Episode 470: Amy Emerson of MAPS on the Future of Psychedelic Assisted Therapy & Research

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Katie: Hello and welcome to the Wellness Mama podcast. I'm Katie from wellnessmama.com and wellnesse.com. That's wellness with an "E" on the end. And this episode goes deep on the science of psychedelic-assisted therapy and research in light of some really astounding Phase III clinical trials that have recently come out about some of these substances. I am here with Amy Emerson who's the CEO of the MAPS Public Benefit Corporation which is wholly owned subsidiary of the Multidisciplinary Association for Psychedelic Studies which is a non-profit. And she's been leading the growth and development of this new wing which is responsible for the global regulatory strategy and implementation of things like MDMA-assisted psychotherapy.

And the reason I wanted to go deep on this today is the recent research on this is really, really astounding. In fact, they're seeing two thirds of people with severe PTSD no longer even meeting the criteria for PTSD diagnosis after this groundbreaking therapy that they are studying. And I've heard from so many of you since my own trauma episode about things that you have gone through, and heard from so many veterans who are suffering through PTSD, heard from so many of you who have been through some sort of sexual trauma or childhood abuse. And I think that based on the current research, this is an absolutely game-changing potential for therapy when used in a clinical medical setting like this, and with this new Phase III data, it is on track to become more available in the next couple of years.

I think the education component of this is also very important as we move toward larger availability, so I wanted to have Amy on to speak to the science of what is going on in the brain and the body that allows us to be so profoundly impactful for so many people, and what this could look like as a widely available treatment. I think even if this is something that you have been maybe hesitant about in the past, I would encourage you to listen with an open mind, because like I said, the data is extremely, extremely compelling, and I think this is a tool that can be extremely impactful for a lot of people who are going through really difficult things. So without further ado, I can't wait to introduce you to Amy Emerson. Amy, welcome. Thank you for being here.

Amy: Thank you so much. I'm excited to talk to you today.

Katie: I'm so excited to go deep on the research today, because I have mentioned in past podcast episodes on my own trauma recovery and some of my other health-related things that certain compounds were really beneficial to me in being able to work through certain things. And since then have gotten a lot of questions.

I'm sure you field a lot of these questions probably regularly. And it seems like this is an area with tremendous potential. And also still a lot of areas that are extremely misunderstood which is why I was so excited to have you here in person to talk about it. Because you are part of MAPS, which I think is a great starting point. For anyone who's not familiar with that organization, will you walk us through what you guys do at a high level?

Amy: Yes, so there's actually two organizations, there's MAPS, which is the Multidisciplinary Association of Psychedelic Studies. And this is the nonprofit, it's a 501(c)(3). And we're an education and research organization, looking at mostly MDMA for PTSD, within my role. So I'm the CEO of the MAPS Public Benefit Corporation. And it's the research arm of MAPS.

So in 2015, MAPS, the nonprofit took our research team, and we put it into a for-profit. That's in the form of a public benefit corporation, which means that we're able to put public benefit before any type of profit. And right now, our sole owner is MAPS, the nonprofit. So we're doing drug development work for MDMA for PTSD right now is our main focus. And we're doing it as close to a nonprofit context as possible.

Katie: I love so much that you guys are structured as a benefit Corp. My products company Wellnesse is also a benefit Corp because it was important to me that with anything, was able to be focused on not just profit but creating good in the world. And I know from a mission standpoint, you guys very much have a lot of mission-based goals in the world.

You mentioned MDMA, and I think that's the next great stepping stone to delve into. Some people probably have a familiarity with what that is, but a lot of people listening may not. So can you kind of walk us through a scientific explanation of what MDMA is?

Amy: Sure. So MDMA is a molecule that many people probably have heard of, in the context of recreational use, and it's otherwise referred to as Molly or ecstasy. However, in recreational use, you actually don't know that that's what you're...that you're getting MDMA. That's what you hope that you're getting.

So what we do is based on prior to the time when MDMA was scheduled, it's a Schedule I drug, meaning it has no medical use. And it was scheduled in the mid-80s, when it had moved from being really used therapeutically, to also becoming used as a recreational drug. And it was the height of these times of, you know, just say no, and the war on drugs.

And so it was emergency scheduled, which means that it became a drug where the government indicated there was no medical use for it. However, we know from its use prior to that time, that it was used medically. And it was used really in the treatment of anxiety disorders, stress disorders, relationship issues. And we know from that time that it was used to help treat trauma. So all of our studies are kind of based on that knowledge of prior to it being scheduled.

Katie: Yeah. And that is the area where I've used it as well is in the trauma aspect. Can you walk us through what maybe some of that research was before it was Schedule I, what they were seeing? I know, it's older research. Now, I wanna get into the new research as well. But what were they seeing then?

Amy: You know, I don't know the research as well from prior. It was, you know, used. So there was a...like, I can't quote you the research papers ago, like out, but there's plenty of them out there. And actually, there's kind of two parts to the research. So one was, it was synthesized by someone...resynthesized I should say. So this was synthesized first by Merck, in the early 1900s, it's off-patent. It was never really used. They kind of shelved it, and it was rediscovered.

And Sasha Shulgin is kind of called the godfather of MDMA. And he synthesized it and found it to be what he thought would be very useful for treating trauma and for working with people along with therapy. And he gave it to Leo Zeff. And Leo Zeff distributed it to a lot of therapists and a lot of people working with people that needed help, right. So it got distributed in this way. And there's a lot of information out there, there's a book called "The Secret Chief" that's all about this.

And so it really took off and was used therapeutically during that time. And there's, you know, I think it's more kind of case report type work that was done during this time, to show that it was beneficial to people. And then there was also work done by NIDA, which is the National Institute of Drug Abuse, to show that it was dangerous, right. So there was actually all of this research done to show the dangers of MDMA. Just like NIDA has done all kinds of other research on other drugs to show what their level of abuse is and to show what, like, the safety issues might be.

So MDMA was never really shown to have a high level of abuse, or to have very many safety effects, like safety side effects. So we were able to actually use all of that research from NIDA, and from the experience of the therapist prior to scheduling. Combined together to kind of create our initial package of going to the FDA to show that we wanted to bring this research back into patients and back into the medical system. And so there's kind of those two realms of research that were very helpful to us from the past.

Katie: And I know, that's no easy feat getting this back into the medical and the clinical system. And I think that's an important distinction before we go deeper on the research side as well is that you guys are very much advocating for this being used in a very well-studied responsible manner. And the results, at least the ones I've read, are really amazing and phenomenal to read about. And I'd love for you to kind of delve into that now. There was recent phase 3 results, I believe, right, that you guys have? Can you kind of walk us through what that is, and also maybe give us a primer on what the difference between like phase 1 to phase 3 results are?

Amy: For the phase 1 research, it's usually a lot of initial research just into safety. And you're not working with patients, and you're not working in a specific indication like PTSD. And then in phase 2, you go to a slightly bigger study, and you work in the indication that you're the most interested in. And so for us, that was PTSD and that's where we started. So we did these small studies. They're usually small, they're kind of safety and some efficacy. So you're looking at both, is it safe, and does it work in this indication?

So that's where we started back in 2004. And we did 12 phase 2 studies, where we were able to show repeatedly that we had a benefit in PTSD and treating PTSD and no concerning safety signals. And we did those studies, both in people with PTSD from any cause. And we did those studies also in one study that was only in vets. And it really showed that we could work with PTSD from any cause. And it didn't matter whether your PTSD was from childhood abuse or from an accident or from some kind of traumatic sexual event or rape that has happened or if it was related to combat.

Katie: Yeah. And I think this is really important to hone in on because at least from my understanding, you could speak to this better. In the conventional model, and the existing, I guess, model with PTSD, there aren't a lot of solutions that really seem to move the needle because it can be considered a relatively complex problem. They've used lots of different types of therapy, especially in the veteran's group. I read a lot about that and how many of them are affected by PTSD, and often how difficult it is for them to get any kind of help or result that actually moves the needle. And, of course, that has a massive impact on their lives, their family's lives, it's very much a bleed-over effect. So what did you guys find when working with PTSD patients?

Amy: So when we worked with PTSD patients, and like I said, it was with...it didn't matter whether it was the vets or PTSD from another cause. We saw that people's symptoms decreased. So a large number of people in the studies had a decrease in their symptoms or a clinically significant response. And we also saw that people no longer had a PTSD diagnosis. So this is about two-thirds of people, no longer had a PTSD diagnosis, this was in phase 2.

And so, that led us to be able to go to the FDA and get a breakthrough therapy designation, because like you said, there's not a lot of treatments that are available that really have a lot of effect for people. I mean, that are at least a positive effect for people. You have a pharmacotherapy, which is like the SSRIs that most people are familiar with. And then you have like more of a talk therapy. So more psychotherapy, that's available to people.

And you know, it can be a long wait, especially for the vets to get psychotherapy, and to get into the treatments. And when you're taking an SSRI, it really is just offering you the ability to ameliorate some of the symptoms that you're experiencing. You're not really getting to reprocessing the trauma and getting through the trauma, it's just dampening things. So a lot of times people feel really...they don't feel good on the SSRIs, they have a lot of side effects. And you're really only working for maybe 30% of people.

And then with a talk therapy, a lot of times people feel re-traumatized by the talk therapy. So, because you're always in this state of fight-or-flight, and then you're going in to talk to a therapist. And you're already having issues with trust and issues with connecting with yourself and there's a lot of memory issues. So normally, if you have had an event happen after you process it goes into long-term memory. With PTSD, people are currently in that memory, they don't know that they are in a current state of safety, it still feels like they're in that state of being traumatized.

And so you go in to talk to somebody about it, and it just feels re-traumatizing. So you have these two, not great options. You know, one of them is really difficult to get through and there's a high dropout rate when you go through psychotherapy. Or you're just dampening all of the symptoms that you're experiencing, but it dampens everything else, it dampens the good things too.

Katie: And that's another important distinction, at least from my understanding of MDMA research is with SSRIs you're talking about long-term use of these substances. With MDMA and the studies you guys are doing, these are not a...this is definitely not a thing someone is taking regularly on a lifelong basis, this is actually used. And you can explain this better, I would love to hear more about, like, the protocol and how you guys are administering this in the clinical trials. Because that's what's so astounding to me is it's not that a thing that you need to keep taking for the rest of your life to keep getting better. It's a thing that actually resolves. And just to make sure I heard you correctly. You said two-thirds of people no longer had a PTSD diagnosis after.

Amy: Yeah, yeah.

Katie: That's astounding.

Amy: It is, yes. So I can tell you a little bit about the treatment that people went through. There's multiple visits, and the certain setting of these visits is first very important. It's in a very comfortable setting. This is not like in a hospital room. You have two therapists, and you are coming in first for three preparatory visits. So these are just kind of normal psychotherapy visits, they're 90 minutes long. You come in and you get to know your therapist, they get to know a little of your history, they get to know a little bit about your trauma. And they're able to tell you about what the treatment's going to be like. So you have three of those, they're probably about a week apart.

And then you have your first MDMA session. So this is an eight-hour session. And for the study, you were either getting MDMA-assisted psychotherapy, or placebo plus psychotherapy. So the psychotherapy was the same in both groups, but one group got MDMA and one group did not. Now, of course, if we get to the point of approval, everybody will get MDMA. And you have the eight-hour session, you're there with two therapists. And this is really a patient-led type of therapy. It's very different from a lot of other talk therapy that is a little bit more prescribed. This is what we call an inner-directed therapy.

So wherever the participant goes with their experience, the therapists are taught to follow that and support it. Like the patient knows the way to kind of unravel their trauma and to understand it, and to find healing. And so it's also very empowering in a lot of ways because you're doing it, you're doing the healing, the therapists are there to support that. So you have three of these MDMA sessions and they're about one month apart.

Another important part, though, is integration. So after an MDMA session, the next morning, you have a 90-minute psychotherapy session with your two therapists. And then you have two more of those. And these are approximately a week apart, so that during that month, you're having time with your therapists. So it's these

three, eight-hour MDMA sessions, and then each of their integrated visits afterwards. And that's it. It takes place over about 15 to 18 weeks. Never, it's not meant to be a take-home. So very different than SSRIs.

Katie: Yeah. That still just boggles my mind that two-thirds of people then are considered resolved. They no longer have a PTSD diagnosis.

Amy: Yeah. So we had 90 people in the study. So now I'm talking about phase 3, not our phase 2 results. So the phase 3 results were just published this year in "Nature Medicine." We had what you would consider a robustly positive study. Meaning we had a very small p-value, which is how you judge if a study is positive or not. And we had a big effect size, meaning there was a big difference between our control arm and our active arm.

And in that, we use this gold standard measure that was developed by the VA to look at symptoms of PTSD. And it's called the CAPS. And with using the CAPS, and this looks like at 20 symptom clusters 42 of the 90 people. So 42 people got MDMA, out of the 90, and the other part of the people were in the placebo group. Forty-two of the people got MDMA, 67% no longer met the diagnostic criteria at all, for having PTSD. And 88% of people had a clinically significant response, meaning that they still qualified as having PTSD even though it was much lower. It was like, decreased like maybe to mild, but they had significant improvements in their symptoms related to PTSD.

And then I can just tell you on the opposite side of that, so that's the MDMA group. In the group that had a placebo plus the psychotherapy. So not a true placebo, because in a clinical trial, a true placebo would really be that you're getting nothing, it's like getting a sugar pill. It's a little more complicated when we do our studies because our study is not just about giving a medication, it's giving a medication-assisted therapy. So that group got therapy alone. And our therapy alone is quite effective, in fact, 32% of people in that group had improvements.

You could say that's very similar to what the standard of care is. That's similar to what you have happen when you give a pharmacology or a psychotherapy, to people with PTSD. So it's kind of nice in that way, in that we weren't using a standard of care arm because it's very difficult to do that in these clinical trials and then blind it. So we had kind of a good comparison to what's going on, in the standard of care right now. And that 67% of people no longer meeting PTSD criteria versus 32% of people in the placebo arm. Yeah.

And then I just wanna say real quick that that is happening, those measurements, we do it after each MDMA session. So you see this kind of arc of people improving after the first, second, and third session. The measurement for the study is two months after the third session. So it's not like right away, after their third session, they have their normal integrative visits. And then they have a period of time with nothing, with not really any contact with their therapists at the sites where they're getting their treatment. So we're not

measuring some kind of afterglow effect like some people might imagine. It's not like right after the MDMA, they've had two months to where they're kind of going back to normal life.

And we're going to look, again, with these phase 3 people, like six months to a year later to see if it's enduring, if the result lasts. If it's anything like phase 2, then yes, the answer will be yes, it's an enduring result. In phase 2, we saw that people continue to improve even. So a few people that hadn't responded during the study actually lost their PTSD diagnosis over the long-term follow-up period of time. And people maintained their level of decrease in the symptoms of their PTSD. And we did have a couple people relapse, you always have some people relapse, you always have some non-responders.

In our phase 3 study, we had five people that were non-responders. And you know, at some point, post the time when maybe we will have approval for this as a treatment, we'll also be looking to see why some people don't respond, or why some people relapse. To see if we can change the therapy some to help them also have a response. But I think it's also just very normal in any kind of treatment that's available in medicine, that not all people respond to it. Different people need different tools to their healing.

Katie: Absolutely. And I definitely had some of that in my own experience, as well, of just I had done the typical types of therapy and talk therapy first, for a long time, mine was tied to sexual trauma. And it is very hard to go back and talk about those things. And I realized over time, I actually was developing kind of a coping response where I could like talk about it, but not actually delve into it or reprocessing it. And I kind of knew what the therapist needed me to say. And so I had like the walls to protect myself, which is a totally different experience than what someone is doing when they're using the assistance of something like MDMA. Can you explain, I know it's a complex process, but kind of the physiological things that go along with MDMA, and what allows that to make it so impactful?

Amy: Yeah, there's a couple things going on. It's really interesting, I think with MDMA. So first, there's kind of the how you experience it, right? So you take the MDMA, you start to feel the effects of it. And what they make you feel like is that you have a little more openness, a little more trust. Sometimes people say it's the first time they actually felt self-love in a long time since their trauma. So there's these types of things going on that kind of create the set and setting, almost in a way, it's like this, a positive environment.

And it's exactly the opposite of what PTSD does, right? PTSD creates fear, distrust, self-loathing, nightmares, flight-or-fright. Or, like what you're saying, it can also create this... So that's like on one side is the hypervigilance, right. And on the other side is this hypovigilance where you're kind of cut off, you're disassociated. You compartmentalize it, you don't connect with it, and you keep it over there, right. But either one of those is kind of keeping that memory alive, it's not reprocessing it and allowing it to go into long-term memory. And you're either not able to go in and talk about it, or you go in and talk about it in a very detached way. It sounds like that's what was going on for you.

So first, the MDMA with the type of effect that it has, it opens what we call a window of tolerance. Where it brings people out of their hypervigilance or out of their hypovigilance and into this kind of state where they're activated in just the right amount. And with less fear and with more empathy for themselves and trust in their therapists. So that's kind of the first thing that's happening.

And you're allowed to then go in and revisit some of these traumatic memories with less shame and anger and without being overwhelmed by the symptoms or underwhelmed by the symptoms. So it amplifies this emotional state. And then you can have these feelings of self-compassion, and you start to process in the absence of fear. So this is one piece that's going on.

Now, in the brain, you'll see that with PTSD, your amygdala is really activated. And this is your fear center. And in your prefrontal cortex, you're less activated, this is kind of where your cognitive processing is taking place, and like your logic and reasoning. So this area is dampened. And when you take the MDMA, it's exactly the opposite, you dampen that fear response, you increase this cognitive processing area. So that's happening in the brain along with these feelings that you're having.

And then there's these neurohormones and neurotransmitters that are also happening. So you have an increase in serotonin, you have an increase in dopamine. So those are neurotransmitters. And then you have an increase in your neurohormones like oxytocin, which is like a bonding hormone. And these all kind of come together to create a sense of well-being and heightened empathy, and so that you can kind of go into these memories with less fear and judgment.

Katie: That makes sense. And I've heard people talk about that when they've experienced this that they...I've heard people say, like, for instance, "I understood gratitude, but I felt it for the first time." Or, "I understood the importance of like, loving myself, but I felt it for the first time." And it seems like they're very much able to connect those things in a way that is definitely not as easy, and sometimes not even seems possible in other areas of therapy.

Amy: Yeah, you know, a lot of the people that we worked with had, on average for the phase 3 study people that had PTSD symptoms for 14 years. In our phase 2 studies, it was 19 years. So people have been struggling with this for a long time, it also gets really ingrained in your brain, that this is your experience. And this is how you're gonna react to the world. And it gets rigid, your thinking gets really rigid around this, and you learn all these coping mechanisms. So this is another kind of thing that's happening in the brain, is that you're potentially opening up these kinds of critical periods, that are allowing some brain plasticity and to allow that rigidity to loosen up a little bit.

And another really important piece of PTSD is sleep. So people with PTSD, besides all these other things that are going on they also don't sleep well. And sleep is really important for coping, right. Even just lack of sleep

can create a lot of the symptoms that people would have, and they're related to PTSD, but it also prevents memory reconsolidation.

So a lot of times, we would hear from people after their first MDMA session, they finally had a good night's sleep. And this is a really important piece of the treatment, I think, is that they have the experience with the MDMA, they have good sleep, they start to have memory reconsolidation. And then you have integrative sessions that allow, like, you to create kind of new roadmaps in your brain.

Katie: Yeah. And I think you can't understate the importance or overstate the importance of that integration and therapy side. And I think maybe that's where a lot of these misconceptions or stigmas around some of these substances come from. Because like you mentioned in the beginning, some of these have been used in party culture or in other ways, and you're not obviously gonna get the same effect using them there that you would in a therapeutic setting. So I think it's really important just to say, again, that we're talking about a very specific, like, you just explained this intensive protocol that involves therapy and integration and follow-up. And that you're quantifying that over a period of time and making sure it's lasting. But I just think that's a really important thing to kind of deconstruct.

What are some of the remaining stigmas that you guys run into? Because I'm sure any kind of...you know, the research you're doing any kind of psychedelic research certainly tends to trigger some of that in certain areas of society. So what kind of stigmas are you guys still running into?

Amy: Well, I think there's...like, let's just even go outside of the MDMA part, let's just talk about mental health, right? There's stigma against talking about mental health or about trauma. Or there's guilt associated with you being traumatized, especially, I think, when it's childhood traumas or sexual abuse type traumas, there's a lot of guilt. So let's try to get over those stigmas first of talking about mental health, and getting the support as needed, and talking openly.

And then, so you add to the stigma of mental health, a drug that has kind of been demonized. And you know, people are taught that there's holes in your brain, or you know, that it's going to completely mess up your serotonin. You know, just all of these types of misinformation that have been propagated about the safety of the drug. So these are still things that we run into.

And then there's also just our medical system, which doesn't allow for...you know, it's very unevenly applied. People in underserved communities do not have the same access to mental health and all of these other stigmas. I mean, they don't have the same access to the medical system, in general, and definitely for mental health. And then there's even more stigma around a drug that's been considered an illegal drug. So these are all still existing and it's going to be a lot of education to change people's minds, not just in the medical system about this, but also just in society, in general.

So the work that you're doing to kind of bring it to people, and have the education be out there and accessible to people is a really important part of dealing with stigma. And then we do the work of getting this published and creating the data and talking to people that are, you know, in the field, and in the medical field, about the results. And so, you know, we have to all do our job, I think, to change minds across the ecosystem in order for this to become really available.

Katie: Yeah, when it was certainly it was scary for me to start really talking about these topics publicly. And one of the reasons I finally did was that when I shared about my own trauma in a past episode, because processing that was so impactful in my health resolving because I was operating in a sympathetic nervous system state for over a decade. And I heard personal stories from literally thousands of women who had been through similar traumas. And I realized not only is there a huge need for this, with so many people suffering, and that there's this incredible tool that's misunderstood. And that people are missing out on something that could be absolutely life-changing because of these stigmas.

I also realized, looking throughout history, anytime we see, especially in the U.S. a big societal change, it's when kind of the average mom population shifts perception. I take that responsibility very seriously to have this incredible community of moms, and the importance of kind of educating about topics like this because I think the potential is huge. And for our kids, as they get older and become adults, hopefully, we're able to, you know, kind of shield them from some of the more severe traumas. But many of them will enter adulthood with something they need to process. This is the thing I want to be available for my kids, for other moms who are listening. What do you think we will see? What does the future of this research and access look like?

Amy: Yeah. Just all what you just said is so important. And I really appreciate how much that you're willing to talk about your trauma and to bring this out there. Because like you said, it does open the doors for other people to feel comfortable about it and that is how we see change. So, it's great. Thank you for what you're doing.

So right now, where we're at. I told you a little bit about the results for our first phase 3 study. And now we're in a second phase 3 study, you need two positive Phase 3 studies for FDA to approve a new treatment. So we're getting close, we don't think it will be approved until later in 2023. It takes a long time to get through these studies, and then submit everything to the FDA and then for them to review it. So 2023 is when we think it will be available. And we're doing a lot of work right now to make sure it will be available. So it needs to go through the approval process, it needs to be rescheduled with the DEA, and then it needs to be rescheduled in states.

And then we need to have a way to have patient access. So that is through talking with insurance companies now. So we're already starting to do that work to try to create the landscape that's needed for this to be a covered treatment because, in order for it to be available, it has to be covered. You know, you can imagine

that I'm talking about, you know, multiple visits with 2 therapists, plus 3 of them being 8 hours long over a 15 week period.

So the therapy is intensive. And that's the part that's expensive, right? So we want that to be covered appropriately by insurance companies. And then we also want the drug to be covered. That's a much smaller part of the cost of the overall therapy, but we're doing the work now to create these pathways.

And then, it's really important to do therapist training, this is not just something you're gonna...that anybody is gonna be able to do. You're not gonna have any doctor giving you MDMA and then sitting with you for eight hours, right? This is psychotherapy, people need to have the training that goes along with it. So we're building up our therapist training program. And then we really need to reach underserved communities. And in order to do that, you need to have therapists that are part of those communities that are trained. So that they can then go and understand how to work with the trauma in a community-based way that's appropriate for that community.

So we're doing the work now to ensure that that is happening at the time of approval. So I think it will look like, people will come, they'll find someone that's a treatment provider, they'll come in. It will be either a private practice or a specialty clinic, or maybe at a university. And they will come in, they'll have their preparatory sessions, they'll have their MDMA session, they'll have the supportive therapy afterwards.

And I also hope that there'll be peer support groups, because a lot of times, if you've had trauma, and now you're having this experience, a psychedelic experience, you may not have people in your community that you can talk to about this. And one of the things people wanna do afterwards is talk about it. This is what I experienced, this is what I learned. This is why it was so important to me. And so we want to be able to create a supportive network for people after their treatment, where they have peer support and people to talk to.

I also hope that these clinics will provide other types of support, you know, helping people to re-establish themselves in work. Helping them re-establish relationships with family. Or to get out of relationships that are not serving them any longer now that they've, you know, recovered from their trauma, you know, living situations. There's all kind of psychosocial support that's also needed. This is not just a simple drug treatment. So I hope a whole kind of ecosystem and landscape will develop around this.

Katie: That is really exciting to hear that you guys are already...those things are top of mind, especially the underserved communities. Because that's a recurring theme that's come up in all areas of health care. I mean, have been a doula and have worked with midwives. That's a concern there. And certainly, in mental health, I think that's an area where it's very, very prominent. So it's exciting that these will hopefully one day be approved treatments that have potential insurance coverage or access for people who otherwise wouldn't be able to access them, but potentially need them even more.

Amy: Yeah. I think there was something you touched on a bit ago that you were talking about, you want this available for your kids. Multi-generational trauma is a really important topic, that when people are traumatized, it tends to carry over, you know, into the next generations also having trauma. So we have to break this cycle. And as we do, I think there's an important piece that trauma is not always just one event that happens, you know, one traumatic event, sometimes it's many, many events. Or sometimes there's racial trauma that's ongoing, that people are living constantly in a traumatic situation. And then that if we can try to break that cycle, by really having this available broadly, then we can break the multi-generational trauma as well.

And then, you know, it doesn't have to be this intense trauma, there's... This is going out first for PTSD. But I hope at some point, it's more broadly accepted for the trauma we all experience as just being human beings and living in this world. So, you know, that's kind of the future for this as well, is that we hope it's something that is a little bit more broadly accepted for, you know, treating stress disorders that don't necessarily rise to the level of PTSD.

Katie: I was gonna ask about that as well because certainly, I can see the application in so many areas or even just anytime you're talking about someone being able to operate from a place of greater love, and gratitude, and empathy, that's going to have such a positive societal impact.

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And I'm glad you bring up the generational side as well because I feel like on the research side, and kind of in the health world I live in, there's so much emerging information about psychedelic research. And there seems to be somewhat of a renaissance happening here.

But for the moms listening, and I think of this as a mom quite often as well, like we talked about, there are still stigmas within culture. And our kids are gonna probably encounter some of these stigmas and need to be educated about these substances and their proper use. So I know you're a mom as well. I'm curious if you have any guidance on navigating these conversations in an impactful and responsible way with our kids?

Amy: Yeah, you know, I haven't... My daughter is 10. And she's kind of growing up in an environment where she hears me talking about all these things all the time. So I haven't really...it's just a part of our natural and normal conversation, but I don't think she understands that I work on something that's stigmatized. And we haven't had a lot of kind of drug conversations yet, you know, she's still like, not at an age... To me, it's like something where you just make it part of your normal everyday conversation. And you answer questions when they come up. But because she hasn't asked a lot of questions or been exposed to maybe more of the recreational side of drugs, that we haven't had any deep conversations about that. But there's some amazing resources out there.

Like the thing that I think we need to move towards as moms, is actual true education. And a prohibition kind of mindset is not true education, right? It doesn't work in sex education. It doesn't work in drug education, like to just say, "No idea," is no education at all. That's what it is. It's no education, it's not providing any information for people to make intelligent decisions.

So there's a few things out there that I would recommend like SSDP, which is a Students for Sensible Drug Policy, have a Just Say Know, program that's for college-aged kids. And for teens and younger, drugpolicy.org has resources, like drug education resources that are great. Safety First Real Drug Education for Teens is a U.S. Harm reduction-based program and curriculum for high school teachers. So I think there's a lot of information out there. And it's not my area of expertise, but I will be looking at these same things when my daughter is ready to have conversations about it.

Katie: I'll make sure those links are in the show notes for you guys listening, that's wellnessmama.fm, so you can find them if you happen to be exercising or driving right now. I'm really excited to see where this continued research goes, I'm hopeful as well that by 2023, we'll actually have this available for a lot more people. And I know you guys are doing research in other areas as well. So I think there will have to be some follow-up conversations as these treatments progress. But just so grateful for you for all the research that you're doing, and for being willing to help educate and spread the word.

Because like we talked about, I think, widespread understanding of what these substances really can do from a research perspective, will help so much toward them becoming available and really able to help people. And when we're talking about something as severe as PTSD, which has a high connection to a high suicide rate, and really lasting effects not just for that person, but for everyone in their lives, this is such an impactful thing. So thank you for the research you're doing on that.

Another question I love to ask at the end of interviews is if there's a book or a number of books that have had a profound impact on your life, and if so, what they are and why?

Amy: Yeah, there was a book called "The Cosmic Serpent" that I really loved when I first started to get interested in this area. And my background was in molecular biology. And then I also just find anthropology really interesting. And this book was Jeremy Narby. And it kind of talks about how if you look at the art, like cave art, even, like you almost see in ancient art and in cave art, this idea of molecular biology, and in like DNA type structures.

And this thought that maybe psychedelics actually opened kind of a window and change your perception, that allowed some of these shamans to maybe understand something before science was ever even there to support these ideas. And so I thought that was a fascinating book. And it really...it made me excited, because I was like, "Wow, these different worlds that I am part of, and I'm interested in, can actually come together." So it was like art and creativity, I think of myself as a very creative person, and that was partly why I loved science so much when I was a kid, as I was outdoor a lot. I grew up in Alaska, horses, and I was always running around outside. And I think that that connection to nature really piqued my curiosity. And that's what got me involved in science. And then I ended up in molecular biology, and then ended up working in this field, in psychedelics. And I was like, I thought it was just so amazing how those kind of all those ideas could be brought together into a book, so.

Katie: That is a new recommendation. I'll make sure that's in the show notes as well. I'm curious to read it myself. And I have a feeling we'll have to do a round two as the research progresses and as people have questions because I think education here is so key. But thank you for your time today, this was super educational. And I'm so excited for where you guys are in the research right now.

Amy: Great. Thank you so much, Katie.

Katie: And thanks as always to you guys for listening and for sharing your most valuable assets and resources, your time and energy, and attention with us today. We're so grateful that you did and I hope that you will join me again on the next episode of "The Wellness Mama Podcast."

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