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OT's Mental Health Response to the COVID Pandemic:
Promoting School Participation, A Trauma-Informed
Approach

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- [Fawn] At this time, it gives me great pleasure to introduce Doctor Christine Helfrich. She is going to review our virtual conference this week.

- [Christine] Morning, everyone. Thank you for attending OT's Mental Health Response to the COVID Pandemic. We've had five speakers this week, we've had two so far. And, if you had a chance to attend those, those will be available in the library soon. Today, we have another speaker and then tomorrow. And, Thursday, we'll have two more. Tomorrow we will have Caitlin Synovec, talking about People Experiencing Homelessness. And, on Friday, we'll have Elizabeth Alicea Torres, talking about Older Adults and the Pandemic from a Mental Health Perspective. Today, we have Amanda Rodriguez, and she'll be talking about OTS's Mental Health Response to the COVOVID Pandemic: Promoting School Participation, a Trauma-Informed Approach. Amanda Rodriguez has worked as a mental health professional, since 2007, working with adults with severe and pervasive mental health diagnoses in a community-based setting.

For the last six years, she's worked as an OT, providing care to adolescents in group homes, as well as working with children and families in the continuum model. She recently transitioned into school-based practice in late 2018 at a small intensive therapeutic school in Massachusetts. In all areas of practice, Amanda deeply values the therapeutic use of self, sensory-based interventions and trauma-informed care, and supporting the individual's capacity to achieve. Since 2004, Amanda has also served as an Adjunct Professor at Bay Path University in the Occupational Therapy Department. And, she presently also provides consultative services as an Occupational Therapist to medically involved mental illness, adults living in residential care. So, she's got a nice wide background to share with us today.

So welcome, Amanda.

- [Amanda] Thank you, Christine. All right, so welcome, everyone. Thank you for attending this live webinar. And, of course, if you're watching this later, thank you for that as well. So, today, we're gonna talk about, Promoting School Participation from a Trauma-Informed Approach. Here are my disclosures. So, Promoting School Participation, a Trauma-Informed Approach. This is an intermediate course, focused on the impact of the pandemic on school participation and well-being through a trauma-informed lens. The course offers an overview of trauma, trauma-informed care and opportunities for practitioners to utilize trauma-informed approaches to support student engagement in the classroom. After this course, participants will be able to recognize how the student experience of the pandemic, may be regarded as traumatic.

They'll be able to list three or greater, nervous system responses to trauma. And, be able to identify three or greater, trauma-informed intervention approaches to promote student participation in the classroom. As always, I like to provide an overview of sort of what we'll be talking about and what to expect. You'll find that this is very much so in line with a trauma-informed approach, letting people know what to expect, the routine, sort of how things are going. So, we'll provide a background on COVID and how that's impacted students. We'll discuss stress and trauma, really going into the stress response from a neurological perspective. We'll talk about trauma-informed care, what that is, the six key principles.

And, of course, we'll get into some interventions. So, some real tangible step that you can use in your practice, focusing on sensory-based interventions, body-based interventions, the use of meaningful occupation. And, most importantly and most critically, therapeutic use of self. We'll have a chance to apply some of what we've learned, and then there'll be a summary. As well, at the end, there'll be an opportunity for some questions, if you'd like to ask those as well. So, let's begin by establishing the foundation and background information about the current situation, regarding student participation. The COVID-19 pandemic, has impacted the student educational

experience, to say the least. The impacts of the pandemic on students, can be viewed both directly and indirectly.

Directly, students have adjusted to the stress of changing routines, navigating novel and greatly adjusted learning environments. Disruptions to occupational engagement, both those preferred and the not so preferred occupations. They've adjusted to changes to interpersonal peer relationships, whether they're separated from family or friends or just having distance relationships in that way. Students are also managing the potential loss of life of loved ones, of individuals being sick, and so much more. Indirectly, the pandemic has impacted students as well, as they are pretending exposed to stressors within other systems in which they're involved, their family, their community and their culture. Caregivers are managing housing stressors, financial stressors, employment stressors and stressors related specifically to contracting the virus. There's a lot of anxiety of course, on what needs to be done to manage exposure.

These stressors, both direct and indirect, may be regarded as traumatic, as individual experiences or cumulative over time. So, one particular instance, of course, can be a traumatic and stressful event. We have to keep in mind, our students have been experiencing this for months, right? So, there's a cumulative weight of some of the experience that they've been having. Willard, Long and Phipps researchers, identified the child's perception of an event, has a stronger relationship with psychological distress than what some may think. So, for instance, the death of a pet may be more distressing to a child than the death of a grandparent they never met. Though we may assume the death of a grandparent may weigh heavier. In addition, their study identified that cumulative experiences of distressing events, can have a stronger negative impact on the child's well-being.

So this goes to show that though these small stressors over time, may add to some significant weight. Those could be heavier than what we may think about as potentially traumatic events for individuals. The current climate has created a handful of challenges in regard to learning, as students ability to participate in education, has been negatively impacted by those individual and those cumulative stressors. Ensuring student participation in school occupations, is the core underpinning of what we do as school-based occupational therapists. The school-based therapist supports these aims through prevention, promotion and intervention for general education and special education students. Whether working with individuals or with groups, for students' families, and for teachers. We really do quite a lot for the students that we support.

And, it is well within, the school-based occupational therapist scope of practice to address stress and trauma experienced by students as a result of COVID-19 to support their participation in education, as well as the associated occupations. So, a little bit on stress and trauma, has sort of been brought up here. And, to better understand the role of stress and trauma on participation, we really need to define what those terms mean, and explore the science and stress of trauma. So, Stress and Trauma, quite interesting. In my review of literature, I came to discover that the term stress and trauma, were almost used interchangeably. So, identifying the difference between the two to me kind of is like comparing apples and oranges.

It's very much so some of the same, but I sort of regard trauma as being those extreme experiences of stress. Nevertheless, to provide a little bit of clarity between the two, we have stress and trauma defined as the following. So, stress may be defined as an actual or perceived threat to homeostasis. Stress upsets our internal balance, whether these are internal or external demands, whether they are actual or perceived. Stress may be something as seemingly harmless and acute as locking your keys in the car, which I've done a handful of times. Or, stress may be ongoing, such as a deadline for a

presentation or a webinar, let's say. Regardless, both of these instances of stress, represent actual or perceived threat to homeostasis.

Locking your keys in your car, right? "Oh, my goodness, what are you gonna do? How are you gonna get all the things that you need to get done," can really upset that balance. And this upset of balance occurs physiologically, mentally and emotionally. Trauma is similar and that experiences of trauma exceed one's abilities to cope. Trauma is amplified stress. When the balance of homeostasis is off to such a degree that one's resources to endure are overwhelmed. Trauma may also be defined as real or perceived threat to life or serious injury. The key component with both of these definitions of stress and trauma, is that these experiences are real or perceived. That's really important, that part about perceived.

So this is what makes stress and trauma so unique from individual to individual. So, Jim and Jane, may have experienced the same significant event. If Jane doesn't find the event threatens her homeostasis or presents as threatening to her life and Jim does, they're gonna have uniquely different responses. Intellectually, we can identify a difference between stress and trauma, right? We can sort of cognitively make sense of the two. But, physiologically, our body doesn't know the difference. Physiologically, our body responds to stress and trauma the same way, whether it's real or perceived. I like to think about the example of, cause as a runner running in the woods, right? If I'm running in the woods, and I see what appears to be a snake on the ground, "Oh my gosh," that stress response is gonna kick in.

If I approach that snake on the ground, and come to figure out that it's actually just a stick, my body doesn't know the difference between the two, right? That stress response is triggered, whether it's actual or perceived. And, another little piece to know, the experience of stress over time, can have a significant negative impact on health outcomes. So, some of you may be familiar with the ACEs Study, and we'll

touch on that a little bit more, but not too much. But, just goes to show that stress and trauma, that experience of running your autonomic nervous system at such a high-end for so long, can have a negative effect on health outcomes. So, as I sort of just alluded to with our autonomic nervous system, let's jump into the science behind this.

So, the autonomic nervous system, is responsible for maintaining our homeostasis. It's a series of unconscious responses, which hopefully allow us to respond to the demands placed upon us. Our autonomic nervous system, is responsible for those adaptive survival responses, like circulation, respiration, digestion, metabolism, regulating our body temperature, hormone secretion and reproduction. The autonomic nervous system, has afferent in efferent pathways. The science behind this is quite important, right? The afferent pathways represent the information coming in and the efferent represents the information heading outward. The autonomic nervous system, is powered by afferent pathways of the spinal cord and a few cranial nerves. Most importantly, the vagus nerve, which we'll discuss a bit later on, as it relates to interventions.

So, information from these pathways, is expressed through those efferent pathways of the sympathetic and parasympathetic nervous system. So, to summarize that a bit, afferent information, is the information that's coming in through our body. Our senses, our sensations or whatnot, coming up through our spinal cord, a little bit of information from our cranial nerves. It's processed through our hypothalamus, thalamus, and limbic system, and it heads out as a sympathetic or a parasympathetic response. So, as I mentioned, the hypothalamus, thalamus and limbic systems, serve as the middlemen to this system. They're sort of receiving and sorting the information and engaging the appropriate pathways. So, long story short, our autonomic nervous system kicks in to fire us up to meet those demands of stress, which is wonderful, right?

That unconscious, sort of get ready to fight or flight or rest or digest. So, it gets our bodies ready to fight the bear that's attacking, if we think about maybe locking our keys in the car. Maybe it's gonna get us ready to punch through that window, which might not be the smartest decision, but that's what it's getting our body ready to do. When stress, when stressed rather, survival becomes our priority, which is the function of this system, right? To maintain that homeostasis, to get us back into safe mode, fight whatever we need to fight. When we're in this state of stress, it naturally creates challenges to do anything else much beyond surviving, right? We are so hyper focused on eliminating the stressor and returning to homeostasis.

We really can't access, those higher-level cognitive functions. So, almost reminds me of that example I just gave about your keys being locked in the car. Punching through the windows, probably not the smartest idea. But, when your autonomic nervous system, is running in this way, you're not thinking about, you know, the decisions and the consequences of the choices you're gonna be making. You're trying to sort of get your needs met in that moment. So, again, going back to what I had said previously, the stress of a bear attack or the stress of your car keys being locked in, our body is gonna trigger the sympathetic or parasympathetic nervous response in order to meet those needs. So, a little bit more on the stress response, just to give us that background that we need in order to identify the interventions that we're going to use and support.

So, keep in mind, our students have been experiencing all of these indirect, indirect stressors. So, they're at this heightened level. So, the efferent pathways of the autonomic nervous system, or the Sympathetic and Parasympathetic nervous system. The Sympathetic nervous system, is most often thought of as our fight or flight system. This system activates all the things you need for that bear attack. It manages our muscle contractility, priming our muscles to take action, dilating our pupils, so that we can see nice far away. Increases our heart rate, pumping our blood and our oxygen to

the muscles that we need and secreting whatever hormones are needed for that survival response. The other side of that, is our Parasympathetic nervous system.

This is regarded as our rest and digest system. I already feel myself sort of calming as I speak about this. This system is responsible for dampening or decreasing the heart rate for constricting the pupils for closer vision, for dilating blood vessels to support digestion. The parasympathetic nervous system is the system of pause. And, I like to think about it that way too, as a fun way to remember, parasympathetic being our pause. For the most part, these systems work in harmony. As the sympathetic nervous system kicks in to increase our heart rate, the parasympathetic nervous system dials back on its role in decreasing heart rate. When ready to initiate rest, the parasympathetic nervous system kicks in the response and the sympathetic nervous system dials back.

It's almost like an excitatory in an inhibitory relationship. That's a nice simplified way of thinking about it. As I mentioned earlier, ongoing engagement of the sympathetic nervous system, can have negative long-term impacts on health and well-being, as made known by the ACEs study, the Adverse Childhood Experience study. Where experiences of trauma, correlated with a variety of negative health outcomes. Because, of this, we as practitioners, and really, as humans, really want to be skilled in our ability to engage the parasympathetic nervous system to counteract those sympathetic responses. One of the many avenues to tap into the parasympathetic nervous system, is through the vagus nerve. So, as you recall, the spinal cord and a few cranial nerves, were the afferent pathways that powered that autonomic nervous system.

One of those nerves being the vagus nerve. Stimulating this nerve and developing what's called high vagal tone, is one way to regulate that stress response to promote parasympathetic engagement. And, to allow our students to engage in classroom activities and school-based occupations and such. We'll talk a bit more in depth about

vagal interventions in the latter half of the webinar. So now that we have our foundation of science, and circling back to our sympathetic nervous system, this, we're gonna look at, sort of, how does this impact participation in the classroom, right? So, overactivity of the sympathetic nervous system, creates challenges both in the immediate and in the long-term. In the immediate, the sympathetic nervous system response may take a number of forms.

And, perhaps you've seen these in some of your students that you've been working with. In the classroom, the response may look like hyper vigilance, may look like increased heart rate. It may look like challenges with thermal regulation, right? Are students sweating a lot? Are they overheating very quickly? Definitely, will look like emotion regulation challenges. So, maybe a bit more irritability, having a really difficult time coming back to center. It may also look like decreased attention. Again, if we think about our sympathetic nervous system response, we're not gonna be able to access higher-level cognition or even just the cognition needed to attend. As noted, we're gonna have decreased cognitive function, and we may even see students withdrawing totally.

Just stepping back from assignments, maybe not even coming to scheduled zooms, which I've still had a few times happen. It's also important to consider that the student who presents with some somatic symptoms, that may be the form of stress as well. So those tummy aches and headaches, may be valid representations of the psychological distress, associated with COVID. Ultimately, the brain and the body prioritize survival over new learning. Yes, completed the math assignment or forming those accurate letters is important, but none of it matters if the body doesn't survive. Stress and trauma maintains survival mode, negatively impacting participation in occupation. Though not immediate, and though not as long-term as that ACEs study, recent research that I came across, exploring the impact of the Australian brushfires with elementary-aged school children, identified a delayed impact on learning.

Noting that the traumatic impact of the natural disaster, was observed years after the incident. This is important to think about because even though we may not see our students with decreased cognitive abilities or meeting some of those milestones that we would typically see in the classroom right now. The stress and the trauma of the pandemic, may have an impact years from now. Researchers in that study advocated for early intervention to prevent those potential delays both academically and functionally. And, with any hope, some of the interventions that we'll talk about in the latter half of this webinar, will decrease the likelihood of that happening for our students, by supporting them and again, engaging that parasympathetic nervous system.

And, again, as noted by the ACE's study, long-term exposure to stress and trauma, can yield negative health outcomes. So, to counteract the sympathetic nervous system response impacting student participation, it's critical that we engage that parasympathetic nervous system to create a sense of safety for the individual within their body and outside their body. So, now that we have our foundation in science, let's develop our foundation in trauma-informed care. So, trauma-informed care, is an approach to care with all individuals that recognizes the prevalence of trauma among individuals. It demonstrates understanding of the physiological and social effects of trauma, and is cooperative and skilled in approach to trauma. So, trauma-informed care, is not a particular set of interventions, it's more or less an approach to how you provide care.

So, there's no one particular thing that I can tell you that will always be trauma-informed. It's sort of all of your interventions, all of your interact interactions. The way that the culture is set up within the school, isn't a trauma-informed fashion. So, examples of trauma-informed care approaches, include the mindset of asking individuals, "What happened to you" versus, "What's wrong with you."

Trauma-informed care, may also look like using the individual's preferred pronouns, along with any traditional client-centered care approaches. Trauma-informed care, is also generally very strength-based as well. I like to regard trauma-informed care as somewhat of a universal precaution for mental health. So, we have our universal precautions in terms of course, now we know a lot about it, right?

PPE and hand washing and how we handle any sort of bloodborne pathogens and whatnot. So, to me, trauma-informed care, is our universal precaution for mental health. I assume all individuals I meet, have experienced some degree of trauma. I recognize and I appreciate the science behind trauma, and how that impacts treatment and presentation. And, I understand best practice in addressing trauma, involves working with the individual skillfully. I believe occupational therapists have an added advantage when implementing trauma-informed care because of our ability to understand the science of trauma. To understand how the trauma response, impacts the individual as a whole, and our ability to perform those activity analysis in order to support and engage individuals meaningfully in their occupations.

Trauma-informed care, is represented by these Six Key Principles and we'll go through them one by one. So, Safety, this one is paramount in my book. Safety, in terms of physical and psychological safety. So this is safety in the environment, safety in the individual themselves and safety interpersonally. Whenever I'm working with an individual, if there's nothing else I can do, I'm really honing in on that idea of safety. And that will be reflected in the interventions that we talked about as well. The second principle being Trustworthiness and Transparency. So, decision-making is transparent and it aims to promote trusting relationships. So, If I'm offering choice, or I'm identifying what sort of needs to happen next, being guided as a practitioner, I'm letting the individual or the student know, okay, we need to get through this thing first, in order for us to get through this.

Really being transparent and letting them know where the decisions are coming from. Peer Support is another principle of trauma-informed care. So, shared stories of lived experience to promote recovery and healing. So, when I think about this one, especially when it comes to the pandemic. I'm thinking about students being able to share, their stories of their experiences. Of course, in a guided and a supportive way. And, also identifying, you know, what's worked for you, you know, if certain students have similar experiences, in their stressors, or even just wanting to share in what it feels like the anxiety and the stress of all of the changes. Being able to have peers that they can connect with. Key principle number four, is Collaboration and Mutuality.

So this is sort of a leveling of power. So, understanding that clients and staff, so if we think about our students and us, yes, of course, there's a natural sort of hierarchy. But, at the same time, we're both humans in this experience. So, while I may be the OT expert in providing interventions, the student is the expert in their life experience. And that sort of levels the ground a little bit. Number five; we have Empowerment, Voice and Choice. So, again, this is a strength-based approach to the experience of the individual, focusing on resiliency. This principle also focuses on the therapists role in the relationship, serving as an agent of change in the recovery process. When I think about OT's and all the wonderful stuff that we do, I think about us as catalysts.

We are unchanged by this relationship. We are, again, the agent of change, we provide the environment for the individual to be able to succeed. But, ultimately, they are the ones changing, we are the ones sort of again, being that catalyst, being the agent of change. And, lastly, we have cultural, historical and gender issues. So this is care. Trauma-informed care, is care that seeks to address cultural, historical, and gender traumas, absent of bias or stereotypes. So, some of these principles may align really nicely with direct intervention, some of them with group intervention. And, others really take more of an administrative or entity wide, so maybe school-wide practice.

Regardless, these are the principles that underlying trauma-informed care in the interventions provided.

One thing to sort of think about, is that when we're promoting trauma-informed care, we wanna consider all of these principles with some weighing heavier than others. And, they're always reflected in our interventions with students, caregivers and teachers. Which reminds me that even the term caregiver, is trauma-informed, and understanding that not all students, are supported by their parents. But, perhaps are being supported by grandparents, foster families or other guardians. So, getting into the nitty gritty part of things now. As far as tangible, concrete interventions, we are going to talk about these four areas to promote school participation, aligning with that trauma-informed approach. So, we'll discuss Sensory-Based Interventions, Body-Based Interventions, the use of Meaningful Occupation, and most importantly, even though it's listed last, Therapeutic Use of Self.

So, on the following slides, you're gonna notice that there'll be a little box with each of those six key principles. And this is to serve as a reminder, and an opportunity to link these interventions, back to trauma-informed practice. So, for the most part, as I mentioned, these interventions focus on the principle of establishing safety within the individual, within the environment and interpersonally. Again, we're promoting that stabilization of the nervous system with our science, our understanding of the stress and trauma response. So, the Occupational Therapist understanding of the stress and trauma, render us an incredible asset in promoting participation for those experiencing distress. So, for our students who are really in it right now. Feeling the changes in their routine, the changes in their school and not being able to hang out with their friends.

All of that stuff, our understanding of the stress response, coupled with some of these interventions, can be really impactful in terms of their learning and participation. And, I think it's almost impossible to talk about sensory interventions and mental health

without mentioning Tina Champagne and the work that she's done. So, as quoted by Tina Champagne, "Sensory-based interventions, are used in part, to help facilitate the stabilization of the autonomic nervous system response to specifically target sensory processing disorders and to enhance occupational participation." When individuals are functioning optimally, little attention is needed to support regulation. However, when unwell, such as experienced acute or chronic states of stress, greater attention is needed to identify and implement those strategies to support regulation.

Sensory-based intervention support regulation in their ability to stabilize the nervous system response and promote safety for the individual. In a research study exploring adaptability, resiliency and challenging behavior in a general population of six to 11 year olds. Researchers identified depression, was negatively associated with sensory seeking behaviors. Researchers suggested these may represent, a relationship between engagement and mood state. As children fully engaged in activity and their environment, they were presented with fewer depressive behaviors. In addition, the research suggested the prior noted may suggest when needs are met, individuals are more suited to engage in their environment. This pretty much what we know about, sensory work in general, right? If we provide a suitable sensory environment for individuals, their ability to engage and participate will increase.

The research identifies this may also, of course, have an impact on mood in a fewer depressive states or fewer depressive behaviors rather. Similarly, their research identified a correlation between avoiding behaviors and challenging or maladaptive behaviors. Suggesting occupational therapists, may offer supports to limit sensory information to promote those adaptive responses. They identified the consideration of environment and routine, as well as promoting predictability and child ownership of decisions as valuable interventions. Child ownership of decisions, sort of struck me as being very much so in line with trauma-informed care, right? That empowerment, voice and choice. A scoping review of sensory interventions and mental illness, Echo this, as

the research supported, the use of sensory interventions to support cognitive function and occupational performance.

Essentially, the literature and the research, is out there that supports the use of sensory interventions to promote participation and to promote engagement, and cognitive function. So, all of this evidence, supports those use of sensory interventions, as well as what we know about sensory-based work and how that promotes a sense of safety for the individual. So, a little bit of Sensory 101 here. We have on the left side, you'll see are Generally Calming types of sensory input. And, on the right, we have our Generally Alerting sensory input. So, repetition, generally calming. And again, when we're thinking about interventions for the students, we're considering the fact that they're heightened, they're already in that alert sort of state. For the most part, that is sort of a generalization.

You may find that some students, of course, are they're responding differently to the stress and potential trauma of COVID-19 the pandemic. But, for the most part, we're gonna assume that they are at that heightened state, right? So, what we wanna do, is aim to provide those interventions that are generally calming. Repetition, things that are familiar. Consistency, which when I am, was sort of thinking about the difference between repetition and consistency. Consistency sort of has a standard attached to it. So, repetition being those things that you repeat doing over and over again. And, consistency being sort of the standard of expectation. We wanna provide interventions that are neutral, that have potentially positive associations. We also wanna be slow paced and rhythmic.

We wanna promote the use of simple activities. Again, if our sympathetic nervous system is engaged, our ability to access that higher-level cognition is not quite there, right? So those really intense problem-solving activities, are probably not where we wanna go. But, keeping things a little bit more simple and definitely as we know as

OT's of course, that just right challenge promote as many opportunities for success and celebration as possible. So, what are some actual sensory-based interventions that we can use? So, as for sensory interventions, here are some of the ones that I've used in practice. These are sort of general categories, but we're gonna identify a couple of specifics that we can use as well.

So, we always always, always wanna consider the environment. So, right now we have a really interesting situation with our students, where some of them are fully remote at home, some of them are fully engaged at school. And then, we have this in-between of hybrid, where, like, for instance, the school where I currently work at, we have students that are on site four days a week, we have students that are home four days a week. We have students that come in two days and go home two days. And then, we just have some students that sort of decide in the morning, whether or not they're coming to school. So, we have a really interesting scenario in considering the environment.

So, as OT's, we need to consider all of those variables in providing those sensory-based interventions. So, what can be added to the environment? What can be modified? What could be removed in order to support the student? We want to increase opportunities for calming spaces without bringing the student into a state of sleep. So, while a bed might be a comfortable and soothing to engage that parasympathetic response, it's also gonna promote sleep. We really don't want our kids sleeping during classroom time. And, if our kids are too sleepy, we need to think about what are some of those ways that we can adapt their environment to meet their needs. So, I, of course, always think when it comes to sensory-based work, going through each of the senses to figure out how to best support the individual.

So, some things I may do, would be limiting the amount of clutter, right? The amount of visual stimuli. If the student is at home, setting up a dedicated space for them to work. Really considering, from like an ergonomic standpoint, even, like what's the table like?

How high is the chair? Is there back support? What is in their line of sight that they may be distracted by? And then, what are the opportunities to take a break from that space as well? Right? To sort of recharge, to sort of introduce a little bit of novelty, cause again, if we have too much of that, sort of little calming sort of intervention, we may have our students who are disengaging in a different way.

And then, at school too, I know different schools have different challenges in terms of how they're setting up their classrooms. So those are the things that we wanna think about, we wanna make sure that students are oriented to their space as well. So, as much as we can, involving them in those decision-making processes about our process, yeah, process about how the classroom is set up, which again connects to our trauma-informed principle with the trustworthiness and transparency. Letting them know, here are the decisions being made. And, here's how they are supporting you and here's where you have some choice within that. For sensory-based interventions, we also want to consider, of course, the use of Sensory Diets.

So, movement breaks, right? I know a few teachers from the school where I work and fellow occupational therapists that are working, their teachers are promoting dance breaks, which is working really, really well. It's a rather large expectation to expect our students to sit and attend to virtual class for such a significant length of time. And that's in the classroom as well, especially given the fact that, we are experiencing, our students are experiencing, high states of stress as well. So, anything, sensory diet, maybe it's implementing those regular, you know, top of the hour sort of movement breaks. Maybe different kids need different sort of sensory input if it comes to tactile. Introducing scent into their daily routine.

The things that we already are doing as OT's, but thinking about it more from that trauma-informed perspective and understanding that it might not be just those students on IEP who have these needs. But, all of our students are experiencing this

sort of stress and how can we provide intervention for them as well? Yoga of course, there's a considerable amount of yoga that supports or there's a considerable amount of research rather, that supports the use of yoga in the classroom, is being supportive for mental health and well-being. So this can take many forms of course from group to individual. It can be done within a sensory diet or as a standalone activity. The picture here on the right is of yoga pretzels, and so I like to use yoga pretzels in my work because it provides a nice visual.

On the other side of the card, there's also some written instructions for how to assume the yoga positions. So, yoga pretzels also includes a nice mindfulness activity in prompting questions about the pose and how it feels in the body. So, taking the student, sort of out of the experience of the classroom, what may feel overwhelming and really turning into themselves and focusing on their body, their breathwork and how their body is responding to the movement. I have done yoga in class with students. We've also done it virtually. So, it's got nice flexibility in terms of how it can be delivered. Also, there's a number of different sort of yoga cards, like yoga pretzels. So these can be something that could be also recommended to families in order, again, to keep that consistency and that routine and develop some more familiarity with the tool.

Just to point this out, the research, the jury is sort of out on the use of weighted vest and stability balls. And, to that I say, if it works for your students, absolutely, I want you to suggest it. But, in terms of a gross broad sweeping, will it work all the time? The research can't quite say that. So, if you feel like weighted vests may be helpful for students in order to engage that proprioceptive, give them that feedback on their joints and their tendons, their bodies in space, in order to promote engagement, go for it. If you feel like a stability ball will work, go for it. But, there may also be other opportunities as well.

So, consider these, of course of wiggle cushions, and any sort of movement-based activities. So, some Students Specific Interventions. As a skilled practitioner, you can likely identify some sensory-based interventions to use and support based on observation alone. Even still, students specific sensory assessments, may be advantageous. I like to use a sensory profile because you can get the student, caregiver and teacher perspective. But, there may be other sensory-based assessments that you wanna use in order, again, to create those environments, within the individual and in their home or at school to support them. In terms of our six trauma-informed care principles, sort of how does this connect? We are promoting safety throughout all of these.

Whenever I am engaging a student in sensory-based work, I am telling them why the intervention is helpful and what the aim of the intervention is, right? So, I'm never just providing an intervention to them without some sort of communication around what it's doing. So, if I'm giving a, you know, weighted ball massage, I'm letting the kid know, like here's, this weighted ball massage may be helpful. It may help you calm and become grounded, giving you that deep pressure. A little bit of that education, so that they understand a little bit more about what's happening. And, they have choices in that decision-making process. Of course, collaborating and identifying what tools may be best for them, and giving that empowerment, voice and choice with them identifying what's going to work.

So, a Sample Home Learning Space. So, you can see here, we've got a lot of stuff happening. What I really like about these pictures, is that the, you can see, we have like a little trifold that's set up to limit the visual stimuli and really sort of keep the kid focused in this space as their classroom. There's also a really nice little plush carpet for them to take a break, to read a book. But this student I wanna say, is using a tablet for their work, so it can be mobile. What you can't see in this picture, is actually the placing of these desks are near outlets. And that's sort of to decrease the frustration

that may be associated with charging items, something small to think about, more on the ergonomic side of things.

But, when parents and students are stressed, that's one less sort of barrier to have to manage. I also like how this mother has included the use of rocking chairs by recommendation, right? To get that linear vestibular input that can be very calming and very soothing. There's also plenty of space which you can't see on this side for large movement. There's like gym floor tiles in order to get the movement, like sort of the safe movement of doing yoga stretches. I know that these kids like to do handstands and things like that during their break time. So, our next area are Body-Based Interventions. So, I've organized body-based interventions into Vagal interventions and Biofeedback. Vagal interventions tap into the vagus nerve and its capacity to engage the parasympathetic nervous system and support engagement for participation.

By tapping into the vagus nerve, we're supporting higher vagal tone. And, higher vagal tone allows the body to relax quicker after stress. So, some interventions to promote vagal tone are; cold. Exposure to cold increases vagal tone, so cold showers, cold cloth, cold compresses, holding ice-cubes. Even something as simple as opening up the windows, assuming where you are is cold, can be an opportunity to tap in to stimulate that vagus nerve. Breathwork. So, actually expanding the diaphragm when breathing in deeply, and exhaling long and deep. We wanna aim for about six breaths per minute. The average person takes about 10 to four when they're not practicing intentionally. So, thinking about taking those deep breaths in through the nose, opening up the diaphragm, and exhaling long and deep.

Underneath this, I just have a little note about masks. So, oftentimes, when wearing masks, we tend to breathe through our mouth. And, mouth breathing actually engages the sympathetic nervous system, right? It thinks it's sort of like hyperventilating, right? We're getting a lot of oxygen, plus we have this cloth that's blocking our face. So, as

much as we can, we wanna promote nose breathing, especially with our children that are wearing masks. So, I know there's some masks that have like a little space to sort of give you a little bit more space with the noses to engage that. I've also seen some really creative ways of people putting in like cupcake liners into their mask temporarily, just to give a little bit more space around the nose.

So, as often as you can promote that nose breathing, if you can provide recommendations for particular masks for students to use. If you notice that they seem to be, eliciting a little bit more of that stress response, then absolutely recommend that. One of my favorites, especially to use with young kids, singing and laughing, is a great vagal intervention. So, chanting, humming, singing, laughing, all of that engages the vocal cords, which stimulates the vagus nerve. So, if it's a classroom sing-along in the beginning, or what I usually like to do is sort of a take on laughter yoga. So, laughing in different voices, right? Doing really quiet laughs, doing really loud laughs, laughing like different animals might laugh.

Laughing like an evil person, laughing really silly. All of those different types of things can be really fun, especially for our younger kids, and engages the vagus nerve, stimulating and increasing the vagal tone. Meditation. So, meditation is a little bit different from mindfulness. And that with mindfulness, the focus is on something, whereas meditation encourages you to focus on nothing. So, to clear the mind, allow your thoughts to flow through. Research has shown that this reduces the sympathetic response and increases vagal tone. We also wanna promote, of course, exercise, and this pairs really well with sensory-based interventions. So, just showing that engagement and exercise, like walking, weightlifting, sprinting, any sort of heavy work, can have a positive impact on vagal tone.

So those dance breaks, those movement breaks, heavy work activity. Those recommendations that you would make for somebody, sensory-based wise, also tap

into the vagus nerve. Again, engaging our parasympathetic nervous system, promoting that pause, through the vagus nerve. Biofeedback is another type of intervention. So, I'm not sure if too many folks are familiar with biodots. I like to use them quite often. They're essentially what I like to call mood ring stickers. So these little stickers change color, based on body temperature, and can sort of clue students in to how they're feeling, based on their body temperature. So, if you remember, thermal regulation was a challenge that some students may have, if they're in that sympathetic nervous system response.

So, biodots are a fun way to check in, and visually take inventory on how someone is feeling. Of course, they're not always 100% accurate, but it is a great way to introduce the idea of biofeedback to students. When I do biodots, I typically put them like on the base of my thumb, just so they're, I can actually see them. And, if you put them distal on your fingers, it doesn't quite get the temperature quite right. So that might be something to play with. Again, remember, they're not 100% accurate, but it is a really fun and creative way to engage students in biofeedback and letting them know, like you are in charge of your body. Some other biofeedback-based interventions.

Traditional Heart Rate Check. So, students can check their heart rate classically by just checking their pulse with their fingers, or nowadays through some pretty nifty technology. So, there's a variety of wearables, from Apple watches with heart rate sensors to other fitness wearables, like Garmin devices that can track heart rate. Some of these tools even have little stress features that encourage individuals to pause and take some cleansing and calming breaths. So these might be tools that you could use with students, again, to engage that parasympathetic nervous system. And, lastly, biofeedback, the intervention tool of HeartMath. So, HeartMath, is a system that measures heart rate variability. That's the HRV. So, high heart rate variability, correlates to high vagal tone, which correlates to higher resistance to stress.

The HeartMath system involves a body-based sensor in an app or a computer software that measures the variance between heartbeats. So this is different from pulse in that, or pulse and heart rate rather, and that heart rate is measured over a period of time. So, your heart could be 60 seconds, or 60 times rather in a minute. Heart rate variability, is measuring the space between those heartbeats. So, at one point, it may be .8 seconds, the next it may be .9 seconds. It may be 1.2 seconds in between heartbeats. The higher the variance, the higher the variability between those heartbeats, the higher the vagal tone. So these interventions connect again, with our trauma-informed principles in terms of promoting that safety.

With introducing any of these interventions, we can always be transparent, communicating what the purpose is, allowing the individual to choose. Oftentimes, when I'm providing students choice, I'm providing two choices, right? So, would you like to use the cold cloth? Or, would you like to do some laughing? Right? So, we're gonna choose one of these interventions. You're gonna be in charge of which one we're doing, but it's still a little bit guided in terms of skilled intervention. I never set a student up to say, "Do you wanna do laughing? Or, would you rather not?" Cause more often than not, they're gonna pick that they don't wanna do it. So, by providing a little bit of structure in that choice, can be really helpful.

So, here's some images, just of some of those body-based interventions. Some things to. So, we have, of course, our pulse oximeter, which is measuring our pulse, fun little O2 stat as well, O2 sat rather. In the middle here, we have some bubbles, which again, is thinking about working on that breathwork. So, encouraging students to make the biggest bubble that they can. Nowadays with COVID and masks, in the classroom this may be tricky. But, could this be done at home? Could this be done through sort of imagining? Imagining you're blowing the biggest bubble ever, right? There's also this fun little toy, which usually has a little ball with it, that you blow through that whistle and try to keep the ball suspended.

And this picture or this part of this picture here, is a reminder of just an intervention that was once used, where we made a maze out of cardboard boxes, and students had to blow their ping pong ball through the maze, without, of course, blowing it off the edge. So, again, thinking about that controlled breathwork, in order to engage the vagus nerve. And this last picture here is of HeartMath. So, HeartMath is connected to an app as well. So, you put this sensor, this clips onto the ear, 100% not painful. Usually, in a trauma-informed way, of course, when I am providing this intervention to a student, I will put it on myself first, so that they can see that there's no harm involved in this.

They're allowed to explore the tool before they use it. But, so, you clip that onto your ear. This other part here clips onto like your shirt. And, you would download the app onto your phone. Or, if you have the computer-based software, you could use that. And, there's an image that pops up and the student just regulates and breathes along with that image. And, it tracks the variability and heart rate. Sometimes with the, I use it in terms of function or functionally. Especially when I was actually working in group homes, was engaging them in some variety of occupation. Something functional, so that they could see how their heart rate changed, depending on what they're engaging in.

And, thinking too about that biofeedback part, if we were doing a novel activity, something that maybe really required them to do a lot of problem solving, reflecting back and looking at their heart rate variability and seeing like, "Oh, that's so interesting. When you encountered a problem, I noticed your variability went low. What are some things that we can do in life to sort of promote you to have that consistent and high heart rate variability?" So, connecting it in that way. It's a really fun, of course, app for kids to use as well. And, lastly, in terms of interventions, this one is probably my favorite slide in terms of philosophy and practice. So, Lorna Jean King, her Eleanor Clarke Slagle lecture, entitled "Toward a Science of Adaptive Responses" really, really

discuss the value of the activity and meaningful occupation in regulating the stress response.

If you can read any Eleanor Clark Slagle lecture, I highly, highly recommend, reading her Eleanor Clark Slagle lecture, just because it taps so well into mental health, into the use of meaningful occupation. So, in her lecture, she identified how somewhere along the way, activity or occupational engagement, became regarded as diversional versus being regarded as stress reducing for its impact on the nervous system. I see this so often, when children are struggling in managing their anxiety or whatever mental health, sort of issues are being presented. If I come in and I provide them with putty, or if I engage them in something that they really love to do, sometimes what I will hear is, "Oh, I'm just distracting them from like their issues that they're managing.

" Or, pretty much essentially saying that the interventions that we're providing are distracting them from dealing with their issues. And that's why they're able to engage in them. And, what Lorna Jean King says, is, "No, no, no. Engaging in those meaningful occupations, helps and promotes a positive nervous system response." So, it allows them and their heart rate to decrease cause they're feeling safe, they're feeling comfortable, they're engaging in something that's meaningful, and it's having a positive impact on their body. Not that they've forgotten about all of their issues that are going on, but that their body is having a physiological positive response to this meaningful occupation. So, again, when engaged in meaningful occupation, our heart rate decreases, our muscles relax.

We can suspend those feelings of worry about being unsafe. Engagement in a meaningful occupation, has the power and ability to dissipate the stress response and promote those adaptive responses. To this end, engaging students in meaningful occupation, can facilitate engagement in education, and in their classroom. And, most importantly, though, it's listed last here. Therapeutic Use of Self, is so, so, so valuable

in what we do as occupational therapists. We want to be able to form those safe and trusting relationships with the students that we're working with. We want there to be a genuine connection, a genuine understanding. And, of course, avoid punitive actions for their non-participation. This is really taking into account that trauma-informed side of things, of understanding that them not participating, is not necessarily deliberate or malicious, but an understanding of there's a science to the stress and trauma reaction that's happening that's keeping them from being able to participate.

Sort of defaulting to the idea of the students are all doing the best that they can, and meeting them where they're at. So, therapeutic use of self, taps into every single one of those six key principles. Promote safety, promotes that trustworthiness, peer support, I guess you could sort of see that if we're thinking about ourselves, of course, as equals and leveling the playing ground, engaging other individuals in the process. We're empowering them. It's all about the relationship. It's all about understanding their experience. When I teach, I often tell students that 99% of being a great occupational therapist, is just being a good human. And that really speaks to therapeutic use of self. If you can connect genuinely with the individuals that you're serving, and really understand and appreciate and respect their life experience, especially given the challenges of the pandemic, they'll be more invested in what you have to offer in terms of interventions.

And, you're more likely to pick the intervention that's suited for them because you are genuinely connecting. And, you're getting a feel for what their interests are. And, again, understanding their experience. So, let's see here. Let's take some time to sort of pull this all together with a case study. So, I'm gonna read through this here. We can't have the dynamic back and forth that I'd like to have. So, I'll give you some interventions ideas, and then we'll discuss how they're trauma-informed. So, you're providing OT services virtually, and the typically attentive and enthusiastic 10 year old student, is

highly distractible, irritable, and unwilling to participate. The dad comes on screen to apologize and says the student had a tough weekend.

Their mom, a doctor on a COVID unit, tested positive for the virus. The student identifies feeling tense with racing thoughts about their mother's condition when prompted. The student also reports feeling disorganized. How do you respond? So, from a trauma-informed care perspective, I'm understanding that this student, is likely having, of course, a stress response, that there's maybe some underlying trauma that this individual is going through. So, even if I didn't know, even if dad didn't come on the screen, and tell me that this had happened with their mother, that is the take that I'm having, as a trauma-informed therapist. Understanding that there's gotta be something that's underlying these responses. So, if I know that they're feeling tense with racing thoughts, I might promote some muscle relaxation, I might promote just sort of like doing a body scan, again, thinking about those body-based interventions.

Where do you feel tense? What does that feel like in your body? Where did you? How would you like to feel? What? Do you wanna feel like a marshmallow? Do you wanna feel like a cloud? Like where do you think your body needs to be? Those sort of questions. Given the fact that they're distractible, I would sort of wonder what is happening in the environment as well. So, maybe that might be an opportunity to consult with dad and ask about the learning space. And, just say, you know, "What does that look like? Tell me a little bit more about that." And then, provide interventions based on that. Of course, as school-based practitioners, we do still have our IEP goals that we need to get met.

So, let's say I'm working with this student on handwriting, something that I may encourage them to do in a trauma-informed way, would be to maybe write a letter to their mother, just to say how much they care about them. Just to have that communication, cause again, let's imagine mom's sort of quarantined, and that can't

happen. That may be an approach that I would take. Another approach, of course, is to recognize the strengths of this individual. So this student has been distractible, irritable, unwilling to participate, and yet they're still on the other side of this virtual learning screen, right? So, saying thank you so much for showing up. I understand how difficult this can be. I appreciate the fact that you're going through what you're going through.

I wanna be able to help, what would you like to do first? Do you want to do our IEP focus stuff? Or, do you wanna do some laughter? Do you wanna try doing sort of a pulse check, and I may walk them through those sorts of things. So, anything again, that can create that sense of safety for the individual, are some things that I may try with this student. Let's think if there's anything else, so we did, of course, maybe some breathwork, if we're looking at our vagal intervention. There may be an opportunity to expose them to some cold, or movement breaks for sensory stimulation. Think that about covers this webinar, I just wanna check my notes to make sure.

So, some yoga may be an opportunity. Again, always wanna provide the individual choice throughout all of this as well. Our next case study, just to look at this as well, is thinking not from an individual but from a school, from a group rather. So, you have been asked by a school administrator to support students in a sixth grade classroom. The students and teacher have just returned to school after a two week quarantine period, following a positive COVID test. So, somebody in the classroom tested positive. The students appear anxious about being back in the building. And, it's all they've been talking about all morning. They're having a tough time orienting to the classroom space, given the time away.

How do you respond? So, within a classroom space, this is a really great opportunity, I think, to do some of that laughter, sort of yoga. Any of those, actually yoga positions could be valuable. So, what I might do, come into the classroom, recognize and

respect the fact that they've returned, honor their experiences of feeling anxious, right? And, saying, "This may be a really good chance to pull in that third principle of peer support." Right? And, have the students sort of share what does this feel like? What are some things that have been working for you when you're feeling this way? What are your hopes? What do you? How do you wanna feel? How do you think we can achieve that?

Right? So, again, getting a lot of that collaboration involved and giving of course students choice within the process. So, one of the things I had thought about would be a really neat idea, would be sort of like a tour of the classroom again. So, again, orienting them, creating that familiarity if they've been removed from the space for so long. A lot of it, though it is kind of familiar, may still feel novel to some of these students. Some other things that may be important would be just to communicate the safety procedures and protocols that are in place, which is tapping into that second principle of trustworthiness and transparency. So, students may be coming back anxious, wondering whether or not somebody else in the classroom is gonna test positive, right?

And, just saying, "Here's how we respond to this." or something like, "If there are any concerns, here's the process for how this happens." And, letting the student know, again, from that transparent side of things, what to expect. And that they are going to be safe and that they are gonna be protected throughout. So, orienting them to the space, identifying what the day is going to be like, Here's what to expect. Engaging them in some of those group-based interventions, some of the laughter, some of the yoga, some of those breathing exercises. Those sort of things can be helpful for students. Again, looking back at the interventions, whether their sensory, body-based, vagal, or biofeedback, meaningful occupation, or therapeutic use of self.

So, as a summary, the pandemic may be regarded as potentially traumatic. And, our stress response impacts participation, engaging the autonomic nervous system, sympathetic and parasympathetic. We wanna tap into that parasympathetic. Trauma-informed care. It's our universal mental health care precaution. And, there are different trauma-informed care interventions, focusing predominantly on safety, but still using those other key principles throughout. So, we have sensory-based interventions, body-based interventions, meaningful occupation, and of course, therapeutic use of self. A lot of information covered throughout. So, if you have any questions, I know Fawn will help moderate, so we can get some of those questions answered and addressed.

- [Fawn] Thank you so much, Amanda, for a great presentation. We do have a few questions coming in.

- Okay.

- [Fawn] We will try to be brief so that we can wrap up here and get people off for their day here. "What are your thoughts on occupational therapists being qualified to teach yoga? As yoga therapists are certified with specialized courses and hours of training?"

- I think, well, I certainly think that yoga therapists have their domain. I think it's within our scope of practice to still provide that intervention. I'm not saying that we are providing. In a lot of the research, sort of delineates different types of yoga, in terms of what's being done. So, what I would say as the OT, we're promoting sort of that stretching, that mindfulness, that meditative part of yoga. We're not necessarily teaching yoga, unless we're trained. I think that's important to distinguish. We can promote the use of yoga positions. We are not teaching yoga, per se.

- [Fawn] Got it. Thank you for clarifying that.

- Yep.

- [Fawn] "As the in person classroom seating rules, surrounding COVID have changed, like kids need to stay in seats, no wiggle cushions, alternative seating spaces like couches, window seats, have been removed. What else do you suggest for these kids to help with self-regulation?"

- Oh, good question. In that, goodness, so one of the important things to think about with seating is the closer to the ground, the more grounded the student or the individual feel. So, if there's any opportunities to even just sit on the floor, sit on. If there's like, excuse me, mats that can be wiped, those may be valuable choices. There's also different types of chairs, again, that can be cleaned, that are closer to the floor that promote that sense of grounding. So, though you may not get it with like a couch sort of feeling or not necessarily the same movement as like a wiggle cushion, there is still that sense of feeling grounded, feeling more in, sort of in tune with your body as well.

And, I also think about, you know, the different seated positions and what that does for your joints and giving you that feedback from your body. So, sitting cross-legged versus sitting with your legs straight out, versus, you know, the opportunity to possibly sit on your feet. Depending again, how the chairs and how different classroom rules are.

- [Fawn] Very good. Someone is asking, "What do you do for laughter?"

- Oh, I just gave an example. So, for laughter, I will, what I have done in the past, is actually have students write down ideas of how they would want to laugh. So, my go-tos are always like quiet laugh, an evil laugh, laughing like different animals. But

then, as you start to do these sort of laughter exercises, students will raise their hands and they'll say, "Can we try this? Can we try that? And so, again, promoting that sort of inclusion and having the students have a voice in what they're doing, encouraging them to possibly write those things down, picking them out of the hat. Maybe that's the way that classes started for any number of teachers.

There's actual, it's thinking about the yoga training, there's actual laughter yoga, and training and certification that you can have. I do not have that. I simply just use the idea of laughter to promote, again, that vagal response.

- [Fawn] Speaking of vagal response, someone is asking, "Is high vagal tone, something you develop as a preventive measure? Or, only in response to a stress response? And, how long does this high tone last?"

- Ooh, good question. So, I think about high vagal tone, is almost being like exercising when it comes to your muscles, right? So, the more that you use it, the stronger it is, the longer it lasts. Gosh, so everyone has a degree of vagal tone, which is essentially what helps us get us back to engage in that parasympathetic response. The stronger it is, the quicker we get back there. So, everyone has it, you sort of can just pump it up and tone it, just like you would tone your muscles for exercise.

- [Fawn] Okay, very good. "How do we get school administrators on board?"

- Good question. I think about, you just, gosh, you have these conversations. And, you, I think what the important part and why I really went so heavy on the science part of it, is you really drive home the science of trauma and how it's impacting the students and what it's presenting like, and what are the barriers? What do these create as challenges in the classroom for our educators? And then, of course, identifying the value in that. It's a lot about being a champion of it. And, sometimes where I work

currently, everybody's on board, of course, with trauma-informed care. But, if you're the only OT, who sort of practicing in this way, it's really being consistent. And, I like to remind people that you're fighting the good fight, like this is where we should be heading, and to promote it as much as possible and give in services, in trainings.

And, you know, as much as you can, really, talk about how great it is and how important and valuable and it is the work that needs to be done.

- [Fawn] Okay, great. We did not get to some questions, but I think

- Okay.

- [Fawn] In light of timing here, we're gonna go ahead and wrap today.

- Okay.

- [Fawn] Feel free to reach out to Amanda if you have a question and she'll gladly respond to you. So, thank you so much for a great talk today.

- Thank you.

- [Fawn] Everyone enjoyed today's class and they join us again on Thursday and Friday to wrap up our virtual conference on Mental Health and COVID Response. Thanks, everyone.