



## **TRANSCRIPT & SLIDES**

### ***The How of Well-Being***

***March 29, 2021***

## **RICHARD J. DAVIDSON**

Good evening from Madison, Wisconsin. I am the founder and director for the Center for Healthy Minds at the University of Wisconsin in Madison. And I'm also the founder and President of an affiliated nonprofit called Healthy Minds Innovations that takes the insights from the science and translates them into tools to cultivate and measure well-being. I'm really happy to be with you all this evening. And as we are getting settled for this evening's program, please take a moment and let us know where you're from in the chat.

There are already many people joining us from different parts of the United States. As well as the world. There are people from Australia, Peru, Sweden, as well as Canada, many different parts of the United States, Mexico, it's really wonderful to see all of you. Also, take a moment in the chat and tell us how you're feeling right now. Give us a word or two and let us know how you're doing this evening. So please use the chat and just let us know. We appreciate that. So this is the first of – and people are now starting to come in with reporting how they're feeling: Terrific, relaxed, exhausted, hopeful, calm, sleepy, a wide range. That's great. We want you to simply report on how you're feeling. There is no right answer here. So we really appreciate honesty and stress. It's a crazy time in which we're living. So this is quite normal to see a very wide range of responses.

This is the first of a series of events we're going to be doing this year, and the events are broadly designed to explore well-being in different aspects of our lives. And this first event is focused on the how of well-being, and we're going to be showcasing here a framework, which has been incorporated in our Healthy Minds Program, which is being released as an app, freely available throughout the world. So please try it if you haven't already tried it. You can go to the website [tryhealthyminds.org](https://tryhealthyminds.org) to learn more about it.

It's completely free, and we would love to have you join us on this journey, which you'll hear more about this evening. So before we get started, we have an expert with us who is assisting with closed captioning for those who need it, and the instructions for how to turn it on will be

posted in the chat box, so please take a look at that if you need that. In addition, as we are going along this evening, I'm sure you will have some questions, and we will have a very juicy question and answer period. So please put your questions in the chat box, and we'll be taking the questions a little later this evening. So tonight we're going to be introducing a framework for what we can think of as the plasticity of well-being. As many of you know, we hold the view that well-being is best regarded as a quality that can be nurtured, a skill that can be learned. And tonight we're going to be talking about the details of the framework and giving you all a taste for how well-being can actually be cultivated. And we'll introduce four pillars of well-being that are at the core of this new framework that we've developed. Actually, we have – we were supposed to have both co-authored this evening. Cortland Dahl, one of the co-authors, who is our Chief Contemplative Officer and Chief Content Architect for the Healthy Minds Program, unfortunately hurt his back and is not going to be able to join us this evening. So we apologize for this last-minute change. And there will be other events with Cortland which you all can attend, so please stay tuned. With me this evening is Christy Wilson-Mendenhall.

And Christy is a scientist at our center. Christy received her Ph.D. from Emory University in Cognitive Neuroscience, and she's an expert in cognitive and affective neuroscience and how those fields can be applied to the study of contemplative practices and their impact on the brain and the mind. So Christy, it's great to have you here. And maybe you can just introduce yourself a little bit more to the audience.

#### **DR. CHRISTY WILSON-MENDENHALL**

Sure. I'm Christy Wilson-Mendenhall. I'm an associate scientist at the Center for Healthy Minds. And like Richie said, I have a Ph.D. in Cognitive Neuroscience. I'm also a mom. I have two young kids. So as part of the presentation tonight, I'm also going to be sharing how I integrate this framework for well-being into my everyday life.

#### **DR. RICHARD J. DAVIDSON**

Thank you so much, Christy. And you have done motherhood and your role as a scientist in the center with tremendous grace during this period of extraordinary challenge, and I'm so grateful for your many, many contributions, and it's great to have you to be part of this first Healthy Minds Live event. So thank you for being here.

# Why is this important? Why now?

So we're going to begin by introducing the framework for cultivating well-being for the plasticity of well-being. So we want to spend a little time talking about why well-being is important particularly now. Today, this is actually data from before the pandemic.

# 76%

of middle-aged Americans report  
moderate to high levels of loneliness

Lee et al., (2018), *International Psychogeriatrics*

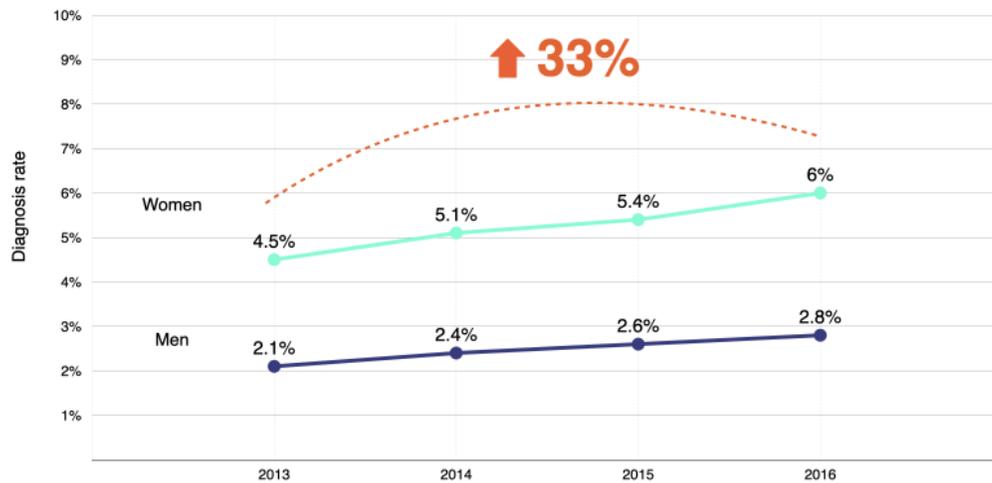
[76% of Americans reported themselves to be moderately significantly lonely.](#) This loneliness has only been exacerbated by the pandemic. And similar figures are available for many other

parts of the world today. In the U.S. today, before we get to that, just a little bit more about loneliness. It turns out that loneliness is not only an ephemeral state, but it can get under our skin and affect our physical health. And this is something that we're learning more and more about, how well-being and how problems like loneliness and depression can impact our physical health. [It turns out that loneliness is more than twice as great a risk factor for mortality than is obesity.](#)



And this is derived from large-scale epidemiological studies. And so this is just indicative of how serious a challenge this is. These are data from the U.S., for those outside the U.S., I apologize. The audience tonight is from all over the world. And there are data for each of the countries that you represent. And when I've gone and spoken to audiences predominantly from those other countries, I've featured those data. And the bottom line is that the trends are similar all over the world.

## Depression is on the rise in adults

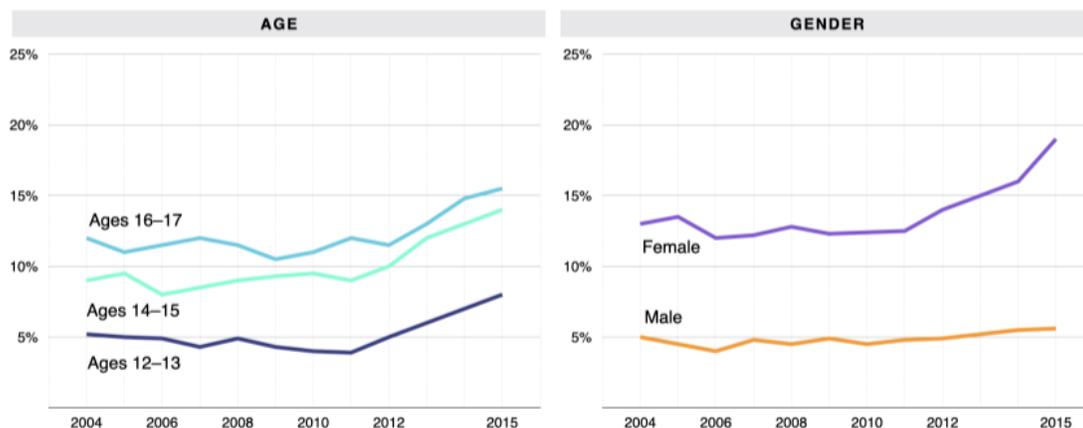


Blue Cross, Blue Shield, Major Depression, Impact on Overall Health, 2018

[Depression is on the rise .In the United States, over a five-year period from 2013 to 2018, there has been a 33% increase in the rates of major depression in women.](#) And this gender difference is found in every country in which it's been examined. It is pervasive, the rates of depression are twice in females what they are in males. And depression, according to the World Health Organization, is now the leading cause of morbidity worldwide. Now, one of the unfortunate things that we see today is that the pandemic has exacerbated this tremendously.

In the U.S., according to data that was published just very recently within the last month, income age groups, [the rates of depression have more than tripled](#). More than tripled. And there are serious consequences to this.

...in teens as well



Centers for Disease Control, 2018

[What we see is similar trends in our teens](#). These, again, are data from the United States. They show that in every age group in which this is examined in teenagers, the rates of depression are rising, and the rates, again, in females compared to males are in this case more than double, and that gender difference is going – is becoming more extreme over time.

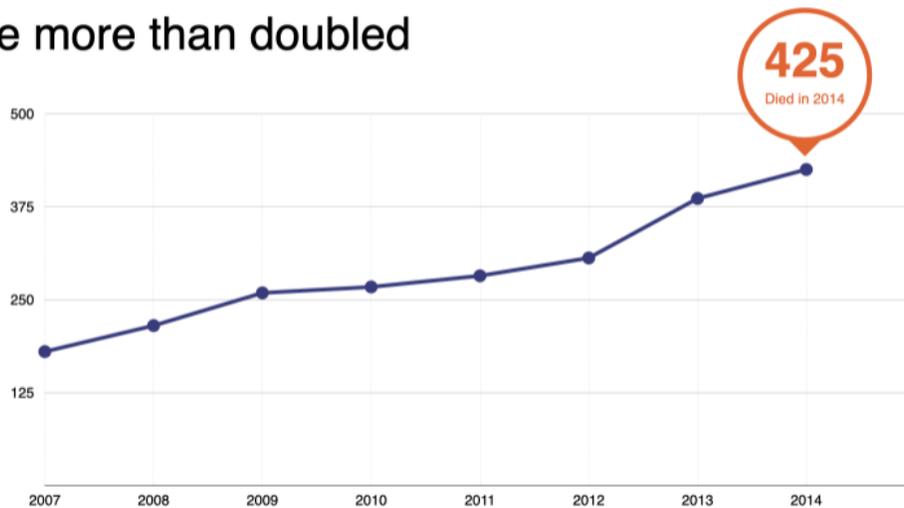
## Suicide rates have been rising... again



Centers for Disease Control, 2018

Unfortunately, [suicide rates are also increasing](#). There was a dramatic decrease in suicide rates in the United States after the second World War, but those suicide rates have been rising since about the year 2000. And this is occurring not only in adults but unfortunately also in our youth.

## Adolescent suicides have more than doubled



Centers for Disease Control, 2018

So in the United States today, there's more than one adolescent suicide that is occurring every day. So this is a serious crisis. So well-being is really an urgent public health need.

Well-being is an **urgent**  
public health need

We believe that all of these problems, in one way or another, stem from a failure to nurture well-being, particularly earlier on in life, in ways that may be preventative as our children develop. One of the important missions that we are on is to communicate this fact that well-being is an urgent public health need and encourage more and more people globally to adopt this framework and to help us disseminate strategies and practices in different sectors of society to promote well-being. The very future of our species is dependent on it.

So we're going to shift now and tell you a little bit about our research. So what makes us resilient in the face of challenges?



What makes us  
resilient in the face  
of challenges?

And at the top of our game when things are going well?



... and at the top of  
our game when  
things are going well?

Well-being is a skill that we believe can be learned.

# Well-being is a skill that can be learned

And what we have found is that when we examine the core elements, the core components, or pillars of well-being and we identify the systems in the brain, circuits in the brain, that are important to support these components of well-being, these are circuits that show plasticity.

## The four pillars of well-being



**AWARENESS**  
Be Present

Skills:  
Mindfulness, attention,  
self-awareness



**CONNECTION**  
Feel Connected

Skills:  
Appreciation, kindness,  
compassion



**INSIGHT**  
Get Curious

Skills:  
Self-inquiry, self-knowledge,  
self-transcendence



**PURPOSE**  
Stay Motivated

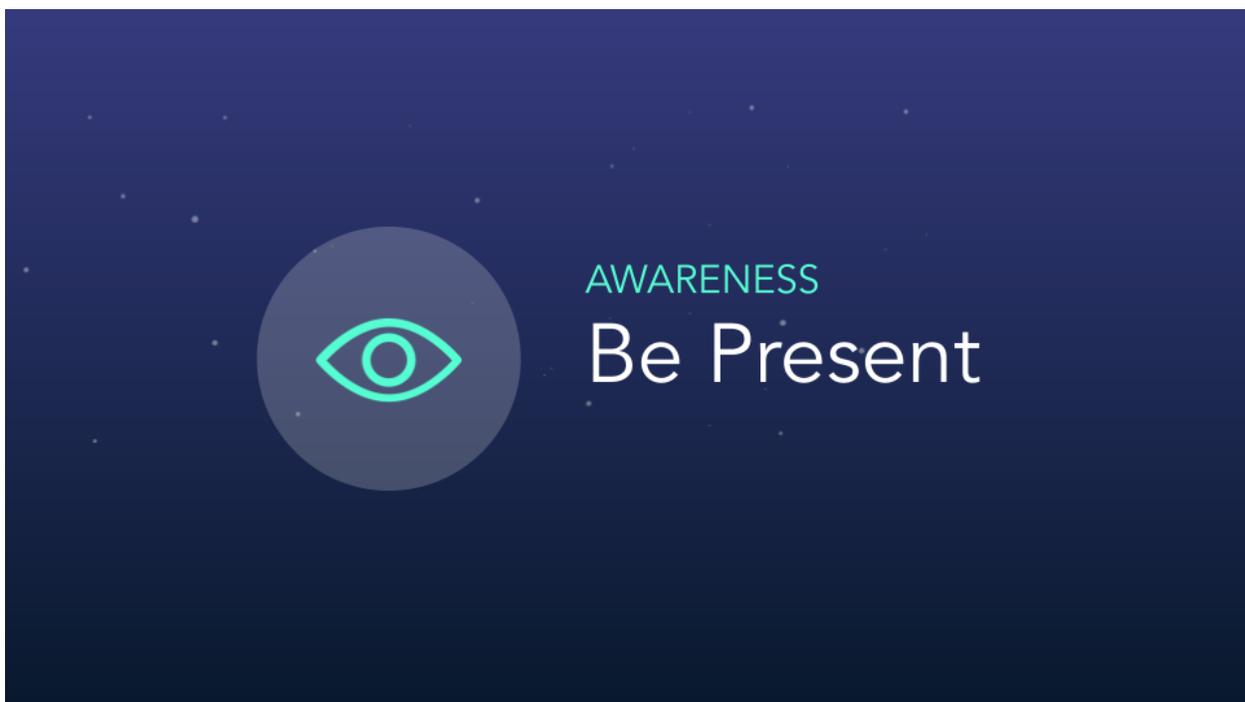
Skills:  
Clarifying and embodying  
purpose, values, and meaning

They can be influenced by experience, and they can be honed through training. So this is really

the heart of the framework. And I'm going to spend a little time going through this because this is an important slide that conveys the core elements or pillars of well-being that are at the center of this framework.

The first pillar of well-being we call awareness. It is about being present. It's where mindfulness would be. It includes our capacity to focus our attention, and it also includes our capacity to be aware of ourselves in our own minds. The second pillar of well-being is connection, really about feeling connected with others. It includes qualities like appreciation and gratitude, kindness, compassion. These are all key constituents of feeling connected. And we know from hard-nosed scientific research that each of these can be nurtured through training. The third pillar of well-being is insight. And this is about getting curious about how our minds actually work, particularly the narrative that we all carry around about ourselves. We all have this narrative. It's a normal characteristic of the human mind. We're not going to get rid of the narrative, nor should we. But we really can benefit from understanding the narrative much more deeply. At the very extreme end of a distribution, there are people that have a very negative narrative. They have very negative beliefs about themselves. And they hold those beliefs to be a true description of who they are. And, of course, that is a prescription for depression. So an important part of well-being is to deeply understand the nature of this narrative and perhaps not to change the narrative but to change our relationship to this narrative so that we can see it for what it is.

And finally, the last pillar of well-being is purpose. It's about staying motivated. And it is about clarifying your values and our sense of meaning as we engage in our activities. It's not so much about trying to find something different to do that may be, quote, more purposeful. Rather, it's about discovering meaning and purpose in the things that we are already doing. And widening the sphere of our purpose to include more and more of our everyday activities.



So now is an opportunity for a little bit of practice. If Cortland Dahl was with us now, he would be leading this. He is a real expert in this. He's had many, many, many years of meditation experience. So you will all have to get by with my novice expertise in this as I will guide you through a little practice.

So let's gently close our eyes since we all are looking at screens so much these days and simply bring our awareness into our bodies, and let's try to find an upright posture but not too tight. One that is awake. If we're sitting on a chair or some other kind of couch, we can feel our feet touching the ground. And let's simply spend a few moments checking in with our bodies, taking a deep breath and exhaling. And simply noticing whatever may be present. This practice is not an invitation to change any element of our experience. It is simply an invitation to shift from a mode of going to a mode simply of being. And one of the things that we do in the tradition in which I practice is we always remind ourselves whenever we sit down to practice, what our motivation is. Why have you all chosen to join us this evening? And see if you can find, in that motivation, a place where there is an altruistic motive. Where we can recognize the calming of your mind and opening our heart in this way may be beneficial not only for ourselves but for all the others that we touch directly or indirectly. So let's now open our eyes and re-engage. And as we re-engage, see if we can maintain that same quality of awake presence as we navigate the remainder of the evening.

## How distracted are we?



So I'm going to tell you a little bit about the science. How distracted are we? Now, can anyone guess what percentage of the time are we typically not paying attention to what we're doing? So what I'd like to invite you to do is put a number in the chat box from 0 to 100 to let us know what percentage of the time you think we're not paying attention to what we're doing. Please enter into the chat box. 50, 80%, 90%.75. Okay. 75. 95 - you guys have a very pessimistic view of the

current state of our attention. It is true that in addition to having a fiscal deficit, we have an attention deficit, if we're honest with ourselves. Turns out it's 47% Some of you have heard me talk before, so you hit this number correctly. So which population? This is a study – this is data from study that was done in about 3,500 people in many different parts of the world. And I won't go into the details of how this study was done, but the scientists found that on average, [people spend 47% of the time not paying attention to what they're doing.](#)

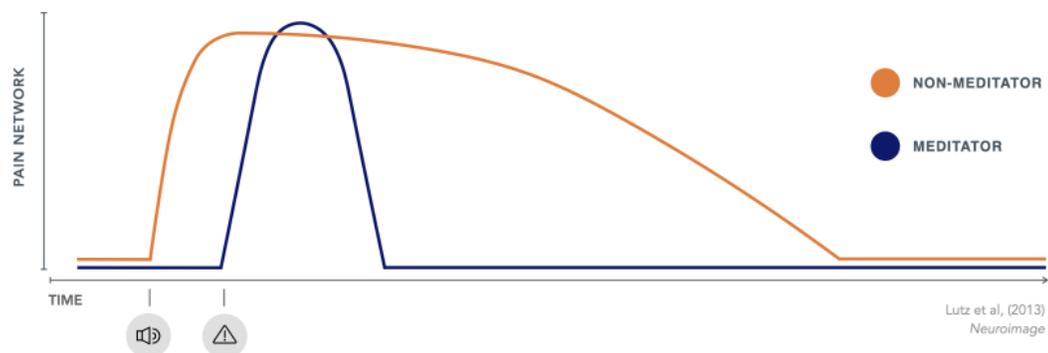


47%

I have the strong conviction that we could do better. This is just an example of how practices of awareness can really dramatically transform our experience, to really stay in the present moment.

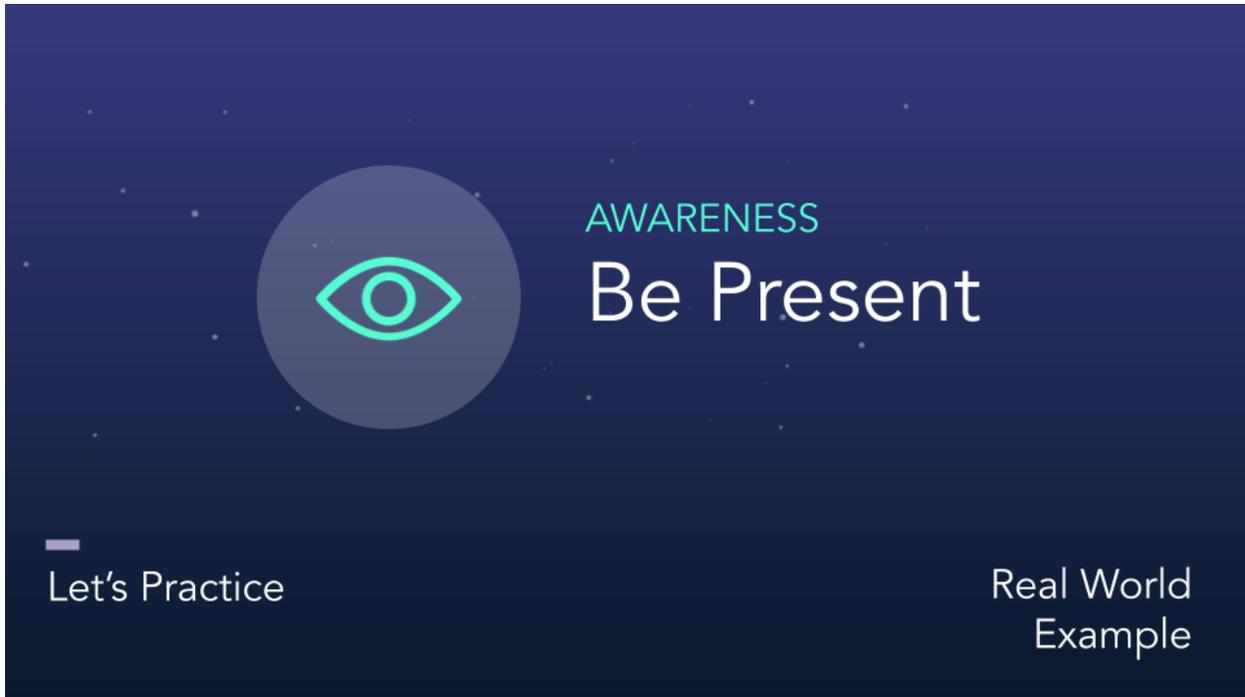
So what we did in this experiment is to look at how people respond to pain.

# Transforming the experience of pain



[And we were testing non meditators and very long-term meditators.](#) The non-meditators are in orange. Meditators are in blue. And we used heat to create pain, and we did this in the MRI scanner. We gave them an experience of this heat so it feels like an intense burning sensation. And the experiment goes like this. They come into the lab after getting a taste of this pain. And we tell them when they hear tone, they're going to get zapped with the painful stimulus in a few seconds. So let me show you what the non-meditators look like. So the non-meditators, when the sound comes on, they immediately show activation in areas of the brain that respond to pain, and they have a very gradual fall-off. The meditators, on the other hand, come into the lab. They show no response when the sound occurs, telling them that they're about to get zapped. They show a big response to the pain itself, and then they have a very rapid recovery. This is a neural picture of resilience. And this is a quality that we and other scientists have found can be nurtured through these practices. This is just a reminder to do the practice which we've already done.

And also a reminder to bring Christy in to just share with us from your own experience, as both a mom and a scientist, a little bit about bringing awareness into everyday life.



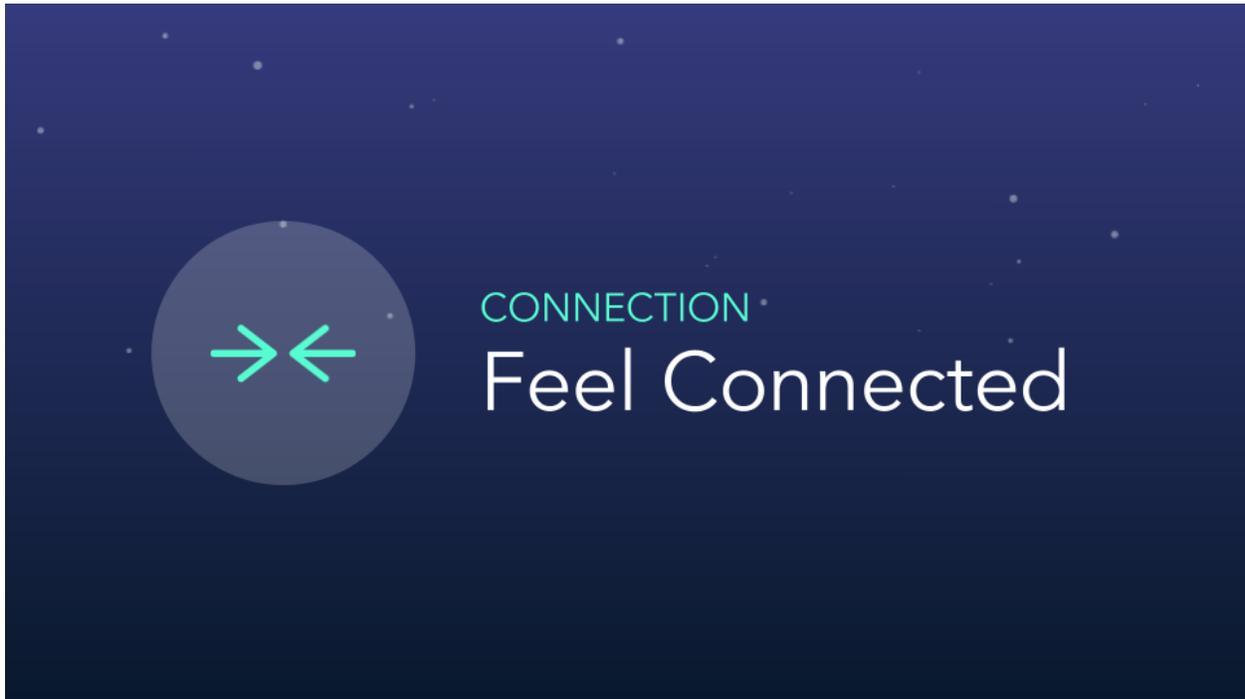
#### **DR. CHRISTY WILSON-MENDENHALL**

So first I just want to acknowledge that it's been a tough year and continues to be a tough time for a lot of people. And for me personally, the practices that I'm going to share for you are much more in the spirit of resilience. I don't feel like I'm my best self right now, but these practices are really helping me be resilient and get through a tough time. So one of the awareness practices that I've integrated into my everyday life is about becoming aware of distraction when I'm spending time with my kids. So every day at some point in the day, usually in the evening, I set an intention to really focus on my kids and be with them. And, of course, that's easier said than done, right? You have your to-do list and your worries and things that pop into your mind. And so this – what I do in this practice is I'm spending time with my kids. And if my mind does start to wander away to a worry or to-do list, as soon as I notice that, I just notice that my mind has wandered away, and I bring my attention back to my kids. And I do that in what we call a nonjudgmental way, and so I don't get caught up in the fact that my mind has wandered away, and I've become distracted when I really wanted to be present with my kids. I just sort of let it go, be gentle with myself, and kind of come back to being present with my kids in whatever I'm doing with them. And so instead of the goal really being to have a time where I'm completely focused on my kids and I never lose or I never become distracted, the goal is to become aware that my mind is wandering and to bring it back. And so I find this is a helpful way for me to be present with them, at least for some part of the day.

#### **DR. RICHARD J. DAVIDSON**

Christy, that was great. Appreciate it. So we're going to move on now to connection, the second pillar of well-being. This is about feeling connected. And so we can be physically distant from

others and yet still feel connected. One of the unfortunate choices that was made by our public health officials early in this pandemic is to talk about “social” distancing. I think this is really an unfortunate choice of words where the recommendation is to be physically distant. But we can be physically distant and socially connected at the same time. And so we're going to share with you a little bit about this.



So there is a whole corpus of research findings on the importance of social connection and its absence. We talked a little bit about loneliness already. [It's a risk factor for depression, for anxiety disorders, for suicidal thoughts, as well as for unhealthy behaviors like smoking.](#) And it increases risk of mortality by 30%. And so this is really a public health issue. This is just to remind us of how important social connection is, particularly early in life.

## RESEARCH FINDINGS

Consequences of  
loneliness and isolation:

— Risk factor for depression,  
anxiety disorders, suicidal  
ideation, and unhealthy  
behaviors like smoking

Source: Beutel, et al (2017)

— Increases risk of  
mortality by 30%

Source: Holt-Lunstad, et al (2015)

One of the things that's actually been found is that the roots of empathy and social connection can be found in neonates soon after they're born.



It turns out that if one baby starts crying, other babies are much more likely to cry in an infant ICU. And it is contagious. And not just negative emotions are contagious but positive emotions

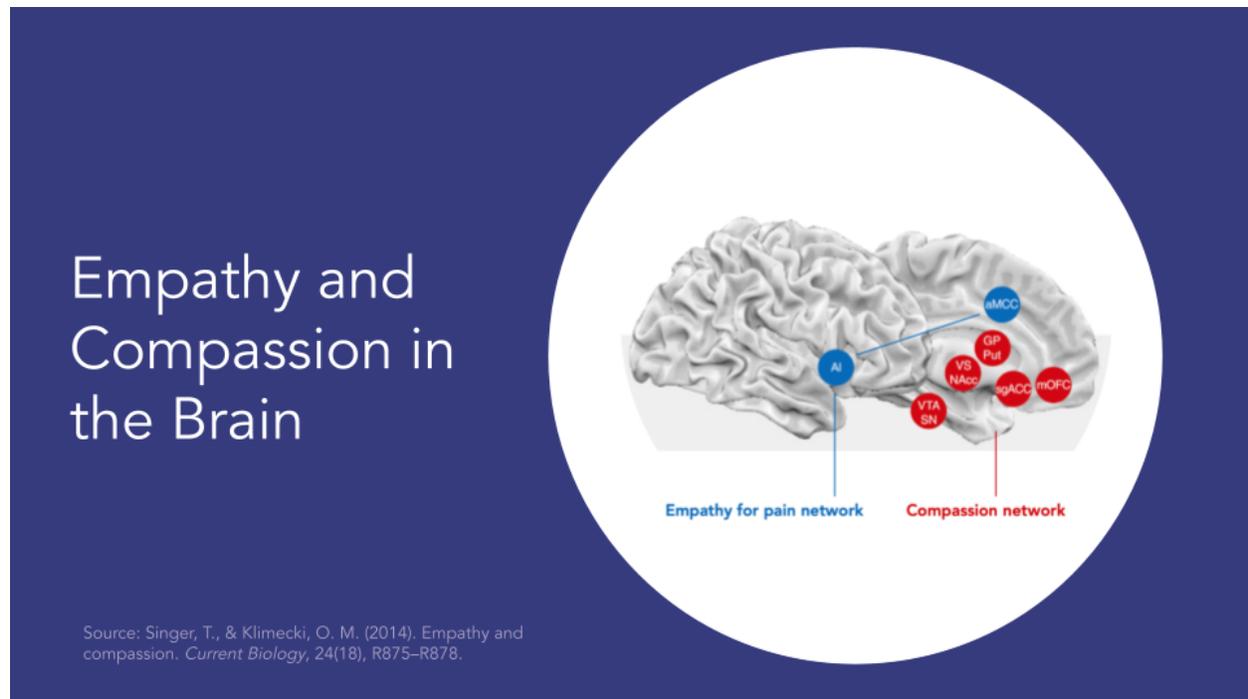
are contagious, too. But there are many different responses to distress. One is to also show distress. This is an example of a kind of indifferent response.



And the next slide illustrates yet a third kind of response, which we think of the antecedents or the origins of compassion, which is a kind of empathetic concern for the other. And so these tendencies can be seen very early in life.

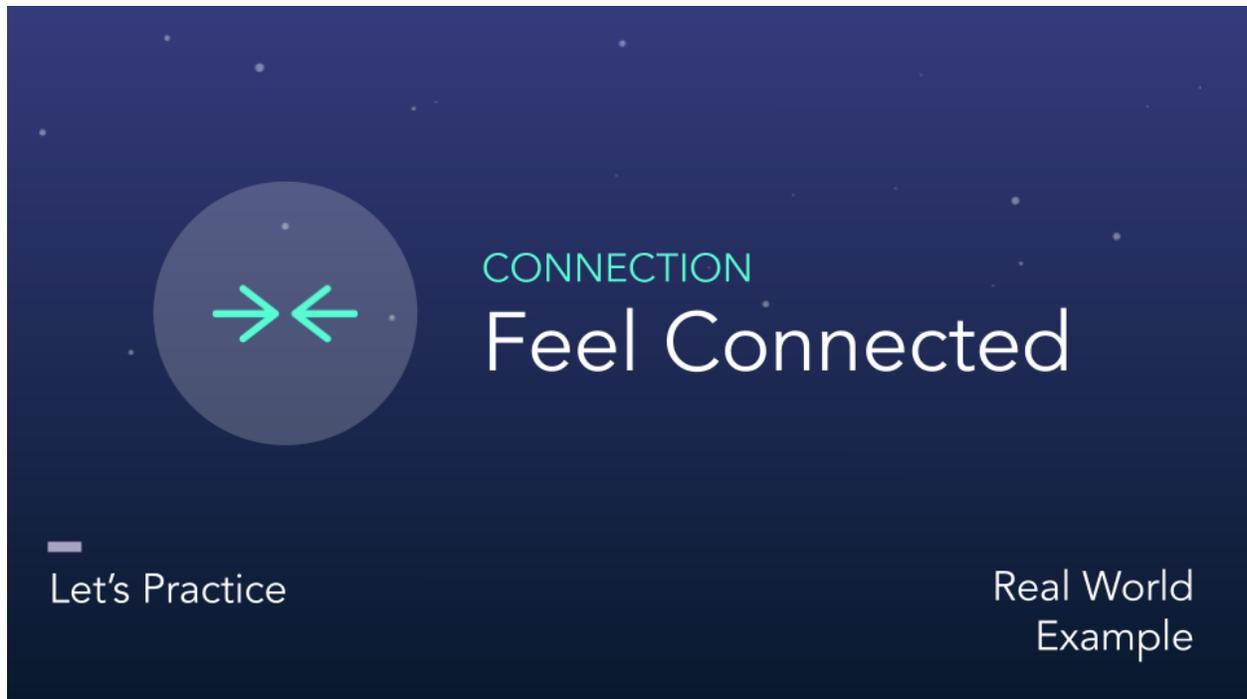


Now, this is an important slide (below) because it shows that empathy and compassion are different in the brain. This is really important. Many members of helping professions often talk about compassion burnout.



And yet we think that that's probably a slightly inaccurate way of talking about it from a scientific perspective. We think it's more likely that what they are experiencing is empathy burnout. When you're empathetic with another person, you're emotionally resonant with them. And if someone is suffering, if they're in pain, if they're anxious, then the sympathizer is emotions as well. And in order to help a person in need, in order to relieve their suffering, feeling exactly what they're feeling and particularly feeling it cumulatively for the same duration of time that they are experiencing it may not be the most helpful. And so one of the things that we and others have investigated show empathy can be transformed into compassion. [Now, the neural systems that are recruited when we generate compassion are totally different than those seen in empathy.](#) And one of the really interesting things is that they include networks in the brain that are important for compassion is a preparation for action. It's to prepare a person to respond as soon as suffering is encountered.

We're going to do a little practice, and then Christy is going to share some real-world examples. So let's now close our eyes again. And again refresh our posture. Sit in an upright posture but not too tight. Not too loose.



And let's begin by taking a moment to bring awareness again into our body. And now please bring into our mind and your heart a person who has been very helpful to us during this time of the pandemic. It could be our spouse. It may be a child. It may be a parent. It might be a delivery person, a health care provider, a grocer. Whoever it might be. Let's start by bringing one person into our mind and our hearts who's been helpful to us. And let's see if we can find, as we bring them into our mind and our heart, a sense of appreciation arising. Appreciating this person for what she or he has done for us. And maybe even appreciating the way in which they have been helpful. Maybe even reflecting on how you might thank them the next time you see them and express your appreciation. Now bring one other person into your mind and heart, a second person who has been helpful. And let's do the same and see if we can find in ourselves spontaneously arising this sense of appreciation. It could be someone you work with. And it may even be someone you don't know, the person who invented the vaccine. Whoever it might be. And sensing this really uniquely human and deliciously valuable quality of appreciation. So let's gently open our eyes. And as we re-engage, let's see if we can sense this quality continuing. And Christy, please share with us a little bit about some real-world examples.

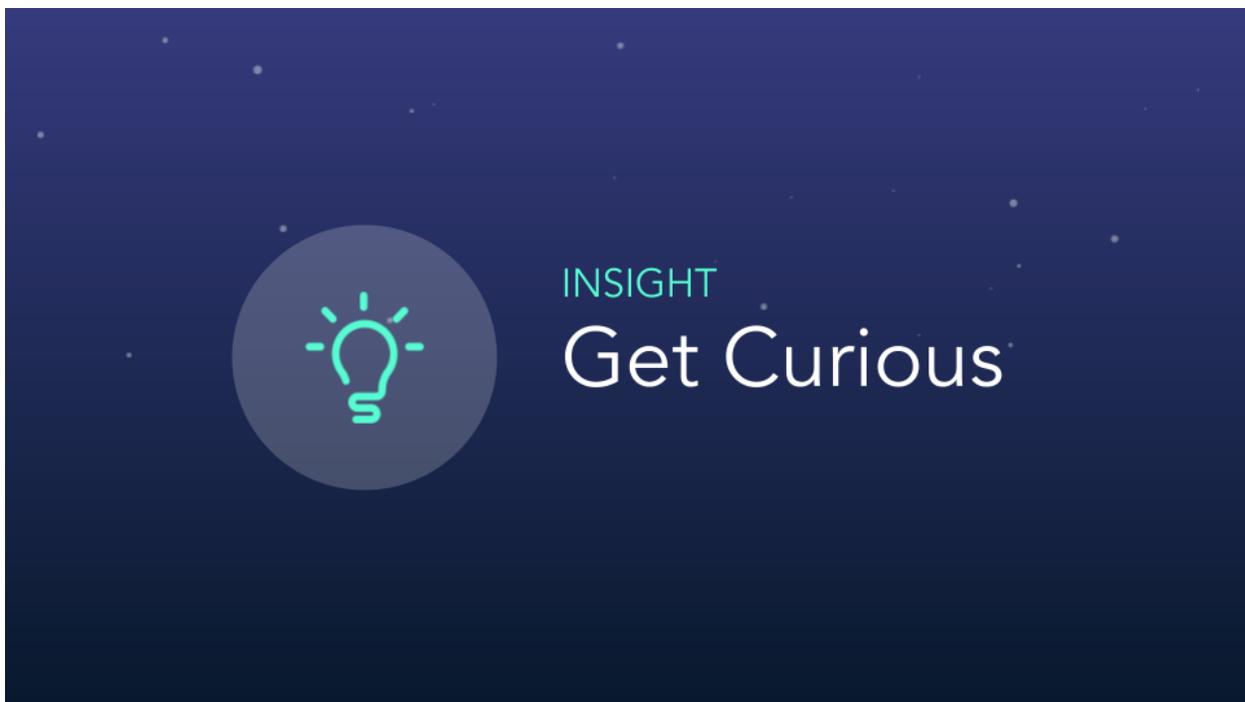
#### **DR. CHRISTY WILSON-MENDENHALL**

So one place that I found this kind of gratitude and appreciation practice really helpful is in my relationship with my husband. So we know from literature that experiencing gratitude in close relationships gives a little boost to the relationship, a little boost of connection. And that's really my experience with this as well. And so the way I practice this with my husband is we both work full time. We have two children. Of course, we're in the pandemic. And things have been crazy for about a year now. And so any time my partner does little things that make my life easier, I take the time to not only feel that gratitude but also express that gratitude to him. So to give you

an example, we had one of our March snows (in Wisconsin), a week or so ago, and my husband went out at 9:00 P.M. to shovel the sidewalk because he wanted to make sure the kids walking to school would not have any problems traversing the sidewalk. And it's little things like that. So when he came back in, I was, like, "Thanks for doing that." And it's sort of amazing to me in a way how much these moments of connection really do feel like this little boost to the relationship.

**DR. RICHARD J. DAVIDSON**

Thank you, Christy. Appreciate that. So we're going to go through the next two components of well-being a little bit more quickly. It always takes longer to do this than we plan. But this third pillar of well-being is insight.

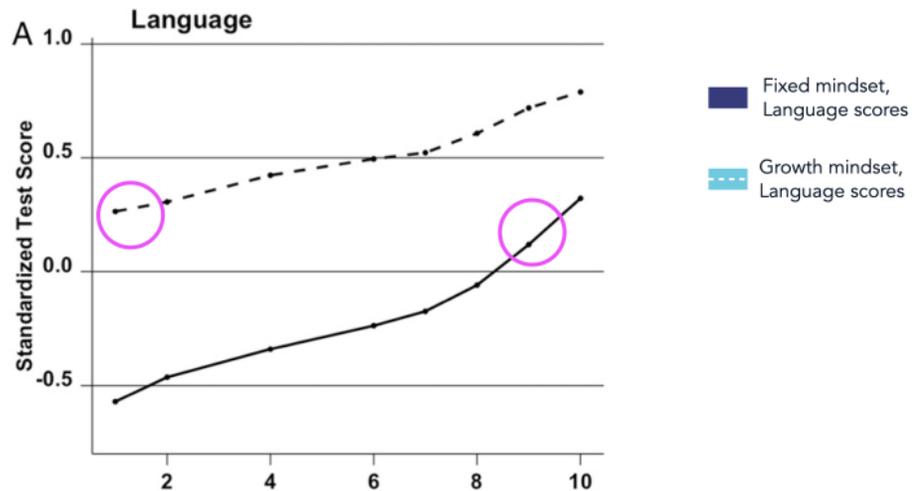


It's about getting curious about this narrative and the way our minds work. So insight is our capacity to recognize how our thoughts, emotions, and senses shape our experience. And the recognizing is a kind of deep understanding experientially.

Insight is our capacity to recognize how our thoughts, emotions, and perceptions shape our experience.

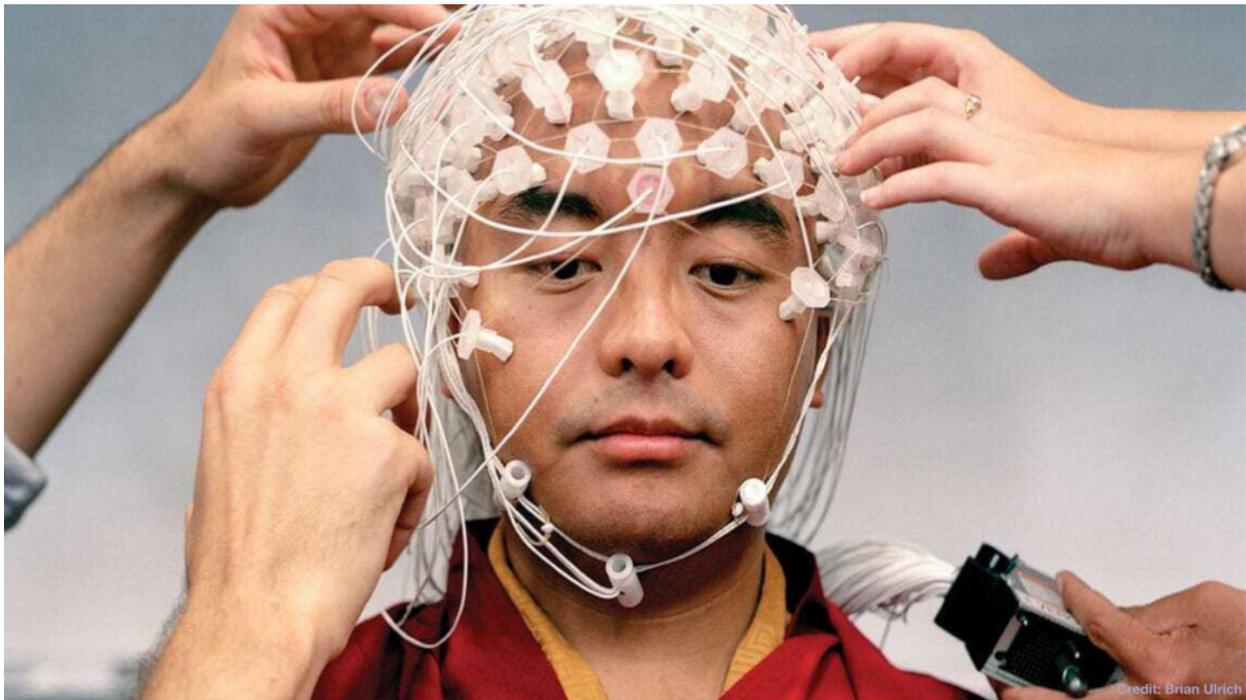
I'm actually going to not go through this in detail in the interest of time but just simply to say that [this study that I would tell you about if we had more time is about mindset](#). And scientists have discovered that when we believe that our minds are fixed, it really limits what we can do when we believe our minds are more malleable and can be changed through experience, we actually do better on a whole host of tasks (this applies to children too), and these data just show that on measures of language, kids, indeed, do better who have more of what we call a growth mindset.

## Test scores, Family Income, and Mindset



Source: Claro, S., Paunesku, D., & Dweck, C.S. (2016). Growth mindset tempers the effects of poverty on academic achievement. *PNAS*, 113(31), 8664-8668.

Oh, this is an inspirational slide to share with you and just to underscore that some of the insights that we've gleaned about insight have come from the study of very long-term practitioners. This is a photograph of a Tibetan monk (Yongey Mingyur Rinpoche) who's been to our lab many times. And he has had a total or at least when we tested him last, of approximately 62,000 lifetime hours of experience in formal meditation. And you can do the arithmetic some other time.



And that's a big number. And so we've discovered certain things about him and other practitioners like him by testing them in the laboratory, which has convinced us that there really is a "there" there that we need to further explore. So we're going to do a little practice now about insight.



So let's, again, close our eyes. And start with bringing awareness into our bodies. And simply settling for a moment or two. Now I'd like you to bring into your mind some challenging experience you've had within the past few months. Not the most challenging but a challenging experience. So take a moment to think about it. And let's bring into our mind some challenging experience. And now see if you can identify the thoughts and beliefs and expectations that you held about this experience when it was occurring. What are the thoughts, beliefs, and expectations that you had? And now take a few moments to envision how this challenging event might have unfolded differently if you hold different beliefs and had different thoughts and expectations. Examine how these different thoughts and beliefs and expectations might change the way you experience this situation. Okay. Let's drop this meditation and simply rest with awareness and gently open your eyes. And Christy, please come back and share with us a little.

**DR. CHRISTY WILSON-MENDENHALL**

Yeah. So talking about expectations. A little over a year ago when the pandemic was just starting, I was nine months pregnant. And so I was preparing myself to have a baby and add a second child to our family. Little did I know that I was going to be having a baby at the beginning of a pandemic and then be raising that baby in a pandemic. And so this is for me one place where growth mindset that we talked about really was influential, particularly in growth mindset

about how you think about well-being and how the practices that I engage in to keep myself well. And so with the shift to life during the pandemic, I've had to shift the things that I – and having, you know, a baby, I've had to shift how I think about well-being and practicing it in my daily life. So, for example, the gratitude practice with my husband is something that I've really just adopted within the last year, given that we're at home so much and we have this extra strain of all the things that we're trying to do without the support of our village that we would normally have. And so I think this kind of growth mindset and understanding of expectations and beliefs has been really helpful for me in sort of that arise.

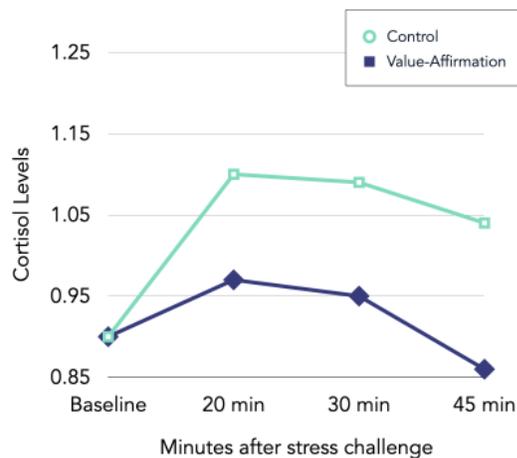
**DR. RICHARD J. DAVIDSON**

Great. Thank you, Christy. Wonderful.



Our last pillar of well-being, purpose, is about staying motivated and discovering in our everyday activities a sense of meaning and imbuing our everyday activities with our core values. So this is a little bit of science to illustrate how incredibly important doing things with a sense of meaning and purpose that are imbued with values really matters.

# Values Affirmation and the Stress Response



Source: Creswell, J. et al. (2005). Affirmation of personal values buffers neuroendocrine and psychological stress responses. *Psychological Science*, 16(11), 846–851.

And, again, not just for our psychological well-being but for our physiological somatic bodily responses as well. So [this is an experiment that used a very standardized stress task in the laboratory that produces elevations of a stress hormone called cortisol](#). And cortisol is on the y-axis, so higher numbers mean you're more stressed. And the two lines are two groups that were randomly assigned. One of them is a control group that got the stress as it normally is administered. The dark blue line is a group that just before they got this stress were asked to write about values which were important to them: kindness, honesty, generosity. So they wrote a few sentences for really just a couple of minutes about values that were important to them.

And then they were exposed to the same stress. And these participants were randomly assigned to these two groups. Look what happens. The individuals who were assigned to what's called values affirmation where they affirmed their values are showing a dramatic reduction in the amount of stress hormone that they produce in response to this standardized stress test. So this matters. This is one of many examples of this kind. So we're going to do a little practice about purpose and staying motivated.



PURPOSE

# Stay Motivated

Let's Practice

Real World  
Example

So let's now close our eyes again. And bring awareness to our bodies. And simply spend a couple of moments resting. And now let's take a few moments to reflect on why you've chosen to participate this evening. What is it about cultivating well-being? What is it about being our best self? That motivated you to participate? And see if you can, again, identify some important values which are central to this choice that you've all made. Whatever they might be. Maybe recognizing that simply being calm can be helpful to yourself and to others. Being connected may be the engine of generosity. Whatever it might be. Spend a few moments seeing if you can lean into the values which underlie your choice. Now let's let go of that practice and simply rest and open our eyes, and please share with us, Christy.

## **DR. CHRISTY WILSON-MENDENHALL**

So partly through studying connection and practicing connection, of course, kindness has become – come to be a really important value in my life. And so I started to think a lot about how I integrate kindness into the work of doing science. And one of the places that I've really become much more intentional about a place where I think kindness isn't always the first reaction. So in kind of when we have to evaluate others. So in science, one really important process in science is called peer-review. And so you run a study, and you write up the study for publication, and you submit it. And then other scientists, peers, will review your study and give you feedback. And then you will have to revise, or they may even suggest that the journal reject that paper. So as a reviewer, you know, when you're engaged in this kind of work – and I think you can think about this in many other kind of work areas, too – I think my first reaction is that, you know, I'm kind of reactive as I'm identifying the things that I think are potentially problematic in this paper that the authors need to change. And so one thing that I've done to sort of bring kindness into this piece of doing science is once I write the review, I actually come back to it. I put it down, and then I come back to it. And I do another revision through the lens of really trying

to remove the more reactive kinds of language that's not really that useful to the authors of the paper. So to sort of convey the points very clearly, very straightforwardly, and where possible to encourage the authors to suggest – make discussions where possible. So this takes more time. I have to do another full pass of the review. But to me, this makes it about the work and sort of the larger goal of doing science well, of really putting forth a review that's going to really help the authors of this study. And so that's one way where I've – and it makes it more meaningful to me to be a part of this process. So that's one way that I've integrated kindness in a way that maybe wasn't initially intuitive to me.

**DR. RICHARD J. DAVIDSON**

Those scientists who receive your reviews are very lucky, and I'm fortunate to have you as a reviewer.

**DR. CHRISTY WILSON-MENDENHALL**

Yeah, we've all been on the other side, right, of receiving reviews that are quite critical.

**DR. RICHARD J. DAVIDSON**

That's wonderful. Thanks, Christy. Okay. So we're now at the point where we're going to invite our dear Shaun who is on our communications and marketing team, who will host our questions and answers. So take it away, Shaun.

**SHAUN HUFFMAN (Q&A MODERATOR)**

Hello, everyone. And thank you so much for joining us. We're glad to have you all here. This first question is actually to you, Richie: Can you speak to the interaction between taking care of the body, such as diet and exercise, and taking care of the mind? And has the center done any research around the best diet or exercise to cultivate that healthy mind?

**DR. RICHARD J. DAVIDSON**

Yeah. It's a great question, and I appreciate it. And we really have not done systematic work on that. It's something that several of us have been talking about for several years. And certainly the combination of training our mind and training our body is really helpful. I certainly engage in regular physical exercise myself. And one of the really cool things to simply consider as we know that physical exercise is a really good way to promote neuroplasticity. However, the promotion of neuroplasticity in and of itself is not necessarily good or bad. It really depends on what else is going on. If your mind is filled with a bunch of negative thoughts and you are promoting your neuroplasticity, that's going to help consolidate those negative thoughts. You know, it may be a real blessing that gyms were closed during COVID because the average American gym, at least, people are engaged in aerobic exercise and watching all kinds of stuff on television which may not be the most helpful for their mind. So one of the invitations is that

we can actually do contemplative aerobics. We can set an intention and recognize that doing our physical exercise is good not only for ourselves but can help create energy and vitality and health in order for us to be more helpful to others. And simply invoking that intention as we do physical exercise may actually be beneficial, although this has not been studied. It is something that we'd love to study at some point, but that's really what we can say about it at this point. So thank you for the invitation to expound a little bit on that.

**SHAUN HUFFMAN (Q&A MODERATOR)**

Thank you so much, Richie. Our next question is to you, Christy: What is the significance to you that this framework was published during the pandemic?

**DR. CHRISTY WILSON-MENDENHALL**

So, as I mentioned, a lot of the practices that I feel like I'm engaging now are really to, in the spirit of resilience. This is a challenging time. And so helping myself from really preventing mental health decline. And so to me I think, you know, that piece is really important, the idea that, I sort of think about this framework and these skills as, eating your fruits and vegetables of mental health. These daily little practices that I think can really help us be resilient during challenging times. And that just feels so important to me that's possible and that we think about mental health in that way. I don't know if you have anything to add, Richie.

**DR. RICHARD J. DAVIDSON**

No. Very well put. Thank you.

**SHAUN HUFFMAN (Q&A MODERATOR)**

Thank you so much to you. That's a great answer as well. Very nice to know. Our next question is from Kevin: If we looked at these dimensions from a developmental perspective, what changes would it lead to in higher education to help students flourish?

**DR. RICHARD J. DAVIDSON**

Well, that's a great question, and we are doing a lot of work in higher education. There is a serious crisis of mental health on our college campuses today. Directors of student health services tell us they cannot hire mental health counselors sufficiently quickly to deal with the crisis on the campuses. And so we think that this can be incorporated into formal education as well as extracurricular kinds of activities. We are teaching a course that we've developed called [the Art & Science of Human Flourishing](#), which is a course for college credit that we offer for freshmen here at the University of Wisconsin-Madison.

Similar courses are also being taught at several other universities with whom we're collaborating. We're measuring the impact of this course on students and we have found it to be of great benefit. We are disseminating this program not only nationally but internationally.

We're working with a large university in Mexico, and we are doing similar work. And so this is something really important that we're doing. And also, let me bring up another issue here because it relates to a question that I saw in the chat from a question of ours from Bob about whether we're studying practices in dyads or groups to foster more experience of connection. And the answer is absolutely. In fact, the app that we've developed is meant to be done not just individually but with others, in groups, in dyads, in larger groups. It also – you don't have to do it as a formal meditation practice. You can do these practices as you're engaged in activities of daily living, as you're communicating, as you are walking, as you're doing physical exercise, as you are brushing your teeth. So this is something really important.

### **SHAUN HUFFMAN (Q&A MODERATOR)**

Thank you, Richie. So our next question comes from Jennifer. And it states: Can you speak to the research about the intersection of implicit bias, mindfulness, and the social implication for collective well-being?

### **DR. RICHARD J. DAVIDSON**

Yeah. Christy, you want to take that?

### **DR. CHRISTY WILSON-MENDENHALL**

Yeah, I can start us off. There's not a research on these kinds of – like, the practices in connection, for example, and implicit bias. There's a little bit. There's a few studies that are suggestive that these kinds of practices may reduce implicit biases of outgroup. But I think we have a lot to learn there. I think it's also extremely important for us to think about connection from sort of all the literature we know that it's very easy to feel connected and to engage easier, to engage in these practices with close others, with your in group. And then often we're unaware of this, but we often don't extend kindness and compassion as easily to people who we perceive to be dissimilar from us. And so I think that's a really important area for future research to move in and to think explicitly about that as we develop interventions as well. And Richie may have more to say on that.

### **DR. RICHARD J. DAVIDSON**

One of our scientists in our center has been exploring the impact of these practices in teachers because it turns out that the achievement gap in the United States between Black and white people is fundamentally, at its roots, at least in part, caused by implicit bias among teachers (*note this research has not been submitted for peer-review*). And the implicit bias leads them to disproportionately administer harsh and punitive punishment toward members of minority

groups. And so this is super important. And in this work, we have found that these practices indeed show significant reductions in these teachers in measures of implicit bias. These are hard-nosed behavioral measures, and these reductions persist for six months out, which is a follow-up period during which we measured. And so there is a lot of promise here, as Christy said, there's not a whole lot of research, but there's smoke. There's enough to suggest that we should continue to explore this area.

### **SHAUN HUFFMAN (Q&A MODERATOR)**

Thank you. Actually a perfect segue. Could you please speak to more ways you can think and feel that this framework of well-being is being applied to social justice work today?

### **DR. RICHARD J. DAVIDSON**

Yeah. And it's a super-important one. There are many examples worldwide of this work being applied to social justice issues. I have the privilege of serving on the governing board of the UNESCO Institute that's based in Delhi, India, called the Mahatma Gandhi Institute. And one of the core missions of this institute is to disseminate these kinds of programs for children in the developing world, in impoverished areas, and also in places on the globe where there are natural disasters. And these are therefore being disseminated to groups that are underserved, and it's also being done while collecting data to actually determine its efficacy. And I can tell you that this is an amazing group that's doing fantastic work and really showing how these practices can be of benefit in a way that I think serves toward social justice. I also am aware of projects in which these strategies are being deployed in Palestinian/Israeli conflict areas, particularly with children. And young children, Israeli and Palestinian children, are being taught these practices together in groups to help to facilitate communication between these groups. And the impact has been really quite extraordinary. There still – you know, there's so much work that needs to be done with this, and we're still only, you know, at the very, very early stages.

But I believe that these kinds of practices really have a tremendously important role to play in promoting social justice. And let me just end by saying this little thing, by saying that I had the experience – the privilege a number of years ago before he died of spending some time with John Lewis, the great Congressman from Georgia who was at the forefront of civil rights in the United States and the famous bridge in Selma, Alabama, hopefully will be renamed in his honor. And John Lewis comes from the Martin Luther King tradition where nonviolence is very much a practice. And one of the remarkable things about John Lewis is I had dinner with him – this is maybe five years ago, and, you know, he was a member of the House of Representatives at that time. Maybe it was – actually, it was less than five years ago. It was during the Trump era. And he – he just was filled with love. And it is just – it was so moving for me to see that and to see the kind of culmination of a lifetime of practice in this way. And it really reminds me of the title of Martin Luther King's famous speech that he gave, and the title was not "I have a nightmare." I think we need to have a dream of what human possibility actually is. And we can then be motivated toward that dream.

## SHAUN HUFFMAN (Q&A MODERATOR)

Thank you, Richie. That was extremely powerful and moving, so thank you so much for that. So that is the end of our questions today. We would like to thank everyone here as well. We would like to reiterate that if you are interested in the art of science and human flourishing that we host for our students, we do have another amazing Healthy Minds Live event coming up which is May 10th as you can see with all of our lovely guests. So we hope to see you there. Thank you, Richie. Thank you, Christy.

## DR. RICHARD J. DAVIDSON

So thank you so much, Shaun, and thank you so much, Christy. And thank you to all our sponsors and donors who make this work possible. Nearly half of our total funding comes from donors and supporters who generously provide the sustenance which allows us to do this work. We couldn't do it without you. [And if you are interested in supporting the work, please go to this website, and you can learn more about it and contribute.](#) So thank you all so much.

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