Mind & Life Podcast Transcript
Zev Schuman-Olivier – Mindfulness, Behavior Change, and Health

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Opening Quote – Zev Schuman-Olivier (00:00:04): *Our society is supercharged to reward us for engaging in behaviors that are not generally supportive of health. A lot of research is focused on how does mindfulness change a state, and then there's folks looking at how it changes traits, like around emotion regulation. But I think the hidden jackpot, essentially, for all of our health is if we can figure out and understand how we can align mindfulness to actually start to change our capacity to initiate healthy behaviors, and to be able to reduce unhealthy behaviors.*

Intro – Wendy Hasenkamp (00:00:45): Welcome to Mind & Life. I'm Wendy Hasenkamp. It's great to be back in your feeds and I'm very happy to be bringing you this conversation today with Zev Schuman-Olivier. Zev is the founding director of the Center for Mindfulness & Compassion at the Cambridge Health Alliance, and an associate professor in psychiatry at Harvard Medical School. His work focuses on integrating mindfulness and compassion into healthcare systems and developing programs to help with addiction, depression, and chronic illness. He's also been increasingly interested in how these practices can help us change our behavior, which is of course, a central and often overlooked factor in our health.

(00:01:32) Zev is also a psychiatrist, so he brings in a lot of experience from that world as well. As you'll hear, we get into a great discussion about Internal Family Systems, which is a popular approach these days in therapy settings that has a lot of interesting alignment with Buddhist theory and contemplative practice.

(00:01:50) I love how in all of this work, Zev keeps a focus on inclusivity and trauma-informed care, and in the episode he shares some of the steps involved in making these programs truly accessible, particularly for diverse and marginalized groups. I came away from this conversation so impressed with Zev's work in the world. He's been in the trenches of the US health care system and all its complexity for well over a decade and has developed some really impactful programs. And as you'll hear, he also has personal experience dealing with chronic illness, and so he is done a lot of his own explorations around how mindfulness and compassion can be critical for healing. I hope you really enjoy this. I know I did. It's a pleasure to share with you Zev Schuman-Olivier.

Wendy Hasenkamp (00:02:42) Well, I'm so happy to be here with Zev Schuman-Olivier today. Zev, thanks for being here. Welcome to the show.

Zev Schuman-Olivier (00:02:48): Thanks for having me. I'm really happy to be a part of this.

Wendy Hasenkamp (00:02:51): I really like to start with some context about how people get into the work that they're doing. So could you share a little bit about how you came into the space of integrating mindfulness into healthcare settings and your interest in mental health, both from a research side and a clinical side?

Zev Schuman-Olivier (00:03:12): I'd be happy to do that. I guess it really starts actually with mindfulness and with meditation. And for me, I was a medical student between my second and third year of medical school, and then decided to go on a 10-day Vipassana meditation retreat. And I came back from that 10-day retreat, which was primarily body scanning meditation, feeling completely different than I had previously. And I went straight into my trauma surgery rotation where I worked 90-100 hours a week. (This was the year before the rules changed for hours protections.) And I just managed to meditate through the rotation, at night, during the day. I don't think I could have got through it without meditation.

(00:04:04) And by the end of that time, I went back again for another retreat. And it was during that retreat that I realized that I should switch what I was focused on and go into psychiatry, so that I could focus on understanding how meditation impacts the brain, how it helps us to rewire and change our behaviors and have a greater capacity for self-regulating. And so that's really where my interest came.

(00:04:35) And I got very interested during the rest of medical school and then in residency on working with addiction because it was the start of the opioid epidemic, before anyone really was talking about it. But I was seeing it in the work I was doing and had an opportunity to start to work at the very first place in the country that was offering buprenorphine, which is a medication for opioid use disorder. And I got to see people coming alive with the medication, and help co-lead groups—the first time there had been really groups of people with opioid use disorder in this way. And I was just very interested in how we could potentially bring the insights I was having from the cushion and from the experience to the work that I was doing.

(00:05:25) I also had the opportunity when I was on one retreat to speak to someone who had been about 20 years in recovery, and he said that this Vipassana meditation was "his AA" (Alcoholics Anonymous), and that got me really interested to try to understand how this is working and how it might be helping him both from the clinical research standpoint, but also from a neuroscientific standpoint, to try to understand the underpinnings of the way that meditation impacts addiction and behavior change.

(00:05:54) So after that, just to bring you up to date, I, after my residency, applied to the Summer Research Institute. And that played a big role for me in being able to really begin to focus on meditation research. And so then I was able to do a fellowship focused on meditation—clinical and neuroscience—related to addiction.

(00:06:19) And I'd say in that process while I was working at Mass General Hospital and working on research projects, actually ended up getting quite ill from pneumonia, which damaged my lung at the time. So I suddenly found myself with a chronic illness and got very interested in how mindfulness could be applied to help support behavior change. Because here I was now 10 years into meditation—intensive meditation—and I felt a bit confused about how to apply it to living with chronic illness.

(00:07:02) And so a big part of the work that happened was I actually left MGH in 2013 because I was ill and didn't think I could keep doing this work, and really took some time to examine my meditation practice and to think about how it needed to change to be able to help me to be able to navigate living

with what became a pretty severe chronic illness. And so it was in that moment actually, after I had collapsed and my daughter found me on the floor from a bilateral pneumonia, that I actually was off for six weeks. And it was during that time that I wrote the grants to become the Center for Mindfulness & Compassion. And I stopped working and then slowly over time built back up. I'm full time again now. But it came from that time of really thinking about, what am I doing wrong in my practice and what behavior changes are needed to be able to live in a way that's going to be more skillful with this?

(00:08:17) Anyway, so that was 10 years ago. And despite the fact that I had been told that most people only live four years with the bronchiectasis diagnosis that I had gotten, it's been 10. So I'm feeling glad about that. And it was that experience also that made me realize just how important it was that we integrate mindfulness and compassion into healthcare. And that's the mission of the Center for Mindfulness & Compassion is to integrate mindfulness and compassion into healthcare with a focus on inclusivity, accessibility, diversity, and supporting belonging for all of our communities.

(00:08:57) So we set out a vision to center mindfulness at the center of the healthcare system, specifically within primary care, and developed a referral-based insurance reimbursable program for mindfulness for all the sites across the Metro North Boston region at our Cambridge Health Alliance system. So it was a team effort. We had at least 50 people involved, and administration involved, and tons of grassroots support to be able to make that happen. And that's led to several NIH-funded grants to be able to study within the context of that implementation project, the effectiveness of the mindful behavior change intervention, and be able to also start to understand some of the mechanisms involved in mindfulness.

(00:09:46) At the core of it was, in some ways for me, I was meditating too hard. And I couldn't see it; I was a competitive person. And I joke that I was a "competitive meditator" until this time. You know, when I sat on the cushion on these retreats, I was thinking about, how can I be the one who gets to enlightenment first? *[laughter]* And it took me a long time to realize that that wasn't actually the path of practice. And then it took me a long time to be able to develop the inner compassion, or what Chris Germer and Kristin Neff talk about as self-compassion, to be able to actually give myself what I needed to be able to care of myself. And so I think it's also in that recognition that we were able to design the Mindful Behavior Change program—which in research was called Mindfulness Training for Primary Care was the research name for the program. So that's how you'll see it in the literature up till now.

(00:10:48) But we wanted to develop an integration of a typical mindfulness-based program that was based on MBSR and MBCT, but at the same time integrate threads throughout, explicit threads—there's always been implicit threads of self-compassion and kindness throughout all these programs. And it's almost a hidden curriculum that comes through. We really wanted to figure out how can we make that explicit, but stay true to the mindfulness-based program, but also have threads that focus on behavior change. Because that's the core of chronic health and chronic illness. And that's the core of what the healthcare system misses, is helping people to be able to feel confident and capable in self-managing their chronic illness.

(00:11:39) And then we also wanted to include threads throughout of interpersonal mindfulness, and the idea that it's not just about us, but it's about interactions with others and with our community. And so we built out an eight-week... I say "we" because there were several of us that worked on the manual, and then it's gone through three or four revision phases throughout the studies, and we get feedback every year from all the group leaders and continue to try to improve it to make sure that it's trauma-informed and inclusive, as inclusive as it can be.

(00:12:13) So that's been the process we've been engaged in the past decade at CMC as one of our core mindfulness programs that we've been implementing and studying. And so I think that's been one of the main focuses of my work. We've had the opportunity to now bring that to studying addiction. We've also expanded to also do research with MBCT with depression and built out our clinical services in psychiatry, based on MBCT. And now we are as well moving into building out research and clinical services related to an Internal Family Systems approach to trauma as a way of trying to address some of the gaps that we saw in mindfulness programs around how to work with people who have trauma experiences. And basically all of this work has moved around the integration of mindfulness and compassion together, trying to have ways of teaching mindfulness in a warm way.

Wendy Hasenkamp (00:13:22): Yeah. Thanks for sharing all that. That's really powerful—your own personal story and then how you've been able to weave the learnings from that into all of these domains. You mentioned the emphasis on behavior change, and how important that is for health and dealing with illness. I wonder if we could unpack that a little bit more. There's a lens, I think, in our culture... as you said, this is a piece that's missed usually by our medical system. So I think behavior is usually not considered the treatment, or what needs to happen. It's so focused on mechanistics and pharmaceutical interventions and other things like that. But can you talk a bit more about the role of behavior in these different domains—addiction, depression, and chronic illness in your own case and others?

Zev Schuman-Olivier (00:14:12): Sure. Well, I think it's important to say that most of the top 10 reasons for mortality in this country are related to illnesses that are preventable based on behavior change, whether that is reduction of smoking, increasing exercise, changing the way one eats, or even just taking medication regularly. Some analyses have suggested that almost up to 90% of all healthcare costs are related to illnesses that could be prevented by behavior change, or reduced in their impact by behavior changes. So I think that's important to say, that it's a crucially important thing.

(00:14:56) So when we're talking about behavior change in our studies with folks who have chronic illness, whether it be chronic physical health or chronic mental health disorders, we often are focusing on changes in activity level, which is a major issue. Changes in what one consumes (both eating and drinking, not just sugary drinks, but alcoholic drinks and other types of things), changes in substance use or drug use, including cigarettes and nicotine, as well as changes in self-care behaviors, so changes in our sleep regimens, changes in our medication taking, changes in the things we do to care for ourselves when needed. I would put having a regular mindfulness practice potentially as a self-care behavior that's important for a lot of chronic illnesses.

(00:15:53) In depression, changing behavior has long been shown to be able to make a change. In the UK, the first line for depression when you go into a clinic is to get prescribed exercise, because behavioral activation has been shown to actually reduce depression outcomes. Now, they actually also suggest mindfulness-based cognitive therapy as a first line as well, as another behavior that one can do. So in depression, it clearly makes a difference.

(00:16:26) You know, in chronic illness (again, just to connect this with the personal), I measured at one point that there were 14 different behaviors I had to change and do every day in order to not have pneumonia. I think I had like 50 pneumonias over 10 years at different times, and all those behaviors were necessary to keep it from returning. And I'm not alone. I think the majority of people in the US have a chronic illness of some sort that they're managing in some way, that requires some behavior change to keep its symptoms from returning. And the other half are engaging in behaviors in order to prevent chronic illnesses from arising. So that's why behavior change is so important.

(00:17:16) And finally—we were talking before we started just about how hot it's been this last week—sustainability behaviors are behavior changes that are really necessary from all of us in order to think about how to help the symptoms of our world being out of balance, which is climate change. So all of these are difficult to change things, and the society that we live in, at least here in the US, is supercharged to reward us for engaging in behaviors that are not generally supportive of health or of mental health. The Surgeon General just came out recently with some concerns about the ways that these phones are designed, and media on the phones that we use are designed to capture our attention and change our behavior in ways that seems like are repeatedly being shown are impacting the health and mental health, especially of our teens.

(00:18:24) So I think it is that focus on thinking about how mindfulness can be potentially a behavior that engages therapeutic neuroplasticity, so that actually can change the brain in positive ways to give us healthier bodies and minds, and more capacity for self-efficacy, self-confidence, self-control, whereas many of the other behaviors tend to lead us down a pathway towards more of addictive habit patterns. So I think that this is one way that mindfulness is impacting, or at least the cultivation of mindfulness over time can impact change.

(00:19:06) A lot of research is focused on how does mindfulness change a state. And that there's folks looking at how it changes traits, like around emotion regulation. But I think the hidden jackpot, essentially, for all of our health is if we can figure out and understand how we can align mindfulness to actually start to change our capacity to initiate healthy behaviors, and to be able to reduce unhealthy behaviors.

(00:19:36) – *musical interlude* –

Wendy Hasenkamp (00:20:06): You mentioned that a lot of your work, especially earlier in your career, was focused on addiction and substance abuse situations. So maybe that's a space we can talk about a little bit, about how you've worked to apply mindfulness in these interventions that you've developed in that space and what you've seen.

Zev Schuman-Olivier (00:20:23): So when I was in training, one of my mentors here at Harvard actually suggested that mindfulness wouldn't work for people with addiction, because that's the deficit that people have. And it was nice, it was like laying down a gauntlet as a challenge for me in my research *[laughter]* to be able to say, "Can we see if this is true? Can we see how it can be adapted to make it possible for people in addiction recovery to be able to strengthen their recovery, or to stop using? And if so, why?"

(00:20:59) I've had a lot of colleagues in this process. I was actually at the Summer Research Institute in 2009 with Judson Brewer and Eric Garland and Sarah Bowen, and we had a lot of exciting conversations that I think have contributed to the work that we've all done this past decade. So I started initially back in 2004 working on the first mindfulness intervention that was tested for substance use. It was actually called Spiritual Self-Schema Therapy, and it was integrating Schema Therapy CBT with mindfulness and Vipassana meditation. And it was a clinical psychology study, but the idea was to engage people's natural interest in spirituality and to engage them with mindfulness.

(00:21:48) And in fact, at the end, 64% of people were meditating 30 minutes a day. So that really gave me a lot of confidence that it was possible. These were people who had a history of opioid use disorder, prescribed methadone, who were still using cocaine, and were engaged in high-risk HIV behaviors. And

we were able to show that the intervention actually reduced at-risk HIV behaviors. It didn't really change the substance use in a way that we could demonstrate with an effect, but it did change some of the behaviors around putting others at risk, which was impactful.

Wendy Hasenkamp (00:22:21): So already that behavior change signal.

Zev Schuman-Olivier (00:22:24): Yeah. Yeah. It was interesting in that regard. And fast-forward to today, we just finished a large national study and the data has been submitted to a journal where we recruited people from 16 states who had opioid use disorder, prescribed buprenorphine, and we were looking at its effects on opiate use, opioid craving, and its effects on anxiety and pain. And I'm excited, I expect in the next few months that the results of that study will come out.

(00:22:56) And in the meantime, colleagues have published results. Eric Garland and Nina Cooperman have both published results about mindfulness for opiate use with people that have chronic pain, demonstrating reductions in chronic pain and reductions in opiate use and opioid craving. So our study is... we have folks with chronic pain in the study, but it's not a chronic pain study. It's for people in opiate use disorder treatment. And it'd be the first study that is enrolling people from across the country here in the US. So I'm excited about that. It's been a long process, because we were supposed to start on March 14th, 2020.

Wendy Hasenkamp (00:23:36): Oh, yes.

Zev Schuman-Olivier (00:23:37): And so the day that we had our launch party was the day before everything shut down in Boston. Which is what partly allowed this to become a national study of a live online remote mindfulness program. So with every challenge, there's an opportunity.

Wendy Hasenkamp (00:23:53): Yes. So that was using the mindfulness-based behavior change intervention that you're working with, in that population?

Zev Schuman-Olivier (00:24:01): Yeah. So it was adapting the Mindful Behavior Change program, and we tried to do it in a way that would be trauma-informed and motivationally sensitive, so that people would get introduced to a low dose mindfulness intervention after being oriented to being in group, and then would have the choice to go through this more intensive Mindful Behavior Change program. So yeah, we're excited to get to share some of those results and what we've learned, I think, is consistent with some of the meta-analyses coming out about substance use. So anyway, that's a teaser. I shouldn't give the results until it's published, but keep a lookout.

Wendy Hasenkamp (00:24:44): Yeah. Yeah, we will.

Zev Schuman-Olivier (00:24:45): So yeah, that's been a big part of our work has been trying to understand and support the use of mindfulness in addiction treatment and recovery. And I'd say now, it's almost the norm for people to have mindfulness as some part of their recovery, especially in for-pay programs. One of the things that I'm focused on right now as the co-chair for the Integrative and Complementary Addiction Psychiatry Group for the American Academy of Addiction Psychiatry is trying to figure out how can these kinds of interventions that are holistic and empower people to self-manage their own recovery, how can they be accessible—not just in private pay addiction treatment programs, but across the country for people who are going to community programs that are generally funded by federal funding or local community funding, and where I think it's desperately needed? So that's something that we're starting to try to pay attention to on a national level.

Wendy Hasenkamp (00:25:54): Yeah. I love your focus on having these programs be inclusive and also you mentioned trauma-informed, and I feel like this is such an important shift in the whole space, is recognizing these needs. I wonder if you could share a little bit about how you think about trauma-informed care now, and what are some of the ways that we need to adapt these programs to work with folks with trauma?

Zev Schuman-Olivier (00:26:17): Yeah, I want to give a shout-out to two people that were really key, Janet Yassen and Barbara Hamm, who worked in the Victims of Violence program at CHA, which was one of the very first, if not the first program for treating community, PTSD community trauma. And so it was founded by Judy Herman back maybe 20, 30 years ago. But we were lucky that two extremely experienced trauma therapists joined the very first cohort of our training. And it was almost every session or every other session, they had a comment for the MBSR teachers who are leading, saying, "This needs to be more trauma-informed." And so it was a good dialectic, and it's part of what we've tried to do to think about how to optimize the Mindful Behavior Change intervention is to really listen to the feedback from our group leaders and from our participants and keep changing it.

(00:27:14) And so very early on, we started to embrace the need for it to be trauma-informed, to ensure that every group leader knows that there's a possibility that every person who's coming in may have some trauma, and that the trauma that we might be expecting might not be who we're expecting it to come from. And to make sure that there's choice in everything that we do. And to bring in language about how to work with historical traumas and structural traumas. And the fact that there is ongoing structural trauma that people continue to experience—and may even be worsened or exacerbated by the structures of groups and by the leadership, depending on cultural concordance. And to look at the interventions and the cultural symbols that group leaders are bringing in, whether it be the type of bell that they have or the words they use, and try to figure out how to make sure that those words and those symbologies are... if they're there, they're there for a clear reason to support mindfulness and compassion, but not because of our own backgrounds, or how we learned, or what our practice was. So to create some consistency in the practices.

(00:28:35) And then finally to really bring this concept of "window of tolerance" into the very beginning of our program. Right when you talk about mindfulness, you talk about the window of tolerance to help people to be empowered, to be able to self-manage their level of exposure to their own experience. Because part of what trauma is, is you get caught in an experiential avoidance cycle. And for many people, they also get caught in a cycle of shame. And both of those come up right in the very first moments you start practicing. So teaching people where there are safe anchors for attention, whether it be touch points with the floor or with the chair, noticing sounds in the room, and knowing that you can always go back to these places so that you have control of keeping yourself in the window of tolerance can help a lot.

(00:29:32) We even had a participant with dissociation who participated in our trial, and being able to give them choice points where they could decide if they want to stay in the room or leave is important. And so My Ngoc To recently published a case study about that. So I think if you want to find out more about some of the ways we were applying trauma-informed methodologies in our groups, I think that's a great one. Just to say that dissociation was not an absolute exclusion, and the participant actually really got a lot out of that and was able to reduce some of the dissociative symptoms and behaviors.

Wendy Hasenkamp (00:30:12): Oh, that's wonderful. Something else that's coming up for me just thinking about this whole space... Again, your sensitivity and emphasis on working with folks with

trauma and also making things accessible to marginalized groups is so needed. I'm also thinking about behavior change. I'm wondering how you hold this space. Like, the idea that "we need to change our behaviors to be healthy" really places the focus and the onus on the individual to be responsible for their health. And I'm thinking of this larger picture that you're bringing up of structural trauma and systems that are in place that, it's not really about the individual, right? There's structural oppression and even just things like food systems and other things that are much bigger picture that are influencing health—social determinants of health and things like that. So I'm just wondering how you hold that whole space and dynamic in your work around behavior change.

Zev Schuman-Olivier (00:31:08): Well, I want to say two things. One is, I do think that we focus on interpersonal mindfulness as well, because being able to identify stakeholders in your change and the barriers to your change and being able to communicate those and communicate those assertively is an important piece of being able to make change. Now, not every change can you communicate about and make a change, because it's like on three levels higher than any individual level. And I do think that we still have capacities to be able to be either more resilient in the face of chronic illness or structural illness—societally structural illness—or not.

(00:31:50) And I think one of the things that I learned from participants in our groups was that the best outcome from mindfulness may not be to become more relaxed. And for many folks of color in our programs, they said when they started to practice, they just realized that there was a deep anger there. But mindfulness helped them give voice to that anger. And to be able to do that in an assertive and constructive and effective way, maybe not at the ultimate structural level of changing who was president at the time, but being able to do that within the context of communities, and even being able to become more empowered, to be able to know that they were safe to speak about what they needed in the group. Or to tell us that we needed to have more group leaders who spoke Spanish or spoke Portuguese or identified as people of color, which we did.

(00:32:40) And so, being able to practice mindfulness may be able to help, even in that way. But you know, mindfulness doesn't make things go away. Right?

Wendy Hasenkamp (00:32:51): Right.

Zev Schuman-Olivier (00:32:52): Ideally, it helps us to be able to navigate the situation and to find our most skillful way towards allowing it to find its ways to change. So I think that in that way, it's helpful. But it might not change right away.

(00:33:08) And I should say one other thing is that discrimination experiences are an activating factor and cue for substance use and for other health behaviors that may be harmful to self. So being able to be aware of the way that we react to discrimination experiences may be able to... It can't change those experiences, it can't change the impact that it has on us maybe emotionally, but it might give us a space to be able to recognize the impact it's having us on emotionally, instead of turning towards other things that just harm us more. I hear that among people that are practicing from communities of color, but other minoritized groups as well. And that is the impact of the way that subordination leads to substance use. And brain studies have demonstrated in animal models as well that subordination in social contexts increases substance use and other types of reinforcing behaviors.

(00:34:16) – *musical interlude* –

Wendy Hasenkamp (00:34:47): I want to talk a little bit about also your work in depression. I know you've expanded into that space too—as you said, adapting at MBCT (Mindfulness-Based Cognitive Therapy), and integrating your work in this behavior change intervention. So maybe you could share a bit about what you've learned in the depression space.

Zev Schuman-Olivier (00:35:05): Well, I've just been really impressed by the level of evidence that has been developed in the Mindfulness-Based Cognitive Therapy interventions, both within the US, and internationally with some amazing studies being conducted in the UK—basically demonstrating that it's a cost-effective solution for depression, and that it's about as good as being prescribed an antidepressant and staying on an antidepressant. So I think that that data is important, and should be impacting all public health systems, not just in the UK. But one of the problems that even the UK is having is how do you develop a workforce that can then provide that once you identify that as necessary.

Wendy Hasenkamp (00:35:53): You mean having enough teachers to deliver these interventions?

Zev Schuman-Olivier (00:35:55): Yeah. Having enough teachers, and having enough processes for patients to be able to get to teachers. And so what we did, starting in 2017, we had been running mindfulness in primary care, and having a lot of positive impacts. But there were a lot of people that were getting excluded from the primary care programs, because there were certain exclusions for higher levels of psychiatric symptoms. And one of the things that we got concerned about was that a lot of those folks were people of color. And we wanted to make sure that we were, as a system, making mindfulness accessible to anybody who wanted it.

(00:36:35) And so that really was our impulse to start the Mindful Mental Health Service. And it's also a referral-based service in our healthcare system, that gets referrals from 12 different primary care sites as well as from the outpatient psychiatry department and other psychiatry clinics. We do a complete evaluation, integrative psychiatric evaluation, from a mindfulness and compassion perspective, and then we help get people connected to the right groups. And we created a mindfulness continuum of care that starts with introduction to mindfulness groups, which are inspired by the MBI (mindfulness-based intervention) practices, but again, are designed to be even more trauma-sensitive and trauma-informed with the practices. And they're shorter. And it's really about helping people to get used to being in a group, and maybe giving them time for their medication to be able to start to reduce symptoms, to develop some behaviors around being able to participate in a group online. And then people can basically move up into our MBCT groups.

(00:37:39) And we've just had a lot of people that have had benefit from MBCT groups, or the Mindful Behavior Change groups. And then once they complete those in an eight-week group, then they're able to apply for our Strengthen Your Practice groups. And we have actually three full groups running, group psychotherapy and Strengthening Your Practice—which is designed because even at the end of eight weeks, people often are still caught around something, especially people that have had significant mental illness. And this gives us a chance to be able to help people problem solve, to learn new practices, to develop a deeper way of thinking about it.

(00:38:19) So about 20% of patients after MBCT end up going on. And the good news, there is about 80% of people don't feel like they need anything else. And at the same time, the Strengthen Your Practice groups are really helpful for those that want to continue. And for many people, it allows them to not need ongoing individual therapy or other types of things where there's difficulties to access in the healthcare system.

(00:38:42) So we also started, during the pandemic, the CHA MindWell program, which has had 2000 people register, which allows people every two months to complete online computerized adaptive tests that assesses eight different types of symptoms of diagnoses for mental health. And if there are increases, then they're able to get triaged to get a quick assessment and then be able to get referred if it's appropriate to one of these groups. And if not, if they need more, to get sent to psychopharm or emergency room. But what we've demonstrated over three to six months, it's a small effect, but we see a small reduction both in anxiety, depression and in PTSD just from being in the MindWell program, and doing these assessments, being able to have someone to talk to, being able to be referred to mindfulness.

(00:39:35) We send out a monthly MindWell newsletter that is focused on some aspect of self-management of mental health, mental wellness. So it looks like about 60% of people read those, which if you think about from a population standpoint, if that kind of thing can continue to grow, then we can have healthcare systems that are not just waiting for people to come in—when we have this massive shortage of mental healthcare providers and massive shortage of primary care providers that where their time is often taken up by working with mental health—but we can actually be proactive in helping people who want to take some initiative in their mental wellness but don't know how to be able to do that in a way that also allows them to connect quickly, at the moment when it's needed. So that's another innovative program that was supported by NIH during the pandemic that we were able to deliver.

Wendy Hasenkamp (00:40:31): Very cool. I know you've done some work too, you've had some interesting findings around the role of the body. And I feel like that's something that comes up on this show a lot in so many different domains, and the role of our ability to sense our body and bodily signals in depression. I heard you give a lecture on some great results there. So could you share a little bit about that?

Zev Schuman-Olivier (00:40:53): Yeah. So I've been interested in the role of the body from the very beginning, as you heard, where my practice started basically with the body scan practice. And as one refines attention and becomes more aware of subtle body sensations, both inside and outside the body, it seems to change people's emotional reactivity, their capacity for emotional differentiation, to be able to understand emotions more clearly by noticing the physical patterns that emotions have. We also can experience craving in the body and notice earlier signs of craving to be able to make changes.

(00:41:33) And so we started to really look at interoception early on. It was one of the targets of our science of behavior change grant—and I should say, we did two studies, one that was focused on chronic illness with anxiety and depression and stress disorder comorbidity. And the other was led by Eric Loucks at Brown that was focused on mindfulness for hypertension. And so we used the same measures to be able to triangulate to mindfulness appropriately. And we early on identified the MAIA, which is the Multidimensional Assessment of Interoceptive Awareness.

(00:42:13) And interoceptive awareness is the awareness of internal body sensations and the ways that we relate to, or respond to those internal body sensations. I should say that interoception is the ability to notice these internal body sensations—especially body sensations related to our maintaining homeostasis or balance, which all use similar neural pathways to come up the spinal cord and come to the brain, and then come to this part of the brain that's called the insula, or the island between the frontal and parietal lobes. And when I was in medical school, we didn't even learn that it existed. *[laughter]* But it turns out is probably one of the most important things for both body awareness, for

pain, for emotion regulation, and for attention and salience. So I've been very interested in the insula from early on.

(00:43:08) And so these interoceptive pathways, there's both this narrow view of interoception as just being a sensory process of receiving sensations from the body. But there's a much broader way of thinking about interoception or interoceptive awareness, interoceptive regulation that is about how do you also appraise or relate to these body sensations as they arise? And then how do you regulate these body sensations? Do you do it by trying to avoid the body sensations and trying to change them? Or do you try to change your perception of the way that your body should be, and bring your sense of what the body state should be to whatever it is? Which is essentially what mindfulness is doing. It's paying attention to body sensations in a nonjudgmental way, allowing it to be as it is—and that reduces the brain's predictive error that would otherwise motivate change.

(00:44:07) So when our brain senses that our body state isn't the way it thinks it should be, the difference between those two states is often what leads to a brain's motivation to then do something—to either have an emotion, which moves us into motion, or to move us into some behavior. So in mindfulness, our interoceptive regulation technique is perceptual inference, or to "be with" whatever the body state is as it changes. And that's a very effective way to do that. So all of these pieces come together into a broader definition of interoception. And interoceptive awareness is a subjective way of measuring these different ways that people relate to their body and body sensations, especially internal body sensations.

(00:44:57) So our studies have suggested, both of the two studies I discussed before, demonstrated that there were increases in interoceptive awareness after eight weeks of mindfulness, with large effect sizes. And one of the things that we found that was interesting was, particularly among depression, there have been studies that have demonstrated previously, neuroimaging studies, that when people are paying attention to their body, that the insula activation is impaired during depression. And it's thought that one of the things that happens during depression is people get so into their head with their thoughts, they get more and more disconnected from their body. And there have been other studies that have demonstrated that when you ask people to feel where they have emotions in their body, there are reliable places in the body where people feel different emotions. People feel pride in their cheeks and in their chest. People feel anger in their fists and in their chests. People feel shame in their cheeks, if you think about cheek flushing. Or anxiety, often people feel it in their belly. Everyone's different, but in general, you see these kinds of patterns that people feel this way. The only emotion that doesn't have any sensory experience with it is depression, where people actually have an absence of emotion.

Wendy Hasenkamp (00:46:14): Oh, interesting.

Zev Schuman-Olivier (00:46:14): And it's thought that there's probably some impact in the signal-to-noise ratio that happens during, it's part of depression, where there's interoceptive dysregulation, and then people can't feel their body. Now, I said before that emotion—part of what's key about emotion is that there's both thoughts that are associated with emotions, there's body sensations that are associated with emotions, and there's action urges that are associated with emotions. And that's partly because when you feel something in the body that's not the way that it should be, it helps to motivate us into action. And there's an action urge that often comes with it. And so in depression, people end up having interoceptive dysregulation, they have less sensation in their body, they're not feeling anything, and therefore they also become amotivated, they have alexithymia (more difficulty explaining what

they're feeling), and they often end up having more and more inactivity, because they don't have the body sensations to motivate them to move or to get up and to do things. And it becomes a cycle.

(00:47:18) And so we actually found in one of our studies that people with depression, that depression severity actually correlated with the lack of body trust that people had—that their body wasn't a safe place, that they couldn't trust the signals coming from their body. And then we found that people also tended to listen to their body less, and notice body sensations less as depression severity increased.

(00:47:44) If you think about trauma and anxiety and depression and how often they are comorbid, I would hypothesize that as anxiety increases and as people have traumatic responses, they become less and less like they can trust their body. And then the brain maybe moves into depression. But then you get stuck in depression because it's hard to motivate to get out of depression without having body sensations that tell you what's good for you—that eating is something I need, that exercise is something that feels good. And then people fall deeper into depression.

(00:48:18) So one of the things that we found in our neuroimaging studies was that as body trust increased during a Mindful Behavior Change program, that people's brain [activity], in their insula, actually increased among those who were depressed. Not among those who were just anxious, but those who had depression, we actually were able to see this correction in the interoceptive dysregulation, this increase in people's capacity to feel their bodies. And that that seemed to be linked to the increase in body trust that they were experiencing.

(00:48:50) We also found that the increase in body trust among people who were depressed, in addition to increases in body-listen, predicted people's ability to make a change over those eight weeks, make a behavioral change. We found that people increased their odds of making a behavior change by about three times if they were in the mindfulness group, versus just in a one-hour mindfulness program—versus the 16-hour or 20-hour Mindful Behavior Change program if you include the retreat. And that change was not fully mediated, but was partially mediated by this increase in interoceptive awareness—by increasing body trust in particular, especially among the depressed.

Wendy Hasenkamp (00:49:29): Oh, that's fascinating.

Zev Schuman-Olivier (00:49:30): So I think that that's an important thing. We know that—if you've done practice and you've had change, then that intuitively makes sense. That, "If I learn how to listen to my body and I listen to what my body needs, that I'll be able to make behavior change." But yet it's never really been shown before. So I think it's an important thing for us to recognize that. And that a mindfulness program that's designed towards behavior change actually does help people catalyze behavior change even around difficult behaviors related to chronic illness, and even among people with anxiety and depression. In fact, perhaps particularly among people who have depression.

(00:50:14) So I think that that's an area obviously for further research. And we're thinking about how to apply that to different specific chronic illnesses now, and looking for collaborators who may be interested in applying the intervention specifically to different chronic illness types in multisite trials.

(00:50:33) – *musical interlude* –

Wendy Hasenkamp (00:50:52): That's really exciting that you've been able to draw those links. That's such beautiful work—to go from the conceptual frame and knowing that interoception and these bodily signals are a problem in depression, and then your intervention both showing the outcomes subjectively

and clinically for the participants, that they developed an increase in ability to trust their body or experience their body, and then it correlates with brain changes that you might expect. So that's beautiful. I think that is a really critical mechanism underlying some of the impacts of these practices.

Zev Schuman-Olivier (00:51:26): Yes, I think so. And we also found that, consistently in all of our studies, that emotion regulation... that there are reductions in maladaptive emotion regulation with the Mindful Behavior Change program. And so I think that's also playing a role, especially around regulating goal-directed behaviors and emotions, emotional expression. So I think there's more work to be done. But from this first decade, I'm very excited about what we've done in this area, and I'm looking forward to seeing how it applies, when applied to other specific chronic illness behaviors.

(00:52:04) But I did want to say that the focus on trauma is something that, by making a trauma-informed intervention and enrolling people that have trauma within our programs, I think we're actually probably able to get closer to what actually will be implementable and impactful in healthcare systems. And so that's been the goal from the outset. And in fact, in our final version of the trial (we did three RCTs as part of the implementation), in the final one, the biggest predictor of behavior change in our study—which surprised me, we looked at it several times—was whether or not people had PTSD. So everybody who had previously identified themselves as having PTSD made a change. So maybe that speaks to the fact that if you would design a program that's trauma-informed, and people identify it in advance, that they are people who are going to be able to make a change.

(00:53:03) Now, I think one of the challenges is the people that did the worst in making a change were people who had Anxiety NOS (Not Otherwise Specified). This isn't a significant finding, so I would say this is exploratory. But it got me very interested because in general, when I think about what is Anxiety Not Otherwise Specified, it's people that have anxiety for a reason that the clinicians don't really understand. And what is that often? Well, that often is a trauma that the person either isn't talking about, or hasn't fully understood themselves. And so I think that actually made me concerned. It said that this is helpful, we continue to commit the work that we're doing, but we also need to have interventions that can support people with PTSD and people with trauma who aren't even at the place where they can talk about it. And to make sure that we can do it safely.

(00:53:58) And so that was kind of when I started this journey to really look at doing research with Internal Family Systems. I don't know how much you know about that...

Wendy Hasenkamp (00:54:07): Yeah. Internal Family Systems I think is such a fascinating approach, but I don't think we've talked about it very much on the show. So maybe you could give just a little overview.

Zev Schuman-Olivier (00:54:15): So Internal Family Systems is a holistic approach to mental health that was started by Richard Schwartz, who actually started as a family therapist and used some of the ideas around family therapy and working with groups within families, and power structures within families, to be able to then look inside and to understand the ways that our internal life works, and to be able to navigate them using some of these techniques that were designed in family therapy. So it's important to say, Internal Family Systems (IFS) is not really about working externally with families. It's really about working inside with what he called parts—parts of ourselves. The way I came to this actually was partly through my interest in self-related processes, and the way that we do "selfing." That every experience that we have is not just this experience, but also our brain starts relating to it and starts having some ownership over the fact that "I'm having this experience." So the thoughts that we have, the feelings that we have, that we see coming and going within the context of a mindfulness practice, are often being associated as "I'm having this experience."

(00:55:38) And so what can happen over time is that we develop almost like sub-personalities. I don't know if you saw *Inside Out*, but I think it was actually partly based on IFS. But this idea that we develop a part that's been traumatized, we have a part that's a protective part that engages thoughts, feelings around protection, and managing. We also have, in that context, firefighter parts that might come in to rescue, when a part that is an exiled traumatized part is activated, to come in and rescue from whatever feelings that might be emerging in the mind.

(00:56:15) And so what happens is, it posits from the very start that there's a multiplicity of selves, of parts in the mind. And I wouldn't say that... these are not Selves with a big S, but they're these limited senses of self, these momentary senses of self, that would actually change if we didn't identify with them and blend with them. And it's when we do that—as opposed to being able to be mindfully and compassionately noticing them and letting them arise, letting them pass—but we instill with them jobs within our mind, and then they go at that, and they stick around. And the more we have of them, the more they come into conflict with each other. And in fact, maybe they're in conflict because they solved some good problems when we were younger. But then they stay around and often the ones that are protective and are managing are ones that are engaged in something that's really either harming us, or exhausting us because they're working so hard to try to be good.

(00:57:16) And if we're able to start to notice them, then perhaps all of these thoughts that are just arising and passing that have no meaning, may within this context sometimes have a meaning, and actually lead us to a trailhead to be able to understand that we were selfing around a lot of these different aspects of our experience—of our thoughts, our body sensations, the emotions we were having that were arising. And that we're actually caught up in, I would say, almost like a mini sense of self. So if you think of *anatta*, or the Pali word for no-self in Buddhism, there are a lot of similarities here. But instead of getting to it at the end of an eight-week program, or let's say at an end of a 30-day intensive meditation process, what IFS does is it rapidly in the first session changes the way we conceptualize, the way we self-experience, and we start to see that we have lots of parts. And we can have those parts without it being all of us. And in fact, we can welcome every part, all parts are welcome.

(00:58:28) And that gets at the internal shame and shaming parts that often are incredibly common in many people, and get in the way of actually starting meditation for a lot of people. And when you've had trauma, they may be one of the primary protective parts—trying to keep you from having people know, or to be in that shameful position again, or maybe feeling like it was your fault and not wanting to put yourself in position where it might be your fault again (whatever it might be, these are the kind of thoughts that can come up), to realize that those thoughts don't have to leave, but they also don't have to dominate, that there's space for all the parts.

(00:59:13) So sometimes in meditation we can have a fantasy that we're going to start meditating and all of our bad thoughts are going to away. Or they're going to come and they're going to pass, and they're really going to pass, right? But what the Internal Family System approach is doing is saying, "Actually, they don't need to pass. They just need to not dominate. They can be part of the internal family of parts, and they're welcome." And what happens is usually when they feel fully welcomed in, and we can warmly be with all of our experiences and all of our parts of ourselves and all of these parts that we identify with, then we can actually heal internally. And we see even people that have had incredible amounts of trauma be able to feel like they've been changed, and that they're able to now work with, and be with, their parts.

(01:00:04) So there was a study by Hilary Hodgdon that was done with the top IFS therapists in the country, in their private practice with people with severe trauma. And it showed a massive effect size reduction in people with PTSD. I think it was a Cohen's D of 4.0 reduction. And so if you're a scientist, you know that's really big—that's physics level big, or maybe not quite physics, but almost physics. And so that got me interested. I said, "How can that be?" And it's probably because it was in private practice with middle to upper-class, generally white women. We need to do this in a diverse healthcare system of people who are primarily on subsidized health insurance. And we need to do it in a way that's not individual care, because who can get 16 weeks of 90-minute individual care?

(01:00:54) And so we designed a system with 90-minute groups for 16 weeks and eight hours of individual counseling, which we mainly did for safety because we just weren't sure how this would work when we got started with a group approach. And overall, it's been really impressive. We actually just had a publication in the APA's flagship trauma journal, it's called Psychological Trauma, just demonstrating that it's incredibly acceptable for patients. And we do see in exploratory analyses that there were reductions in PTSD symptoms using clinician administered scales. We also saw reductions in anxiety, depression, in suicide risk.

(01:01:37) And we saw increases in decentering. So I think part of what you're doing when you are identifying things as parts is being able to gain that meta cognitive awareness of this not being me, and not being caught up in it—not being "blended" with it is the word that they use in IFS. So then you're able to see it and be able to be compassionate towards it. We found that self-compassion increased because what's happening when you're welcoming in all these different parts of you, you really are harnessing inner compassion. And we saw big reductions in maladaptive emotion regulation. So it was interesting. It's very similar to what we're seeing in mindfulness programs, but we're seeing in people with severe and high levels of trauma—trauma loads of at least seven events was our average mean—and among diverse populations with people feeling welcomed. Because the parts that... you mentioned the structural and historical traumas. Those structural and historical traumas are often experienced as burdens for specific parts. And so IFS works with that, and I think that's made it a very safe and attractive format for people from all different cultures, at least to date.

(01:02:47) So we're still doing research. We've got several other studies that are happening, but I'm excited about this and we've seen enough in our data, even the unpublished data that will be coming out soon as well, to be able to start the first IFS clinical service. So we're doing a parts service as part of our mindful mental health service. So when people have high levels of trauma, instead of having them go right into MBCT, we have them start with our IFS program with, the parts programs.

Wendy Hasenkamp (01:03:18): That's great. I love the way that this perspective of IFS and the way you were just explaining it really brings together these ideas of no-self or loosening that tight idea of self that of course, Buddhism names as such a central cause of suffering. And also, I'm seeing this from so many different places coming up, that need for acceptance and self-compassion, as you said, and that stance of welcoming all of the things that come up in our experience, and how healing that can be. I'm thinking of David Creswell's work, looking at the relevance of acceptance. And Tsoknyi Rinpoche has a practice called handshake practice, which is really about creating that same stance of welcoming and warmth.

(01:04:03) Well, Zev, this has really been so wonderful to chat, and I know we're coming up on our time, but is there anything else that you wanted to share as we're wrapping up?

Zev Schuman-Olivier (01:04:12): Well, I guess I would just encourage people if they're interested in the work we're doing to go to our website at the Center for Mindfulness & Compassion. We are doing a Mindfulness-Based Cognitive Therapy teacher training intensive this fall. And again, I'll say this, in line with our goals for accessibility, we're trying something new after leading five intensive trainings, to be able to do both an in-person three-day training and then have flexibility around scheduling some evening online groups.

(01:04:46) So we're really trying, not just in our programs, but also when thinking about how to make this accessible for busy clinicians in healthcare, for diverse clinicians to be able to have a welcoming place to be able to train and develop mindfulness. I think that we've seen that a lot of early adopters across the healthcare system have done mindfulness training, but a lot of people have gotten stymied in actually implementing it in their healthcare system, or have given up on that because it just felt like it was too difficult in their healthcare system. And then a lot of other folks just didn't feel like it could be for them, because it requires such an intense startup to be able to commit to becoming an MBI instructor.

(01:05:31) So we're trying to make our instructor training programs more accessible. So people, I hope, can check them out. And we've also started just this year, our first Mindful Healthcare Scholars program, which is focused on identifying emerging leaders who want to integrate mindfulness into their healthcare system, or their mental health system, or their substance use treatment program, but just need the skills and the support to be able to both figure out what's the right training for them to develop their own skills if they want to teach as a teacher or if not, how to identify and get connected to good teachers.

(01:06:07) And then maybe the even more difficult thing is how to figure out how to navigate the healthcare system. *[laughter]* Yeah, I have to say we're fairly US-focused because that's where we've been working, but it's also where the healthcare system is maybe the most difficult to navigate. You know, how do you make insurance reimbursable mindfulness programs that are sustainable both in primary care, in mental health, and substance use treatment? How do you align with stakeholders in your healthcare system and be able to get buy-in from everybody from the very top, all the way down to the front desk staff who have to check people in, 12 people in at a time?

(01:06:46) And so we've done that. We've worked across CHA, across multiple different sites to be able to do that. We've been working with other healthcare systems, both locally and in other states, and this is a way that we're hoping to create a yearly program for the year, where we support emerging leaders to do that in their healthcare systems and implement a project. So it'll be interesting. I can come back in a year and tell you how that goes. But if that's successful, then we're hoping that it can be a model for helping to support this, not just in research, but really in the true healthcare system in all the different ways that it helps to take care of patients.

Wendy Hasenkamp (01:07:28): Wonderful. Well, thank you so much, Zev, for taking the time today to share all this great work with us. And thank you for everything that you're doing in this space. It's been really great to chat.

Zev Schuman-Olivier (01:07:39): Thank you. It's been a pleasure.

Outro – Wendy Hasenkamp (01:07:44): *This episode was edited and produced by me and Phil Walker, and music on the show is from Blue Dot Sessions and Universal. Show notes and resources for this and*

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