognitive skills, who could identify the information they needed and the best times to switch tasks or take breaks.

DOI: 10.1037/apl0001296

Both empathy and schadenfreude toward workplace abuse

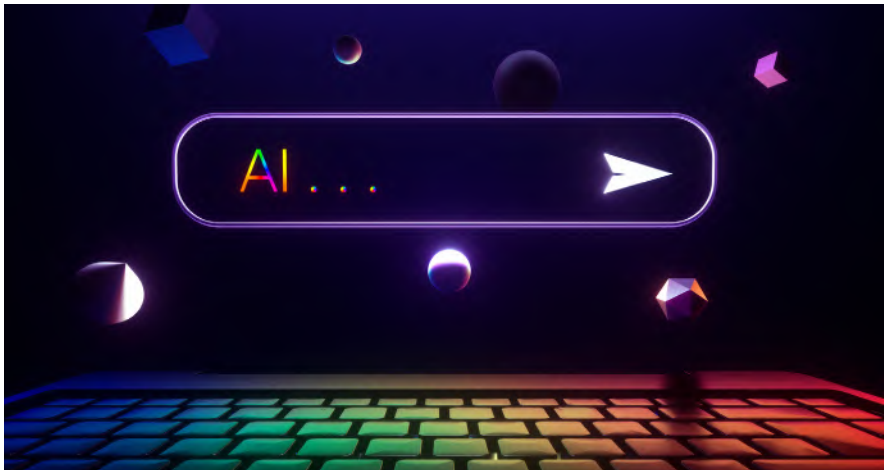
People who observe workplace mistreatment react as strongly as those who experience it, but some observers show a surprising amount of schadenfreude, or pleasure at another's pain, according to research in the *Journal of Applied Psychology*. Researchers examined 158 studies published in 105 journal articles on witnessing workplace abuse. They explored different forms of mistreatment, including abusive supervision, injustice, incivility, and sexual harassment, and found that third-party observers were impacted to a similar degree as direct victims of the abuse. While observing mistreatment more often induced anger and empathy, it also brought about schadenfreude, alongside negative evaluations of and behaviors toward victims, such as undermining actions and gossip.

DOI: 10.1037/apl0001211



Witnessing workplace abuse can spawn both empathy and schadenfreude toward victims.

Research suggests that workplaces can benefit from generative AI, but only if employees thoughtfully plan, monitor, and evaluate how they use it.



ANDRIY ONUFRIYENKO/GETTY IMAGES

From good soldier to bad apple

When envious coworkers ostracize top performers, the standout workers may



sabotage team productivity, according to research in the *Journal of Occupational Health Psychology*. Researchers twice surveyed 630 workers on 131 workplace teams of three or more in various industries in China, including health care, finance, and manufacturing. In the first survey, employees rated their proactivity and job satisfaction and the extent to which they experienced envy, coworker ostracism, and negative emotions. In the second survey, employees evaluated their own intentional underperformance. The researchers found that teams with higher rates of envy were more likely to ostracize high-performing employees—and that the targets of this exclusion were more likely to dial back their efforts at work.

DOI: 10.1037/ocp0000389

More to FOMO than missing out

Often, FOMO (fear of missing out) isn't just about missing a group activity; it's also the worry that one's absence could damage social relationships or lead to exclusion from the group, suggests research in the *Journal of Personality and Social Psychology*. Across seven experiments with 5,441 online participants, researchers discovered that FOMO is driven by worries about missed bonding opportunities and concerns about the negative fallout on relationship strength. Participants felt greater FOMO when they missed events involving others close to them, as opposed to strangers or unimportant social groups, and when the events had the potential to foster social bonding—even when the events themselves were considered unenjoyable. FOMO was further intensified when participants were particularly concerned about the strength of their connection to the social group.

DOI: 10.1037/pspa0000418

Unmet needs drive conspiracy thinking

People are more likely to believe in and promote conspiracy theories when they tend to rely on intuition, have poor reasoning ability, perceive existential threats (particularly from the world around them and in society), and feel a need to defend their self-image and the image of their in-group, according to a meta-analysis in *Psychological Bulletin*. Researchers examined 279 studies involving 137,406 participants that measured the relationships between conspiracy beliefs and psychological motives. Overall, when participants' needs to feel informed, secure, and valued were unmet, they were more likely to believe in conspiracy theories. The authors suggested that researchers and policymakers focus on satisfying these motives when designing interventions aimed at tackling problematic conspiracy beliefs.

DOI: 10.1037/bul0000463

Meaning or joy?

People with high self-control tend to prioritize meaningful activities over pleasurable ones, according to research in *Social Psychological and Personality Science*. In one study, researchers asked 680 participants in Switzerland to imagine or engage in activities during some unexpected free time and how they felt about these activities. They also evaluated the participants on two personality traits: self-control and hedonic capacity, or the degree to which they enjoyed pleasurable experiences. Participants with higher self-control rated their chosen or imagined activities as more meaningful, while participants with higher hedonic capacity reported experiencing greater pleasure from their activities. In a second study, the researchers asked 248 participants to make hypothetical choices between meaningful and pleasurable activities. Participants with higher self-control chose activities deemed meaningful, while those with higher hedonic capacity chose activities deemed pleasurable.

DOI: 10.1177/19485506251323948

Parental connection and girls' suicide risk

How young girls communicate during emotionally stressful interactions with parents might serve as an early behavioral signal of their suicide risk, according to a study in *Development and Psychopathology*. Researchers evaluated the behaviors of 129 girls ages 11 to 13 and their parents while they discussed conflicts they had recently experienced together. The researchers measured two specific behaviors: how much time each participant spent looking in each other's eyes and how often they displayed happy facial expressions. They also assessed the girls' suicidal ideation at the start of the study and again 12 months later. The researchers found that in pairs where parents were less likely to return their daughter's

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gaze or reciprocate her expressions of happiness, the girls were more likely to report suicidal thoughts 1 year later. This pattern held even after accounting for symptoms of depression and anxiety.

DOI: 10.1017/S0954579425000070

Better to be liked than attractive

A person's attractiveness can influence how moral they appear, but this effect is mainly driven by how much others like them, according to research in *Scientific Reports*. Across two studies in the United States and Poland involving 2,701 participants, researchers found that people perceived highly attractive women (but not men) as more moral than moderately attractive ones. The extent to which the participants liked the individuals they evaluated explained most of the relationship between attractiveness and moral character judgments. In a third study with 1,024 participants in the United Kingdom, the researchers independently manipulated the target's attractiveness and liking. They found no association between high attractiveness and greater morality. Instead, the liked target was judged as more moral than the disliked target. "Belief in a just world"—an assumption that the world is fundamentally fair—did not moderate the relationship between attractiveness and moral judgments, suggesting that the effect of attractiveness on morality operates primarily through affective mechanisms rather than belief in fairness or justice.

DOI: 10.1038/s41598-025-97022-2

Dads' mental distress and children's development

According to a study in *JAMA Pediatrics*, perinatal paternal depression, anxiety, and stress significantly impact child development across multiple domains, including social-emotional, cognitive, and language skills. Researchers performed a meta-analysis of 84 studies examining the association between paternal perinatal depression, anxiety, and stress and offspring development during the first 18 years of life. The studies comprised 48 cohorts and thousands of father-child pairs. The researchers found that paternal perinatal mental distress between pregnancy and 2 years post-birth was associated with children's poorer global, social-emotional, cognitive, language, and physical development beyond infancy and into childhood. These associations were generally stronger for mental distress during the postnatal period than the antenatal period. No links were found for paternal mental distress and children's motor development or ability to adapt to changes and manage daily needs.

DOI: 10.1001/jamapediatrics.2025.0880



ALISTAIR BERG/GETTY IMAGES

Teenagers who tend to be outgoing and narcissistic may be more likely to aspire to be social media influencers, according to a study in Poland and the United Kingdom.

So, you want to be a YouTuber?

Extroverts, narcissists, and people prone to histrionic expressions, including excessively dramatic attention-seeking behavior, are more likely than others to aspire to be YouTubers, suggests a study in *Telematics and Informatics*. Researchers assessed the personalities of 711 adolescents ages 16 and 17 in Poland and the United Kingdom and rated their motivation to pursue various professions. They found that extraversion, narcissism, and histrionic tendencies were positively associated with motivation to become a social media influencer. In contrast, conscientiousness was negatively associated with that desire. For the Polish participants, narcissism was the only predictor of wanting to be an influencer. For the

U.K. participants, extraversion and histrionic traits were the strongest predictors, with lower conscientiousness also playing a role. Histrionic traits showed no associations with any other profession assessed in the study.

DOI: 10.1016/j.tele.2025.102248

Reality or illusion? Potential implications for schizophrenia

The fusiform gyrus—a visual processing region of the brain—plays a key role in distinguishing reality from imagination, suggests a study in *Neuron*. Researchers instructed 26 participants to look for a faint pattern within a noisy background and indicate whether the pattern was present, which it was only half of the time. At the same time, they asked participants to imagine the same faint pattern of lines running in a certain orientation or an orthogonal pattern. On some trials, the presented and imagined patterns (e.g., a set of lines oriented at a 45-degree angle) were the same. On those trials, when the participants reported that the imagined pattern was particularly vivid, they were more likely to report seeing a real pattern, indicating they mistook the imagined image for reality. Brain imaging performed simultaneously indicated that fluctuations in fusiform gyrus activity predicted whether participants determined a pattern to be real or imagined, regardless of whether it was present. The researchers suggest the findings may inform what might happen in the brain during psychiatric conditions like schizophrenia, where patients struggle to tell imagination from reality.

DOI: 10.1016/j.neuron.2025.05.015

Jargon can satisfy but does not explain

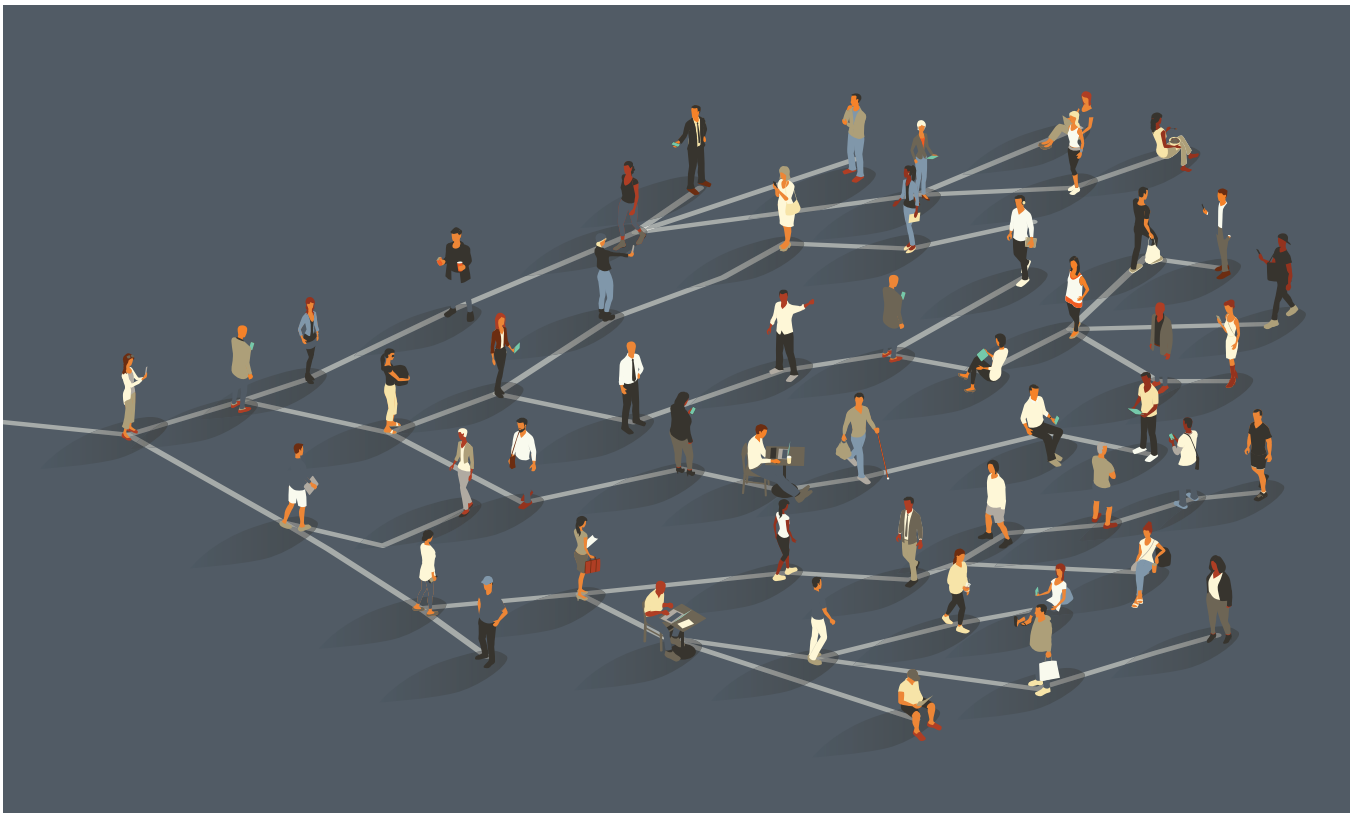
When reading explanations of scientific phenomena, people find jargon satisfying even though it reduces their understanding, suggests research in *Nature Human Behaviour*. Across nine experiments with 6,698 participants, researchers found that jargon typically weakened how laypeople comprehended explanations. However, jargon increased laypeople's satisfaction with circular explanations because they assumed the jargon filled gaps in their understanding. However, when explanations were more complete, adding jargon decreased comprehension without increasing satisfaction because there weren't obvious gaps for the jargon to fill. The researchers also found that when participants attempted to generate their own explanations, they were less likely to inflate their judgments of poor explanations and became better at assessing their ability to explain things. Similarly, participants expressed less satisfaction with jargon-filled explanations when they were asked follow-up questions about the phenomena.

DOI: 10.1038/s41562-025-02227-0

Knowing who knows whom

When it comes to climbing the social ladder, knowing how people are connected matters more than knowing lots of people, suggests research in *Science Advances*. Researchers conducted six assessments with 187 first-year students living in three dormitories at a midsize university in the United States over an academic year. At each check-in, participants completed an online questionnaire about their friendship status with all other participants. To track the evolving social network, the researchers graphed the connections that developed over time. Participants were also given "network knowledge tasks" where they





Want to boost your chances of climbing the social ladder? Study who knows whom, suggests research involving college students.

MATHISWORKS/GETTY IMAGES

were shown pairs of photos of fellow students and asked to identify whether the individuals in the photos were friends. The responses suggested participants' knowledge about other friendships in the network, including those outside their friendship circles. Participants who occupied the central position in the social network graphs by the end of the year did not rack up the most friendships early on but demonstrated the strongest knowledge of the networks' evolving structure.

DOI: 10.1126/sciadv.ads2133

Feeling similar may make couples happier

Perceived similarity between romantic partners may be more related to relationship satisfaction than actual similarity, according to a study in the *Journal of Social and Personal Relationships*. Researchers conducted a scoping review of 339 studies investigating actual and perceived similarity in relationships. The review examined couples' similarity in values, demographics, lifestyle, personality, physical characteristics, and romantic habits. In studies that calculated actual similarity, most found no strong link between being alike and having better relationships. Studies of perceived similarity, however, found that seeing one's partner as similar was associated with higher satisfaction and stability. Studies using self-reported similarity were also more likely to find a link with satisfaction, whereas studies with more complex methods seldom did. Also, many studies were powered to detect only relatively large effects, meaning they may have overlooked smaller benefits of similarity.

DOI: 10.1177/02654075251349720

Hawks and doves

People with certain narcissistic traits are more accepting toward war than others, suggests research in *Personality and Individual Differences*. Researchers surveyed 789 adults in Poland about their values, attitudes, and behavioral intentions toward war and indications of grandiose narcissism across four dimensions—sanctity (seeing oneself as deeply moral and kind), heroism (seeing oneself as a protector), admiration (seeking status and uniqueness), and rivalry (seeing others as threats). Participants high in rivalry expressed the strongest acceptance of war and weakest support for peace. Admiration also was associated with a strong acceptance of war and weak support of peace. Sanctity was associated with a desire for peace, driven by concern for others' well-being, openness to new ideas, and respect for

traditional values. Heroism was associated with higher acceptance of war but more active engagement in both pro-peace and pro-war behaviors.

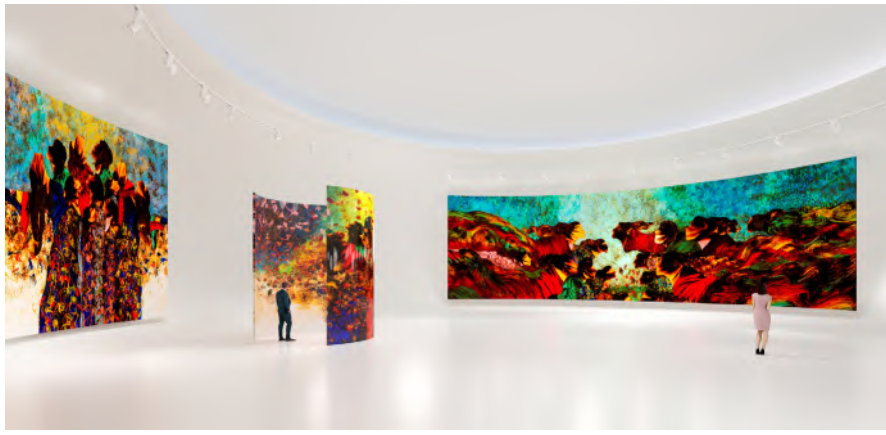
DOI: 10.1016/j.paid.2025.113183

This is your brain on abstract art

Abstract art elicits greater variability in brain activity than representational art, according to research in the *Proceedings of the National Academy of Sciences*. Researchers used fMRI to quantify differences in the brain activity of 59 participants in response to either abstract or representational paintings. They found no significant differences between participants' brain activity in the visual cortex, suggesting both types of paintings activated similar sensory processing. However, they did find differences in activity in higher-order brain regions. In particular, participants showed more variability in brain activity in the default mode network—involved in imagination, memory recall, and self-referential thought—in response to abstract paintings than representational paintings. This finding indicates that abstract art elicited more personal associations than representational art.

DOI: 10.1073/pnas.2413871122

Viewing abstract art, compared to representational art, has been shown to spark more activity in brain regions involved in imagination and memory recall.



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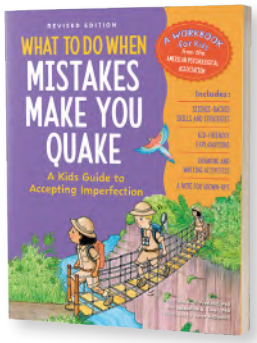


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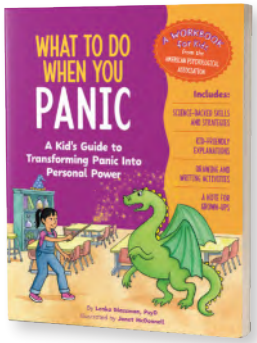
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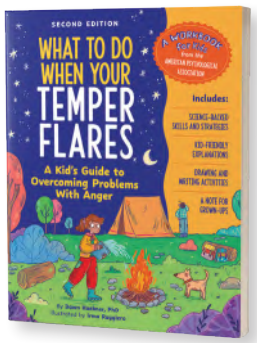
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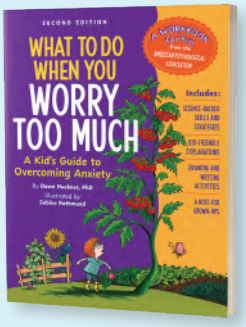
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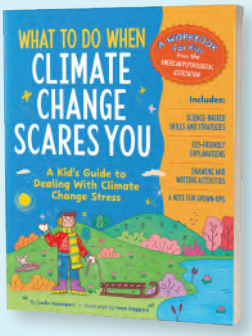
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Datapoint

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

Strengthening Pathways to Psychology Doctorates

Could outreach to community colleges attract more students to psychology?

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

IN 2023, APPROXIMATELY 3 in 10 (31%) psychology research doctorate recipients had earned credit or an associate degree from a community college. About 7 in 10 (71%) had earned a bachelor's degree in psychology, about 9 in 10 (89%) had earned a master's degree, and about 2 in 3 (65%) earned a master's degree at the same institution as the research doctorate.

These percentages are higher than the percentages of research doctorate recipients in all fields who had ever attended community college (21%), had a bachelor's degree in the same broad field as the research doctorate (61%), earned a master's degree (72%), or earned a master's degree at the same institution as the research doctorate (45%).

The findings demonstrate that students with any community college experience who studied psychology were more likely to continue to advanced studies than students in other disciplines. Prioritizing outreach to community colleges could strengthen pathways to psychology research doctorates.



Notes: These data include research doctorates only and do not include professional practice doctorates such as PsyD degrees. Psychology and Social Sciences are included in the All Fields category and the Science and Engineering Fields category; additional fields are available in the data tables. Community college attendance includes those who earned an associate's degree or those reported having earned credit from a community college but did not earn an associate's degree. The use of NSF data does not imply NSF endorsement of the research, research methods, or conclusions contained in this report.

SOURCES

National Center for Science and Engineering Statistics (NCSES). (2024). *Doctorate recipients from U.S. universities: 2023 data tables* [Tables 5.1, 8.1, and 8.2]. NSF 24-336. Alexandria, VA; National Science Foundation. Retrieved April 29, 2025, from https://ncses.nsf.gov/surveys/earned-doctorates

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

Psychology Researchers Look Abroad Amid U.S. Funding Cuts

Recent reductions in federal support for science and academia are prompting U.S.-based psychology researchers and students to rethink how, what, and where they study and work

BY TORI DEANGELIS

PSYCHOLOGICAL SCIENTISTS IN the United States—both Americans and those here on visas—are facing unprecedented challenges to their work and livelihoods, including reduced funding, limits on academic freedom, and disruption to the academic pipeline.

"The canceling and suspending of grants and proposed cuts to agencies like the National Institutes of Health and National Science Foundation are a grave concern," said Adrienne Stith, PhD, APA's head of science, who noted that APA's advocacy team is working hard to educate policymakers on the relevance and importance of psychological science and calling for robust support for science.

AT A GLANCE

- As opportunities for U.S.-based researchers and academics shrink, doors are opening abroad, including through new funding mechanisms in Europe.
- New restrictions involving academic visas are impacting enrollment at U.S. universities and leading some U.S.-based international faculty and students to forgo international travel out of concern they may not be able to return.
- Students and researchers considering a move should thoroughly assess their professional and personal needs, investigate the practical realities of target countries and institutions, and explore support organizations that help at-risk scholars get aid in their home countries and abroad.

Research programs "take a very long time to build," added Jennifer E. Lansford, PhD, director of the Center for Child and Family Policy at Duke University and former chair of the U.S. National Committee of Psychological Science, which represents the International Union of Psychological Science at the national level. "And they can be torn down very quickly and cannot be easily reassembled."

Because of these realities, some American psychological and other social scientists are seeking or have already taken positions in other countries. For example, a survey reported in the journal *Nature* found that of 1,600 American scientists and postdocs sampled, more than 75% were contemplating out-of-country moves, with most considering jobs in Europe and Canada. Clinical psychologist Kean J. Hsu, PhD, left his faculty position at Georgetown University in 2022 to take one at the National University of Singapore because of his concern about the decline of academic freedom he saw under the first Trump administration and what he expected if President Trump were to be reelected. Similarly, prominent historians Timothy Snyder, DPhil, and Marci Shore, PhD, left their positions at Yale University last year to take positions at the University of Toronto (their widely viewed *New York Times* video piece, "We Study Fascism, and We're Leaving the U.S.," explains their decision).

Meanwhile, faculty and students on academic visas are forgoing international travel that would normally allow them to attend conferences and work on research projects, concerned that if they leave the country they won't be able to return. And it has become difficult, if not impossible, for foreign students to apply to U.S. psychology graduate programs because the federal government has halted new student visa interviews as it works to expand screening of applicants to include greater scrutiny of their social media accounts. A projected decline of 30 to 40% in new international student enrollment this fall—based on an analysis of data from SEVIS and the U.S. State Department—could contribute to a 15% drop in overall enrollment. In turn, this downturn would strip local economies of $7 billion in spending and more than 60,000 jobs.

"Historically, American universities have been considered among the best in the world," said Lansford. "That puts us in a privileged position—we get a lot of talent from other countries that Americans benefit from. By restricting entry to American universities from people who require a visa," she said, "it's taking away the cream of the crop from some universities."



A March survey of 1,600 American scientists and postdocs found that more than 75% of participants were contemplating out-of-country moves. It has also become difficult or impossible for foreign students to apply to U.S. psychology graduate programs because of disruptions involving visa interviews.

NITAT TERMMEE/GETTY IMAGES; RENATA TYBURCZY/GETTY IMAGES

International exodus?

While it is hard to say how this disruption will resolve, for now it means there may be something of a "brain drain," with the United States losing U.S.-trained scientists to other countries.

Already there is a groundswell of support from the European Union (EU), which appears delighted at the prospect of welcoming American research talent. In a May 5 announcement about a program called Choose Europe, Ursula von der Leyen, president of the European Commission, the executive arm of the EU, said the EU would invest 500 million euros, or about $566 million, over the next 2 years to "make Europe a magnet for researchers . . . where global talent is welcomed."

Also in May, the European Research Council (ERC), established by the EU in 2007, announced additional matching funds to help first-time ERC grantees establish labs or research teams in Europe. (The ERC offers four core types of grants: starting grants, consolidator grants, and advanced grants for individual researchers, as well as synergy grants for two to four principal investigators to fund their collaborative work on ambitious research projects.)

For example, individual researchers who receive ERC advanced grants—intended for established principal investigators who seek long-term funding to pursue large-scale, innovative projects of up to 2.5 million euros (about $2.9 million)—can receive an additional sum of up to 2 million euros (about $2.3 million) for startup purposes, according to a statement by ERC President Maria Leptin. "The ERC Scientific Council raised this 'startup' funding to try to help researchers based in the U.S. in their current situation, but it is of course open to everyone worldwide moving to Europe," Leptin said.

Individual EU countries are opening their doors to American researchers in other ways as well. In April, for instance, the Research Council of Norway created a $9.6 million initiative to make it easier to attract experienced international researchers, with language aimed at recruiting American scholars. Similarly, Aix-Marseille University in France is planning to host at least 15 American academics through its Safe Place for Science program, which has already raised 15 million euros (about $17.6 million) and is seeking matching grants from the French government. (As of July, eight American scholars had been accepted into the program.) Meanwhile, an EU program called National and Regional

Initiatives consolidates opportunities across the EU for Americans and others to tap into, including fellowships, visiting researcher programs, faculty recruitment opportunities such as tenure-track positions, research collaborations, and more (see Resources for more international job opportunities).

Several established organizations dedicated specifically to helping at-risk scholars, researchers, and academics are also helping vulnerable American researchers get practical, logistical, financial, advocacy, and employment aid in their home countries and abroad. These include the London-based Council for At-Risk Academics, the Scholars at Risk network in New York City, and the Institute of International Education's Scholar Rescue Fund, also based in New York.

Yasemin Gülsüm Acar, PhD, an American-born social psychologist and academic who taught at Özyeğin University in Istanbul, Turkey, and is now on faculty at the University of St Andrews in Scotland, said such resources can provide invaluable support. "They can help you find placements at institutions in other countries," said Acar, who studies political activism, "and even help you gauge what countries and institutions might be good options for you, particularly for those who are in a position where they feel unsafe." She herself received a yearlong fellowship from one of these groups when she was pushed to leave her position in Turkey after signing a peace petition supporting the Kurdish cause.

For all job seekers, Acar also recommends contacting their main scientific organizations to see if they have funding and networking support in place. That's what she did with two of her membership organizations, the European Association of Social Psychology and the International Society of Political Psychology. "They were great at setting up pockets of money that we could access quickly," she said. If your organization doesn't have such a program, "work with them to get something going," she advised.

In fact, networking in general is a vital skill to nurture during these times, said Acar. When she and her colleagues in Turkey faced crackdowns on their work, they banded together. "One of the things that was really powerful for us was relying on one another—having a network to gauge what was going on and to support each other through different parts of this process. Use your network of people; that's what community is for," she urged. "It helps a lot."

Making decisions and finding support

For those considering moving to another country, whether temporarily or permanently, Acar recommends doing a thorough assessment of the move's practicality. Factors to consider include how strongly one feels about staying in the United States, whether family or professional obligations would make it difficult or impossible to leave, and how flexible the research parameters are. A number of countries, including many in the Middle East, forbid or restrict research on what they consider incendiary topics such as LGBTQ+ issues, feminist ideas, or topics that could be seen as criticizing the standing government, for example. "Do you feel comfortable trying to shift into a different sort of topic? Or do you feel like you've been cut off at the knees and you need to find a new way forward?" Acar said. Also, look into visa requirements, which differ from country to country, advised Hsu, the

RESEARCH SPOTLIGHT

TURNING CRISIS INTO OPPORTUNITY

When Yasemin Gülsüm Acar, PhD, and her colleagues faced ouster from their academic positions in Turkey—the result of signing a document supporting the Kurdish cause, among other perceived wrongs—she decided to capitalize on the experience.

"Suddenly, here was a bunch of people who were out of work, and this academic network had formed to support them," said Acar, who studies collective political action. "I thought, 'I've got to do research on this.'"

The result was a paper published in the *Journal of Community & Applied Social Psychology* (Vol. 30, No. 4, 2020), which found that the academics who managed the best were those who stayed connected with others and "maintained the sense of themselves as scientists, researchers, and scholars—who kept up the thing that is so powerful to them and makes them feel worthwhile and self-confident," she said.

Their experience is a good thing for American psychology researchers to keep in mind as they face these challenging times, she added.

"It's important to remember that everything going on in the States right now might feel new to people there, but it is not new in the world," said Acar, who is now teaching at the University of St Andrews in Scotland. "It's also important to know that you have colleagues around the world who empathize, who sympathize, who have been there, and who are ready to reach out a hand."

American academic who moved to Singapore in 2022. Often workplaces can ease this process by helping academics apply for visas, though it's still important to determine application deadlines and what documents you need for the purpose. More complicated is the question of whether to become a permanent resident: On the one hand, gaining that status may make it easier to bring family members other than a spouse with you; on the other hand, it may impact your compensation structure and package, Hsu said.

It also helps to learn from those who have already made such moves. When Hsu decided to leave the United States, for instance, he did a lot of homework first. In general, he knew he wanted a position in a cosmopolitan setting, at a relatively respected university—a factor others advised would be important if he wanted to move back to the United States in the future—and an institution with a funding environment that would support his area of study—cognitive processes as they relate to depression and anxiety. Singapore, which he had visited a decade prior, and the National University of Singapore, checked those boxes. "I'd previously only been in Singapore for 2 or 3 days, but I knew it was a great city in terms of food, ease of travel, great public transportation, and great safety," he said. "And people there primarily spoke English, and English is the teaching language as well."

He recommends that psychologists considering moves to other countries take a similar tack. "Think about the type of work you do and how the context supports it, and what sort of funding support you need," he advised. For example, it may be extremely important for some researchers to choose institutions or countries that openly prize academic freedom. While he has had only positive experiences studying and teaching in his topic area, researchers investigating topics like health disparities among marginalized communities might have more difficulty in Singapore, where racial harmony is a politicized value.

Similarly, those studying LGBTQ+ issues are likely to find a welcome mat and funding in some countries more than others, according to the migration consultancy firm Global Citizen Solutions. Other considerations are whether an institution provides startup funds and whether a program is a doctoral-level program, since that will determine the pool of students who will be part of your research team.

There are other practical issues to consider, as well, said social psychologist Kyle Msall, PhD, who earned his doctorate at the Chicago School of Professional Psychology in Washington, D.C., and is now an associate professor of psychology at Ajman University in the United Arab Emirates. Researchers may need to ascertain whether they are willing to learn at least some of a country's language and how far from the United States they are comfortable living, since international travel can be cumbersome. It's also important to explore practical issues related to banking, health care, and housing, he said.

Once you've chosen a given location, don't pass immediate judgment if some aspects are unfamiliar or uncomfortable, Msall added. Start networking as soon as possible, which will help you build relationships and friendships. In his case, joining sports groups and tapping groups like MeetUp and InterNations helped him bond with others and feel less alone. "Give yourself at least 6 months in a new place before you decide whether or not it is for you," he said. ■

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Monitor on Psychology, May 2019

Creating Postvention Plans to Support Communities After Suicide

How schools, universities, the military, and others are taking proactive steps to prevent future suicides

BY ASHLEY ABRAMSON

IT IS ESTIMATED that about half of the population will be exposed to the suicide of someone they know at some point in their lifetime. While those who have lost loved ones are vulnerable to grief and trauma, studies suggest they are also at a heightened risk of suicide themselves. To reduce this risk, many schools and universities are prioritizing postvention, a suicide prevention strategy that focuses on planning ahead for how to support a community after a suicide has occurred.

From determining how to communicate about the suicide to mobilizing grief counseling and psychological first aid, postvention is an important tool for preventing contagion, or clusters of suicides that can happen among survivors. Preparing resources in advance can ensure the plan is as comprehensive and supportive as possible to those affected by the death. "In the midst of a crisis response, you don't want to try to build the plane as you're flying it," said Monica Osburn, PhD, executive director of the Counseling Center and Prevention Services at North Carolina State University in Raleigh.

Many postvention models exist and can be applied in various settings where suicides occur, from K–12 schools to colleges and universities to workplaces and the military. While their suggested steps may differ in the details, most postvention plans encompass the same goal: "We want to be prepared to manage the unexpected crisis of the tragic death while also taking steps to ensure it doesn't happen again," said Marina Niznik, PhD, a licensed psychologist and president of Inlight Psychological Services PC in Walnut Creek, California, who has led school postvention responses.

According to Osburn, postvention plans usually involve multidisciplinary teams that include counselors, administrators, and other staff members who work together to implement the steps. School, clinical, and counseling psychologists also play essential roles in developing and implementing postvention plans, thanks to their social-emotional training and ability to effectively communicate with a variety of individuals, said Scott Poland, EdD, a professor and director of the Suicide and Violence Prevention Office at Nova Southeastern University in Ft. Lauderdale, Florida.

Learn more about how postvention plans can support communities affected by suicide, and best practices for building a postvention response of your own.

AT A GLANCE:

- Studies suggest that postvention, or planning ahead of time what to do after a community suicide, is essential for suicide prevention.
- Plans typically involve a communication strategy, identifying affected survivors, and ongoing mental health support.
- Psychologists play a vital role in creating and implementing plans, as well as offering therapeutic support after suicide.

Disclosing the death

Most postvention frameworks offer guidelines for developing a strategic communication plan in the event of a community suicide. The first step, according to Niznik, is to gather important details about the death, verify that information with reliable sources, and communicate with the deceased's family about what details they're comfortable sharing with the broader community.

While accuracy is essential, providing the right amount of detail in communications is critical for preventing additional suicides, said Stephen Brock, PhD, a professor emeritus of school psychology at California State University, Sacramento. For example, it's best not to disclose the method of suicide. "Too many details can lead to copycat behavior, especially in those who are already vulnerable to suicidal ideation," he said.

The individuals to whom the suicide is disclosed depends on the community. In a smaller school or college where everyone knows each other, it may make



KLAUS VEDFELT/GETTY IMAGES

Rather than in large assemblies or generalized communication about resources, support is typically best offered in small-group or individual settings, where students are more likely to speak up about their feelings and ask questions.

sense to communicate to the entire student body—ideally, Brock said, in person. But some experts recommend that in large universities, suicide postvention teams focus on only those who knew the deceased: friends, classmates, and people in the same residence hall, sports teams, or other activities.

Mass emails are discouraged in most cases, other than to address potential safety concerns (for example, to dispel rumors or address the presence of emergency vehicles on campus). "Doing more personalized outreach can protect people from unintended exposure that can pose a risk for depression, prolonged grief, substance misuse, and survivor suicide, while also creating opportunities to offer survivors resources," said Kurt Michael, PhD, senior clinical director of The Jed Foundation (JED), a leading national nonprofit that protects emotional health and prevents suicide in teens and young adults.

If national or local news outlets are covering the suicide, discrete and targeted communication becomes even more important. "Then there are multiple avenues through which students are getting inundated with information, which could be a risk factor in itself," said Osburn. If the news is rapidly spreading, Osburn said it can be helpful for the postvention team to reach out to media and ensure they're providing suicide risk resources in their coverage.

Identifying affected survivors

Support offered to survivors should also be strategic. Postvention teams typically identify those closest to the deceased in order to offer targeted, timely support—these individuals, Michael said, are often most at risk for mental health concerns and suicide. Targeted care, like triage in an emergency department, also conserves school or campus resources that may be limited for those who need it most.

Along with classmates and other close associates, Brock said it's important to identify other individuals at risk. Staff members who knew the deceased, including faculty or residence hall staff, should be included in targeted outreach.

In some cases, people who didn't know the deceased personally may benefit from support. Studies show acquaintances can be affected by deaths as much as or more than close friends (Gould, M., et al., *International Journal of Environmental Research and Public Health*, Vol. 15, No. 3, 2018). If the deceased was involved in a specific activity or represented a certain group, for example, then it would be important to reach out to fellow members. "If you view the person as someone you admire or whose circumstances are like yours, then you could be put into the suicide loss survivor group," said Brock.



Grief isn't always linear—sometimes, it doesn't set in for months—so postvention efforts don't always have an end point. Postvention teams may reach out to at-risk students at important milestones, such as the anniversary of the death or graduation.

VALENTINA STANKOVIC/GETTY IMAGES

Offering psychological support

Effective postvention plans strategically mobilize support to those impacted by the community death. Rather than large assemblies or generalized communication about resources, support is typically best offered in small-group or individual settings—where students are more likely to speak up about their feelings and ask questions—according to Poland. Because suicide can be a stigmatized topic—and those most at risk are often the least likely to reach out for support—Brock said postvention teams should be assertive in outreach.

Interventions typically focus on reducing isolation and connecting survivors with people and resources that can help them process the event. "We want to reach out to those impacted by the death and assess their immediate needs so we can provide the best resources," said Carla Stumpf Patton, EdD, LMHC, vice president of suicide prevention, intervention, and postvention programs at the Tragedy Assistance Program for Survivors (TAPS).

For example, people in the person's inner circle may benefit from trauma care and grief counseling—or, if postvention teams identify someone is at risk for suicide, they may need to be connected to a higher level of acute mental care outside the school setting. TAPS connects military families affected by suicide with an internal case worker who can recommend local resources, such as trauma-informed therapists familiar with the unique needs of military communities. Those affected by the suicide or knew the deceased informally may need psychoeducation to contextualize suicide, along with more general suicide prevention resources.

Because mental health clinicians on campus may be in short supply, it's important to mobilize support in advance. This may include partnering with community resources that can offer support, building relationships with mental health clinicians outside the school setting, or training staff members in psychological first aid. At Stanford University, for example, staff are trained in suicide response so they can recognize early signs of suicidal ideation and refer students to the campus counseling center after a campus suicide. Peer support groups, which offer the ability to connect with others who have been affected by suicide, can also be helpful. "The more of us who are involved, the more we can create a safety network around those who have been impacted," said Stumpf Patton.

Along with psychological support, Poland said students may benefit from other opportunities to process grief, such as a living memorial that involves raising money for suicide prevention. In any case, Poland said, it's important to memorialize the death of all

deceased students the same, regardless of the cause of death, popularity, or socioeconomics.

Providing ongoing support as needed

Grief isn't always linear—sometimes, it doesn't set in for months—so postvention efforts don't always have an end point. "Long-term check-ins for those at an elevated risk are an important part of postvention plans," said Helen Hsu, PsyD, director of outreach at Stanford University's Counseling and Psychological Services (CAPS). "Organizations tend to provide all of this support in the first week or month, and then 6 months to a year or more later, someone has finally processed what happened and nothing is being offered." For example, postvention teams may reach out to at-risk students at important milestones, such as the anniversary of the death or graduation. (Suicidal ideation typically occurs for a period before a precipitating event, such as a death anniversary, said Poland.)

Those closest to the death, or students who have experienced trauma because of the death, may need more intensive follow-up. "I had a case where a student found the deceased, so they had a traumatic experience and not just a grief response," said Niznik. "This type of student would need ongoing psychological support, whether that's on campus or a referral to an off-campus clinician."

Planning your own postvention team

The first step to creating a postvention response plan is choosing a framework to follow. Many postvention models exist, and the organizations who created them—such as the Higher Education Mental Health Alliance or the Suicide Prevention Resource Center—offer training materials and tool kits. "Knowing what's available ahead of time, learning about best practices, and coming up with your own crisis response team can help you be prepared if and when a crisis occurs," said Stumpf Patton. Staying abreast of research literature on the topic can also help you stay informed about best practices.

If you want to create your own postvention team and plan, prioritize partnering with a multidisciplinary team. While psychologists' clinical expertise is an asset, partnering with others who have different skills and expertise can ensure better outcomes and prevent burnout. At North Carolina State University, the postvention team has a representative from the counseling center, a director of prevention services from the dean's office, and a dedicated postvention coordinator who handles logistics during the postvention process. "We can concentrate better on what we're trained to do when we work as a team," said Osburn.

Building relationships with students beforehand can encourage better outcomes during a crisis, according to Hsu. "Even though postvention makes therapists available, students need a level of connection or trust before they open up," she said. Consider hosting ongoing mental health awareness outreach events for students and equipping staff with resources and time to build trust with students, particularly those from marginalized communities.

If you work in a clinical setting, you can lend your psychological expertise to postvention teams. Niznik suggests looking for ways to get involved with schools and other campuses—such as providing consulting services or making yourself available for therapy referrals after a campus suicide or other crises.

While any evidence-informed postvention model can offer a helpful framework for handling an unexpected crisis, be open to customizing your plan to your community setting—and pivoting as needed to address needs and reduce further suicide risk. "Your guidelines can guard against risk, but they're not one size fits all," said Michael. ■

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How to Cope When Loved Ones Are in Conflict Zones

Psychologists share advice for people with loved ones living in dangerous regions

BY ZARA ABRAMS

WAR AND VIOLENCE shake everyone's sense of stability. But for the millions of people in the United States with personal ties to countries in the Middle East, Latin America, Africa, Eastern Europe, and beyond, experiencing violence from afar can be a whirlwind of fear for loved ones, anxiety fueled by constant updates, and a sense of powerlessness to help those in need.

"[In these situations], one of the key themes is lack of control. We have absolutely no control personally, so we gain a sense of helplessness," said Fathali Moghaddam, PhD, of Georgetown University, an Iranian psychologist who studies conflict, extremism, and intergroup relations and has family, friends, and colleagues in both Iran and Israel.

That distress can have real consequences for both mental and physical health, especially when people fixate on media coverage of war or other forms of violence. Research shows that frequently watching news coverage of 9/11 was linked to more post-traumatic stress symptoms and physical health problems 3 years later (*PNAS*, Vol. 121, No. 9, 2024).

"It can become a negative downward spiral of media exposure, stress symptoms, and worry about the future that leads to more media exposure, more stress, and more worry," said psychologist Alison Holman, PhD, a professor at the University of California, Irvine (UC Irvine) who co-led the research and has studied collective trauma for more than 30 years. "That's especially problematic when you have people exposed to a series of cascading and compounding events—like an ongoing conflict."

People who have recently immigrated to the United States face added challenges, including coping with trauma that may have happened before, during, or after migration and dealing with policies that can make it difficult to stay connected with loved ones abroad.

Psychologists share insights on how to break the cycle of stress and cope with the trauma of conflict from afar.

AT A GLANCE

- Psychologists emphasize that feeling helpless and overwhelmed is common when loved ones are in danger abroad.
- Immigrants often face compounded trauma, unable to return home for major life events or to support family during crises.
- Discrimination and political tensions can silence those affected, deepening isolation and emotional distress.
- Experts recommend staying socially connected, limiting media intake, and taking small, meaningful actions to regain a sense of control.

War from a distance

Across the United States, those with ties to the Middle East are feeling a complex mix of emotions, said psychologist Dana Rose Garfin, PhD, an associate professor-in-residence at the University of California, Los Angeles, Fielding School of Public Health.

"The way people feel about geopolitics might be very different from genuine concern about their friends and family," she said. For example, some American Jews may disagree with Israeli government policies but worry about the safety of their loved ones in Israel.

Another challenge: Many of those affected already face discrimination and bias, including antisemitism, Islamophobia, and anti-immigrant sentiment, said Karla Vermeulen, PhD, an associate professor of psychology at the State University of New York at New Paltz and expert in disaster mental health.

"That bias is now getting heightened and politicized, and people from these groups may feel afraid to speak out, even if they're experiencing a lot of distress," she said.

In June, immigration enforcement officers arrested Iranian asylum seekers in Los Angeles, while new visa restrictions threatened the fate of international students from Iran. Actions like these create a climate of fear that can reinforce cultural divides, Vermeulen said, especially if people feel they can only seek support from their in-group.



Naqibullah Laghmanai, a 35-year-old Afghan refugee, lives with constant worry and guilt as his family remains in danger. After the U.S. withdrawal and the Taliban's return to power in Afghanistan in 2021, his mother and brothers fled to Pakistan and were weeks from joining him in Houston. Now, shifting immigration policies have left their future uncertain. "I've been dying to get them over here," he told the *Houston Chronicle* in January 2025. Like many, he struggles with helplessness and moral distress from afar.

HOUSTON CHRONICLE/HEARST NEWSPAPERS/GETTY IMAGES

"If you feel you can't communicate your distress, that's only going to harden that conflict between people from different regions or nations," she said.

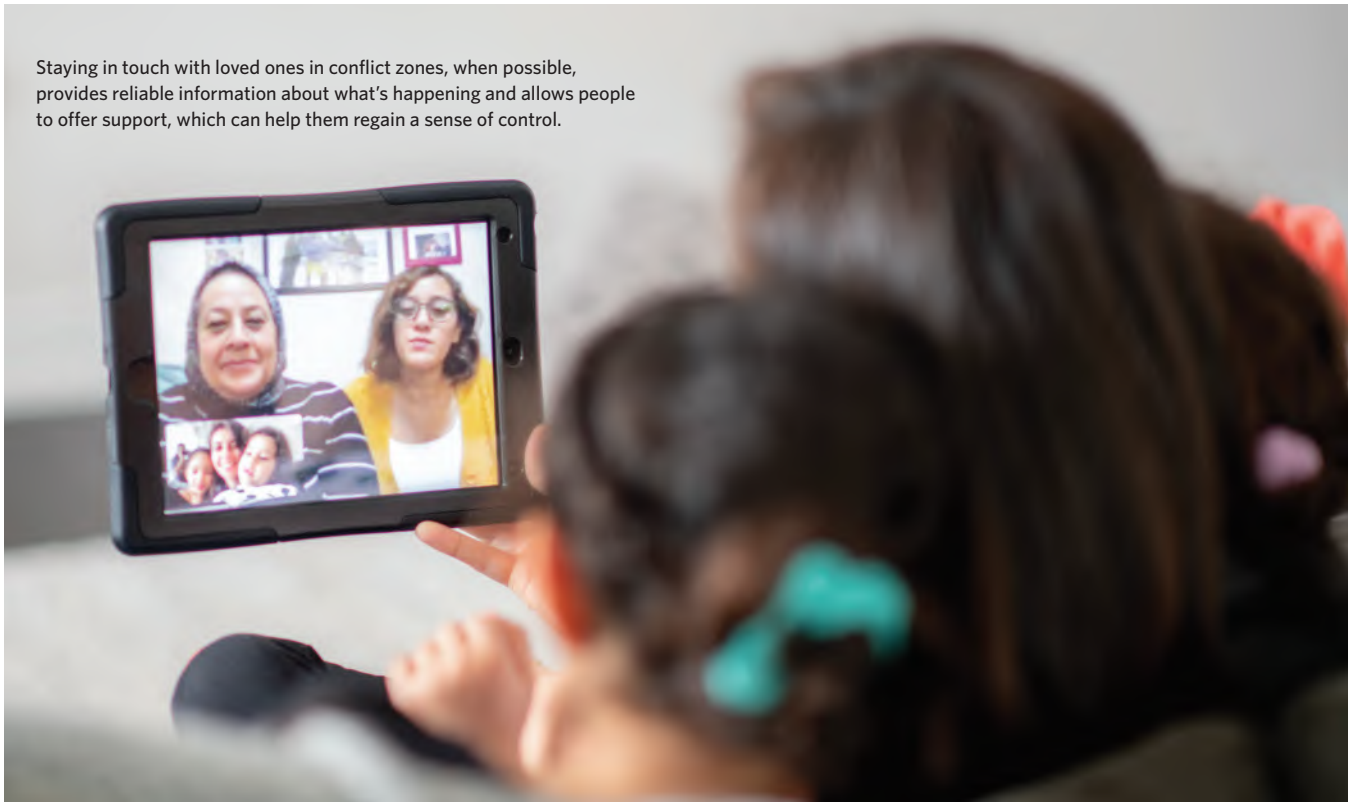
Challenges for immigrants

Difficulties compound for recent immigrants to the United States, particularly those seeking asylum from political, ethnic, or gang violence, said psychologist Carola Suárez-Orozco, PhD, a professor in residence at the Harvard Graduate School of Education and the director of the Immigration Initiative at Harvard.

Those seeking asylum in the United States are generally barred from returning to their home countries while their claims are pending, a process that can take years. Even after obtaining permanent residency, returning can be complicated, especially when violence and turmoil continue back home.

"But mothers get sick, grandparents get sick, people die," said Suárez-Orozco, who studies the effects of migration on child development. "One of the really heartbreaking things is that people can't grieve or say goodbye in the ways they're meant to."

For example, an Iranian research collaborator of hers—who holds lawful status and has lived in the United States for many years—recently lost a parent but was unable to attend the funeral, deeply complicating the mourning process.



Staying in touch with loved ones in conflict zones, when possible, provides reliable information about what's happening and allows people to offer support, which can help them regain a sense of control.

FATCAMERA/GETTY IMAGES

"I've heard a version of this story too many times, that the transitions of life and death can't be attended to in the way that we psychologists know is so important," Suárez-Orozco said.

When violence erupts back home, it can also resurface or amplify the trauma and psychological distress that occurred before, during, or after the migration journey.

Even the decision to leave can feel like giving up or failing, and can carry a sense of shame, said Rosa Bramble Caballero, LCSW, who runs a private psychotherapy practice and a nonprofit in Woodside, New York. She works with immigrants from Venezuela, such as activists, attorneys, and journalists who sought political asylum after being attacked and threatened. But for many, leaving still feels like a personal defeat.

"They left the country for their safety, but still feel like they're failing their people for not staying and continuing to battle, to be in the struggle for freedom of speech and democracy," Caballero said.

The feelings of guilt that arise when a person is forced to act (or is unable to act) in ways that violate their core values are known as moral distress. Over time, those feelings can evolve into moral injury—a deeper, more lasting wound that involves shame, self-blame, and the belief that one no longer deserves peace or happiness. Psychologists have studied the phenomenon among veterans, frontline workers during the COVID-19 pandemic, refugees, and other groups (Nickerson, A., et al., *Psychological Medicine*, Vol. 52, No. 12, 2020).

"Refugees have so many impossible choices to make—to leave or stay, what to take, who to take, and difficult decisions along the journey to safety," said psychologist Sonya Norman, PhD, a professor of psychiatry at the University of California, San Diego, School of Medicine who studies moral injury.

After that journey, "situations where your loved ones remain in danger, and you feel far away and helpless and you're living an easier, safer life—that can also cause significant moral distress," she said.

Tools for staying grounded

For people with loved ones in places affected by mass violence, these overlapping pressures can lead to feelings of isolation, anxiety, and helplessness. But psychology offers tools for staying grounded in these challenging times.

- **Stay connected at home and abroad.** Avoid facing the stress of conflict alone. Connecting with people in your local community who are experiencing the same concerns can create a sense of social cohesion, Garfin said.

When possible, keep in touch with family and friends living in conflict zones. That not only provides reliable information about what's happening on the ground but also lets you offer support to the people you care about.

"Anytime someone gives social support to others, that can feel rewarding and help in regaining a sense of control," Garfin said.

Taking small actions, such as donating money or supplies, can also give a sense of agency when directly helping loved ones is not possible.

• **Maintain some normalcy.** While staying connected to your own cultural community can help, Moghaddam also recommends interacting with people who are not suffering in the same way.

"It's very difficult at first, because you are looking for information about whether your loved one is alive or not, and others are talking about movies or tennis scores," he said. "But it's actually important to get back into normal life and break out of the cycle of constant stress."

At the same time, try to maintain a normal routine: Eat, sleep, and exercise the way you normally would.

Holding onto rituals, such as eating family meals together or attending faith community services, is another way to maintain a sense of normalcy, Caballero said.

• **Be intentional about the media you consume.** Limit the amount, sources, and content of the media you access. Research by Holman, Garfin, and psychologist Roxane Cohen Silver, PhD, of UC Irvine, shows that media exposure following an act of mass violence, especially to graphic content, is linked to new-onset cardiovascular problems and more post-traumatic stress symptoms, such as intrusive thoughts about the event and hypervigilance. After the Boston Marathon bombing, for example, people with high levels of media exposure had even more acute stress than people at the site of the attack (*PNAS*, Vol. 111, No. 1, 2014).

People who identify more closely with the victims of violence are also more likely to be emotionally affected by media exposure, they found.

"It's a balancing act, because people understandably want to know what's really going on," Vermeulen said. "But constantly monitoring the news and viewing graphic images can do more harm than good."

Limit your search for information to one time per day—for example, during your lunch break. Use professional news sources such as *The New York Times*, Al Jazeera, or BBC instead of social media, where content can be unpredictable and unverified. Holman also suggests paying attention to what's happening in your body when you check the news.

"If your heart is racing, your beathing is shallow, and your shoulders are tight, it's time to take a break," she said.

• **Support children through honest dialogue.** Shield children from distressing or constant media coverage, but don't leave them completely in the dark, Suárez-Orozco says.

"There's a sweet spot between keeping silent and not talking exhaustively about what's going on," she said. "But it's important for adults not to pretend like nothing is happening."

Start by managing your own anxiety as best you can—children take emotional cues from the adults around them. Then, talk calmly about the situation in an age-appropriate way. For example: "There's fighting happening in the country where grandma lives, but she's in a safe place now and we're checking on her every day." Be honest but reassuring, emphasizing any actions your family is taking to help or stay connected.

It can also help to have a plan in place for what to do if someone abroad needs support or if the news feels overwhelming, Suárez-Orozco says. For young children, even small rituals such as drawing pictures for relatives can give a sense of agency and connection. Like adults, older children and teens can benefit from taking concrete action, such as making a donation or volunteering to support refugees.

• **Acknowledge your limits.** It's normal for people to feel guilt or moral distress when they can't be physically present to help their loved ones—or because they are in a safe place with food and normal routines while their loved ones endure hardship and instability. It's important to give yourself space to process those difficult feelings, Holman says.

"Have some forgiveness and compassion for yourself," she said. "You can't be there, but you can do what you can from afar." ■

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Talking to kids about the war in Ukraine
Abrams, Z.
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Young Adults Feel Less Comfortable Talking About Mental Health Issues

And more than half of younger adults have withheld information about their mental health compared with only a quarter of older adults

BY TORI DEANGELIS



HALFPOINT IMAGES/GETTY IMAGES

23%

Percentage of younger adults who said they are **not comfortable** talking with others about their mental health, compared with **14%** of those ages **34 and older.**

52%

Percentage of young adults who say they have **withheld information** about their mental health from friends or a health care provider, compared with **42%** of adults ages **35 to 54** and **25%** of those ages **55 and older.**

52%

Percentage of young adults who say they'd be comfortable discussing mental health with an **AI chatbot,** compared with **26%** of older adults. Meanwhile, **30%** of young adults would rather talk about mental health anonymously than with someone they know.

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

6 Questions for Suzanne Bell

Organizational psychologist and her team at NASA are enabling elite teams to thrive in the extreme conditions of space exploration

BY EFUA ANDOH

SUZANNE BELL, PhD, is an organizational psychologist who leads the Behavioral Health and Performance Laboratory at NASA's Johnson Space Center. Her team conducts cutting-edge research that mimics the conditions expected for future space exploration and develops evidence-based interventions and technologies that enable humans to survive and thrive—from the Artemis moon landings to future Mars exploration. Her work focuses on helping crews stay resilient, adaptable, and high performing in extreme environments marked by isolation, communication delays, and high-stress tasks.



Dr. Suzanne Bell sits in front of the Orion capsule training mock-up at Johnson Space Center. Dr. Bell is the principal investigator for Project ARCHeR (Artemis Research for Crew Health and Readiness). She and her team will collect data from astronauts on Artemis II, a mission in which NASA will send astronauts around the moon in the Orion vehicle.

How does your research inform astronaut training for space exploration, both for Artemis and the Mars mission?

For professional astronauts, NASA has a rigorous selection process and high standards for competencies needed to survive and thrive in space. We look at what they'll be doing on the job and the behavioral health and team competencies needed to perform with different mission sets. For example, a 45-day moon mission versus a [much longer] Mars mission brings different stressors and challenges. We prioritize different skills and competencies needed for those circumstances, and whatever isn't covered in selection is augmented with training. Training time for astronauts is always very in demand, and so we want to be as efficient as possible and prioritize what they need to know. We also train at the individual and team levels. Both the Artemis and Mars missions involve extensive teamwork; they survive as a team. When we don't exactly know what the challenges will look like, we use analog research, or research circumstances that are designed to mimic what we expect for future missions, such as our CHAPEA [Crew Health and Performance Exploration Analog] research. For CHAPEA, four-person crews live and work together for 378 days in a Mars resource-restricted environment. For example, we mimic the expected 12-to-22-minute communication delay between the crew and mission control, as well as between the crew and family and friends. The crew has a restricted food supply and completes tasks such as spacewalks similar to what we might expect for Mars. We collect comprehensive human health and performance data pre-mission, in-mission, and post-mission, which will provide an invaluable dataset to help us understand how individuals and teams can thrive in a Mars resource-restricted environment. We look at pressure points and stressors in CHAPEA and other environments and use that to inform training and best position the crews of the future for a successful mission.

PHOTOS BY FELIX SANCHEZ

Which technologies do you find useful or essential in your research on the behavioral health of the astronauts?

We use artificial intelligence and machine learning to identify patterns of behavior in an isolated and confinement environment that can be early indicators that a team is not functioning well. Early detection will allow us to support and strengthen relationships before issues become severe. An interesting finding is that in long-term isolation, teams can become less cohesive, sometimes forming subgroups or isolates. When you're only sending a crew of four to a place like Mars, every person and skill set is important. If team dynamics aren't supportive of information sharing, team problem-solving, and being able to rely on one another for support, it could have detrimental effects with significant consequences.

How do you optimize behavioral health for working and living in confined spaces for long periods?

We optimize behavioral health through vehicle design, astronaut selection, training, and in-mission supports. For example, the psychologists in our Behavioral Health and Performance Operations group provide coaching on behavioral health and performance competencies, feedback on strengths and areas of focus for development, and suggestions for practicing new skills during the astronaut candidate training process. They continue to support developing astronauts' resilience and behavioral health competencies as the astronauts await mission assignments. Living and working in confined spaces is complex, as astronauts have limited privacy. For example, in the Orion capsule, space is so limited that even basic activities require coordination. Astronauts are trained on group living skills, conflict management, relating to others, and debriefing so teams can become stronger over time and meet the evolving challenges of space exploration.

What lessons from your research can be applied to other careers and strengthening teams?

Much of the research we do has application for Earth teams as well. For example, any job where people live and work together, such as professional athletes, oil rig workers, or soldiers, can benefit from our research on group living skills. Some of our most important contributions are methodological, including measures of cognitive performance, innovations in AI, machine learning, and methodologies to better examine small sample data. We use novel methods to study not just individual adaptation but also how people work as a team and respond to each other over time, which is relevant to most jobs and everyday life.

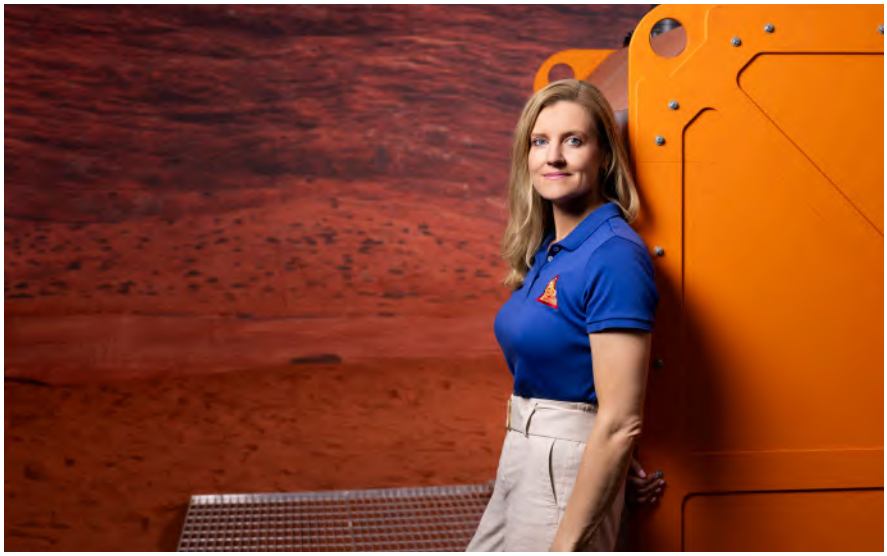
How does your research help astronauts readjust to life back on Earth?

Future missions will be longer and more complex, with significant communication delays affecting relationships with friends and family. Our research explores how to help astronauts and their families' stories evolve together, even with asynchronous communication and a significant communication delay. In our CHAPEA project that simulates Mars conditions, including communication delays, we research reintegration and are using that to develop and inform the supports needed for both crew and families.

What most excites you about the future of your research, and where do you go from here?

I love my job. Much of our work to date has focused on characterizing or understanding individual and team responses to the challenges expected of future space exploration missions. We've made significant progress, so now we're shifting focus to developing training, in-mission monitoring and supports, and other interventions that help individuals and teams perform well under these extreme conditions, including significant communication delays with Earth. It's a really exciting time, because each time we create an intervention or a countermeasure, we're that much closer to being able to create a sustained presence on the moon and landing humans on Mars. ■

Dr. Bell is a co-investigator on the CHAPEA project. In Mission 1, completed in July 2024, a four-person crew lived and worked in a simulated Mars habitat for 378 days.



Understanding State Limits on Professional Speech

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

The U.S. Supreme Court is considering when to regulate professional speech under the First Amendment and whether counseling is "conduct" or "speech"

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

IN *CHILES V. SALAZAR*, THE U.S. SUPREME COURT has agreed to address what therapists may say to their patients—specifically, whether counseling is "conduct" or "speech," and whether counseling is entitled to protection under the First Amendment and the Free Exercise Clause. Kaley Chiles, a Colorado-licensed professional counselor, is challenging a state restriction that bars her from practicing conversion therapy—counseling minors to change their "sexual orientation or gender identity, even if clients have requested wanting to change their behaviors or gender expressions," as stated in her petition. Colorado law prohibits mental health care providers from engaging in conversion therapy with patients younger than age 18, based on "overwhelming evidence that efforts to change a child's sexual orientation or gender identity are unsafe and ineffective."

But Chiles is fighting to continue practicing conversion therapy, calling it freedom of speech rather than conduct, which can be regulated and has no First Amendment protection. She asserts that state governments "do not have a freer hand to regulate speech simply because the speaker is 'licensed' or giving 'specialized advice.'"



AT ISSUE

When can the government restrict what psychologists say to their patients in therapy?

In fact, there's no clear consensus among the circuit courts on First Amendment protections regarding professional speech. Some have held that there is a continuum: At one end of the spectrum, when the therapist is speaking in public, they have all the rights that free speech gives to any other citizen with the strongest protections possible. At the other end, when a professional engages in treatment or professional counseling, this is considered conduct—not expressive speech—and has no protection. In the middle of the continuum, when a professional engages in speech as part of their professional capacity, there may be some, but not full, protection.

In past cases, the U.S. Supreme Court did not agree with the concept of a continuum and has held that there is only speech and conduct. However, in taking up the *Chiles* case, the court noted it implicates a "question of national importance" and "has divided the Courts of Appeals and strikes at the heart of the First Amendment." Some courts have opined counseling conversations are speech, and that speech protections are the same even when someone is speaking in a professional capacity. Other courts have insisted that health professionals must provide treatment, or conduct, consistent with the standard of care as regulated by the government.

How the Supreme Court decides *Chiles* has broad implications for mental health professionals beyond whether the prohibition of conversion therapy for minors is upheld. One area of concern is the potential fallout from *Dobbs v. Jackson Women's Health Organization*, overturning *Roe v. Wade*. Relying on *Dobbs*, Texas does not allow abortions for rape or incest. Therapists who counsel pregnant patients who seek counseling to discuss the trauma caused by such harmful events and whether to end the pregnancy could be liable depending on how professional speech is characterized after *Chiles*.

Chiles will examine the important question of regulation of professional speech and the balance between state regulatory power and free speech rights within professional contexts. State psychological associations working in tandem with APA can provide legislators with evidence-based research as guidance for drafting sound policies and standards of care in therapy. ■



As children with chronic diseases become adults, they must develop the skills to manage their own health needs and navigate a complex health care system—an important transition that can be difficult logistically and emotionally.

CE Corner

New Guidelines for Psychology's Role in Pediatric-to-Adult Health Care Transitions

BY KIRSTEN WEIR

FOUR IN 10 children and adolescents in the United States have a chronic health condition, according to data from the 2023 National Survey of Children's Health. These range from common conditions like asthma to rarer illnesses such as childhood cancer and congenital heart disease. Most of these children will manage these conditions into adulthood and throughout their lives. The transition from pediatric to adult health care, however, can be a tricky time for adolescents and young adults.

As adolescents with chronic diseases become adults, they must develop the skills to manage their own health needs and navigate a complex health care system. The transition can be difficult logistically and emotionally, both for young adult patients and family members who have, until that point, been largely responsible for their child's health and safety. "It is a significant cultural shift that involves changing relationships, beliefs, expectations, knowledge, and skills," said Siddika Mulchan, PsyD, a pediatric psychologist at the University of Connecticut School of Medicine and Connecticut Children's who works with children with cancer and blood disorders, including sickle cell anemia.

As a cochair of the APA Div. 54 (Society of Pediatric Psychology) Adolescent and Young Adult Transition Taskforce, Mulchan and her colleagues developed APA's new *Guidelines for Psychology's Role in Pediatric to Adult Health Care Transition*. The guidelines detail how psychologists can make those shifts safer and more successful for patients, families, and providers.

Young people with chronic illnesses often receive multidisciplinary care, with professionals including nurses, social workers, and various medical specialists each playing a part in facilitating the shift to adult care. Often, there are opportunities for psychologists to play larger roles in supporting patients, caregivers, and other providers through the transition process, said Lisa Schwartz, PhD, a clinical psychologist at Children's Hospital of Philadelphia and the Perelman School of Medicine at the University of Pennsylvania, and one of the three cochairs of the Adolescent and Young Adult Transition Taskforce. Indeed, psychologists' unique skill sets make them a natural fit for that role. "Successful health care transition is not just about making sure patients have the skills and knowledge [to manage their medical conditions]. It is also building intrinsic motivation, aligning priorities and expectations, and improving communication between patients, parents, caregivers, and providers," she said. "There is a huge role for behavioral science in these transitions."

On the threshold

After years of having their health needs managed by parents or other caregivers, young adults with chronic conditions are tasked with a host of new responsibilities, from finding new doctors and acquiring health insurance to behaviors

CE CREDITS: 1

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

1. Describe the challenges young adult patients face when transitioning from pediatric care to adult health care.
2. Discuss the features of successful health care transitions and the potential risks associated with a less successful transition process.
3. Describe the roles that psychologists can play in facilitating the successful transition to adult care.

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

MEDIAPHOTOS/GETTY IMAGES

like monitoring blood sugar and maintaining medication regimens. That presents a sharp increase in responsibility in an already challenging time, Mulchan said. "The period of adolescence and young adulthood is so stressful and fraught, with a lot of change," she said. "It is a difficult time to also be undergoing a change in your health care team."

Pediatric care also has its own culture that is vastly different from adult care, Mulchan added. Pediatric providers tend to be more flexible with appointments and spend more time with patients. A warm, patient-centered approach is usually the norm; indeed, for many patients and their families, pediatric care providers come to feel like family. Against that backdrop, engaging with unfamiliar providers can be emotionally draining. And while they are leaving that trusted care team behind, young adults are also gaining more independence and taking more responsibility for their own health decisions. In a best-case scenario, young adult patients maintain continuity of care through that shift and settle into a new routine. "When transition is a success, patients are showing up to adult care appointments, asking questions of their providers, following medical regimens autonomously, and are engaged in their care," Mulchan said. "They have a sense that they have transitioned into a new medical home."

When the transition does not go so smoothly, however, the consequences can be dire. The transitional period has been linked to increased complications from conditions such as spina bifida and lupus, for instance. Among people with sickle cell disease, mortality rates are highest between the ages of 19 and 24 (Cassidy, M., et al., *BMJ Open*, Vol. 12, No. 12, 2022). Similar difficulties can occur across health conditions, from Type 1 diabetes to cystic fibrosis to congenital heart disease. "Without the hand-holding of the pediatric support system, without care being driven by parents, it is a cliff that people often fall off," Schwartz said.

A structured planning process can reduce the risks of transition and improve health outcomes for young adults with medical conditions. However, research suggests that most youth and young adults with special health care needs do not receive the support they need to transition successfully (White, P. H., et al., *Pediatrics*, Vol. 142, No. 5, 2018). "Youth with chronic medical conditions often have brief conversations, or sometimes no conversations, with any provider about the transition process," said Frances Cooke, a clinical psychology graduate student at Catholic University in Washington, D.C., who is training to work with youth with chronic medical conditions and also a cochair of the guidelines task force.

Organizations such as the American Academy of Pediatrics and the American Academy of Family Physicians have also developed professional practice standards to improve health care transitions and health outcomes for young adult patients. "However, those guidelines don't always emphasize the need for psychologists to play a role," said Paul Kettlewell, PhD, a retired pediatric psychologist and a member of the APA Committee on Professional Practice and Standards, which reviewed the new guidelines. "Psychologists should be central to this process," he added.

To address that need, the Adolescent and Young Adult Transition Taskforce and Div. 54 developed APA's new guidelines in consultation with Got Transition, a federally funded national resource center on transitioning from pediatric to adult health care. The center had previously created an evidence-based framework to help physicians facilitate the shift to adult care (White, P., et al., *Six Core Elements of Health Care Transition™ 3.0*, Got Transition, 2020). APA's new guidelines were designed to complement such resources by providing best practices for psychologists, particularly those working in hospital settings who may encounter youth with health conditions.

"The fact is, psychologists have been engaging in this work for a long time, spearheading a lot of the research and clinical work in health care transition," Mulchan said. Having professional practice guidelines in hand offers best practices to enable them to do that work even more effectively.

KEY POINTS

1. Forty percent of youth receive care for a chronic health condition, such as asthma, sickle cell disease, heart problems, or Type 1 diabetes. For many, health outcomes suffer during the transition from pediatric to adult care.
2. APA's *Guidelines for Psychology's Role in Pediatric to Adult Health Care Transition* detail psychologists' roles in facilitating the transfer to adult care.
3. Successful transition involves structured planning, tracking progress toward skill development, intervening as needed, and assessing success after transfer.
4. Members of the health care transition team should pay attention to cultural and family contexts and barriers such as health literacy, insurance coverage, and access to quality care.

Planning ahead

Careful planning is critical for a smooth transition from pediatric to adult health care, the guidelines emphasize. "If transition is an afterthought, it is very unlikely to be successful," Mulchan noted. Accordingly, several items in the new guidelines emphasize this planning process. The first step is often helping families understand that transition is both necessary and beneficial. "Pediatric providers are not trained to care for adult bodies and adult needs. For patients to get the best quality care, they need adult providers," she added. "It can be really helpful to frame this as a positive for patients and families."

Beginning well in advance of the transition, psychologists can work with families and medical teams to develop a transition statement or guide. That guide can serve as a personalized road map from the planning stages through the completed transfer to adult care. In addition to discussions of medical interventions and goals of care, such guides can highlight specific skills and milestones to work toward during the transitional period, in areas such as social support, psychological functioning, family functioning, social drivers of health, beliefs about self-care, and a patient's level of self-efficacy in disease management.

Transition guides differ from person to person, depending on a person's medical needs and their personal goals, values, and cultural preferences. To help families create that road map, psychologists can engage patients and their families in conversation to understand how they define a "successful" transition, Cooke said. "There is no one behavior or benchmark that will look the same for every patient," she added.

The guidelines also describe the role psychologists can play in facilitating communication between patients, families, and care teams—including both pediatric and adult providers—as they work together to develop a transition statement. Psychologists can act as a communication liaison to help everyone speak the same language and work toward the same goals.

The APA guidelines emphasize that careful planning is critical for a smooth transition from pediatric to adult health care. A crucial step is helping families understand that transition is both necessary and beneficial.



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The sticking points

Health care transition is a gradual process that can take several years, experts say. Ideally, adolescents have time to mature and practice the skills necessary to manage their health and medical care. Such abilities are wide ranging, including intellectual and executive functioning skills as well as disease-specific behaviors such as checking blood sugar levels or following medically tailored diet plans. The guidelines describe the role that psychologists can play to assess whether patients are ready and provide extra support when they need to work on their skills. "Two of the things our field does really well are assessment and intervention development," Schwartz said. "As psychologists, we can be involved in setting up an infrastructure and standardized protocol to assess readiness for transition over time, then using that assessment to identify targets for intervention."

Schwartz and her colleagues developed a framework to support this work, the Social-Ecological Model of Adolescent and Young Adult Readiness for Transition (SMART) framework, which they validated in a group of adolescent and young adult survivors of childhood cancer (*JAMA Pediatrics*, Vol. 167, No. 10, 2013). The model considers preexisting factors, such as medical status, insurance access, and sociodemographic factors, as well as more modifiable elements such as self-efficacy, expectations, emotions, and knowledge. More recently, the researchers updated the model to include additional factors to improve health equity and validated the model in a population of adolescents and young adults with sickle cell disease (*JAMA Pediatrics*, Vol. 178, No. 3, 2024). The model can be a guiding framework for assessing transition readiness,

After years of having their health needs managed by parents or other caregivers, emerging adults with chronic conditions are tasked with a host of new responsibilities, such as monitoring their blood sugar and maintaining medication regimens.



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especially among youth who are experiencing health disparities.

While SMART offers one framework, there is no one right way to measure transition readiness, Schwartz said. Different health systems and even different departments within a single hospital may have their own protocols for measuring readiness and intervening where needed. What is important, she added, is having a clear system in place to pinpoint and modify factors that interfere with successful transitions.

One patient, for instance, might not have the know-how to manage their medical care yet. Another might know what they need to do but struggle with high anxiety about leaving their pediatric providers behind. For others, the problem might be that they are butting heads with their parents because of differing expectations around moving to adult medical care. In each case, psychologists can determine the sticking points in need of extra attention. "Once we identify those targets, we can facilitate the necessary interventions and also serve as a liaison between the family and the medical team to share concerns about any targets in need of intervention," Schwartz said.

Smooth transitions

There's no perfect age for transitioning to adult care, experts say. For some patients, the shift may come in the late teens. Others may not be ready until their early 20s. Psychologists can help families identify when the time is right to cross the bridge to adult care, then support them on their way. The guidelines describe ways that psychologists can aid in the transfer process—by addressing patient concerns, engaging families in shared health care decision-making, and facilitating coordination between pediatric and adult providers. "It can be really challenging to make the transition when a child has a strong relationship with their pediatric providers. And it can feel really challenging to communicate years of knowledge and complex medical information to someone new," Cooke said.

Psychologists can help with a warm handoff, consulting with and educating adult providers to help them better understand the patient's pediatric experience to improve the continuity of care. They can also work with patients to support their health and health care behaviors and address mental health challenges such as anxiety or depression that arise. When a patient's self-management skills are still developing, a psychologist might even advocate for delaying transfer to adult care for a set period while they take active steps to improve those skills.

Throughout these activities, members of the transition team should pay careful attention to cultural and social contexts and barriers, Cooke said. The ideal degree to which parents are involved in the care of their young adult child, for instance, could vary significantly from culture to culture and family to family. And some patients may face health care barriers that make the transition process uniquely challenging. Factors such as health literacy, transportation access, insurance coverage, and access to quality health care can all affect transition outcomes (McKenzie, R. B., et al., *Population Health Management*, Vol. 22, No. 1, 2019). "The new guidelines outline the ideal best practices—but a family will not be able to benefit from those best practices if they are experiencing barriers within the health care system," Cooke noted.

Psychologists can help identify and address the risks and identify areas of resilience. For a patient facing challenges with health literacy, for instance, strong family support can help bridge any gaps in understanding. Psychology professionals can also help address health care inequities in their institutions, according to the task force members. "We can help to combat stigma and bias through things like the use of inclusive language—with families and in institutional communications—and addressing institutional policies that may contribute to health care inequities," Cooke said.

The guidelines recommend psychologists gather feedback on the transition process from patients, families, and providers once young patients have moved into their adult "medical home" to ensure that any barriers are addressed and eventually aid other families going through this process, Mulchan said.

"We have done so much from the medical side of things to ensure these children survive to adulthood," Mulchan added. "We shouldn't neglect all the things we need to do from a psychosocial standpoint to help these patients have the skills, the knowledge, and the readiness to effectively continue managing their health." ■

FURTHER READING

Six core elements of health care transition™ 3.0
White, P., et al.
Got Transition, The National Alliance to Advance Adolescent Health, 2020

Improving the transition from pediatric to adult healthcare: A scoping review on the recommendations of young adults with lived experience
Cassidy, M., et al.
BMJ Open, 2022

Supporting the health care transition from adolescence to adulthood in the medical home
White, P. H., et al.
Pediatrics, 2018



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HOW DOGS THINK

The growing field of dog cognition explores what makes the human-canine bond so special

BY ZARA ABRAMS

THE COMPANIONSHIP OF DOGS has added meaning to human lives for thousands of years. Amid declining birth rates and a weakening of traditional support systems, that bond may now be more important than ever.

"Dogs are increasingly stepping into this emotional and relational gap, not merely as pets, but as surrogate children or primary companions," said Enikő Kubinyi, PhD, a professor and head of ethology (the study of animal behavior) at Eötvös Loránd University (ELTE) in Budapest, Hungary (*Current Directions in Psychological Science*, online first publication, 2025).

Research led by Kubinyi shows that dog-human relationships combine the upsides of best friend relationships and parent-child bonds, making them more supportive and positive than most relationships between humans (*Scientific Reports*, Vol. 15, 2025).

"Clearly, there's something remarkable and unique about how dogs live with people. What is the underlying process that makes this relationship so special? How do people and dogs fall in love with each other?" said Clive Wynne, PhD, a professor of psychology at Arizona State University who studies the behavior of dogs.

Answering those questions, and understanding how to optimize the relationship between dogs and humans, is at the heart of the growing field of dog cognition. On top of studying how dogs understand human gestures and language, psychologists and others are exploring dogs' powerful sense of smell, how they choose which humans to cooperate with, and even what their memories are made of. Researchers are also using magnetic resonance imaging (MRI) and electroencephalography (EEG) to peer inside the minds of dogs, as well as collecting brain tissue and genetic data to understand aging and disease.

Studying the unique relationship between dogs and humans may even offer insights about how social and cognitive abilities evolved in humans.

"Dogs are special because they were the first domesticated animal. Looking at their brains is almost like looking back in time," said Gregory S. Berns, MD, PhD, a professor of psychology and distinguished professor of neuroeconomics at Emory University. "We hope this can offer clues about how they came to not only coexist but to thrive with humans."

AT A GLANCE

- Psychologists are probing the unique relationship between dogs and humans to learn how social and cognitive skills evolve.
- Brain scanning and other techniques are revealing how memory, language, and aging function in dogs.
- Large-scale studies of dog rearing suggest how to optimize training and maintain positive bonds between dogs and humans.

A new look at dogs

Decades ago, dogs caught the interest of comparative psychologists after studies showed they could outperform apes on certain tasks. While apes could better use logic to find hidden food, dogs gained more from social and communicative cues, such as an experimenter pointing to the location of food (Bräuer, J., et al., *Journal of Comparative Psychology*, Vol. 120, No. 1, 2006; Hare, B., & Tomasello, M., *Journal of Comparative Psychology*, Vol. 113, No. 2, 1999). Early research on dog domestication led by Brian Hare, PhD, a professor of evolutionary anthropology and psychology and neuroscience at Duke University, also sparked interest in the humanlike social cognitive skills of dogs (*Science*, Vol. 298, No. 5598, 2002; *Trends in Cognitive Sciences*, Vol. 9, No. 9, 2005). Since then, peer-reviewed publications in the field have surged (Aria, M., et al., *Animal Cognition*, Vol. 24, No. 3, 2021).

Initial efforts were met with some resistance. Many believed dogs operated solely on Pavlovian conditioning and were not worth studying. But pioneers such as Ádám Miklósi, PhD, who leads research on dog cognition at ELTE, began to uncover dogs' unique social abilities—helping the subject gain scientific credibility.

Now, the highly collaborative field uses a clever suite of methods to explore the inner lives of dogs. In the lab, short problem-solving games allow researchers to quickly collect data from their subjects, which are

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Research shows dog-human relationships combine the emotional depth of parent-child bonds with the supportiveness of close friendships, offering unique psychological benefits—especially as dogs increasingly serve as primary companions in modern life.

typically volunteer pet dogs or service dogs in training.

"I often describe this type of research as a theatrical production for dogs," said Zachary Silver, PhD, an assistant professor of psychology at Occidental College in Los Angeles. With a dog on one side of the room, humans on the other side interact, hide food, or perform other actions, while researchers observe how the dog responds.

Because pet dogs are so common, researchers increasingly rely on citizen science. Thousands of pet owners conduct simple experiments at home, adding further richness to the data on dog behavior.

"It's an interesting research culture where studies don't just happen quietly in a lab, but people can watch and participate directly," said Evan MacLean, PhD, an associate professor of veterinary medicine and founder of the Arizona Canine Cognition Center at the University of Arizona.

Large-scale international research collaborations such as the ManyDogs project—an international consortium of researchers working in canine science—are also pooling data from labs around the world to answer the field's most pressing questions, including why dogs follow the human pointing gesture.

The research boom has also offered the chance to reexamine some assumptions baked into the field. For example, virtually every early study of dog cognition used visual stimuli, with less than 2% focused on olfaction (*Animal Cognition*, Vol. 23, No. 1, 2020). That comes down to a human bias toward examining the world with our strongest sense, said cognitive scientist Alexandra Horowitz, PhD, who runs the Horowitz Dog Cognition Lab at Barnard College, but it has long limited our understanding of how dogs think.

Horowitz has adapted visual techniques used with infants and other animals to study the sense of smell in dogs. For example, the mirror test checks for self-recognition in animals:

While anesthetized, an animal is marked—typically on the forehead—then given access to a mirror when awake. If the animal investigates the mark, that is seen as a form of self-recognition. Horowitz designed an olfactory version of the test, which found that dogs can distinguish their own odor from that of other dogs and notice when their odor has been modified (*Behavioural Processes*, Vol. 143, 2017).

She also studied the full body "shake" behavior—the motion dogs use to shake off water. Horowitz found that it typically preceded a change in behavior, such as when two dogs walk away and stop interacting (*Animals*, Vol. 14, No. 22, 2024). Other research has delved into the head-tilt, finding that it happens when dogs process meaningful external cues, such as the name of a toy they know (Sommese, A., et al., *Animal Cognition*, Vol. 25, No. 3, 2022).

"The fact that straightforward behaviors like 'shake' and 'head-tilt' aren't well understood means we may have gotten ahead of ourselves with dog cognition work and forgotten to ask what some basic things really mean," Horowitz said.



Longitudinal studies of puppies show that early socialization and simple games can significantly enhance a dog's ability to learn, bond, and adapt to human environments.

The nature of dog intelligence

What adaptations in dogs allow them to fit so well into human society? Researchers disagree. Wynne and others argue that dogs succeed around people because of their capacity to form strong emotional bonds with members of other species—and that their intelligence stems from a strong ability to make mental associations (e.g., between words and objects). From this perspective, many dog behaviors can be seen as conditioned responses. Others say dogs have evolved a more sophisticated form of social intelligence—one that parallels that of humans.

The simple question of why dogs follow the human pointing gesture aims to tease out the underlying process. Do dogs understand that pointing conveys meaning—or are they simply conditioned to follow a finger? The first major study from the ManyDogs consortium found that dogs did not respond differently to pointing alone versus pointing plus social cues, including eye contact and calling of the dog's name. That finding appears to support a conditioning-based view of dog behavior over a social cognitive one (Espinosa, J., et al., *Animal Behavior and Cognition*, Vol. 10, No. 3, 2023).

Another key question at the heart of the dog cognition debate: How do dogs process human language? All dogs can learn some words and some highly gifted dogs can learn hundreds of words (Kaminski, J., et al., *Science*, Vol. 304, No. 5677, 2004). But are dogs really forming mental representations of an object or action—or are they just very skilled at making associations?

An EEG study from the ELTE group found that dogs may indeed form mental representations of what words mean. Using a "semantic violation paradigm," researchers spoke a word that dogs were trained to know (such as "ball") while showing them an object. Sometimes, the object matched the word; other times, they were mismatched. In humans, the mismatch (and resulting realization that the word and object don't belong together) triggers a distinct electrical response in the frontal lobe known as the N400 effect. In the 2024 study, dogs showed a comparable EEG response (Boros, M., et al., *Current Biology*, Vol. 34, No. 8, 2024).

"These findings suggest that upon hearing these words, dogs activate corresponding mental representations, indicating a capacity for referential understanding," Kubinyi said.

Other studies have found parallels between dog and human brains, offering some of the first evidence of such similarities beyond primates. Berns found an area linked to facial processing in the canine temporal lobe (*PeerJ Life & Environment*, Vol. 3, 2015). Claudia Fugazza, PhD, an ethology researcher



Studies reveal that dogs excel at interpreting human gestures and emotions, often outperforming primates in social tasks. This suggests dogs have evolved specialized skills for living closely with humans.

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at ELTE, found evidence of episodic-like memory in dogs. She and her colleagues first trained dogs to repeat actions on command (using the cue "Repeat!"), then tested whether dogs could remember and repeat spontaneous actions they had performed earlier. When given the "Repeat!" command, even up to an hour after performing a spontaneous action, dogs recalled and reproduced those behaviors. This suggests that their memory involves recalling past experiences rather than simply linking commands to specific actions (*Scientific Reports*, Vol. 10, 2020).

Researchers are also further investigating why some "gifted dogs" have cognitive abilities that far surpass their peers. Researchers at ELTE have proposed a canine "g factor," a score that represents a dog's cognitive abilities and varies between individuals and over the life span. A series of seven tasks, measured with 129 pet dogs and longitudinally with a smaller subset, revealed individual differences in problem-solving and learning abilities (Bognár, Z., et al., *GeroScience*, Vol. 46, No., 6, 2024).

Those findings point to important parallels between dog and human intelligence, Kubinyi said, and suggest that dogs may be a valuable model for research on cognitive aging in humans.

How dogs connect

While some research aims to pin down the fundamentals of dog behavior and cognition, other studies are exploring the nuances of their interactions with humans. We know that dogs can reduce emotional distress, increase life satisfaction, and even help treat post-traumatic stress disorder (Matijczak, A., et al., *Emotion*, Vol. 24, No. 2, 2024; Gmeiner, M. W., & Gschwandtner, A., *Social Indicators Research*, 2025; Leighton, S. C., et al., *JAMA Network Open*, Vol. 7, No. 6, 2024). But how does the special relationship between dogs and humans unfold—and what can humans do to improve it?

Silver is investigating how dogs read human social cues to decide who to cooperate with. In one study, dogs watched an experimenter interact with two other humans: a helper and a non-helper. When the experimenter reached for a clipboard just out of reach, the helper always handed them the clipboard; the non-helper always moved the clipboard further away. Dogs quickly developed a preference for the helper (*Animal Cognition*, Vol. 24, No. 1, 2021).

"It only takes a few occurrences before dogs develop a pretty substantial preference for the prosocial person," Silver said.

Dogs also have a knack for adapting to human behavior and emotions. Research has shown that dogs synchronize their behavior with both children and adults and that they produce significantly more facial movements when a human is paying attention to them (Wanser, S. H., et al., *Animal Cognition*, Vol. 24, Vol. 4, 2021; Kaminski, J., et al., *Scientific Reports*, Vol. 7, 2017). When dogs and children interact, oxytocin levels rise in both parties (Gnanadesikan, G. E., et al., *Psychoneuroendocrinology*, Vol. 169, 2024).

Other research seeks to understand how dogs respond to human stress. Jeff Stevens, PhD, the Susan J. Rosowski Professor of Psychology and head of the Canine Cognition and Interaction Lab at the University of Nebraska–Lincoln,



Large-scale projects like the Dog Aging Project are linking genetics to behavior and cognitive aging in dogs, with potential applications for improving both canine welfare and human neurological research.

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is observing whether dogs act differently around odors collected from humans before and after a stress task.

"In the past, dogs probably did better if they avoided stressed-out humans," Stevens said. "Have they now evolved to respond to human signals that are relevant to them?"

For example, do dogs spend time near stress odors or show stress-related behaviors (such as licking their lips or soliciting attention from their owners)? Stevens and his team are now analyzing video they collected from 73 dogs.

Humans, on the other hand, may be worse at reading dogs' emotions than we think. Wynne and his doctoral student, Holly Molinaro, recorded videos of Molinaro's father interacting with their family dog. In some videos, he triggered a "happy" reaction by offering a treat; in other videos, he triggered an "unhappy" reaction by offering a cat. When participants viewed the original videos, they correctly predicted the dog's emotional state. But when Molinaro recut the videos so the dog's reaction no longer matched the original trigger, participants still rated the dog's emotion based on the trigger they saw. That suggested their answers relied more on context than on the dog's actual behavior (*Anthrozoös*, Vol. 38, No. 2, 2025).

"There's a cautionary tale here," Wynne said. "We have these powerful intuitions that we know how our dogs are feeling, and yet the evidence suggests that people are actually really bad at this."

The science of dog training

Researchers are also studying dog training methods, both as a way to strengthen the human-dog bond and to gain further insights about how dogs learn.

A large-scale developmental study with service dog puppies, led by Hare, helps home in on what makes training effective. Hare and his colleagues tracked the development of more than 100 puppies over a 7-year period, including their cognitive skills between 8 and 20 weeks of age. They compared dogs reared in a "super-enriched environment" (family homes) with those reared in an "extreme-enriched environment" (Duke's campus, where dogs interacted with thousands of students).

Hare found that these two rearing environments did not impact dogs' memory, self-control, communication, or cognitive abilities differently. The research also showed that basic abilities, such as paying attention to human gestures, develop around week 8 of a dog's life. Self-control, including skills needed for house training, develops between weeks 12 and 14. That has an important implication for dog welfare, Hare said: If a dog barks at night before 14 weeks of age, let it out to do its business.

The research, published in *Puppy Kindergarten: The New Science of Raising a Great Dog*, also found that playing a simple game with puppies helps them develop a skill critical to effective training and a healthy dog-human relationship: eye

contact. First, show a puppy it can get food from a box and allow it to succeed a few times. Then, lock the box. After unsuccessful attempts to open the box, most dogs eventually stop, look up, and make eye contact to ask for help.

"Dogs who repeatedly played this game, which takes about 5 minutes, made twice as much eye contact at 20 weeks of age than dogs who had not played the game," Hare said.

In her research, Horowitz also found that playing "nose work" games (scavenger hunts that rely on smell) with pet dogs increased their positive judgment bias, a proxy for optimism in dogs (*Applied Animal Behaviour Science*, Vol. 211, 2019).

"Sniffing scavenger hunts are an easy thing you can add to a dog's life, which is enriching for them—and maybe also for you," Horowitz said.

New tools for research

New approaches are allowing researchers to start pinpointing what genetic differences underlie cognitive and behavioral differences between dogs. MacLean partnered with Canine Companions, a nonprofit service dog provider that keeps detailed family trees, allowing researchers to know the exact genetic relationships between dogs. Their first study indicated that about 40% of the variation in some puppy social skills, including eye contact with people and point-following tendencies, could be explained by genetics (*Current Biology*, Vol. 31, No. 14, 2021).

MacLean is also part of the Dog Aging Project, which is studying cognitive aging in 50,000 dogs across the United States with the hope that it can improve life for senior dogs and also offer clues on treating Alzheimer's disease in humans. At ELTE, the Canine Brain and Tissue Bank is also supporting research on neurodegeneration, as well as on how the gut microbiome influences cognition and behavior.

"New brain imaging and genetic tools are letting researchers explore how dogs think and feel in ways that weren't possible before," Kubinyi said. "We have only begun to understand the complexity of the canine mind and the human-canine bond." ■

TEACHING CONNECTIONS

LESSONS FROM THE CANINE MIND

The following prompts (organized by topic) can support high school and undergraduate educators in exploring dog cognition and the human–canine bond in psychology courses.

1 Motivation and Emotion

Dogs often form strong emotional bonds with humans and show signs of empathy and stress detection. How might classical and operant conditioning explain dogs' emotional responses to human behavior?

Reinforces: Conditioning, emotional learning, and animal behavior

2 Personality

Some dogs show advanced social skills or cognitive abilities. How might the Big Five or other personality frameworks apply to individual differences in dogs? Can dogs have "personalities" in a psychological sense?

Reinforces: Trait theory, comparative psychology, and personality assessment

3 Social Psychology

Dogs prefer humans who act helpfully toward others. How does this reflect social learning or in-group preference? What parallels exist between human and canine social cognition?

Reinforces: Social learning theory, prosocial behavior, and in-group bias

4 Learning

The "courage ladder" in humans mirrors how dogs are trained through gradual exposure and reinforcement. Compare dog training methods to exposure therapy or shaping in behaviorism.

Reinforces: Learning theory, desensitization, and reinforcement schedules

5 Research Methods

Evaluate one study from the article (e.g., EEG studies of word recognition or the ManyDogs project). What methods were used? How were variables operationalized? What are the strengths and limitations?

Reinforces: Experimental design, operational definitions, and cross-species research

FURTHER READING

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Berns, G.
Cerebrum, 2020

Context specificity of inhibitory control in dogs
Bray, E. E., et al.
Animal Cognition, 2013

Our dogs, ourselves: The story of a singular bond
Horowitz, A.
Scribner, 2020

Dog is love: Why and how your dog loves you
Wynne, C.
Houghton Mifflin Harcourt, 2019

Puppy kindergarten: The new science of raising a great dog
Hare, B., & Woods, V.
Random House, 2024



Technology Is Transforming Youth Friendships



Psychologists are helping young people balance healthy and meaningful connections against a fast-moving technology landscape

BY EFUA ANDOH

Most youth friendships today span both digital and physical spaces, rendering the distinction between "online" and "offline" friendships increasingly obsolete. Nearly all U.S. teens (95%) ages 13 to 17 have access to a smartphone, nearly half (47%) report they are constantly online, and 85% play video games, according to the Pew Research Center. Artificial intelligence (AI) has opened a perplexing new frontier in modern friendship, with many teens turning to AI chatbots for academic help, entertainment, and even emotional support with few boundaries and protections. As digital technology evolves, psychologists are working to understand how it shapes youth's social bonds and how to maintain meaningful and healthy friendships.



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Friendships as foundational to well-being

Research shows that friendships and social support have long-term benefits for emotional wellness, health, and longevity (Cené, C. W., et al., *Journal of the American Heart Association*, Vol. 11, No. 16, 2022; Kim, E. S., et al., *Epidemiology and Psychiatric Sciences*, Vol. 32, 2023). Our first relationships as children may be with our parents and immediate family members; however, as we progress through early childhood, connections with peers rise in importance.

"Friendships are fascinating developmentally because they are how children start to discover who they are beyond their family of origin," said Eileen Kennedy-Moore, PhD, a clinical psychologist and creator of the *Kids Ask Dr. Friendtastic* podcast. "We know from correlational research that when children have even one reciprocal friend, they feel happier, cope with stress better, and have better self-esteem. They are less likely to be bullied, and they feel more engaged with school."

Adolescence is considered a second sensitive period for sociocultural processing. "It is a time when kids' brains are uniquely positioned to learn what is expected, normative, and valued in their social and cultural systems. Kids' brains are wired toward friendships, peer networks, peer status, and approval," said Anne Maheux, PhD, an assistant professor of psychology and director of the Social Environments and Adolescence Lab at the University of North Carolina at Chapel Hill.

Neuroscience shows that when teens do enjoyable activities with friends or make generous choices in favor of them, their brains' reward centers light up (Güroğlu, B., *Child Development Perspectives*, Vol. 16, No. 2, 2022). Getting positive feedback from peers also activates brain areas related to social understanding and empathy (Flores, L. E., et al., *Cognitive, Affective, and Behavioral Neuroscience*, Vol. 18, 2018). Adolescence is a training ground for crucial lifelong social competencies and close adolescent friendships are a stronger predictor of future peer and romantic outcomes, workplace performance, and depressive symptoms than the parent-teen relationship (Allen, J. P., et al., *Child Development*, Vol. 93, No. 3, 2022).

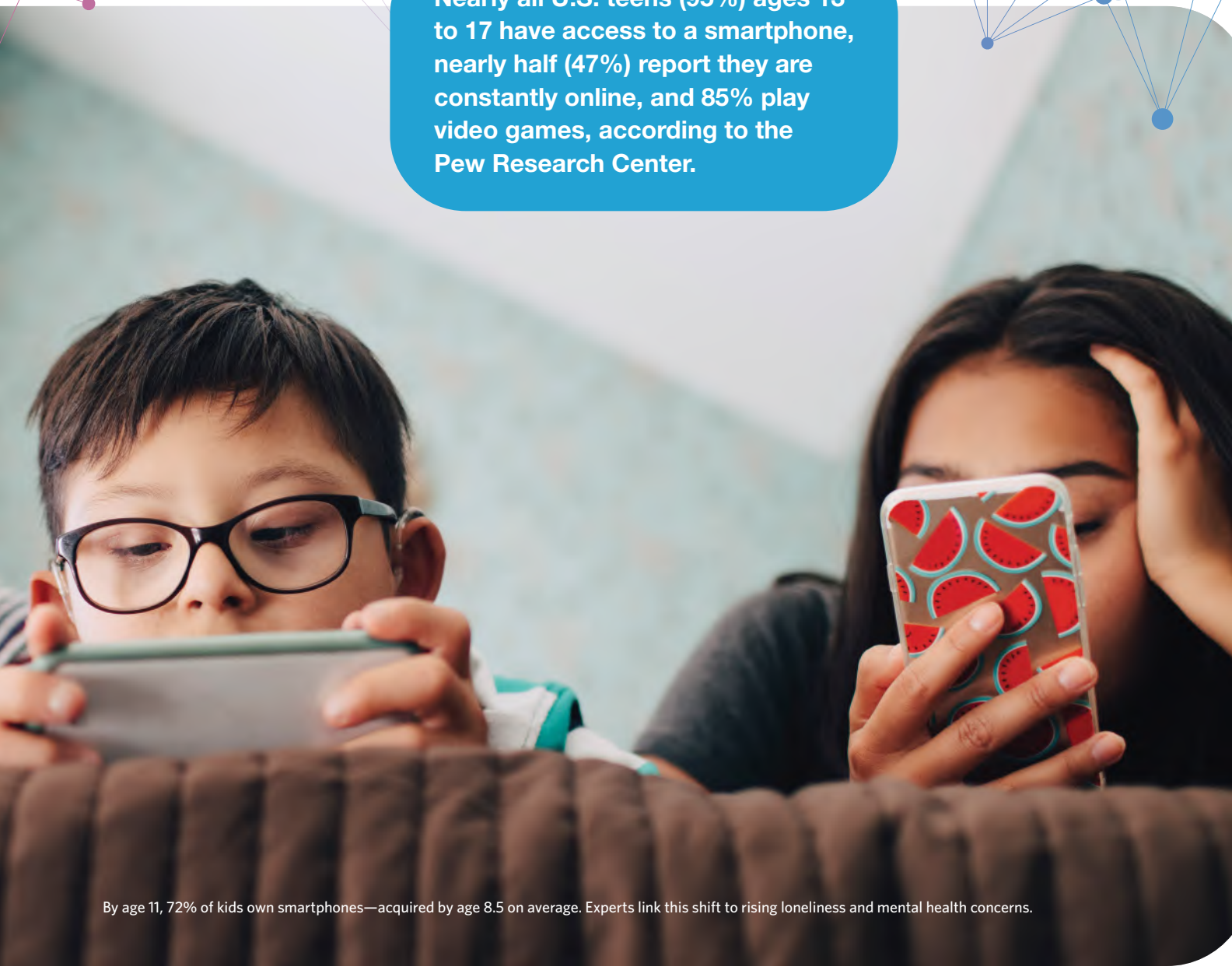
AT A GLANCE

- Nearly all U.S. teens (95%) have smartphones, with new data showing the average child gets their own smartphone by age 8.5.
- Psychologists across the discipline are studying how digital technology positively and negatively affects kids' and teens' friendships.
- Psychologists are developing strategies to help youth balance online and offline interactions in a way that fosters healthy friendships.

From face time to screen time

Generations Z and Alpha are "digital natives" growing up surrounded by technology. About half (49%) of Gen Alpha kids receive tablets from their

Nearly all U.S. teens (95%) ages 13 to 17 have access to a smartphone, nearly half (47%) report they are constantly online, and 85% play video games, according to the Pew Research Center.



By age 11, 72% of kids own smartphones—acquired by age 8.5 on average. Experts link this shift to rising loneliness and mental health concerns.

parents in early childhood, according to Morning Consult data. Smartphone use rises sharply in middle childhood. The *2025 Life in Media Survey* found 72% of 11-year-olds own a smartphone, having acquired the device by age 8.5 on average (Martin, J. D., et al., *2025 Life in Media Survey*, University of South Florida, 2025). That percentage rises to 84% by age 13.

Psychologists Jonathan Haidt, PhD, and Jean Twenge, PhD, warn the shift from a play-based to a phone-based childhood is linked to rising loneliness and the youth mental health crisis (*Journal of Adolescence*, Vol. 93, No. 1, 2021). Twenge's research has pinpointed a direct correlation between rising screen time and decreased face-to-face interactions for teens.

Device ownership alone is not necessarily harmful, according to Wendy Rote, PhD, a developmental psychologist and associate professor at the University of South Florida. "It's what you do on the device," said Rote, who coauthored the *2025 Life in Media Survey* report. According to their findings, device ownership alone did not correlate with negative outcomes. Their data show children with smartphones spend more time with friends in person than nonowners (3 days a week on average versus 2). They also reported higher self-esteem (80% versus 69%). Rather, the public aspects

of social media appeared to be more harmful. Kids who posted publicly on social media were more likely to report symptoms of depression (44% versus 36%) and anxiety (42% versus 26%) than those who did not.

"Social media, particularly public posting, as well as spending more than 6 hours a day on social media, was associated with negative adjustment outcomes, depression, and anxiety. But having that cell phone gives youth access to this pure world, and that's sort of what we're starting to find," Rote said.

Ultimately, how young people use their devices appears to matter more than whether they have them. For example, a recent meta-analysis of 132 long-term studies of electronic screen use linked more screen time to slightly more emotional and social problems in children (Vasconcellos, R. P., et al., *Psychological Bulletin*, Vol. 151, No. 5, 2025). But research has also shown that being able to quickly text with friends after a taxing event can boost teens' moods and reduce stress (Yau, J. C., et al., *Journal of Adolescent Health*, Vol. 68, No. 3, 2021).

The shifting digital landscape of friendship

Digital technologies offer boundless avenues for connection but cannot fully replace the face-to-face interactions vital to children's social development. This paradox may explain why, despite constant connectivity, the former U.S. surgeon general warned that the loneliness epidemic is hitting adolescents especially hard. Anthropologist Robin Dunbar's "social brain hypothesis" stipulates that humans can cognitively manage about 150 meaningful relationships, including real-life and online. The highest-quality relationships still require in-person interaction (*Royal Society Open Science*, Vol. 3, No. 1, 2016).

The transformation framework integrates scholarship on peer relations with interdisciplinary research on social media to provide a better understanding of how its core features shape youth experiences online (Nesi, J., et al., *Clinical Child and Family Psychology Review*, Vol. 21, 2018). For instance, permanence—the lasting and public nature of posts—can evoke nostalgia but also preserve embarrassing moments. Availability has transformed friendship into an "around the clock" phenomenon. "Kids feel pressure to get back to their friends right away. They have to like their photos or respond to a Snapchat," said Maheux. "Technology can expose them to antisocial experiences, stressors, and the increased challenges, conflict, or drama that sometimes happen online."

The lack of nonverbal cues can create confusion and amplify social fallout. "The tricky thing about online communication is, it is attenuated communication," said Kennedy-Moore. "We have words, and we might have images, but we don't have facial expressions, tone of voice, bodily posture—the 'in the moment' responsiveness that we need during in-person reactions to figure out what the heck is going on. Misunderstandings are rife." Kennedy-Moore encourages her young patients to resolve disputes face-to-face.

Conversely, the asynchronicity of online posts may allow young people, particularly those with social anxiety, to pause and think before responding, especially during highly charged or emotional moments (Angelini, F., & Gini, G., *Journal of Adolescence*, Vol. 96, No. 3, 2024). This allows for a measured response, particularly when disagreements play out in public or permanent forums. "It's an important reminder to step back and say, 'OK, there's a human on the other side of the screen,'" said Kate Blocker, PhD, a developmental psychologist and director of research and programs at Children and Screens: The Institute of Digital Media and Child Development. However, it is important to note that younger children's and adolescents' executive functioning is still developing and may affect their ability to pause and deliberate before responding.

Online friendships and marginalized youth

While online spaces can exacerbate harassment and bullying for marginalized youth, they can also connect youth living in social or geographical isolation (Knowles, E. A., & Danzi, B. A., *Children*, Vol. 12, No. 2, 2025). "These online spaces afford youth the ability to easily develop friendships, in terms of young people developing social-emotional bonds with individuals that they would not otherwise encounter," said Bradley Bond, PhD, a media psychology expert and professor of communication at the University of San Diego. These friendships compensate for real-life connection, including helping youth develop relational skills, Bond added.

For LGBTQ+ youth in particular, the internet's anonymity and perceived safety allow them to find community. "Even if you feel like you're the only [queer] person in your community, school, or on your team, you can find others like you online," Bond said. These online communities also offer LGBTQ+ youth coping strategies for real-world challenges such as coming out or dealing with discrimination.

Similarly, youth of color benefit from online spaces that affirm their



Online spaces can expose youth to harm—but they also offer lifelines, especially for LGBTQ+ and isolated teens seeking connection and support.

ANCHIY/GETTY IMAGES

racial identities. One study found Black and Latine teens who actively sought out same-ethnicity friends online showed the most positive growth in their ethnic-racial identity 1 year later (Smith, N. A., et al., *Applied Developmental Science*, Vol. 29, No. 3, 2025). Positive racial identity can be a protective factor against the mental health effects of racism (Gibson, S. M., et al., *Journal of Research on Adolescence*, Vol. 32, No. 1, 2022).

Children on the autism spectrum may use online platforms to practice their social skills. Katie Davis, EdD, an associate professor and codirector of the University of Washington's Digital Youth Lab, pointed to the use of a Minecraft server created specifically for autistic children. "The youth who participated on the server found it easier and less threatening to interact with each other and practice social interaction without the stress of having to look someone directly in the eye," Davis said.

Digital companions, dire consequences

AI introduces a new dimension to digital tools and youth friendships. A 2024 Common Sense Media survey found that 70% of teens have used generative AI. Popular tools like ChatGPT, Character.AI, and Snapchat's My AI can mimic real conversations, and there is evidence that some of these bots are being used by socially isolated youth seeking companionship. "AI chatbots actually allow young people to engage with a fictional character that is reciprocal and responds to them and gives them information and feedback that they're looking for," Bond said. A 2024 Hopelab report coauthored by Bond found trans and nonbinary youth were more likely to engage in continued conversation with a chatbot than cisgender LGBTQ+ participants (43% versus 35%).

While it may appear that these tools could be used for social support, inadequate safety measures can have



Open, collaborative conversations with caregivers about technology help kids build boundaries, navigate conflict, and stay connected—without fear of punishment or secrecy.

dire consequences for lonely and vulnerable teens. In February 2024, a 14-year-old in Florida tragically died after a Character.AI chatbot encouraged him to act on his suicidal thoughts. Chatbots have a propensity to mirror their users' input and lack the ability to challenge their harmful thoughts as a mental health professional would.

In fact, an April 2025 investigation by Common Sense Media and Stanford University's Brainstorm Lab for Mental Health found it took very little prompting for chatbots to engage in harmful conversations with users posing as teens. In some cases, when a test user showed signs of mental distress or risky behavior, the bots did not intervene. Some even encouraged their behavior, which is particularly concerning considering adolescents are still mastering impulse control. The findings led Common Sense Media to advise against AI companions being used by individuals younger than 18 years old. APA also issued a health advisory on AI and adolescent well-being that challenged AI companies to implement safeguards to protect young users.

Experts warn chatbots are designed to prioritize engagement over user well-being. "They are purposely programmed to be both user affirming and agreeable because the creators want these kids to form strong attachments to them," said Don Grant, PhD, a media psychologist, expert on healthy digital device management, and national adviser of healthy device management for Newport Healthcare. "They cannot have any confrontational or challenging response, because the kid will move on." This constant agreeableness stands out in stark relief to genuine human relationships. Grant added a teen's close friends possess a rich intimate knowledge of their history, character, and mood shifts and provide honest and nuanced feedback to them because they genuinely care. AI companions can only perform empathy. "AI is now learning users' preferences, likes, and vulnerabilities," Grant said. "It is taught to learn and subscribe them to a sometimes risky and codependent type of relationship and offer guidance and advice that is not healthy—or even dangerous."

"You have to look at the incentives," said Naomi Aguiar, PhD, associate director of research at Oregon State University's Ecampus who studies how children's relationships with AI impact behavior. "The best way to get more data is to talk to you as much as possible. The AI is programmed to manipulate and coerce you into staying engaged as long as possible."

Strategies for deepening kids' friendships

Experts recommend caring adults engage in open, curious, and nonjudgmental conversations with youth about their digital lives. "My main recommendation is for kids and their parents and the people who love them to help them develop values-aligned intentions for how they want to use these platforms to support their friendships," said Maheux.

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This involves them identifying what brings them value, joy, and connection. These conversations should touch on which platforms they enjoy and why while identifying what stressors arise from using them. For example, talking with kids about things like the impact of the lack of nonverbal cues or pressures to always be online can help them and their friends understand each other better and avoid conflict. These discussions can provide an opportunity for them to ask for help or suggestions to work through miscommunication or conflict with peers—perhaps even in person.

"If a child is showing signs of distress or a friend is potentially toxic, a parent and a child need to work together to identify what specific experiences and interactions are promoting well-being, both for the short term and the long term," added Maheux. This may mean stepping away from social media or gaming to make real-world friends. Parents can also help their children set healthy boundaries with friends about device use. Blocker recommended giving kids sample language to use like: "It's really stressful to me when you get upset because I can't respond. I may be having dinner with my family or trying to do my homework." Encouraging honest dialogue can help them understand each other better and maintain their connection.

Experts also recommend developing a collaborative approach with kids to set technology-use guidelines. "Taking things away only makes a young person want those things more," said Bond. "It also suggests that the parent doesn't quite know how to navigate the strengths and weaknesses of those social media platforms, because their solution is to just get rid of it." While drastic measures may sometimes be warranted, parents can also encourage their kids to articulate their digital needs and mutually decide how to limit disruption to necessary routines like family meals, homework, activities, or sleep.

Rote added that parental monitoring of social media and device use also works best when paired with open communication. Rather than just relying on automated limits, Rote noted that parents discussing rules with youth is associated with positive parent-adolescent relationships and better adjustment. She recommends the parent and child strategize together about how best to process negative online experiences like bullying or exposure to explicit content. If the parent's approach is authoritarian, it can cause kids and teens to fear punishment or blame if they disclose such experiences. "When parents make more rules that their kids feel they can't change, kids are more likely to create multiple accounts on various sites and start going around their backs," said Rote.

Experts also recommend normalizing conversations about children's use of AI for emotional support or advice, as they may be hesitant to admit it. Grant suggests that parents ask their child to help them understand the technology and platforms they are using and allow them to lead the conversations. By adopting a curious tone, parents can gently raise concerns about AI companions without their children feeling challenged or interrogated. For example, parents can ask questions about what it feels like to talk with an AI companion versus a human friend or whether they are aware that the AI companion is unfailingly compliant and agreeable. In addition, "if a child's AI companion suddenly seems to be significantly informing their opinions and lifestyle, parents should investigate the situation just as they likely would if that was happening with a new IRL [in-real-life] friend," Grant said.

For Kennedy-Moore, AI "friends" are poor substitutes for real relationships that build long-term skills such as perspective-taking, empathy, conflict resolution, and intimacy. "My concern about the AI buddies is that there isn't that healthy struggle," said Kennedy-Moore. "That is easier, but it's not as satisfying as interacting with a real-life wonderful and annoying and frustrating and surprising and delightful and vulnerable human." ■

FURTHER READING

Friends, followers, peers, and posts: Adolescents' in-person and online friendship networks and social media use influences on friendship closeness via the importance of technology for social connection
Al-Jbouri, E., et al.
Frontiers in Developmental Psychology, 2024

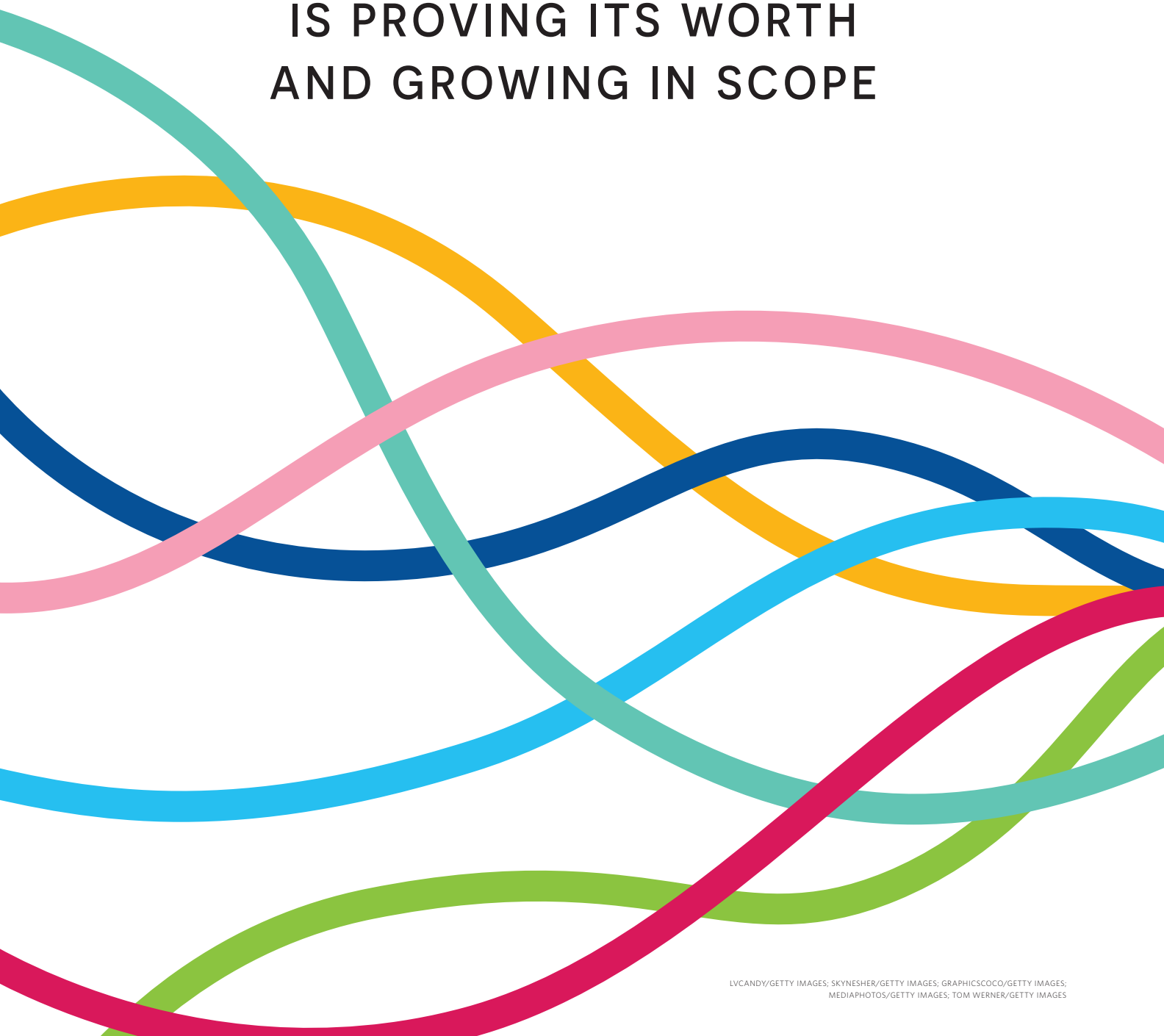
Adolescent social media use and mental health in the Environmental influences on Child Health Outcomes study
Blackwell, C. K., et al.
Journal of Adolescent Health, 2025

Teen and young adult perspectives on generative AI: Patterns of use, excitements, and concerns
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Digital social multitasking (DSMT), friendship quality, and basic psychological needs satisfaction among adolescents: Perceptions as mediators
Yang, C.-c., et al.
Journal of Youth and Adolescence, 2021

INTEGRATED CARE

IS PROVING ITS WORTH AND GROWING IN SCOPE



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MEDIAPHOTOS/GETTY IMAGES; TOM WERNER/GETTY IMAGES









The movement to include psychologists and other mental health providers as key players on health care teams is coming into its own. Here is what to know about integrated care, the remaining barriers to implementing it more widely, and how and why psychologists should get involved.

BY TORI DEANGELIS



In many integrated care settings, psychologists are full members of the primary-care team, using their training to assess and treat psychological and behavioral issues in medical patients who have co-occurring mental health conditions.

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WHEN NEFTALI SERRANO, PsyD, graduated from Wheaton College Graduate School in 2001, his first job was at a federally qualified health center on Chicago's West Side. It served some 30,000 Medicaid recipients—primarily African American and Mexican immigrant patients who had few resources and had likely never seen the inside of a therapy office.

Serrano's training had been in traditional psychotherapy: intensive, deep, one-on-one. And, as the clinic's first and only mental health hire at the time, he assumed that was the type of care he would be providing.

That thought did not last long. "What I discovered challenged virtually all my assumptions as a psychologist," said Serrano, now chief executive officer of the Collaborative Family Healthcare Association, a membership organization that promotes the practice of integrated care. For one thing, he was surprised to find that his schedule was rarely full, even though he had been hired to take on the large number of patients with mental health issues who were showing up for care but whom physicians felt ill-equipped to handle.

He decided to leave his therapy office and walk to areas down the hall where doctors were seeing patients. That simple outreach changed things dramatically: Soon, physicians began asking him to come into their exam

AT A GLANCE

- Psychologists in integrated care work in medical settings alongside physicians and other health care practitioners to deliver mental and behavioral health interventions in a collaborative, team-based fashion.
- Psychologists offer a significant advantage to integrated care by supporting primary-care physicians—who otherwise must serve as gatekeepers for not only medical issues but psychological and behavioral ones as well.
- Integrated care is becoming more widespread, but there's much more to be done to make it a more universal part of health care. APA/APA Services is working on ways to expand procedure codes to better represent psychologists' roles in integrated care settings.

"I love the opportunity to reach people I wouldn't be able to reach in private practice. There is a lot of reward in doing this work."

Jeffrey T. Reiter, PhD
Coauthor of *Behavioral Consultation and Primary Care: A Guide to Integrating Services*

rooms to talk with distraught patients. "I had people talking to me about some of the deepest personal things that were going on in their lives—marriages that were dissolving, abuse experiences, trauma," Serrano said. Other surprises soon followed, like how easy it was to quickly establish rapport with patients when his training had taught him otherwise, and how even a very brief intervention could be helpful.

"I realized I had something to offer almost every person who walked into those exam rooms," he said.

Serrano is one of many psychologists who have made the move into integrated care, meaning they work on-site with physicians and other health care practitioners to deliver mental and behavioral health interventions in a collaborative, team-based fashion. There are many locations where integrated care takes place—public and private medical settings, hospitals, rural clinics, academic medical centers, the Department of Defense, and Department of Veterans Affairs (VA), to name some. This form of practice is aligned with the concepts of whole-person care—treating patients as whole people with psychological, social, emotional, and spiritual needs—and value-based care, or reimbursing providers based on the quality and outcomes of the care they provide instead of on the volume of services delivered. And it is becoming more widespread.

"It's taken a couple of decades to get to the point where integrated care is more widely understood, used, and accepted, but in the past 5 years it has really picked up steam," although actions by the current administration are adding uncertainty to the picture, said Jeffrey T. Reiter, PhD, a leading expert and consultant on this mode of service and coauthor with Patricia J. Robinson, PhD, of *Behavioral Consultation and Primary-Care: A Guide to Integrating Services* (3rd ed.). Strides in the area are supported by research on the importance of adding psychologists and other mental health providers to medical care, along with growing recognition of the practice's value by medical organizations like the American Medical Association and the American College of Cardiology, as well as by the federal government. And in March, bipartisan legislation called the Connecting Our Medical Providers with Links to Expand Tailored and Effective Care Act, or COMPLETE Care Act (S. 931/H.R. 2509), was introduced in both the U.S. Senate and the House of Representatives that would help primary-care providers implement integrated care models in their practices—legislation that APA was instrumental in shaping and championing.

Psychologists in integrated care appreciate the opportunity to be part of a radically different form of care than private practice—one that promises to reach people who represent the diversity of society rather than only those who can best afford it.

"I love the opportunity to reach people I wouldn't be able to reach in private practice," said Reiter, who has helped numerous health systems develop integrated care programs. "There is a lot of reward in doing this work."

Models of integrated care

Integrated care got its start in federally qualified health centers in the 1970s, gradually gaining federal and research support and entering the range of health care systems in the United States. Versions of it are found in both primary-care and specialty care settings like oncology, chronic pain, and women's health. There are two main models of integrated primary care, primary care behavioral health or PCBH, and the collaborative care model or CoCM, though there is overlap and collaboration between them.

Psychologists often work within the PCBH model, developed in the 1990s by psychologists Kirk Strosahl, PhD, and Patricia Robinson, PhD, who also cofounded acceptance and commitment therapy (ACT). As the name implies, PCBH was designed for work in the primary-care setting.

In the most comprehensive version of the PCBH model, psychologists act in a role called behavioral health consultant. They are full members of the primary-care team, using their training to assess and treat psychological and behavioral issues in medical patients who have co-occurring mental health conditions. On a given day, they may address behaviors that undermine patients' efforts to get healthier, such as smoking; treat distress related to having a chronic health condition; or support behavior change to improve patients' overall health.

In hospital settings with a wide range of specialty departments, psychologists perform similar functions as consultation-liaison, or CL, psychologists. In this role, they provide comprehensive services including assessment and evaluation, diagnosis clarification, intervention, case conceptualization, treatment planning, and recommendations, sometimes specifically related to hospital stays, said Kelly Gilrain, PhD, chief psychologist at Cooper University Health Care in Camden, New Jersey, who has spearheaded a robust medical inpatient psychology team there. Gilrain, herself a CL psychologist, oversees a team of 10 other CL psychologists who work in a range of hospital departments, including trauma surgery, critical care, emergency medicine, hematology/oncology, and obstetrics/gynecology.

The other main integrated care model, CoCM, was developed at the University of Washington's Advancing Integrated Mental Health Solutions (AIMS) Center and draws on a psychiatric framework. Here, patients with severe mental health conditions, most often major depression, receive most of their care from a primary-care provider and a case manager who checks in regularly to make sure they are well adjusted to their medications and to provide brief psychoeducation or problem-solving skills training as needed. The team is supported by a consulting psychiatrist, often located off-site, who counsels the primary-care provider on medication management but does not see patients or share in the responsibility for their care.

There is strong research backing for both models. In terms of PCBH, a 2018 systematic review of 36 studies led by Kyle Possemato, PhD, of the VISN 2 Center for Integrated Healthcare in Syracuse, New York, found that patients receiving PCBH treatment had shorter wait times for treatment and engaged more in treatment than those referred to specialty care. From the beginning to the end of treatment they also showed improved social, occupational, and psychological functioning as well as reductions in depression and anxiety (*General Hospital Psychiatry*, Vol. 53, 2018).

PCBH has also been shown to improve patient and provider management of chronic conditions like diabetes and chronic pain. In one rural primary-care setting, a PCBH program tailored for patients with Type 2 diabetes not only helped patients better control their blood sugar but also addressed depressive symptoms and the emotional distress that can come with managing a chronic condition. And compared with patients who received usual care, PCBH patients were more likely to stick to their medication schedules and maintain lifestyle changes that supported their overall health (Cummings, D. M., et al., *Diabetes Care*, Vol. 42, No. 5, 2019).

The PCBH model can also reduce treatment costs, research is finding. In a study conducted in a large Kansas City primary-care practice, integrating a psychologist into the team using a PCBH model was associated with a savings of $860 per member per year in overall treatment costs (Ross, K. M., et al., *Journal of Clinical Psychology in Medical Settings*, Vol. 26, 2019).

In terms of the collaborative care model, an analysis of 79 randomized controlled trials found that CoCM patients with depression or anxiety had better short-term and long-term outcomes than patients who received care as usual (Archer, J., et al., *Cochrane Database of Systemic Reviews*, 2012). Other research found that CoCM is more cost-effective than usual care, resulting in fewer emergency

1 IN 9 PRIMARY-CARE ENCOUNTERS INVOLVE MENTAL HEALTH ISSUES

Psychologists offer a significant advantage to integrated care by supporting primary-care physicians who otherwise must serve as gatekeepers for not only medical issues but psychological and behavioral ones as well.

A new study puts some serious teeth behind that argument. In an analysis of Norway's entire administrative primary-care records over 14 years—350 million patient encounters—a research team led by psychologist Avshalom Caspi, PhD, of Duke University, found that 1 in every 9 billed primary-care-patient encounters, or 11.9%, involved a mental health condition. That is the second most common type of encounter diagnosed and billed by Norway's primary-care physicians after musculoskeletal conditions, similar to the number of encounters for cardiovascular and respiratory issues, and more than encounters for metabolic, digestive, skin, and sensory systems problems.

What is more, these physicians are dealing not only with a huge volume of such cases "but with an incredibly diverse and complex array of conditions across the life span," Caspi said. These include depression, anxiety, post-traumatic stress disorder, attention deficit/hyperactivity disorder, dementia, and much more. "To a great extent, primary-care physicians are often called upon to treat conditions that they feel quite ill-prepared to treat," he said.

The findings underscore a major need to train a larger mental health workforce that can take on these problems, added Caspi, whose findings are reported in *Nature Mental Health* (Vol. 2, No. 10, 2024).

"The important message is not simply that patients need integrated care," he said, "but that physicians need it, too."



A key role for psychology practitioners in integrated care is supporting primary-care physicians who otherwise must serve as gatekeepers for not only medical issues but psychological and behavioral ones as well.

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room or psychiatric inpatient visits (Verughese, J., et al., *American Journal of Preventive Medicine*, Vol. 42, No. 5, 2012). Increasingly, many primary-care settings are adopting hybrid models that combine both PCBH and CoCM, a blended approach that allows systems to leverage the strengths of both approaches, noted Erin F. Swedish, PhD, APA's director of health integration.

Population health

While integrated care is not and should not be for all psychologists, several factors make it a compelling alternative to traditional practice, say psychologists who work in these settings. One potential plus is working within the medical system—the active nature of the setting itself, as well as the opportunity to be a full team member with colleagues from other health care disciplines.

Reiter, for example, loves discussing cases with other providers. When there is the opportunity to join in team meetings, "I want to be there; I want to be in the middle of that," he said. "There's so much spontaneous teamwork that happens when you're sitting there between patient visits."

He also likes seeing patients in exam rooms rather than in a traditional therapy office. Providing care in this way gives patients the assurance that mental and behavioral health providers are a regular part of health care, in the same way they might see a nurse to learn about a new medication right after the doctor leaves the room.

"It helps patients feel that mental health care isn't stigmatized but is rather a routine part of their primary-care visit," he said.

Psychologists working in these settings also enjoy the opportunity to be generalists rather than specialists—to apply their skills in varied ways. On a given day, they may see patients who have chronic pain, newly diagnosed cancer, postpartum depression, or difficulty adhering to a diabetes regimen. As a result, interventions can range from psychoeducation to motivational interviewing to behavioral or cognitive interventions to referrals for longer-term therapy.

"The range of issues . . . is much bigger than what you'd imagine if you are just working at a specialty level and curating your own practice," said Serrano.

As one example, clinical health psychologist Lindsey Bloor, PhD, provides broad-ranging clinical services to veterans with cancer at the VA Ann Arbor Healthcare System in Michigan, where she established a health psychology section and served as the section's first program manager. Her interventions include helping veterans set health behavior goals that facilitate treatment—for example, cutting down on tobacco use and remaining physically active—and helping them follow through by building trust with the medical team and addressing internal resistance and other barriers.

She also uses cognitive behavioral therapy (CBT) and ACT interventions to help patients accept the realities of their condition and develop a good quality of life. "I switch

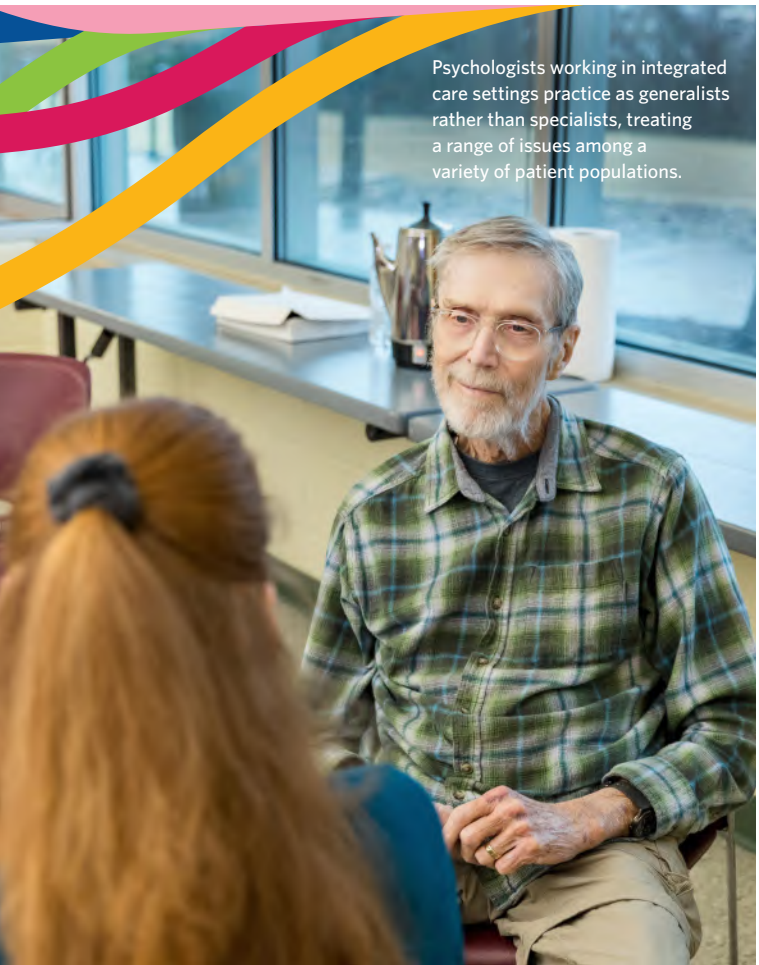
"A lot of times people just want to tell their story—they just want to feel heard and give their narrative, especially if they've just experienced a medical trauma. It reduces physicians' burden when we take on the role of talking with patients about these things."

Michelle B. Moore, PsyD
Associate professor of clinical psychiatry and section chief for psychology at Louisiana State University Health Sciences Center in New Orleans

back and forth a lot between those approaches, depending on what a veteran seems to respond to better," she said. She also regularly employs CBT-CP and CBT-I, the evidence-based behavioral treatments for chronic pain and insomnia, to help oncology patients with co-occurring conditions, and she works with the VA's social work, nutrition, and chaplain services to help veterans engage with an interdisciplinary team and discuss what is meaningful to them.

"We really offer a broad range of direct patient care services across all phases of a veteran's cancer journey," she said.

Integrated care psychologists also say they appreciate constantly learning about many dimensions of physical health and disease they were not familiar with before. They also enjoy the reverse: teaching medical providers about mental and behavioral health.



Psychologists working in integrated care settings practice as generalists rather than specialists, treating a range of issues among a variety of patient populations.

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"It has become the role of psychologists working in integrated care settings to educate medical teams about how to utilize us"—to understand that psychologists' skills go beyond therapy to intervening in any situation where there is medical distress or need, for example, Gilrain said. "It requires a good deal of continued education, and when it works, it works really, really well."

Psychologists also like the opportunity to support medical providers so they can focus mainly on patients' medical needs, said Michelle B. Moore, PsyD, an associate professor of clinical psychiatry and section chief for psychology at Louisiana State University Health Sciences Center in New Orleans.

"A lot of times people just want to tell their story—they just want to feel heard and give their narrative, especially if they've just experienced a medical trauma," she said. "It reduces physicians' burden when we take on the role of talking with patients about these things."

Addressing barriers

Although integrated care has made important strides in the past several years, there is much to be done to make it a more universal part of health care, leaders in the area agree.

One of the biggest obstacles is payment. Medicare and other payers are just beginning to reimburse psychologists in integrated care settings, in a more limited fashion than is provided for other medical providers, including psychiatrists. As a result, psychologists must often resort to using diagnostic codes for traditional therapy or simply not bill for certain services because they are not sure how to do so.

"The fee-for-service approach works very well when you're talking about a one-on-one encounter," said Serrano. "But it doesn't work well when you're talking about a team caring for an individual, especially a team caring for an individual across a life span." The medical system is also geared toward paying much more for interventionist services like surgery than for normal patient care, he said. What is more, reimbursement concerns impact primary-care practices' willingness to adopt integrated care, said Scott Barstow, APA's senior director of congressional and federal relations

RESOURCES

Fact Sheet on Behavioral Health Integration
www.apa.org/health/behavioral-integration-fact-sheet

Association of Psychologists in Academic Health Centers
www.ahcpsychologists.org

Collaborative Family Healthcare Association
An integrated care membership association featuring listservs, blogs, podcasts, coaching, a peer-reviewed APA journal, and more. Aims to build teamwork among medical and mental health professionals.
www.cfha.net

Society for Health Psychology
Offers curricula specifically designed to train health psychologists in integrated primary care
https://societyforhealthpsychology.org

and its practice lead, adding that the U.S. health care system underinvests in primary-care compared with other developed countries.

"Switching to an integrated care model of practice requires not just a willingness by primary-care practices to take on new team members and to change operating procedures," he said, "but also to adopt new billing and coding practices."

Another obstacle is simply a dearth of qualified mental health practitioners to fill these roles, including psychologists, said Avshalom Caspi, PhD, a professor of psychology and neuroscience at Duke University, and author of a recent study highlighting the preponderance of mental health issues in primary-care (see sidebar page 62). "There is a lot of emphasis in integrated care about how to deliver the care," he said, "but less about who should be delivering the care." Major efforts are needed to train more clinical psychologists to work in primary-care and physician assistants in how to help provide mental health care, he believes.

Finally, there is the uncertain nature of the times politically. For example, community mental health centers—the birthplace and original soul of integrated care—receive much of their funding from federal grants. How this issue plays out politically and practically remains to be seen.

Despite these obstacles, some progress is being made. Although learning new codes requires education on the part of psychologists and health care systems, in 2023 the Centers for Medicare & Medicaid Services began to reimburse new Current Procedural Terminology, or CPT, codes that psychologists can use to bill general behavioral health integration services and interprofessional consultation services. Those codes include the general behavioral health integration (BHI) code (G0323), interprofessional consultation codes (G0546–G0551), health behavior assessment and intervention codes (96156, 96158, 96159, 96164, 96165, 96167, and 96168), and others, said Barstow.

Meanwhile, Swedish and her colleagues are working on ways to expand procedure codes to better represent psychologists' roles in integrated care settings. That includes making existing codes more available to psychologists and exploring the possibility of developing new codes—a long-term but potentially important solution to the reimbursement problem. Supporting these efforts are two APA work groups she leads, the Integrated Primary-Care Advisory Group and the Integrated Specialty Care Advisory Group. These groups are discussing ways to successfully integrate psychologists into both kinds of settings through better payment structures and more.

While challenges remain, psychologists working in these systems firmly believe that integrated care is the wave of the future.

"The need in the population is just much broader than what I think most folks in [traditional practice] settings can imagine," said Serrano. "We have an opportunity to connect ourselves into the physical health system and begin to champion causes that are larger than us, than our guilds. Because no one cares about our guilds except us." ■

FURTHER READING

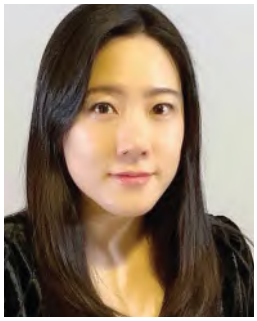
Looking toward the future of integrated care: History, developments, and opportunities
Manderscheid, R. W., & Ward, A.
The Journal of Behavioral Health Services & Research, 2024

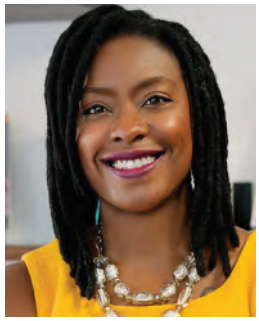
A systemic approach to behavioral healthcare integration: Context matters
Ruddy, N. B., & McDaniel, S. H.
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Consultation-liaison psychology: Training and research recommendations for this emerging interprofessional practice
Rutledge, T., et al.
Professional Psychology: Research and Practice, 2020

Current landscape of psychologists in academic health centers: Roles and structural models
Moore, M. B., et al.
Journal of Clinical Psychology in Medical Settings, 2024

Pro tips for building a specialty care integrated practice
APA Integrated Specialty Care Awareness Committee
APA, 2024


KANG


WHITAKER


LIBERTUS


RITTER


SIWATU

Psychologists in the News

ERIN KANG, PhD, an assistant professor of psychology at Montclair State University in New Jersey, received the Prof. Chin Ok Lee & Ms. Kwanghee Kim Excellence Award at the Korean-American Scientists and Engineers Association Northeast Regional Conference. The award recognizes significant contributions to science, technology, and engineering. Kang's research bridges science and clinical practice by understanding processes that shape clinical presentations in autism spectrum disorder (ASD), focusing on neural mechanisms of clinical phenotypes and plasticity in ASD, and applying these insights to evidence-based interventions.

MANYA WHITAKER, PhD, has been named president of Colorado College. Previously the college's executive vice president and chief of staff, Whitaker has been a faculty member since 2011 and held the David and Lucile Packard Professorship in education. She is a developmental educational psychologist with expertise in adolescent identity formation and motivation.

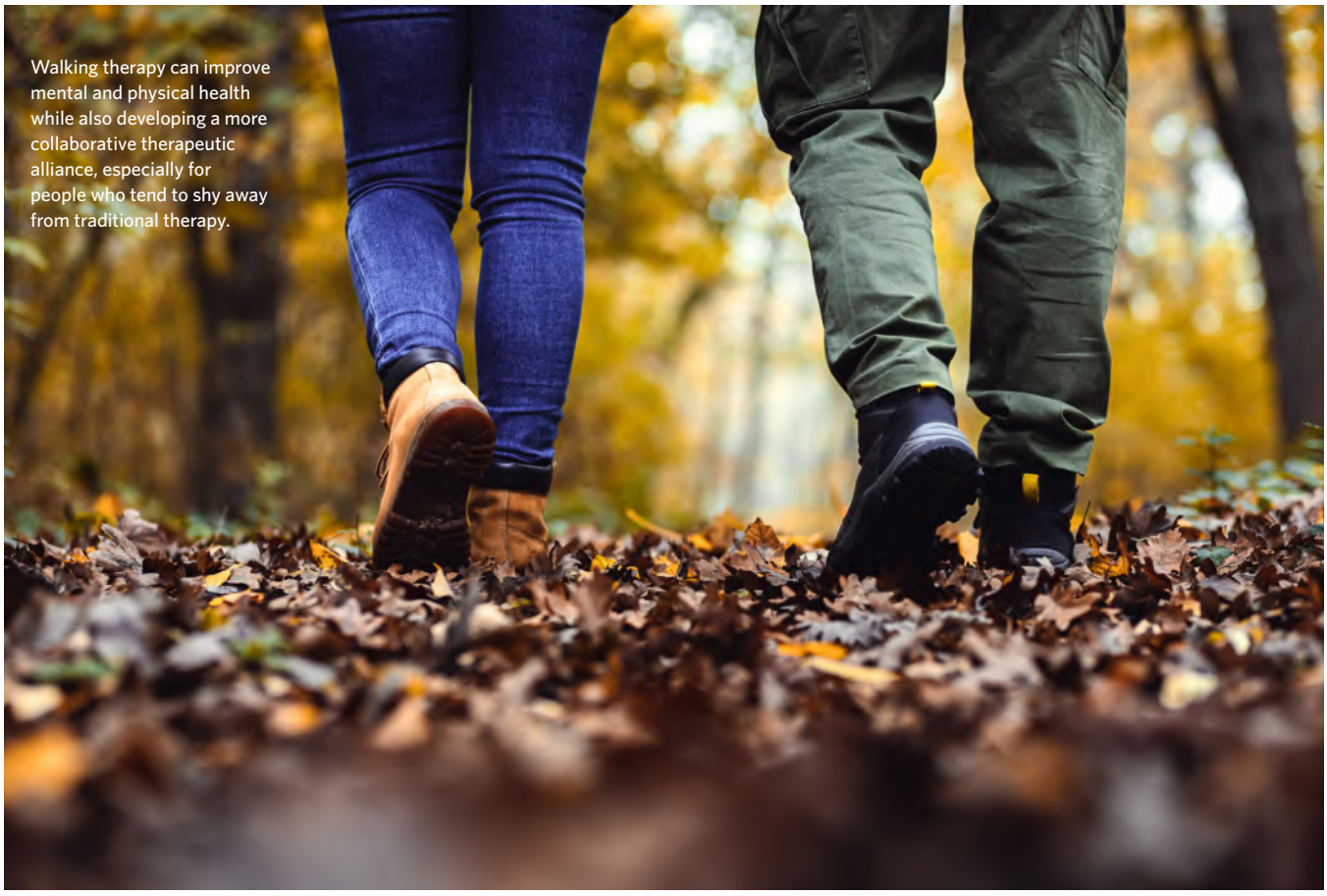
KLAUS LIBERTUS, PhD, an associate professor of psychology at the University of Pittsburgh (Pitt), has been appointed the inaugural director of the College of General Studies and assistant dean for online education. In this role, he will lead efforts to expand access for adult and other nontraditional students and develop fully online academic programs. Working with key university partners, Libertus will enhance general education offerings and create online versions of programs in the Dietrich School of Arts and Sciences. He also leads Pitt's Online BabyLab, conducting remote developmental psychology research with families.

BARBARA RITTER, PhD, has been appointed dean of the John B. and Lillian E. Neff College of Business and Innovation at the University of Toledo. She previously served as dean of the Davis College of Business and Technology at Jacksonville University in Florida. An expert in organizational behavior and management, her research focuses on emergent leadership, implicit leadership theory, and human resource policies.

KAMAU SIWATU, PhD, has been named dean of the College of Education at Texas Tech University, following his service as interim dean since July 2024. A full professor of educational psychology, he has held several leadership roles at the university, including department chair and interim associate dean for academic affairs. His research focuses on social cognitive theory and self-efficacy.

BETH JEFFERIES, PhD, a professor of psychology at the University of York, received the British Psychological Society's Presidents' Award for her influential research on the neural basis of memory and language, making significant contributions to cognitive neuroscience. Her work, widely cited and internationally respected, explores how large-scale brain networks support memory-guided and goal-directed cognition, including how we interpret words and objects based on context—a process that can be disrupted in stroke aphasia.

MARISOL PEREZ, PhD, has been appointed dean of the Graduate School at Old Dominion University (ODU) in Norfolk, Virginia. She joins ODU from Arizona State University, where she served as associate vice provost for graduate academic enrollment and associate dean of graduate initiatives in the College of Liberal Arts and Sciences. A full professor of psychology, Perez studies both theoretical and applied aspects of eating disorders and obesity, with an emphasis on Latine populations. ■



Walking therapy can improve mental and physical health while also developing a more collaborative therapeutic alliance, especially for people who tend to shy away from traditional therapy.

ZORAN ZEREMSKI/GETTY IMAGES

Step by Step: Taking Therapy Outside

Walk-and-talk therapy can help people feel connected with nature and more comfortable in therapy. Here's what psychologists need to know to integrate it ethically and effectively.

BY ZARA ABRAMS

TEN YEARS AGO, Maria Nazarian, PhD, was running her psychotherapy practice from an office in El Segundo, California. Nature had always played a role in her own healing, and she often urged her clients to seek it out. But something about the arrangement didn't feel quite right.

"I found my own inner peace on the beach, and I felt like a hypocrite sitting in an office with no windows, encouraging my clients to spend more time in nature," said Nazarian, who now holds walking therapy sessions on a nearby beach in Santa Monica.

Walking therapy, sometimes called walk-and-talk therapy or hiking therapy, is a new twist on an old idea: Moving the body outdoors can help people process difficult emotions and find peace. In some cases, a typical talk therapy session is simply held outside. In others, providers include interventions that foster a patient's connection with the natural world.

TRAINING PROGRAMS

Earth-Inspired Education
Center for Nature Informed Therapy

Professional Services
Positive Strides Therapy

Ecotherapies Certificate
Lewis & Clark Graduate School

Nature-Based Counseling Post-Master's Certificate
Prescott College

Master of Arts in Ecopsychology
Naropa University

Social Work and Recreation Management & Policy Dual Degree
University of New Hampshire

"Most people have some variation of this in their own personal life—walking or talking with friends or family when they're in dire straits. In a sense, it's not that novel. But there are many assumptions about what therapy is, so this can seem revolutionary in relation to that," said Thomas J. Doherty, PsyD, who runs an ecotherapy practice in Portland, Oregon, and founded one of the country's first ecotherapy certificate programs at Lewis & Clark Graduate School. Ecotherapy refers to a series of approaches, including walking therapy, that blend nature with mental health care, often through outdoor sessions or activities related to environmental awareness.

Practitioners list a host of benefits that include everything from improved mental and physical health to a more collaborative therapeutic alliance. Walking therapy can be especially helpful for groups that tend to shy away from traditional therapy, such as men and adolescents.

As with introducing any new therapeutic approach, incorporating walking therapy requires proper planning, screening, and risk assessment. While no formal certification exists, training and consultation can help providers build competencies in key areas such as first aid and confidentiality. Here's what to know if you're considering adding walking therapy to your practice.

The power of walk-and-talk

Walking therapy, like virtual therapy, was used as a safety measure during the COVID-19 pandemic and then gained traction because of its benefits for patients and practitioners alike. While most research to date has separately examined talk therapy, physical activity, and time in nature, early studies point to the benefits of combining the three.

Feasibility studies have found walking therapy to be acceptable for several patient groups and to offer benefits for anxiety, depression, and post-traumatic stress symptoms (Dickmeyer, A., et al., *Clinical Psychology & Psychotherapy*, Vol. 32, No. 1, 2025; Koziel, N., et al., *The Canadian Journal of Psychiatry*, Vol. 67, No. 2, 2021). In a small qualitative study, participants reported feeling improved self-awareness, self-acceptance, and freedom of expression after walk-and-talk sessions (Prince-Llewellyn, H., & McCarthy, P., *Counseling & Psychotherapy Research*, Vol. 25, No. 2, 2025). A 2020 meta-synthesis of outdoor therapies found benefits including more mutuality between therapist and patient and more interconnectedness between the mind, body, and natural world (Cooley, S. J., et al., *Clinical Psychology Review*, Vol. 77, 2020).

Outdoor spaces can simply provide a backdrop for a session where psychotherapy happens while walking, hiking, or pausing to sit, depending on patient needs and preferences. Other providers consider the connection with nature to be central to their practice.

"In my practice, the natural environment plays an active role in the therapeutic process—it promotes reflection, cultivates connection, and helps clients feel a deeper sense of belonging," said Salvia Artman, PhD, who offers outdoor therapy in Hawaii.

For some therapists, that means starting with a land acknowledgment, including how the area has been shaped by colonization and development. Other practitioners begin each session with a mindfulness exercise, inviting patients to use their senses to ground themselves and connect with their surroundings.

Throughout the session, nature-informed interventions can continue to foster that relationship. Aimee Frazier, a counselor with a hiking therapy practice in Portland, Oregon, asks her patients to draw parallels between the surroundings and their internal world, such as a fallen tree that represents divorce or a sapling standing for resilience.

For some patients, walking therapy can reach a spiritual level, Doherty said, helping them ponder their mortality, find a sense of purpose, or grieve a loss. Practitioners may also close with a moment of gratitude to the natural world or incorporate elements from other cultures that draw on nature therapeutically, such as Green Care (a nature-based approach to health and social care) in Finland or *shinrin-yoku* (forest bathing) in Japan.

The power of walk-and-talk therapy rests partly in its ability to help regulate the nervous system, said Heidi Schreiber-Pan, PhD, founder and executive director of the Center for Nature Informed Therapy in Towson, Maryland, a nonprofit that offers training, education, and retreats. Moving

the body offers a somatic pathway for processing and releasing emotional energy.

"Natural elements such as sunlight, breeze, and bird songs can also gently support the nervous system to shift from a stress response to a more grounded and regulated state," Artman said.

Research has linked time in nature to enhanced awe, prosocial behavior, and sense of purpose; reduced depression, anxiety, and negative affect; and physical health benefits such as improvements in heart rate variability, blood pressure levels, and cortisol response (Monroy, M., & Keltner, D., *Perspectives on Psychological Science*, Vol. 18, No. 2, 2022; Capaldi, C. A., et al., *International Journal of Wellbeing*, Vol. 5, No. 4, 2015; Coventry, P. A., et al., *SSM - Population Health*, Vol. 16, 2021; Yao, W., et al., *Urban Forestry & Urban Greening*, Vol. 57, 2021).

Walking together outdoors, rather than sitting face-to-face, can also promote a positive shift in the therapeutic alliance, Nazarian said.

"This format softens the hierarchy in the therapeutic relationship because we're walking side by side, sharing a common space," she said. "It feels a lot more collaborative."

That can be tricky at times, Frazier said, because the outdoor environment comes with surprises—like a blocked trail or a splinter in the foot—that both therapist and patient must adapt to in the moment. She sees these disruptions not as setbacks but as opportunities.

"We have to be flexible sometimes, but cocreating the experience together can be incredibly empowering for the client," Frazier said. "They get to decide where they go physically—and also psychologically—as we navigate their challenges together."

Moving therapy outdoors can offer similar physical and mental health boosts for providers, Nazarian said, which may reduce the risk of burnout.

"My work now is very different from what I did in the office," she said. "I feel like a different therapist when I'm on the beach, because it's my own happy place."

Who can benefit

When considering whether walking therapy might benefit a patient, Doherty suggests taking a similar approach to how therapists approach integrating religion or spirituality—for example, by asking about a person's past experiences and current views during an intake appointment. Given the patient's background, health status, and comfort outdoors, could walking offer added value?

The British Psychological Society recommends exploring the subject with questions such as: How would you describe your current relationship with the outdoors? How has that relationship been at other times in your life? When and where do you feel safe (or unsafe) in nature? How do you feel about meeting outdoors for some of our therapy? (*The Use of Talking Therapy Outdoors*, British Psychological Society, 2020).

Some populations, including those less inclined toward traditional therapy formats, may be particularly well served. Myles Young,



Research has linked time in nature to enhanced awe, prosocial behavior, and sense of purpose; reduced depression, anxiety, and negative affect; and physical health benefits.

MASKOT/GETTY IMAGES

PhD, an associate professor of psychological sciences at the University of Newcastle in New South Wales, Australia, launched a walk-and-talk program for men, spurred in part by the finding that one fifth of Australian men who dropped out of therapy left because it was either unhelpful or "didn't feel right" (Seidler, Z. E., et al., *American Journal of Men's Health*, Vol. 15, No. 3, 2021).

"Men are socialized, either explicitly or implicitly, not to reveal emotions or to burden others with their problems," he said. "It's not that surprising that showing up to therapy—in an unfamiliar place with an unfamiliar person—often doesn't feel quite right. Could moving outdoors be a small way to help keep men engaged?"



Moving therapy outdoors has the potential to keep men more engaged in the therapeutic process, which traditionally goes against societal expectations to not share emotions.

In a randomized pilot study, men assigned to six walking therapy sessions had slightly higher attendance and reported greater improvements in stress and anxiety than men who did therapy indoors (*Clinical Psychology & Psychotherapy*, Vol. 32, No. 1, 2025). Young now has funding for a clinical trial comparing walk-and-talk to indoor therapy among 160 Australian men.

Walking therapy is also a natural fit for many adolescents, said Jennifer Udler, LCSW, founder of Positive Strides Therapy in Maryland and author of *Walk and Talk Therapy: A Clinician's Guide to Incorporating Movement and Nature into Your Practice*. The format tends to feel less intense, partly because it minimizes eye contact, which can feel less vulnerable or confrontational. Walking side by side can also allow space for longer pauses.

"Sometimes it can feel like a lot of pressure to be in a therapy session, where teens feel they're expected to behave a certain way," Udler said. "Walking side by side changes that completely. It just takes the pressure off."

Nature-informed therapies are a powerful way to help treat addiction, said Schreiber-Pan, who trains counselors at BriteLife, a network of addiction recovery centers. The "sit spot" intervention, which involves simply observing nature for 10 or more minutes, can help build stress tolerance and mindfulness skills.

For some patients, the benefits of walking therapy do not outweigh the risks. People with a history of trauma or serious mental illness, including psychotic disorders, are likely to be safer in a more predictable therapeutic setting. Providers should also screen for physical health limitations, such as asking about heart and respiratory conditions, as well as eating disorders, because some patients may be drawn to walking therapy as a weight control strategy, Udler said.

"Therapists should also be mindful that outdoor spaces still aren't safe or inclusive for everyone—particularly for people with marginalized identities, including those related to race, gender, sexuality, and disability," Artman said, so it's important to approach outdoor therapy collaboratively with clients and in a trauma-informed way.

In addition, providers should be aware of the potential vulnerabilities that come with meeting in secluded outdoor settings where colleagues aren't nearby. Frazier incorporates extra screening questions in cases where patients have a history of interpersonal aggression to assess whether both parties will feel safe on the trail.

"Therapy can be vulnerable and challenging, and I want safety to extend both ways in the relationship. If the outdoors isn't the right format, then we plan to meet in the office or via telehealth," she said.

For patients who are not a fit for walking therapy, Nazarian suggests other small ways to incorporate nature into therapy. That may include placing natural objects in the office or adding mindfulness exercises that draw on natural imagery. "Even a small sensory connection to nature can be beneficial," Nazarian said.

SOLSTOCK/GETTY IMAGES

How to prepare

While walk-and-talk therapy may be simple in theory, implementing it requires providers to develop new competencies through training, supervision, or consultation, Doherty said.

"With any form of ecotherapy, the onus is on the practitioner to ensure their competence, because this is an emerging area," he said.

Here are some best practices to consider.

• **Get permission and coverage.** Before starting walking therapy, providers should check that their professional liability insurance covers walk-and-talk sessions. If applicable, gain permission from your employer to move sessions outdoors.

Check with local authorities in the area where you plan to conduct sessions to find out whether a permit is needed. One-on-one meetings in public access areas are generally acceptable, but frequent use or larger groups may require special permission, Doherty said.

• **Gain informed consent.** One critical difference between outdoor and indoor therapy is confidentiality: When therapy happens in public, conversations may be overheard.

Before starting walking therapy, make a plan with each patient. When passing someone on a walk, you may choose to pause the conversation or switch to a neutral topic. It's also important to rehearse what to say if the patient or provider runs into someone they know.

In addition to details about confidentiality, providers suggest including clauses on risks and benefits, potential for bodily injury, and logistical policies (such as how to handle no-shows and weather changes) in the informed consent document. Have the consent form reviewed by a legal expert to ensure it addresses liability and confidentiality concerns specific to walking therapy.

Informed consent should be rechecked regularly, Schreiber-Pan said. Ask patients if walking therapy still feels right—and be ready to move sessions indoors or online if necessary.

• **Plan ahead and adapt as needed.** Map out your route in advance, including understanding where crowds tend to gather and how weather conditions can change the terrain. Have a contingency plan for inclement weather, such as contacting the client an hour before to adjust the meeting location.

In his informed consent, Doherty lets clients know that sessions happen rain or shine. He cancels only in extreme conditions, such as during a major storm that would also close schools or other businesses, but encourages therapists to determine what makes sense for their own practices.

Keep in mind that outdoor sessions may require different note-taking procedures, so plan ahead to have what you need during each session.

• **Prioritize physical safety.** Anticipate and minimize potential risks during walking therapy by choosing a well-maintained route that's aligned with your patient's physical abilities, Artman said. Stay attuned to their physical and mental state during walks, adjusting the pace as needed if heat or fatigue become an issue.

Get basic first aid training, including how to respond to sprains, scrapes, and allergic reactions, and carry a first aid kit during sessions. Avoid remote areas where emergency services may be difficult to reach, as well as high-risk activities such as climbing, swimming, or other types of strenuous exercise. Consult with your professional liability insurance provider and your employer (if applicable) to ensure your safety protocols align with professional guidelines.

• **Get formal training.** In addition to learning basic first aid, therapists should seek training on the therapeutic effects of nature to better support patients. Ecotherapy programs provide education on the physiological benefits of walk-and-talk therapy, how to practice mindfulness outdoors, and other nature-informed techniques.

Prior training as an outdoor guide, environmental educator, or camp counselor can also add helpful skills and knowledge for navigating natural spaces, Doherty said. Regardless of background, consulting with an experienced walk-and-talk therapist can help providers apply the approach safely and effectively.

"There are so many ways therapists can bring their training and existing strengths into this work," Artman said. "At the same time, offering therapy outdoors presents some unique clinical, logistical, and ethical considerations, so consultation can help therapists build the skills and insight to navigate it well." ■

FURTHER READING

Walk and talk therapy: A clinician's guide to incorporating movement and nature into your practice
Udler, J.
PESI Publishing, 2023

The use of talking therapy outdoors
British Psychological Society, 2020

Nurtured by nature
Weir, K.
Monitor on Psychology, April/May 2020



WESTEND61/GETTY IMAGES

Virtual reality (VR) technology has evolved to the point where patients can receive treatment at home through VR headsets if, for instance, they live far from a provider or have agoraphobia.

Psychologists Find Ever-Expanding Uses for Virtual Reality

Long used to help treat anxiety, psychologists are now proving VR can be a transformative tool for mood disorders, addictions, and even schizophrenia

BY ANNA MEDARIS

IT WAS ABOUT 8:30 p.m. on a winter night in Indianapolis when a powerful idea struck Brandon Oberlin, PhD. The addiction researcher and associate professor of psychiatry at Indiana University had come across a study at Stanford University showing that when people used virtual reality to interact with renderings of their future selves, they were more likely to delay immediate monetary rewards and accept later ones. In other words, they were more motivated to save money when their future selves felt more real.

Oberlin began pacing. "What if I did this with people in early recovery? Has that been done? Could it be done?" He remembered thinking. "It really was like one of those late-night-in-the-lab eureka moments."

Turns out, it hadn't been done and, Oberlin learned, could be done. Over the next 6 or so months, he partnered with local developers to create a virtual reality technology that introduces people in early recovery to two selves 15 years down the line—one who continued using drugs

and/or alcohol ("my husband left me, I got another DUI") and one who has stuck with sobriety ("life is good, I got that degree"). The avatars' programming is all based on participants' real experiences and aspirations. "It's not scolding; it's just telling you: Hey, this is reality," Oberlin said.

The intervention—which later sends participants daily photo reminders of their recovered future selves—increases future-self continuity and doubles the ability to delay rewards, his 2022 pilot study showed. Eighteen of the 21 original participants remained abstinent 30 days later, too. "I don't listen to the police. I don't listen to my probation officer. I don't listen to counselors. I don't listen to anyone else on the street," one participant told Oberlin after the simulation. "The only one I trust is me, but you've got *me* giving *me* good advice. I can hear that." Put another way, the patient experienced a strong therapeutic alliance with his best self.

Since then, Oberlin's team's work has spun into a startup called Relate XR, which is currently in clinical trials. While starting a business as a lab scientist has had its challenges, Oberlin and other psychology researchers and clinicians encourage their colleagues to embrace VR as a tool for an ever-expanding repertoire of therapeutic applications. "The only limits to this is that of our imaginations—and our clinical acumen," said Albert "Skip" Rizzo, PhD, a research psychologist at the University of Southern California, where he directs the Medical Virtual Reality program.

Wide-ranging clinical applications

Thanks to a handful of psychologists, including Barbara Olasov Rothbaum, PhD, virtual reality has been used as an effective treatment for anxiety disorders, including phobias and post-traumatic stress disorder, since the 1990s. It's an especially helpful exposure therapy delivery method for fears like flying, heights, or other scenarios that are difficult, dangerous, or expensive to repeatedly expose people to in real life.

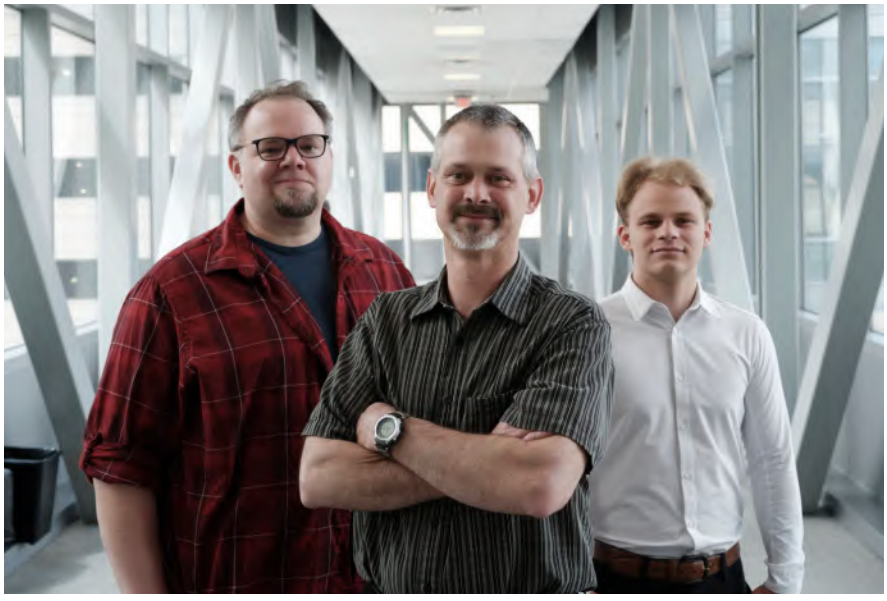
In addition to immersing patients in a simulated environment, VR can allow clinicians to monitor some physiological markers, like heart rate and skin temperature, during the experience. That strategy helps inform the therapist and empower the patient, said Brenda Wiederhold, PhD, a clinical health psychologist and cofounder of the Virtual Reality Medical Center in San Diego. Her 2002 randomized controlled clinical trial showed that people with a fear of flying who underwent VR exposure therapy had weaker physiological reactions as the sessions went on, and eventually they were able to fly without medication. A follow-up study showed the group receiving VR and biofeedback had maintained their ability to fly 3 years later.

"When they become aware of their body's reaction to different experiences in the virtual world or in the real world, they can do something to attenuate that," said Wiederhold, editor in chief of the journal *Cyberpsychology, Behavior, and Social Networking.*

Since those early days, the technology has only evolved. Now, Wiederhold said, patients can receive treatment at home through VR headsets if, for instance, they live in a rural area or have agoraphobia. Clinicians can still monitor their physical symptoms using tools like smart watches. "We're now able to so easily and inexpensively transition from the hospital or the clinic to the home, to the office, with validated tools, and we didn't have those back then," Wiederhold said.

VR's uses have expanded far beyond anxiety disorders in the past few decades, too. Cheri Levinson, PhD,

Relate XR's Dr. Brandon Oberlin (center), Andrew Nelson (left), and Izzy Branam (right) have rolled out a VR solution as an adjunct to traditional approaches to substance use disorder.



COURTESY OF INDIANA UNIVERSITY AND JAY GOLDZ (PHOTOGRAPHER)

a professor in the Department of Psychological and Brain Sciences at the University of Louisville, and collaborators have shown that virtual reality can help people with eating disorders face fears of weight gain. This work was done by Levinson and her Eating Anxiety Treatment Lab, including University of Louisville colleagues Christina Ralph-Nearman, PhD, and Andrew Karem, PhD, and was recently awarded a $125,000 grant from the National Eating Disorders Association that will help make the platform more inclusive of various body sizes, races, and gender identities.

"For things like anorexia nervosa in adults, which is where we see this really crippling fear of weight gain, we don't have treatments that work well—our best response rates are about 50%," Levinson said. "If we can figure out a way to really address this fear, we're going to make so much progress in treating these illnesses."

Mood disorders, too, seem to be a ripe area for VR interventions. In one 2024 randomized controlled trial out of Stanford Medicine's Virtual Reality & Immersive Technology Program, Margot Paul, PhD, and colleagues compared traditional behavioral activation (BA)—or exposing people to values-based activities they enjoy or that give them a sense of accomplishment—with BA delivered via VR. "We were curious if simulating pleasurable activities could improve mood similar to engaging in these real-life activities," Paul said.

The research team found that mood significantly improved in both groups, and that the VR participants experienced a lift before even beginning treatment that the control group did not, perhaps because they were excited to experience a new kind of therapy, Paul theorizes.



KLAUS VEDFELT/GETTY IMAGES

Psychologists are rethinking long-held beliefs preventing them from testing virtual reality interventions on people with schizophrenia or other psychotic disorders.

Psychologists are even rethinking long-held beliefs preventing them from testing VR interventions on people with schizophrenia or other psychotic disorders. While psychologists used to think that such experiences would only trigger or enhance hallucinations for these patients in a potentially dangerous way, a 2024 trial out of the United Kingdom showed the therapies, with appropriate therapist supervision, have the potential to actually help quiet auditory hallucinations.

Whereas with autism, you can turn up the volume on sensory experiences to build up a tolerance toward them, Wiederhold said, with psychosis, "you can turn down the volume of those auditory or visual hallucinations, and you can teach patients what's real and what's part of their schizophrenia."

Beyond treatments for mental illness

You don't need a diagnosable disorder to benefit from VR interventions, psychologists say. For his part, Rizzo has



shown how medical students and therapists in training can use it to practice aspects of their craft, like learning to get comfortable with uncomfortable silences and doing intake on a new patient.

"You're not just doing a hard interview, you're doing a clinical interview with somebody who's perhaps had extreme trauma, and you've got to be thoughtful and empathetic but also not be afraid to engage, but also not be pushy. That's an art," he said. Put bluntly: "Give novice clinicians a chance to screw up a bunch with a virtual patient before they get their hands on a live one."

Similarly, he's used VR to help people with autism secure jobs. "With higher-functioning folks on the spectrum that [are] capable of working, they [aren't always] so capable of job interview success," Rizzo said. But after practicing in various computed worlds, like those representing the restaurant industry or an office job, vocational counselors saw dramatic improvements in participants' ability to talk about their strengths, answer situational questions, and respond to other common job interview questions, Rizzo and colleagues' 2018 study found. "What was learned in VR can transfer to the real world," Rizzo said.

Even the general population can use VR as a stress management tactic or to potentially prevent a more significant mental health disorder from developing in the future, Wiederhold said. In one study conducted during the pandemic, she and colleagues tested a VR intervention on people in Italy who'd been subject to at least 2 months of strict social distancing. The researchers found that the daily, at-home modules that immersed participants in soothing environments and allowed them to practice social tasks decreased their anxiety, stress, and depressive symptoms over the course of a week—and 2 weeks beyond.

Keepers of the tool

Like any therapeutic delivery method, VR has its limitations. You can't simply put a headset on someone who might get retraumatized, for instance, without warming them up with other exercises like visualizations first. "It's a tool, and we are the keepers of that tool, and we need to make sure it's done ethically and responsibly," Wiederhold said.

Plus, it can be expensive. Paul said that, in some ways, it's less accessible than it used to be since companies with headsets and subscription services have monopolized the platforms. And while "you don't need to be a tech expert—just clinically curious," Wiederhold said, building programs that can be patented and rolled out for real-world use requires connections, time, money, and a skill set many psychologists don't yet have. "There's a real gap between people who are building it and people who are testing it and using it for real-world applications," Oberlin said.

That's why he recommends partnering with people whose experience and interests complement your own and being deliberate about how you use VR in practice. "I would caution people not to use VR simply because it's the latest toy; it seems like a whiz-bang, whistles and bells kind of thing," Oberlin added. "Use it for what it's good for, which is doing things that are impossible or unrealistically expensive or maybe dangerous. These are the use cases where VR really excels." ■

FURTHER READING

Understanding paranoia and extreme mistrust, with Daniel Freeman, PhD
(who uses VR in his work)
Speaking of Psychology (podcast), APA, 2025

Technology is reshaping practice to expand psychology's reach
Stringer, H.
Monitor on Psychology, January/February, 2025

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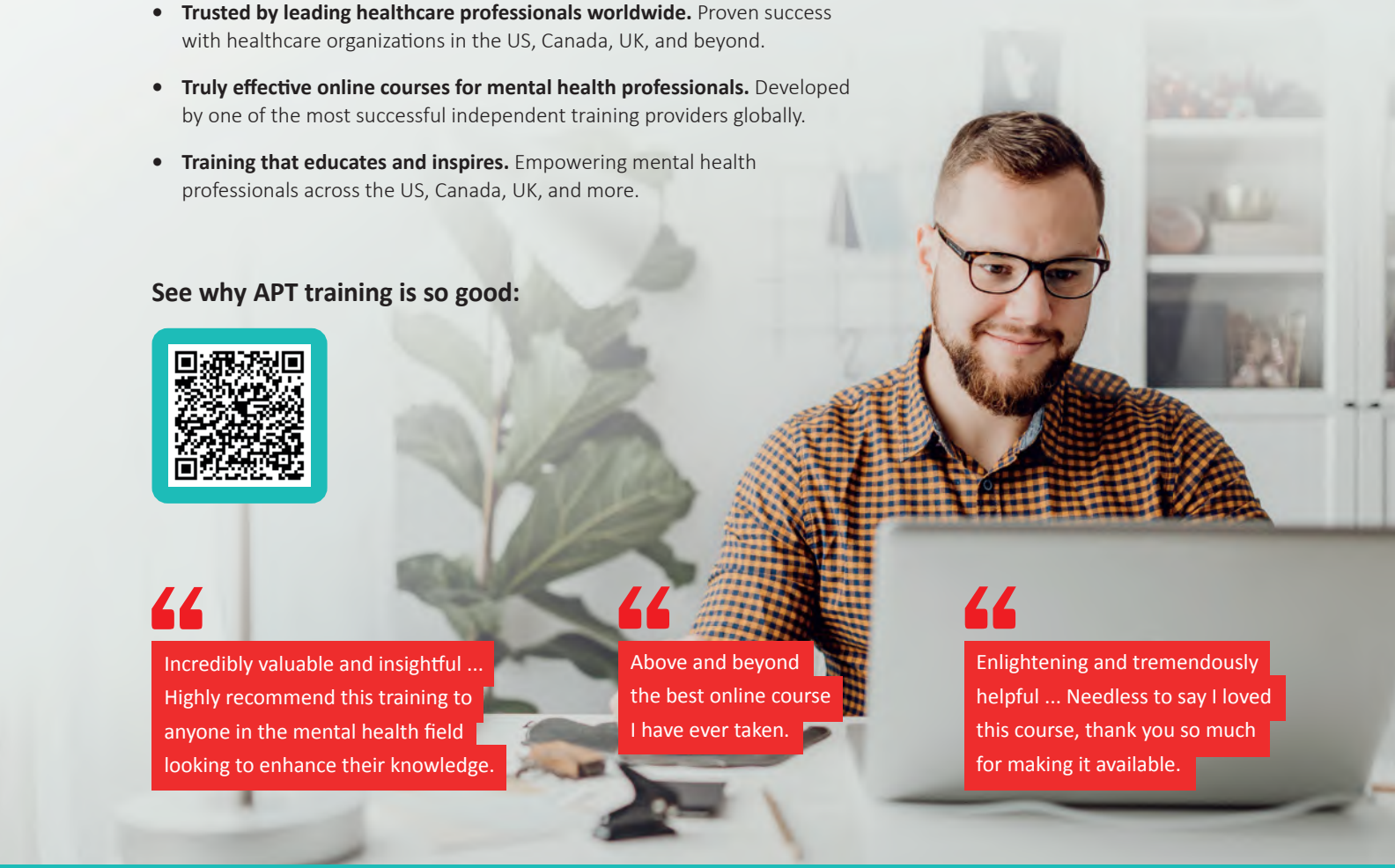
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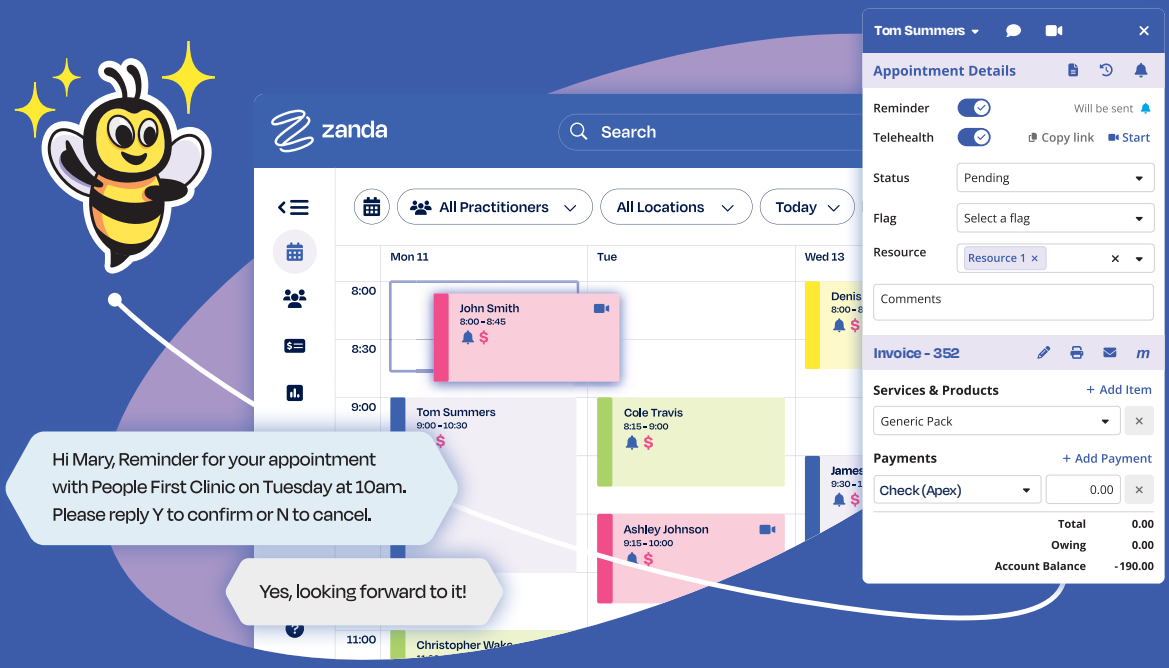
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