

The Top 10 Insights from the “Science of a Meaningful Life” in 2022



Our team names the most provocative and influential findings published during this past year.

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It’s hard to talk about individual well-being these days without talking about what’s going on in the world, whether that’s the mental health fallout of the COVID-19 pandemic, political polarization, or global crises like climate change.

All of us are affected by these problems, and that’s reflected in *Greater Good*’s 2022 selection of top scientific insights. But this research doesn’t just suggest how we might cope with bad situations. These studies also show us the power of connecting, working together, and being open to other perspectives—and the hope for a less gloomy future. The top insights also give us practical ideas of ways to grow, be kind, and find meaning in our everyday lives.

The final insights were selected by experts on our staff, after soliciting nominations from our network of nearly 400 researchers. We hope they help normalize whatever challenges you may be experiencing and offer a note of optimism for the year ahead.

Appreciating everyday experiences can enhance our sense of meaning in life



Have you ever found yourself caught up in admiring the beauty of a painting or the tranquility of your local nature reserve? Do you get deeply engaged in conversations with other people, or find yourself savoring the little things in life? A 2022 study published in *Nature Human Behavior* found that appreciating small moments like this is an important way to enhance our sense of meaning.

In one experiment, the researchers asked 474 university students in the U.S. to write about a recent experience they appreciated or a place they visited; afterward, participants were asked to report on their emotions. The researchers found that students who reflected on an experience they appreciated reported a greater sense of meaning compared to students who just reflected on a recent trip. For example, some students wrote about being in nature, moment of peaceful solitude, time with loved ones, or kind strangers.

“Our findings suggest that simply appreciating one’s experiences can foster a rich sense of meaning and perhaps shore up confidence that life has been and will be worth living,” write the researchers.

Prior research has found that meaning in life is driven by having a sense of purpose, feeling like your life matters, and feeling like the world makes sense. But this paper found that appreciating experiences may be another key driver of meaning.

Of course, consciously practicing appreciation may be easier said than done. How do we go about appreciating our everyday lives?

In the paper, one path to appreciation that the researchers discovered was awe. After viewing an emotional montage showcasing the wonders of nature, participants reported greater appreciation of experiences, which led to a higher sense of meaning in life.

Or one additional idea is to simply appreciate the everyday pleasure of thinking. As another 2022 study published in the *Journal of Experimental Psychology: General* found, we consistently underestimate how much we will enjoy the simple task of sitting with our thoughts.

Meaning might seem lofty and unattainable, but this research suggests that we might be able to find it in the small things.

Leaning into uncomfortable feelings could help us achieve bigger life goals



There are many ways we seek comfort in life. We can find it in a warm shower, a fuzzy cuddle with a cat, or a night on the couch with no obligations.

But according to a 2022 study published in *Psychological Science*, our desire for comfort could be holding us back when it comes to personal growth—and actively seeking out *discomfort* could help us achieve our goals.

Researchers conducted five experiments in which over 2,100 people were engaging in personal growth activities, such as taking improv classes, journaling about their emotions, or learning about COVID-19, gun violence, or opposing political viewpoints.

In each activity, researchers told some participants that their goal was to feel uncomfortable and awkward, nervous, anxious, or even upset. They were told to push past their comfort zone and know that feeling uncomfortable is a sign that the activity is working.

Ultimately, the researchers found that people who aimed to be uncomfortable were more engaged in their activities, felt more motivated to keep doing them, and believed they made more progress toward their goals compared to those who weren't seeking out this kind of vulnerability.

For example, improv students spent more time in the spotlight on stage and did wackier things; journalers were more interested in writing another difficult, emotional diary entry in the future; and people were more motivated to read challenging but

informative news articles.

“Growing is often uncomfortable; we found that embracing discomfort can be motivating,” write Woolley and Ayelet. “People should seek the discomfort inherent in growth as a sign of progress instead of avoiding it.”

Seeing discomfort as a sign of progress can be motivating, the researchers believe, because we often see awkwardness or fear as the opposite: a sign that there’s a problem and we’re not cut out for the activity.

This research goes to show that we might be judging normal human experiences like nervousness, stress, and discomfort too harshly. While our inclination might be to avoid them, we can become better people and live a richer life if we embrace them.

Our personalities changed rapidly during the pandemic



Is your personality fixed and insulated from outside events? Or can it change in response to what’s happening in society?

In a September paper published in *PLoS ONE*, a team of researchers studied more than 7,000 U.S. adults whose “Big Five” personality traits had been monitored from 2014 onward.

Observing people over time, the researchers didn’t find significant changes in personality through the start of the pandemic. But then, as time wore on into 2021 and 2022, personalities did in fact start to shift:

- **Extraversion:** We became less likely to seek out company and enjoy time with others;
- **Openness:** We lost capacity to seek out novelty and engage with new ideas;
- **Agreeableness:** Sympathy and kindness declined, affecting our ability to get along with others;
- **Conscientiousness:** We became less motivated to pursue goals and accept responsibilities.

Younger adults changed the most over the course of the pandemic. That group showed the steepest declines in agreeableness and conscientiousness, and a sharp spike in neuroticism, which means that they became more angry, anxious, irritable, and depressed.

That wasn't the only study this year to reveal the deep psychological impact of the pandemic. Another study published just this month by *Biological Psychiatry* combined mental health assessments with brain scans of 163 adolescents, before the pandemic and then two years later. The results are startling: "Youth assessed after the pandemic shutdowns had more severe internalizing mental health problems, reduced cortical thickness, larger hippocampal and amygdala volume, and more advanced brain age."

Why are we highlighting these studies?

First, if you have experienced negative changes to your well-being and personality during the past three years, this means you're not alone. If you find yourself depressed or irritable or unmotivated, that's not because you're weak—it's because you went through something terrible, along with people all over the world.

It's also good to know that we can change so much. Yes, these studies document negative changes—but if personalities can shift in that direction in so short a time, they can shift in positive directions, too. Yes, the pandemic was rough, but we can recover—and we will.

It’s not uncommon to experience high levels of well-being after mental health problems



According to the World Health Organization, as many as 1 in 8 people were living with a mental disorder in 2019. Anxiety and depression increased during the first year of the COVID-19 pandemic—and among youth, those numbers were staggering, with up to 1 in 4 experiencing depression and 1 in 5 anxiety.

Amid this backdrop, a 2022 paper published in *Current Directions in Psychological Science* offers some hope, finding that many people with mental health problems go on to lead thriving, happy lives. In other words, a mental health diagnosis doesn’t mean you’ll have to face a lifetime of suffering and struggle.

Researchers Jonathan Rottenberg and Todd Kashdan examined prior surveys from over 4,000 U.S. adults and nearly 16,000 U.S. adolescents who had been diagnosed with depression or anxiety disorder, or who had attempted suicide. People were considered to be “thriving” if they were doing better than 75% of their peers who hadn’t received such diagnoses, measured in terms of their positive and negative emotions, personal growth, relationships, purpose, self-acceptance, and more.

For example, 10 years after being diagnosed with depression, about 10% of adults were thriving. Although that might sound like a small number, since the bar for thriving was so high, it meant that depression only reduced people’s chances of thriving by about half.

“The way mental illness and mental health problems are described is as if you are stuck in this psychological prison,” says Kashdan. Adds Rottenberg, “It turns out that for decades we’ve completely been missing that there are a significant segment of people who go on to not only recover but to enjoy key aspects of the good life.”

Similarly, when following nearly 600 adolescents who had attempted suicide, they found that 1 in 7 were thriving seven years later, compared to 1 in 4 adolescents who hadn’t attempted to take their own lives. In other words, their chances of thriving only decreased by just over 40%. The results weren’t quite as encouraging for panic disorder and anxiety, though.

Still, these findings offer a different way to think about mental health issues. While depression and other conditions may seem intractable, a good proportion of people not only overcome them but go on to be happy and well.

We underrate the power of kindness, inside and out



During COVID, opportunities for everyday social encounters, like amicable chit-chat with strangers or spontaneous chances to do good deeds, largely disappeared. But evidence from several 2022 studies tells us why kindness matters more than we think, inside and out—and, hopefully, inspires us to be kinder.

A first study, led by Steve Cole, examined the impact of kindness on a biological response called Conserved Transcriptional Response to Adversity (CTRA). CTRA is a gene regulation program tied to greater inflammation, which, when chronically

elevated, increases our disease risk. For a month, on one day a week, some study participants performed three acts of kindness, while others just listed their daily activities.

Afterward, CTRA gene expression was elevated among the people who tracked their activities, and reduced in people who practiced kindness to others—a healthier genetic profile for stress.

In addition to these deep benefits to our bodies, a second study found that kindness is uniquely beneficial for our sense of meaning in life. Compared to three other positive behaviors—kindness toward the self, being more socially outgoing, and acting more open-minded—practicing kindness gives people higher self-confidence, more competence, and a greater sense of meaning while they’re doing it.

Given these benefits, what keeps us from being kind? Another two studies highlight mental biases that get in the way. Specifically, in deciding whether to do something generous or helpful for someone, we chronically underestimate how much beneficial impact we can make. Secondly, when considering whether to reach out to an acquaintance, we predict that they will appreciate it less than they actually do. These inaccurate assumptions make us less likely to approach and interact with each other to reap the benefits reported in the first two studies: a healthier stress profile and greater sense of meaning in life (among the many other benefits of kindness).

The reminder that “happiness springs from doing good and helping others” (Plato) is especially important now because, frankly, we’re a bit out of practice. As we get to gather together through the holidays, into the new year, and beyond, there’s plenty of room to infuse more kindness into the mix.

Awe helps us feel more connected to the global community



To overcome worldwide problems, like poverty and climate change, we must focus our attention on our shared humanity and prioritize global cooperation. But it can be difficult for individuals—and even nations—to think beyond their own problems and concerns.

Two 2022 studies point toward a potential solution: experiencing awe. When we feel a sense of wonder in the presence of things greater than ourselves, we expand our circle of care and become more likely to act as global citizens.

In one study published in *Emotion*, American participants were induced to feel awe (through writing exercises or seeing awesome pictures and videos of nature) and then reported how much they identified with all of humanity and felt a shared destiny with them. In some cases, they also were invited to give away money to a couple of charities—one globally focused, the other benefitting Americans alone.

In comparison to other people who did different activities, people feeling awe were more globally focused—and more willing to give to global charities.

“Awe helps you realize that you’re a small piece of a larger universe. That naturally leads to a realization that people elsewhere are relevant and worthy of concern,” says researcher Sean Laurent.

In another study published in *Psychological Science*, researchers found similar benefits of experiencing awe after people witnessed the 2017 solar eclipse. Researchers analyzed the tweets of almost 3 million Twitter users during the eclipse and found that people residing in the eclipse pathway expressed more awe and used less self-focused language than those living outside of it. And the more awe expressed in their tweets, the more affiliative, humble, and collective language they used in comparison to their pre-eclipse tweets.

Taken together, the studies suggest awe can broaden our moral circle of care by increasing our sense of common humanity and collectivism.

Young people aren't becoming more selfish



In recent years, there's been some bad press about younger generations, suggesting they're more self-centered and selfish than past generations. Even some researchers have made the case that millennials are more narcissistic than their predecessors.

But a 2022 study that came out in *Psychological Bulletin* questions that narrative.

Researchers analyzed results from hundreds of experimental studies conducted between 1956 and 2017 with 18 to 28 year olds who had played the same economics games. These games are frequently used in research to measure how much people will cooperate with strangers (to mutual benefit) or act selfishly (maximizing their own individual profit at the expense of others), allowing researchers to compare the selfishness of generations of players over time.

Ultimately, researchers found that younger generations were *less* selfish and *more* cooperative than older generations.

“This may be somewhat surprising to people, when you consider the commonly held [opposite] view,” says researcher Paul van Lange. “But, when you look at actual cooperative behavior, which these economics games do, there’s a slight positive trend in cooperation.”^[1]_[SEP]

Why might young Americans be more willing to cooperate these days? It’s possible that as urbanization has increased, and more people are living among other people they don’t know well, cooperation with strangers has become more necessary for our social survival.

This research suggests we need to stop pigeonholing younger generations as selfish and uncooperative. Otherwise, we do psychological harm to them, while taking attention away from other barriers to cooperation—like economic insecurity or a lack of trust. In fact, we should stop stereotyping *all* generations, young and old, as research suggests those stereotypes are generally wrong and can hide complicated factors that drive human behavior.

One hopeful message from these findings? If younger generations are truly the most unselfish they’ve been in decades, maybe they will lead the charge on working collaboratively with others to solve social issues.

Climate anxiety makes young people depressed—but collective action might help protect them



Few issues are more overwhelming than climate change: long-term shifts in temperature and weather patterns largely fueled by humans burning fossil fuels. We already know many of the technological and social solutions, like making transportation more efficient and shifting toward renewable sources of power.

But as individuals, it's easy to get discouraged and feel like we have little control over the course of climate change and the decisions of corporations and governments. How do we cope with our climate worries?

A study published by *Current Psychology* looked specifically at anxiety, depression, worry over climate change, and willingness to take action among 300 young adults ages 18 to 35. The researchers found that the worst formula for mental health, unsurprisingly, was to be aware of climate change but not do very much to fight it.

For people who were taking steps to fight climate change, the type of involvement mattered. Taking individual-level action (by, for example, reducing driving) didn't seem to lower depression—but taking collective action did.

Why? "Engaging in collective action may combat feelings of despair and helplessness and foster feelings of hope," write the researchers. "Collective action also brings with it community connection and social support, which supports health and well-being."

So, what can you do to manage any anxiety you feel about climate change? Vote, boycott, write letters to politicians, and march with others to demand the solutions we know are available—and find a community of like-minded people who share your concerns.

We can stop misinformation



When Elon Musk bought Twitter in October of this year, one of the first things he did was to dismantle the social media platform's ban on misinformation about COVID-19, citing freedom of speech.

It was a depressing development, given the well-documented links between misinformation and pandemic deaths. But the past year also saw a wave of studies explore the ways we can effectively counter misinformation (mistakes of fact or interpretation) and disinformation (deliberate falsehoods).

As one paper by a team at UC Berkeley found, people are very prone to spreading information that seems popular. So, if you exist in a somewhat closed social network—online or off—you're more likely to adopt the group's beliefs, no matter how inaccurate. That's why so many social media experts recommend getting outside of our information bubbles.

Two other new papers tested steps you as an individual can take to prevent yourself from adopting and spreading misinformation.

In one, a team based at the University of Pittsburgh examined "investigative behaviors—actions aimed at determining the veracity of information encountered online" among almost 900 adults. That basically means Googling beyond the headline, to try to verify the information across multiple sources.

What led to more investigative behaviors? A trait called intellectual humility, which is the knowledge that your opinions are fallible. Our intellectual humility quiz can offer you some recommendations for strengthening your intellectual humility.

Another study published by *Nature Communications* tested the effectiveness of a very simple technique: seeing a short public-service announcement about accuracy before consuming news, encouraging people to make sure the information they're about to encounter is accurate.

(The reminders that social media companies have attached to certain posts—that claims are false or disputed by independent fact-checkers—could perhaps have similar benefits as accuracy prompts. In the absence of them, we may have to remind ourselves of the possibility of misinformation before we go to share or like a post.)

Overall, the researchers found, accuracy prompts reduced the sharing of false headlines by 10%. If that doesn't seem like a lot, that's because "no single approach will solve the misinformation problem," as the authors write. It will take many different approaches, on both organizational and individual levels—and, as these studies reveal, that effort starts with you.

Wealth redistribution could increase happiness across the economic spectrum



Recently, there have been some interesting social experiments where cities have given money to people in need, hoping to improve citizen well-being. But does this strategy work and actually make a lasting dent in people's life satisfaction?

A new study published in *PNAS* suggests it may.

In the study, people from three lower-income countries (Indonesia, Kenya, and Brazil) and four higher-income countries (the United States, the United Kingdom, Canada, and Australia) were randomly given a gift of \$10,000 from a wealthy donor and told to spend it any way they wanted over three months. For the six months following the gift, the recipients reported on how satisfied they were with their lives and how much positive and negative emotions they were experiencing.^{[1][2]}

It may come as no surprise that those who'd received \$10,000 to spend were significantly happier than those who hadn't. What's more telling is that their gains in happiness lasted for at least three months after spending had ended, and even people with incomes of \$125,000 per year or more were happier getting the money (though not as dramatically happier as less wealthy people). And, within poorer countries, the happiness effect of receiving money was even greater—three times greater—than in wealthy countries.

As the authors write, their study offers “evidence that cash transfers substantially increase happiness among economically diverse individuals around the world.” It suggests that redistributing money could be a viable plan for improving worldwide well-being.

But wouldn't wealthier people suffer under that plan? Not a lot, probably. Once people have reached a certain level of wealth, having more is likely to bring diminishing returns on their happiness. On the other hand, wealth inequality has been found to lower happiness for everyone, which suggests wealth redistribution could have large-scale benefits—among poor and wealthy alike.

With the richest 10% of people owning 52% of global wealth and the poorest half owning only 8.5%, perhaps it's time to expand that social experiment and spread the money—and the happiness—around.

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