Ken Duckworth:

My name's Ken Duckworth. It's my very good fortune to be the Chief Medical Officer of National NAMI. And in keeping with our tradition, we invite the best and brightest thinkers, researchers, and peers, family members to share what they have learned. Today's expert is Dr. Bruce Perry. I could go on the entire length of this seminar to talk about his accomplishments. Just a few I want to mention. Dr. Bruce Perry won the NAMI Research Award last year and gave a brilliant presentation in Washington DC. He's written many books, including with Oprah, a bestseller. He also helped with Christine Crawford's book, the NAMI book for parents and caregivers. And when I asked him to write a blurb for NAMI's first book, he got right back to me and wrote a blurb. I don't know if you've ever dealt with international superstars and fields, this doesn't always happen. So Bruce is a friend of the family, an international expert on childhood distress, trauma, and the response to it, and I really want to welcome him today.

Let's go to the next slide please. Just remember we have a helpline. We're extremely proud of our helpline, and if you want to chat with somebody, here's the ways you can do it. We've had about 350 volunteers that are here to help people navigate the mental health, chaotic, fragmented system and lend an ear. We are not the National Suicide Prevention Lifeline. That's 988. Next slide, please. Speaking of our helpline, if you want to volunteer for our helpline, we get 650, 700 people on this call. You never know, somebody might be in a place they want to give back. We'll train you, we'll connect you to state-of-the-art resources, and you can help other people in four hour shifts and be part of a wonderful community of people that are living in service to helping NAMI's mission. Next slide, please. Okay, I went over your 300 questions in advance.

Fantastic questions. I'm going to do my best to get to them and kind of combine them and integrate them in the Q&A session with Dr. Perry. But many of the questions weren't about today's talk. So I want to mention some of the questions related to some of the talks that we've talked about, supporting a loved one with psychosis. What's the latest in bipolar disorder? How to help someone with mental illness accept treatment, treatments for borderline personality disorder, how to prevent suicide. Many of the questions, we've had amazing speakers at the level of Dr. Perry, which isn't easy to find on all these topics. This is a library you can access just by Googling NAMI ask the expert. You can listen to them while walking a dog, doing the dishes. You don't have to participate in any meaningful way. You can just go about your life and learn from some of the best researchers and thinkers in the world.

Right. Next slide please. So Dr. Bruce Perry has really kind of changed the world about how we think about child trauma, its impact on the brain and the sensible response to it. We're incredibly grateful for his experience and what he offers the field. So what we're going to do is have Dr. Perry give a talk. And while we have more than 700 people on this call, we'll do our best to engage in thoughtful Q&A. We'll run to 5:15 plus or minus five or 10 minutes, see how it's going. Dr. Perry, thank you for everything that you do, and thank you for donating your time today and for all the work that you're going to share.

Dr. Bruce Perry:

Well, thank you, Ken. I appreciate the opportunity. I think from the time I started training in mental health, I've been aware of NAMI and the good work that's really been carried out by all of the folks at NAMI Professional and really more than anything, the families and people who've been impacted with mental health challenges, who've really gotten to a place of safety in their own lives and then turned around and helped others. It's really the way it should be. So I am a tremendous advocate for NAMI, and I'm very pleased to have this opportunity. You asked me to do this. I wasn't quite sure what part of our work I should talk about. Once you get old, you end up actually accumulating a lot of stuff that you've done. Some of it you think is important, but it's probably not that important or interesting to other people.

And then some of it is probably relevant for more people than others. And what I'd like to do is talk a little bit generally about the concept of stress in part because stress is something that impacts every person on the planet in one way or another, and stress is a component and distress is a component of every single

mental health challenge that there is. So I think to some degree, even though this is focused in on stress-related challenges, stress-related problems, maybe trauma a little bit, I do think that there's relevance for these basic comments for individuals who are dealing with schizophrenia or bipolar disorder or a developmental disorder or whatever the specific challenge is. Understanding a little bit about how our body manages distress and how the pattern of stress can influence how you function, I think that can be really helpful. So that's what I want to do.

Now, I tend to teach coming from two different directions. Sometimes I teach coming from the direction of the biology of the brain, and that is sometimes interesting to people and sometimes helpful. It's not very helpful if you don't know much about the brain. So I spend part of the time talking a little bit about the brain to get that going. The other way I teach is to try to come at it from the narrative, the story direction. And I think that I'll feather in some stories as I talk about this today.

And I'll certainly bring up some sort of story elements and personal narrative elements when we have our conversations, I'm sure. But I think what I want to do is start a little bit with the biology of the brain. And I don't want people to be too intimidated by it. I think it can be presented in a way that's useful and not too overwhelming. So let me just go ahead and jump into my slides and see if that's actually if I'm right or not. I might be wrong. Y'all can let me know if this is too too much or too detailed. Everybody-

Ken Duckworth:

Go for it, Dr. Perry.

Dr. Bruce Perry:

I'm going to go for it.

Ken Duckworth:

You have an engaged and bright audience. You go.

Dr. Bruce Perry:

All right. I'm going to give it little bit of biology here. Now, first of all, I know all of you have seen some version of a picture of the brain, and I think that that almost all of you probably know a lot about the brain. But what I want to do is give you a little bit of just a flavor of the complexity of the biology of the brain.

And the reason I want to give you a flavor of the complexity of the brain is that this very complexity, this miraculous array of neurons and synapses and neurotransmitters and receptors and all these things that are in us basically are so complex and complicated that we have to simplify these in order for us even as neuroscientists to understand and to study this. So no matter how, no matter how much you're trained as a neuroscientist, no matter how much you know about neurons and synapses and the proteins inside a synapse or the architecture of a single cell or any of these other amazing, miraculous things, this is one of the more really exciting recent publications of an actual rendering of a bunch of neurons in the human brain.

Look at that. Look at how complex that is, all the wiring and connecting and just it's complex beyond our comprehension. Now, the reason I say that is that I'm as intimidated by the brain as you are. And so what I have to do to make it understandable for me is use a model. I have to simplify this complexity so that I can understand it. And then once I think I have grasped the concept, I use these models to try to teach what I think I'm learning. Now, I hope you recognize that I'm being very cautionary about my language. And the reason I am is that as much as there is to know about the brain, as many incredible advances as we have made in the neurosciences and in mental health in the last 40 years, we are just beginning to scratch the surface of how the brain really works, how these systems influence behavior, how the systems

can be modified and changed either through medication or treatment or sport or whatever it is you're doing.

We're just learning a little bit about that. And so we've got this level of complexity that's just really honestly mind-blowing. But I want to reassure you that as complex as these models can be, as complex as it is to try to figure out the brain, I mean, I always laugh at this one because this looks like a wiring diagram. Anybody who's ever seen a wiring diagram, and then of course I looked at it, I'm like, oh, this guy was the space shuttle guidance system engineer. So this was his working view of how to make sense out of things. He took wiring diagram just to show a little bit about how different parts of the brain are interacting and as you can see, this infinitely complex. It's kind of cool, but holy cow, how do you understand all this stuff? So rather than deal with that crazy complexity, which I mean, it's not crazy, if you want to spend the rest of your life studying some aspect of that, that's great.

You'll be contributing to this vast body of knowledge that can move forward our field. But I on the other hand have decided that I like to color. I like pictures. So I'm going to give you a really simple version of the brain. This is my model of the brain that I'm going to use to talk about stress and to talk about distress and trauma. And I'll kind of walk you through this hopefully in a way that will be helpful. But let me just start by saying this. This is not the way the brain really works. I mean, the brain is not an upside down triangle. These different areas aren't colored. But there's something that... There's some truth that is contained in this heuristic. The truth is that there's a top area of the brain and there's a bottom area of the brain. And it's true that they're anatomically distinct.

Now, they are integrated, they are connected, they do communicate. But this can be a very, very useful model to try to teach a few things about the brain. So that's where we're going to start. First thing I want to just say, simple thing is that within your brain, you have all of these incredibly complex systems. And oops, and this would be... You've probably heard of epinephrine, serotonin, dopamine and so forth. And all of these neurotransmitter substances, there are clusters of cells that use predominantly one or the other of these primary neurotransmitter substances. And they send axonal projections up into multiple parts of the brain, and they communicate with cells that also have different neurotransmitters. And so there is this very complex network of communication and interconnectivity across these different parts of the brain and in ways that we don't really understand. Systems in lower parts of the brain are capable of influencing and regulating body temperature, regulation or heart rate and respiration. Systems up here in the middle part of the brain are involved in forming and maintaining relationships, and they're involved in sort the reactivity of emotion that we feel.

And when we feel pain, the first place we feel it is right up in here. And when we develop the capacity for speech and language, it requires networks that are up in the cortex. And so what we do know is that as the brain develops from the bottom to the top, these networks are organizing that allow us to develop sequentially, right? We grow up. We can't walk in the beginning, and then we can stand, and then we can walk, and then we can run, then we can surf. That we develop, we sequentially acquire functions. And all of those acquisitions of increasingly complex functions are a product of increasingly complex organization in different parts of the brain working together to allow you to walk, talk, think, move, laugh, love, joke and so forth. And the systems, the functions that are at the very top of the brain are the most uniquely human functions.

The ability to reflect on the past, the ability to think about the future and make a plan, the ability to store the values and beliefs of your culture and community, the ability to develop speech and language, all of these are mediated by cortical systems. Now, I'm going to come back and talk about the relevance of that in a minute, but that's the first thing I wanted to sort of get across. Bottom line, just to summarize, different parts of the brain have networks in them that mediate different functions. Now, so here's a summary slide. Now, don't get to this... Again, a lot of you know about this stuff, and you may not have seen it presented this way, but you probably heard a lot of this or read about this. And if you've listened to other people that teach about mental health, a lot of these words and terms have probably come up.

But let me just this again, a simplified version of the organization of the brain's primary or what we call core regulatory networks. And what I mean by regulatory networks is that these are systems that have the capacity to monitor and modulate the activity of other functions. So these systems down here can monitor and modulate language, monitor and modulate feeling, monitor and modulate movement, monitor and modulate respiratory functioning. And because of that architecture, because these systems collectively reach every part of the brain and out into every part of the body, both directly through your autonomic nervous system and indirectly through your neuroendocrine system and your neuroimmune system, this collection of systems working together that have this backbone of your core regulatory network, these are essentially your primary stress response systems. Now, what do I mean by stress response? I'll come back and elaborate on that in one minute.

But first of all, let me point out one more thing on this slide. I've been talking about how these systems send signals out to the rest of your body and brain, but these systems are also continually monitoring and getting direct input from your primary senses. In other words, you have these apparatus that monitor the outside world, tell you what's out there. We see smell, taste, touch things. That's from the outside world. It comes into your core regulatory network, it gets processed. And then depending upon what that processing tells these systems to do, you'll activate certain parts of the brain or not. You also are getting continuous input to these lower parts of the brain from your body, right? Am I hungry? Am I thirsty? Am I cold? Do I have enough oxygen? All of that stuff. So you have this incredible monitoring capability that involves internal monitoring and external monitoring. Now, what does this have to do with stress? Well, it has everything to do with stress. And so this is kind of busy. This is kind of a busy, busy slide, but let me just walk you through this.

Well, before that, let me just go and kind of talk for one second about the concept of stress, because I want people to think about stress maybe in a way different from the way we tend to use this language. Most people when they say, man, I'm stressed, they're talking about it in a negative way. But what stress is, is essentially a challenge to any of our body's physiological systems. And that challenge is something that is essentially indicative of an external or internal set of signals that are telling us about what's going on so that we can respond to it in a way that will get us back in balance. It can get us back in a state that we're physiologically more stable and more safe, and that we have a higher probability of surviving and thriving. So think about stress as something that pushes us kind of out of balance a little bit.

Simplest example I can think of that we all deal with every day is the stress of getting hungry or thirsty or tired. We have all these systems in our body that tell us how much glucose or sugar we have in our body. And when we eat, after we eat, that levels go up and then our body internalizes the sugars. And then if we go for a while without any food, without any calories, we get signals back to our brain that, hey, I'm out of balance. I'm stressed because I'm thirsty, I'm hungry, I'm cold, I'm sleep-deprived. Those are stressors.

Every time we have a stressor and we get to a certain level of notification to that lower part of the brain and it gets up and it sends a signal to the middle part of the brain, you then feel something. You feel hungry, thirsty, cold. And then based upon that, you act. You act on the internal signal. In other words, you respond to the stressor. And so every day, every person goes through a whole variety of stressors, the stressor of traffic, the stressor of getting hunger, stressor of exercising. It is a stressor. You get up and you leave your desk and you go for a 30-minute walk. You are providing a little bit of a challenge to your muscles and your cardio respiratory system. You have to work a little bit more, but that's not bad. It is a form of stress that is actually predictable, it's moderate and it's controllable.

Now, the interesting thing about this is everybody's probably heard of the term neuroplasticity, right? Neuroplasticity is essentially the term we use. It refers to the ability of neural networks to change and respond to activation. And neuroplasticity underlies our ability to learn, our ability to develop. It underlies our capacity to heal. And it is a phenomenon that is universally important in the success of a human being. And we all have the capacity to demonstrate neuroplasticity. However, just like all biological phenomenon, there are certain rules to neuroplasticity. It just doesn't happen randomly. One of the most important elements of neuroplasticity is that you can't expect a neural network to change in any

meaningful way if it doesn't get a meaningful, predictable signal that it needs to change. In other words, if you expect to go into the gym and you go, you know what?

I'm tired of being a 98 pound weakling, so I'm going to go lift weights and I'm going to get really strong. You can't expect to go into the gym and lift weights one day and then expect, well, that's the signal I told my body, change. That's not an adequate signal. So there's certain rules about specificity. You have to keep activating the muscles. And these rules of neuroplasticity are also rules of change in many other cellular systems, muscle, bone, et cetera, et cetera. If you don't give the muscle a certain kind of challenge, if you don't stress it to a certain point, it will not get the signal to build more actin and myosin and make your muscle bigger and stronger and more capable. And so the specificity, the pattern of activation is what leads to the change. And so, one of the great things about development, one of the great things about growing up is that it's filled with tons of stressors.

So one of the first things that's going to stress your brain when you're a developing child, or even once you get to be our age, is if the incoming signal, let me use this slide. If you start to get input from the external world, you hear or see something and that input comes in and it gets processed. And the way it gets processed is that at this level, your brain is going to compare the incoming input to things that you've previously seen. It's going to say, is this familiar or is this not familiar? And if it's familiar, it's basically going to make some decision about is this safe familiar? Is this familiar, boring? Do I have to do anything or is it something I've already heard? And it will send that interpretation up to the next level, and there'll be a second level of interpretation, and then there'll be a third level of interpretation.

And at each level, there's the opportunity to act if you have to. So if you actually end up touching a hot stove, the signal that comes in here that says, oh, that's tissue damaged, you immediately will get the signal to remove your finger immediately. You don't even pass the information up here. By the time you pass the information up here and feel pain, you will have already withdrawn your finger. That's a reactive response to a very intense signal of threat. Those of you who know anything about evocative cues and post-traumatic stress disorder, you will recognize that I'm describing what happens with people who get primary associations with things that happen during their trauma. You may hear the same kind of country music being played as it was played when you were in the garage and the person was hurting you. And even before you consciously are aware of it, you will activate your threat response.

Your muscles will tense up, your heart rate will go up, you feel distressed. When it gets up to this level, you start to feel anxious. And then ultimately, you might actually have a evocative cue induced flashback. You'll have images and thoughts and feel as if you are back in that event. So this sequential processing of incoming information is a key part of understanding trauma and trauma-related phenomenon. And it's not just in trauma. This happens in all kinds of stuff. But that four S sequence that we talk about is really important in understanding stress, distress, and trauma. So in comes the sensory input, in comes the interoceptive input from your body. You get that signals, which you sense it. You'll sort it. You'll basically compare it against previous experience. If it's new, you'll store it. If it's not new, you'll just add another repetition and further encrust the memory, and then you will send it up to the next level for interpretation.

But you may actually react if the signal is of sufficient intensity or if the signal is associated with previous threat. And so you have your first sequence of sense, sort, and send. You then go through the same thing in a different systems in the brain, but at this level, you actually are assigning emotional value to the experience. This is where you feel pain. This is where you go, is this happy, sad? Am I angry? Am I frustrated? That happens at this level. And then as you process and send it up to the next level, this is where cognition gets involved, the same process, sense, sort, and send.

And one of the things that's really important here for understanding stress and distress is that when you have these incoming signals from the world or incoming signals from the inside of you, and they go through this process of being essentially processed, our body is organized to react before we feel and to feel before we think, which is just the opposite of the expectation that we put on children and on others

around us. We expect them to think before they act. But the truth is that you're fighting the biology of normal sequential processing of experience when you do that.

Okay, I'll come back and talk some more about that in a second. But because of the principle of specificity, if you are activating your stress response system by having an exposure, a challenge of having to get up as a student in a classroom and get up in front of your peers and try to remember what the reading assignment of the day was, that's a stressor, but it's usually pretty moderate. And if you prepare, there's elements of controllability, you knew that there was a chance that you're going to get called on. So if you did your work, there's a certain degree of predictability, moderation, and control to it. And this actually results in a little bit of activation of the stress response neurobiology, but then it ends a little stressor, and then it ends a little bit of stressor, and then it ends. And literally, it's like weightlifting.

When you lift weights to your muscle, you wait, challenge it and let it rest, challenge it and let it rest, challenge it and let it rest. You are providing a predictable, moderate controllable activation, and that literally builds resilience. It makes your stress response system more capable of dealing with stressors. So if you look at it like this, ignore this stuff on the left-hand column here in the beginning. I'll explain this in a second, but if you look sort of at your stress reactivity curve, you get up in the morning, you have a daily challenge, and you happen to be the neurobiology of your stress response has been proportionally organized, which means that you've got an appropriate internal activation for a minor challenge, and you will not have a complete meltdown. You'll just get into an active alert state. So when you're challenged in traffic, you have to be alert and focused.

It's stressful. You activate your stress response, but you're not overwhelmed. If you have a moderate stressor because you're driving to a board meeting and you have to present a little bit of information about how you're going to get through the budget crisis since the federal government has now defunded your program, that's a moderate stressor, and you are going to have access to your cortex, but it's going to be a little bit of a bigger challenge. But because you're proportionally organized, you'll still be capable of taking advantage of all of this stuff in your cortex, maybe not as efficiently, but you'll have access to your cortex. Now, if you happen to be somebody who is old like me, who's gone through tons of funding and defunding cycles, state, federal, and you've seen that, listen, these things end and you have this moderate stressor, but you've developed resilience, you are going to be able to be more regulated during the discussions about what are we going to do because we're defunded.

You know that this is only a four years. We'll get over this. There's going to be a rebound. People will make... We'll get through this. Now, if on the other hand, you are an individual who has grown up and you have had a whole series of developmental challenges and unpredictability, and there's been episodic, uncontrollable, and unpredictable experiences, your stress reactivity curve begins to bend. It becomes sensitized. Little by little, the more uncontrollable, the more chronic, the more unpredictable your developmental experience is, the more likely you are to end up with a shift in this stress reactivity curve. And this happens with lots of kids who have developmental adversity of all sorts, and it can range from poverty to community violence to exposure to domestic violence, to a whole bunch of things can lead to a sensitizing pattern of activation to the stress response, and they develop the neurobiology that manages stress becomes overactive and overly reactive. They're sensitized. Now, what's the downside of that? Well, the real downside of that is that... Sorry.

The downside of that is that if you look at the way your core regulatory network handles extreme stressors, the first thing it happens is that the information comes into these lower systems in the brain. They activate. They get the amygdala involved, they get certain parts of the cortex involved. All of these, the amygdala and these sorts of prefrontal cortical systems are there to help you deal with this. But at the same time, they're activating these key systems. You deactivate other systems, particularly cortical systems. So there's a phenomenon that we call state-dependent functioning, and it's a graded response, which means that when you have a little bit of stress and you're a little bit challenged, you might have a little bit of meltdown. You're not yourself. You may be a little bit more reactive, a little bit more emotional, you may not handle a situation like an adult.

You may be a little bit more petulant, a little bit more childish. And if you get even more distressed, then you will begin to forget cognitive content that you already have mastered in your brain. If you get really distressed, then you have a complete cortical shutdown. So there's a phenomenon that if you are regulated, you're not hungry, you're not thirsty, you're not cold, there's no incoming signals from your body, you're in no interoceptive signals that are telling you that you're under duress, and there's no external novelty, no external threat, no external unpredictability. Your brain is able to keep you in a state where your cortex and your limbic systems are open for business, which means that you're going to be more relationally appropriate and more cognitively available. You'll be your smartest, most humane, most compassionate when you are safe. And safety is not just external safety, it's internal safety.

But if you get threatened, if you have some level of distress, you'll literally have networks in your brain that are less accessible. And many of these are cortical and social-emotional networks that are involved in making you humane, making you compassionate, making you empathic, making you thoughtful, making you planful. Those things start to shut down. Now, as you can imagine, I could go on and on about this, but the point I wanted to make is that this state-dependent functioning is something that is malleable. You can take somebody who has a proportional stress-reactivity curve and put them in a situation where there's more unpredictability, where there are more demands, where there's more chaos. And this happened during COVID, for example. This can happen if you get into a job where somebody is not... Your boss is unpredictable. One minute they're nice to you, the next minute they're unpredictable and they treat you like you're invisible.

And then another minute you do the exact same thing, they give you a big reward, and then you do the exact same thing, and then they get mad at you because you did some little weird thing. And so you can get into an environment where you're walking on eggshells and little by little you can develop a sensitized stress response so that every Sunday before you go into work, you get stomach aches and headaches and you dread going to work. And that's because you're developing a sensitized stress response. It influences your entire body. Now, the good news is that you can go both ways. You can actually take systems where there's a lot of unpredictability and you can introduce more predictability, more moderation, more controllability, and you will start to return to a more regulated and proportional stress reactivity curve. This can be hard to do, but it's something that absolutely can happen and does happen.

The area where we're very, very, very focused on really right now is, I was talking about this with Ken before the webinar, that we have so many people that have been impacted by significant adversities, and we have so many people who are challenged by the unpredictability of developmental stressors that we're really creating more people who would benefit from mental health help, from connection, from compassion, from understanding then we are able to address. There are more people that are struggling then we can possibly begin to meet the demand with a traditional mental health model. And so part of what we've been trying to do is help others recognize that you, by being present and attentive and attuned and supportive, can actually be a tremendous therapeutic presence in somebody's life. And I think one of the great things about NAMI is that that's the way it's always worked.

An understanding parent, an understanding peer, an understanding professional who may not be a mental health professional. People from all walks of life come in to NAMI and help other people. And a big part of it is, and one of the reasons I think it's so powerful and important is that this sensitization, this stress response sensitization can take place just because you are experiencing mental health challenges in a society that doesn't understand people that have mental health challenges. It's not just about trauma and trauma related problems, it's about anybody who's different.

This can happen if you are handicapped or disabled in some area. Just the way people look at you, the way people deal with you, the stressors that you have in your life are going to be more unpredictable and more chronic. And so because we treat and still stigmatize people who have mental health challenges, they're almost always also going to be dealing with certain degrees of unpredictable and prolonged sensitizing stress. And this only compounds their problems. It only makes it harder for them to heal. It makes it harder for them to succeed and engage others because of the misunderstandings and the inability

of other people to recognize what's going on with somebody. And the tendency for people to flee from things they don't understand, to either attack things they don't understand or to flee from them. It's a fight or flight response that can be a part of this for so many different people's experience.

One of the things that we've been dealing with in our work is a lot of these very, very high profile, large scale, catastrophic events. And the one we're dealing with right now is the floods in Texas. And there's a couple of issues that are so obvious is that if we think that we can address the problems of the many, many, many families that will be dealing with traumatic grief and loss, if the mental health system is woefully overwhelmed and inadequate to meet the fundamental needs of individuals who have been impacted by this kind of calamity. And one of the most interesting things, I think, again, this is where I think NAMI kind of fits into this in a very powerful and important way. Humankind has always had to deal with these large-scale catastrophes and traumas. And we've always had to deal with distress and stress and trauma, and we didn't have mental health systems, but we've made it generation after generation after generation.

I'm not saying we were at all that healthy, but we've made it. And what we find is that every culture has, to some degree, has built in practices that are therapeutic and that are healing. And if you look at this curve, again, the key is to begin to move things from this column to this column. How do we make things more predictable in somebody's life? How do we take people that are experiencing profound activation of these stress response systems and give them ways to moderate that? How do we take things that are uncontrollable and prolonged and make them a little bit more controllable and a little bit less duration? And I think that there are ways to do that. And again, NAMI does this all the time. The first one is one of the best things that you can do for helping people deal with distress and unpredictable things.

And this is from a slide from our work in Turkey, but it's the same kind of thing is to essentially help people understand. Ken talked about the catalog and library you have of experts talking about what to expect, what to read. The book that he wrote is all about hearing what other people's experiences are, having things explained, making them less frightening, making them more concrete, tangible, understandable. There are things you can do. You help bring a sense of predictability to what's going on. You know if you have this, there are going to be times when you can't sleep. You know if you have this, there are going to be times when people are going to look at you funny. If you do this, people are going to act a certain way. Then you can address it, make a plan, and it makes it much less distressing and traumatizing if you help bring predictability.

Second thing, so many of the stress moderating practices that are out there are easy to do, easy to teach, and important to recognize as being essentially dosed in very brief periods of time. The traditional mental health dose of engagement is like an hour a week if you're lucky. Well, that's inadequate if you have all throughout the week, you've got these experiences where you're dysregulated. So teaching people how to understand very simple issues around sleep, diet, exercise, find something that you like to do. Dance, learn mindfulness. Get connected to people in your community. Get connected to somebody at NAMI who knows about these things, relational connection, somatosensory practices that are easy to do, that you can essentially dose throughout your day for the whole week will moderate your distress and stress. And then the third thing is to help give a sense of controllability and agency. And this is where again, NAMI has written about this, they've talked about it.

You have control over reaching out to people who can help you. You do have things that you can control now. You can't control everything. And certainly at certain times it's very hard to not over-focus on something that feels overwhelming. But the degree to which you can develop the capacity to focus on the things that you have control on, the more you will find that your stress response becomes less reactive and more normalized. And ultimately, many of you who are listen, have actually gone through this process of starting out here. And over time, through relationships and through regulating inner opportunities, either through work or through recreation or community of faith or connection to NAMI, you get more and more proportionally organized. And then ultimately, you keep going and you develop a form of... You

develop resilience. You know what it's like to go through four or five cycles if you've had bipolar disorder.

You know enough so that you can help other people. You can take your experience, transform your painful experiences into positive and powerful healing engagements and interactions with other people. Again, I've seen this happen time and time and time again through NAMI. One of my old, old friends who's an FBI agent, and he was active in NAMI, and his son had schizophrenia. And I can't tell you how often he took his pain and his, in the beginning when their child was struggling, they didn't know what was going on, and they were sleepless nights and overwhelmed and distressed themselves, and their marriage was on the rocks. And over time, as they learned more about it, they became more engaged with NAMI. They got the support they could. He literally went through this cycle I just described, basically walking on eggshells. So dysregulated, sleep problems, depressive symptoms, ultimately got back to his own baseline, and then ultimately became a tremendous healer for other people and other families who were struggling with some of the same stuff.

And I think that the malleability, the neuroplasticity of our stress response systems and a recognition that you can make those systems both healing and resilience building, is something that's very, very powerful. Now, I kind of rambled all over the place. Oh, my gosh, it's 4:53 already, but I've talked too long. All right, I'm going to stop. Ken, I'm sure there's some questions.

Ken Duckworth:

Fantastic. So I'm going to ask everybody for a little grace, well over 800 people on this webinar. So this is a super holistic humanistic approach that each of us can be a resource.

This is super NAMI, especially as it's going to get harder to find clinicians as millions of people lose their Medicaid. So how would I or someone on this call become a more trauma informed person? Is it learning from my own experience, making a decision to be loving and accepting, helping people do box breathing and some of the other sensory motor things? How would you have... So let's say you love a child who's traumatized. You want to be the best adult in that person's life you can be. You're a coach, you're their basketball coach, you're a teacher of theirs. How might we get better at this critical life skill that you've laid out?

Dr. Bruce Perry:

So the good news is that there really, in the last 20 years, there have been so many, I think, very good efforts to communicate some of these concepts and develop practical application of some of these things. So there's a couple places that you can go. If you're the kind of person that likes to read, there's a lot of things to read. Nadine Burke-Harris's book is good. Bessel's book is good. We've written a couple-

Ken Duckworth:

You're allowed to mention your books. It's okay. Why don't you mention them briefly?

Dr. Bruce Perry:

Well, I've written three books really, that I think in some ways talk about some of this. I do think the best way to actually start though is for you to think about your own what makes you feel better? What is your regulating tool? When you get really whacked out, what do you do? Do you want to watch movies? Do you want to go for a walk? Do you need to go to the gym and box or whatever? And everybody's a little bit different.

And so the other thing, I didn't really talk about this, but I think most people know this, human beings are so relationally contagious that if you're thinking about how to help your child or somebody that you know and love that's struggling, one of the most important things to do is to make sure that you are regulated

yourself, that you are anchored, so that you can tolerate sort of the ups and downs that you might run into when you interact with them. And it's so easy. And everybody who's listening, who's been a parent, who's had a kid who's struggling, or a partner, you know that you may start out with these good intentions. Oh yeah, I'm going to keep my cool. I'm going to be good. And within three minutes, they push your buttons and you're screaming at each other and you're like, "I tried to help you. I tried to..." Pretty soon it's like everything blows up again.

So the first thing I think is give yourself some grace. Be patient with yourself. You can learn about some of these things. There's some online YouTube based content that we have that other people have that talk about this. There's some books, but more than anything, I really do think that you just start with what regulates me.

If I can stay regulated, good things will come from that. If I can just hold my tongue and be parallel as opposed to face-to-face and telling, telling, telling, telling, telling. I want to help you. I want to help you. I want to help you. Just be present, be parallel, be patient, persistent. And then when that person feels that you feel safe enough, they will look for dyadic engagement. They'll look for more emotionally deep conversation. Think of this. Everybody's probably had the experience of trying to talk to your child across the dinner table and face-to-face. How was school? Fine. What'd you do? Nothing. You did nothing in school today. No. Well, I'm calling school, don't be a jerk. And then you get in the car and you drive-

Ken Duckworth:

Repeat it across America thousands of times.

Dr. Bruce Perry:

Yeah, exactly. But then you get in the car and give them a ride somewhere, and you're in parallel. And then they start talking, talk, talk, talk, talk, talk, talk, and then you get close to school, close to the theater where you're going to drop them off, duck your head down, drop me off a block before. I don't want them to see me with you. But the power of proximity is powerful. Just be with people in a non-judgmental, supportive way. Usually if you're doing something in parallel, let's call her, let's play catch. Let's throw the ball back and forth. Let's shoot hoops. That leads to this more of a non-judgmental, safe presence where you're likely to get somebody to be open and talk about stuff that they're struggling with.

Ken Duckworth:

One of the commenters in the Q&A said this is the best lecture on stress I've ever seen. So file that away in your things that might regulate you if things go poorly for any reason. I want to do switch a little bit to the clinical side of this. Obviously every person can be a therapeutic agent. You've made that really clear, understand your own capacity for regulation. NAMI is really built on this. The family you described, the former FBI agent is ubiquitous in our book. People who've made the decision to serve others through what they've learned. I mean, it's kind of a beautiful principle. What about professionals, EMDR treatments for trauma? How do you figure this fits into this model?

Dr. Bruce Perry:

Well, it's interesting. I gave the keynote presentation to the International EMDR Association like 20 years ago about the mechanism of EMDR. And I remember when it first came out, and I was, among other things, I had started the first trauma recovery program at the VA in Houston, and we were doing kind of the conventional trauma treatment stuff. And a lot of the older clinicians were like, oh, this is. This is a wave bunch of magic and wave your fingers around. And I said, no, no, no, no, no. Wait a minute. If you understand how the brain works, that makes complete sense. And what we do know, and I don't want to get into the biology too much, but as these sensory things come in, I talked about this upside down

triangle brain. You have the sensory apparatus that come in, and you have also the interoceptive feedback that comes from your body.

So in utero, when your brain is developing, your brain, your body is organizing in rhythm. There's a continuous pattern, repetitive auditory pattern, repetitive vibratory input that the little fetal brain is getting, and it's coming in through those three multiple sensory routes from the outside world. At the same time, your little fetal body is sending signals up into your brain that say, I'm not cold, I'm not thirsty, I'm not hungry. In other words, I'm regulated. And so your brain makes an association between pattern, repetitive, rhythmic, somatosensory activity and regulation. And then after you're born, what do we do to quiet a baby? We rock them at the same frequency of this maternal heart rate, and then we stroke them at a sub-multiple of that. And then human language, actually, the pros of human language is a sub-multiple of that too. So there's a tremendous somatosensory rhythm that runs through the stress response networks in our brain.

These core regulatory networks are very sensitive to pattern repetitive, rhythmic stuff, and it's a very powerful built-in memory. So when you do something that when you get the discomfort of a full bladder as a little boy, and you're learning how to go and you're playing Legos, and this is the best Lego tower I've ever had, I cannot go away. You try to regulate your distress of a full bladder by rocking. And when you can tell, Billy, do you need to go to the bathroom? No, no, but that's what we do. Or you can see Pete Carroll on the sidelines chewing gum so fast that you have... He's so tuned up he has to chew gum.

You see people that pace back and forth at a sporting event. Pattern, repetitive rhythmic stuff makes us feel regulated. Every culture on the planet has used that in their healing rituals. Now, EMDR is sort of a more formalized, structured way to create those rhythms at the same time that you're bringing a cognitive memory of a bad thing into your head. And so what happens is you've got a cognitive element to the memory. You've got an emotional element and a regulatory element, and they're all connected. This is why traumatic memory is so unique is that it's pervasive. It's not just a cognition.

Ken Duckworth:

Right?

Dr. Bruce Perry:

Don't just you remember, oh yeah, my dad died. It's just the cognitive memory. No, you have the feeling and then you can literally even have this body response. But the thing that is important to remember is that as powerful as your trauma-related distress is, as powerful as that memory is and makes you feel crappy, it's nowhere near as powerful as the primary permeating core regulatory memory of rhythm. And so when you do rhythmic things, when you activate that cognitive thing, guess what happens? You short-circuit the memory. So you can remember it, but then all of a sudden it doesn't feel as stressing. And if you do that enough times, you basically build the new primary default association.

Ken Duckworth:

What an elegant description of a kind of psychotherapy that is brain-based. There was a question about mass trauma, and I wanted to ask you about that because your approach is so holistic that each of us could be an agent for resilience. You mentioned briefly before we got talking about some of the work you've been doing in Texas. A different person asked about a different trauma, mass trauma, a mass event where many people were traumatized by the same experience. How might you approach that differently?

Dr. Bruce Perry:

It is interesting. I've had a lot of experience with those kinds of events, although starting really with Waco many years ago and 9/11, and there's a number of school shootings and stuff, and it's very interesting. I don't want to sound like... I mean, some of the stuff I'm going to say is going to..., it's not controversial,

but it's like, honestly, we've really screwed that up. We've screwed up our responses to these big events I think. One of the things that we've gotten better at is some of the initial response, but what we're terrible at is that as soon as the event gets out of the news cycle, then all of the volunteerism and all of the time, the energy and all the effort, it all just dissipates. And I've seen this time and time again. I have some slides here I don't really want to show. Well, maybe I could show them. Let me just show-

Ken Duckworth:

You can tell a story about it and then include the slides in the packet that everyone gets who signed up. All 2,400 people who signed up will get these slides and a copy of this presentation. Just tell us a little bit about it.

Dr. Bruce Perry:

Here's the real problem, is that in the beginning, let's say Sandy Hook, there was tremendous mobilization of mental health attention, philanthropic dollars as there should be. But the people who were most impacted by this, and this is so interesting because this has to do with what I just talked about. They were dysregulated, so dysregulated that they're not even in a position to really think through what they need. They're not able to make a plan. So other people around them decide how to use the resources. And frequently, they get left behind. And so what happens is six months later when they're now capable of understanding, well, I didn't really want a community center with a plaque on it. I would've rather had funding for some treatment. So that's what happens. After these events, the people that are most impacted by them usually see a huge sort of deflation of attention and support, along with tremendous discomfort being around them.

This is one of the biggest problems. This is where I have a kind of pet peeve about the resilience stuff that.. And I wrote about a little bit about this in the book I wrote with Oprah, is that in the beginning, the pain of somebody whose child was murdered in a school or whose child was swept away in a flood, the pain of sitting with them is brutal because you are helpless. You're like, what's the right thing to say? Should I say this? Should I not say this? And people end up kind of trying to make themselves feel more comfortable by whatever, but we forget the power of silence, silent presence. But in order to be with folks to help them through this, it comes because of the contagion, right? We talked about this. It's painful. So after the first week, two weeks, three weeks, the people impacted still feel the pain. After three weeks, the people that are trying to help and feel helpless start to avoid. And then they start to want to hope that people become resilient.

Because these folks have to go about their daily business. They have to go shopping, they have to go back to work, and they are hollow shells going through the motions using dissociation to manage whatever pain they can. And people love to see, oh, look at Bill. Look at that. He laughed at a joke. He's fine. He's doing well, all things considered. But the truth is, what happens is the levels of depression, the levels of serious mental health challenge start to emerge at three months, six months, and that's where no help is usually available.

Ken Duckworth:

Right. Same thing with veterans. They come back from service. They get interviewed. How traumatized are you? I'm doing fine. I'm happy to be home. Six months later, they're in big trouble. So how do you sustain this over time? Well, Dr. Perry, so much love for you in the comments, so much appreciation for your work and for what you're doing. I just want to say how grateful I am and also for your holistic approach and how people at NAMI can be in service to this, that everything isn't the magic of a clinician and that it's a community framework that you bring. That is one of the reasons we love you at NAMI. That's all. So you're going to send some slides out. People will get a copy of this lecture. Let's go to a few other slides as we close today's webinar.

So I want to tell you what's coming up. In August, ask the expert goes on vacation and can be seen hopefully on a beach reading one of NAMI's fantastic books. September, we return. Long-acting injectables. We'll be talking to Dr. John Kane, who's one of the kings of long-acting injectables, and we'll talk to an individual and a mother that a long-acting injectable has made a tremendous difference in their lives.

We're going to be talking about lithium, the best mood stabilizer that's grossly underutilized these days with Dr. Jonathan Mayer. We don't always focus on meds. This happens to be two in a row. We're going to be talking about rural mental health in November, and so we just keep going with the most creative and best thinkers out there. Next slide, please. Here's our little book series, youarenotalonebook.org. Bruce Perry was helpful in both of these books. They're filled with real people and what they learned about their mental health experience. So not too dissimilar from this brilliant lecture. So all the royalties go to NAMI, and if you've read the book and you love it, write a review. If you don't like it, take a regulating walk or hike. All right, next slide.

Next slide. Here's some sponsors that we have. People like to give us money because it takes time to hire staff to put on these free webinar series. We accept those resources, we're transparent about them. Next slide, please. You Are Not Alone, and this is an educational webinar series. Don't make decisions based on this, but use this to inform your thinking as you go forth in life. All right, next slide please. I want to thank you for joining today. My name is Ken. I work for NAMI, Ken@NAMI.org. It's like a vanity license plate. I can easily remember it. If you have a question for me, I'm happy to do my best. Asktheexpert@NAMI.org is where we take your suggestions for topics that we should have. I want to thank the more than 2,400 people who registered, the more than 850 people who showed up and the thousand or so people who will listen to this brilliant webinar going forward.

I want to invite you to get involved with NAMI if you're not. Go to NAMI.org, put in your zip code or town. You will find a group of like-minded, loving people who are here to be in support of whatever you've been through. Thank you so much and take good care everybody. I'll see you in September after our little vacation. Thank you, Dr. Perry. Brilliant.

Dr. Bruce Perry:

My pleasure. Thanks. Keep up the good work everybody.