116 | Brain Health – with Dr. Vonetta Dotson

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This is an audio transcription of an episode on the Navigating Neuropsychology podcast. Visit www.NavNeuro.com for the show notes or to listen to the audio. It is also available on the following platforms:

Speakers: Vonetta Dotson, Ryan Van Patten, John Bellone

Intro Music 00:00

Ryan Van Patten 00:17

Welcome, everyone to Navigating Neuropsychology, a voyage into the depths of the brain and behavior. Brought to you by INS. I'm Ryan Van Patten.

John Bellone 00:25

And I'm John Bellone, and we are board certified neuropsychologists. Today we give you our conversation on brain health with Dr. Vonetta Dotson. Vonetta is a professor of Psychology and Gerontology at Georgia State University, Senior Project Scientist at NASA, and founder and president of CerebroFit Integrated Brain Health. We spoke to her about all of these topics. This current episode focuses on the brain health landscape and adults.

Special thanks to Hunter Holoubek & Shanna Cooper for transcribing this episode.

While later, Neuropsych Bites will cover CerebroFit and NASA. Note that the INS neither promotes nor recommends any commercial products or services discussed in this episode, such as CerebroFit or Vonetta's book, "Keep your Wits About You." And with that, we give you our conversation with Dr. Vonetta Dotson.

Transition Music 01:12

John Bellone 01:22

Okay, Vonetta Dotson, welcome to NavNeuro. I've really been looking forward to this discussion. We have a lot of overlapping interests. I've really been impressed by all of your work in the areas that we're going to talk about. So thanks so much for joining us.

Vonetta Dotson 01:34

Thanks. I'm happy to be here.

John Bellone 01:36

Before we start asking you questions, I just wanted to set the stage a bit for the conversation. So, brain health is a huge topic with important domains and subdomains like sleep and physical activity and social engagement, nutrition, many, many more, each of which is related to the others and has its own dedicated literature. And our approach to this episode is going to be to talk about brain health and adults and older adults broadly. And to touch on a few of these specific areas that, that I just mentioned. We'll just barely scratched the surface, of course, in terms of all of the depth and complexity in this area. And as with most NavNeuro episodes, this one will be geared toward healthcare professionals and trainees rather than explicitly to a lay-audience. So we'll be asking you, Vonetta, about how to talk to patients and people in the community about brain health. And you know, these conversations happen frequently in neuropsych feedback sessions. But they can also take place in clinical interviews and cognitive training sessions, psychotherapy, professional consultation and outreach to communities, and lots of other contexts. So just wanted to kind of give give listeners a broad overview before we launch into it. But to launch us off, can you just give us your elevator pitch for the importance of brain health in general?

Vonetta Dotson 02:53

Absolutely. So I tell people, brain health really is health. Brain health is health. Every aspect of our health is tied to brain health. Everything that we do, everything that we think, everything that we feel, is tied to our brain. So when your brain is healthy, that means that everything you do is going to be done better. Every kind of thinking, you think more clearly, you think better, and your emotions are better regulated. So every aspect of life is affected by brain health, so healthier brain, healthier life, happier person.

John Bellone 03:26

Well said.

Ryan Van Patten 03:27

Yeah, great intro. Vonetta, in your book on this topic, "Keep Your Wits About You," you frequently referenced the Global Council on Brain Health from the American Association of Retired Persons, AARP. Can you give us a brief overview and description of the Global Council?

Vonetta Dotson 03:43

The Council's a really great group of brain health experts. So it's scientists, health professionals, scholars, and policy experts who all do some type of work related to the brain and cognitive functioning. And they, as a group, you know, really get into the literature and come up with expert recommendations for how to achieve and maintain a healthier brain. Honestly, this group has the resources that I share the most with my own patients. And as you mentioned, I refer to them constantly in my book because I have never found that quality of information about brain health that's at that level. So really, really a great group.

Ryan Van Patten 04:24

Great. Yeah, these resources will be helpful for our listeners. So moving on, most people already know that physical activity, nutrition, sleep, being mentally active, and these other brain health behaviors are good for them. And yet, there's often a lot of room for growth with respect to implementation of lifestyle factors in people's everyday lives. Education can be helpful, such as when we lay out explicit links between cognitive decline and a sedentary lifestyle or poor sleep. But simple information sharing is not typically enough to really get the brain health behavior change going. And we can do more for our patients than just, you know, tell them what to do. As psychologists, we have a strong background in health related behavior change things like operant conditioning, motivational interviewing. So talk about your perspective on our role as neuropsychologists and promoting brain health behavior change in our patients.

Vonetta Dotson 05:17

Yeah. So I really think you make a good point that education's not enough, but the education is really important. I'm shocked sometimes at how many people - I shouldn't be shocked - but I am sometimes shocked at how many people have no clue that for example, exercising can help with your memory, something very basic that I take for granted, a lot of us do, right. But whether it be with patients and their families, or when I give community talks, I will oftentimes get a look of surprise that people didn't realize that that was even a link. So I think we have to start there, particularly for underserved communities where that information is not getting pushed as much. So we have to start there. But then, like you said, to go beyond that. So that's where we want to think about using our feedback sessions, using the report itself. If we can, having follow up sessions to be able

to help people figure out how to implement some of the behaviors is absolutely key. I 100% agree that some of the skills that a psychologist we know, such as motivational interviewing, is huge. And that actually, for me, incorporating motivational interviewing into the feedback session is one of the most helpful things that I see what I can do to help people get started on their brain health journey. I frame it to them as a journey, not that they're going to see my recommendations, talk to me about it and say, "Oh, okay, I got it. I've got that all figured out. Now, next week, I'm gonna start doing all these things." That's not how it works. Emphasizing that we take small steps to get towards a goal, and that we want to make them realistic. And we want to make them actionable. We want to identify barriers, we want to see what gets in the way, not just in terms of external barriers, even just a sort of mindset. The mindset can be something as basic as, "Well, as I get older, of course, my memory goes down." Getting people to realize that that's just an assumption that people will make, partly based on ageism, that has been incorporated into how we talk as a society, and to realize that it's not inevitable, and the degree of it is not inevitable. So you can take some action to be able to at least minimize that. So a lot of it is getting people to challenge some of their assumptions, to think outside the box about what it means to have a brain-healthy life to find what could be their motivation. I find a lot with middle-aged to older patients that I work with the threat or the fear of, of Alzheimer's disease actually ends up being a motivation, because they're thinking, "Okay, I've seen someone go through this, I've heard about it. I don't want that. So what can I do?" And so I oftentimes will talk about how, you know, we can't guarantee that we can stop the risk or take away the risk, we can certainly reduce it with our behaviors. So that was a bit of a rambling answer, but there's so much to say about that.

John Bellone 08:23

That was great. And I love, I love how you incorporated, you incorporate motivational interviewing, MI, into your work. I do the same, and I think it's a great modality for us, neuropsychologists to help with behavior change. You talked about some of the details of it. But can you talk more about the nuts and bolts of how you incorporate it into your sessions?

Vonetta Dotson 08:42

So during my feedback sessions, I try to ask really pointed questions about the person's desire to change their health behaviors, or their motivation to change the health behaviors, once they have more information about how certain lifestyle choices can affect their brain. So, people who we see in, you know, clinically have heard from their physicians, many of the same things that we're telling them because so many other brain-healthy behaviors, like good nutrition, exercise, sleep, are also good for overall health. So we're not necessarily saying something new in a general sense of, "Hey, move more," you know, "Have a heart-healthy diet," but we're trying to frame it in a different way, you know, trying to say, "This is not just good for your heart," which it is, "but it's also going to be helpful if you're worried about someone taking your keys down the road because of your cognitive impairment," as far as making that a link to outcomes that they weren't thinking about before. So once I get that information, then within that context, I like to ask okay, "So thinking this through, know, how do you feel about making some steps," you know, "to try to live a lifestyle is gonna be a little bit healthier for you?" And again, giving the caveat that we're talking about small steps at a time we're talking about finding ways to be

brain-healthy, if you will, that are fun. I always say it doesn't have to be a chore, you know, and we can, you know, you can work out by having a dance party with your grandkids. And guess what, if you're getting exercise, it's not, it doesn't mean you have to go to the gym and run on the treadmill for half an hour, which you might not want to do. So trying to give all those contextual things that make it seem less daunting, and then assessing, "Okay, so how do you feel make about making changes? What are the things that could get in the way," you know? "What has helped you in the past, when you've tried to change some kind of behavior?" And really focusing on individualizing that conversation, that what works for some person doesn't work for other people. And that's, you know, very basic and my principles that we're trying to get it from internally for that person, you know, what is it that can, can drive them towards change, and what has happened, what has helped before, since most people have had some experience of changing something in a very broad sense, and then saying, "Okay, there's something there, let's work with that, build upon that, and apply it to the behaviors that we're talking about for brain health."

John Bellone 11:09

Yeah, eliciting that change talk and the values-based approach that you mentioned, finding what they care about most and then tying their behavior change into them, getting more of that. So yeah, I love that. I'd like to hear you talk through advice for what our listeners might do in this situation where there's a clear brain health risk factor, like chronic heavy alcohol consumption, for example, and cognitive impairment related to that risk factor, and yet, our patient has little or no motivation to change that behavior, you know, sometimes called pre-contemplative phase in the transtheoretical model Stages of Change. How do you approach those kinds of conversations with more difficult topics?

Vonetta Dotson 11:52

Yeah, that can be really tricky. Because a lot of these behaviors, you know, getting someone to start a behavior's hard enough, getting someone to stop unhealthy behavior is even more challenging in many ways. And particularly when it comes to something like substance use, where there's a physiological, kind of, draw to keep doing it. And I think that drawing up on our knowledge as a clinical psychologist, not just a neuropsychologist, so much using MI is where I think this becomes important. And I say that because I think oftentimes, as neuropsychologists, we put ourselves in a different category, we do brains, and you know, we have this particular mindset, but we have to have these basic clinical skills to be able to get at just core behavioral principles of people making changes in their life, or not, and how to sort of overcome that. So again, I think, I always just think personalizing and coming to that person's level of what's going to be most useful and practical, within their contexts, within their family system, within the community live in, within their health conditions, all the things that can interact with whatever the behaviors are trying to change, and so individualizing, and really having a strong sort of network of professionals that we can refer to, and that gets really challenging, sometimes, because there's so many settings in which we work as neuropsychologists, you know, if you're working at a VA setting up becomes much easier, you know, to, you know, send referrals to people who can help with something like substance abuse or other issues, where if you're in private practice, that takes more work, because you don't necessarily have an in house, the people to send someone to. So I think doing that sort of

workup ahead of time to have the appropriate referrals. And then trying to, within our feedback sessions or any follow up sessions, emphasize the importance of that particular behavior for brain health and making brain health specific. If you say brain health for some people, that rings true for other people, you have to say, for your memory, for your Alzheimer's risk, so kind of tying it to something that they care about, which hopefully you figured out based on your interview and working with them, what things sort of motivate them. I think that's where we really come into play is trying to say, we start that process of change. Most neuropsychologists, we see someone once or twice, then that's it. So we can't expect to completely change problematic behavior in those sessions. But we can certainly set a foundation for that change, and do our due diligence to really give them the resources to follow up on that. Not just some cookie cutter recommendations, like here's five things to do for your brain go- good luck. But it's saying, "Okay, here's why." Always explain the why not just do this, but, "Here's why. My report I will say, research shows that being socially connected is great for brain health. People who are more isolated have a higher risk for dementia. Therefore," maybe not maybe not the word therefore, but, "so based on this research, I suggest X y&z Here are some resources." So I'm saying, here's the information, here's why you need to do this, here's how to do this, and here's how to contact me if you have questions and this becomes difficult. So, again, I went off a little bit of a tangent there, but I think it applies to so many things, whether it be stopping something unhealthy, like when someone has no other comorbidities like a substance abuse disorder, that all released because all interconnected,

Ryan Van Patten 15:27

No, that's a great answer. I like how you're really focusing on our core clinical skills for feedback and for brain health, behavior change, super important. Something I've noticed in myself over the past few years, as I've moved from trainee to now early career person where I think I've improved in terms of feedback around brain health is, I used to do a lot more straight education, information sharing sort of medical model of getting through the recommendations, "Here's what we found, we think we'll help you: exercise, Mediterranean diet, sleep, sleep hygiene," and there was a lot of sort of one-way, me giving them information and telling the patient what to do in a hopefully, sophisticated empathetic way. But now when I talk about brain health, I often start by asking a question. So I will have already asked them about sleep or exercise. But it's been a few weeks since I've seen them now that I'm in the feedback session. And I might ask, "So how is exercise been going for you? How are you feeling about that these days?" and get them talking a little bit, which then allows me to listen for a change talk, sustained talk, reflect it, and use some of those MI skills. And with a little more experience, these days, I now feel less pressure to like, get through my list in the feedback session, I gotta touch on everything. The conversations feel a bit more natural and free flowing.

Vonetta Dotson 16:55

That kind of approach I think is so helpful for patients because it feels more genuine, I think that when it comes off is like, "I have this list that I give to everybody so let me just tell it to you," that feels different than going, letting them sort of lead the conversation. And then it feels more personal to them. And that's the kind of thing where I feel like it really does help to lay that groundwork. And that can then hopefully be built upon by any follow-up sessions that we have them or other people who we refer them to you, the family who's hopefully

present and committed to trying to support their their changes as well. So as much as we can make the patient feel like it's about them and not about us. And that it's not just what we always say, always recommend but about us thinking about them. Even something like you're following up from something that you said in the interview; they notice that. I've actually had patients say, "Wow, you remember that?" I'm thinking of course, of course I do. I understand that I see a lot of patients, but you're an individual person. So I'm paying attention to what you've said, and not just saying the same thing to everybody.

Ryan Van Patten 17:59

Yeah, that's great. Something you've already referenced Vonetta that I want to follow up on is the importance of individualizing our feedback and brain health discussions with patients. So a really important variable here is our patient's health literacy, their background, knowledge and ability to locate and consume information related to their own health and well-being. So as neuropsychologists we should, of course, tailor our brain health conversations to our patient's level of health literacy, we should meet them where they're at. So if I am giving feedback to a patient who's a physician versus a patient with three years of education and no healthcare background, I should be thinking about that and talking to them differently. So how do you recommend that we develop these skills?

Vonetta Dotson 18:44

Pay attention to the patient. It really is paying attention to what they say, what they don't say, how they discuss their health, something such as when you ask about their medical history, the degree of detail tell they tell you or how prepared they come. You know, when I have someone who has their typed up list of medications and dosages and their past surgeries, and I say "Yes!" Number one, I know they're organized, they're on top of things. They are trying to track what's happening, either them or their family or both. But either way, that means that's a different sort of setting, or environment to give that feedback versus someone who's, you know, "I'm not really sure, I think that might have... my doctor might have said my blood pressure is high." That tells me something about how much they're actively taking a part in their, in their health. And that allows me to better gauge, "Okay, how much do I need to... how much groundwork we need to lay first before getting into some of the details? And how much detail can I give?" If I'm giving feedback to someone who's a physician, for example, I'm going to obviously go into a lot more detail, get a lot more technical. Even if they're not a physician, but if they're in if they're in a field that's kind of related where it's clear that they are interested in the details, I might draw brain diagrams and all kinds of things to like really get into the nitty gritty. Whereas for someone else, I might go at a more basic level, because I don't want them to feel overwhelmed. So there's that, their sweet spot. You don't want to talk down to someone, of course, but you also don't want to make them feel overwhelmed and then tune out because you're going too high. And that's just basic clinical skills, I think of paying attention to what they've said throughout the course of your clinical encounters with them. And also reading the room when you're talking to them. So you can see if their eyes are glazing over, if you need to kind of pull back some, or if they're just kind of taking in everything and you might want to try going into a little bit more detail. So using that clinical judgment to see when to say more or less, I think is really important. And the last thing I'd say about that is that I think... I like to sometimes talk specifically about health literacy. And I might

say, you know, "There's something called health literacy, and I think is really important, and it's important for not just your appointment with me, but for all of the medical professionals that you see." And so I might talk about and say, "This is something you can actually build. There's ways that you can try to be more of an active consumer of your health care, and here's some ways to find good information. Here's where I go for information online," always given the caveat that talk to professionals the best, be careful what you find online, but I might just actually give a little bit of a primer on health literacy and to get them thinking about that, if I feel like it's pretty low.

John Bellone 21:31

That might be the one intervention that makes the most difference in their life long-term, is just the fact that they're going to pay more attention to their overall health and maybe be more adherent to their medications or follow up with doctors more frequently. So yeah, it's a good point.

Vonetta Dotson 21:43

Absolutely.

John Bellone 21:56

We are neuropsychologists as well as general psychologists, so we often do cognitive testing. I'm curious how you suggest we use our neuropsych assessment results to inform our conversations about brain health.

Vonetta Dotson 22:11

There's a variety of ways I think we can do that. So one way is just based on our results will of course determine what recommendations we give. So again, think about individualizing, that if someone has a dementia diagnosis, and they also have and I've also found out from me, they have a dementia diagnosis may have, let's say depression as part of my results, then what I recommend for them is going to be different and how I presented is going to be different. Number one, I'm going to of course, make sure that there's family members present, because I understand that, you know, their, their understanding and memory of what I'm talking about is going to be more limited. And so I want to be able to make sure we have sort of backups for all the information. I'm still going to be talking to the patient, but with someone else present so that they feel like they're being seen and heard, but then there's someone else who's there, and then talk to them as a family together as well. I might suggest more things that are involving the family as a whole and trying to... I'm really big these days on recommending intergenerational exercise. That's my thing. It's saying, you know what, everyone needs to move. This is going to be good for the person who has dementia who's trying to like, slow things down, if possible. It's gonna be good for the family member who's worried if their child about also having a risk, or for the spouse who is also getting older and is seeing those things that are possibilities that are there and wanting to be healthier. So things like that I might recommend, I might emphasize more with someone who has one diagnosis or another. I'm also going to take into account things like mood. So I mentioned if someone has depression, that I'm thinking

about, okay, telling someone who is moderately depressed to go and exercise probably isn't going to get very far. People have a hard time initiating behavior, like an exercise regimen anyway, you add on the lack of motivation that can often accompany depression. And it's going to be that more challenging. So I won't even frame it as exercise I'll say, "Get out of the house and take a walk. That's going to be so good for you. The sunlight is good, you know, the movement is good. Can you plan a 10 minute walk after dinner? Let's say three times a week, let's start there." So I'm going to frame it differently because going straight to, "You to exercise 150 minutes a week, etc." It's just, it's not going to be as helpful. The report will say these are the outcome ideal goals. But when I'm talking about it, I'm going to start with something very basic, and I'm tailoring it to comorbidities that are there. So that's another way that the results can help to inform how I talk about brain health and how I discuss it and also what I specifically recommend for them.

Ryan Van Patten 24:47

There's also the situation where a patient is cognitively intact according to our evaluation, and yet we want to talk to them about risk factors for later cognitive decline. As you heard referenced earlier, sometimes people who actually have cognitive impairment are more motivated to change to prevent further decline and getting worried about dementia and other scary conditions and terms. There can be less urgency and motivation when someone is currently cognitively healthy. We're giving them the good news. So the concepts of prevention and future risk aren't always easy to communicate in a really effective way. People sometimes might reference their aunt or grandfather who, you know, smoked and drank and ate red meat into their 90s and had no cognitive impairment. And this is evidence that all these factors don't matter. So how do you recommend communicating information about prevention and future risk?

Vonetta Dotson 25:37

That's such a great question. I think that's a scenario that we've all encountered if you've done clinical work for any amount of time. I like to take the approach of talking to people about, number one, that when it comes to what people seem to fear the most as they get older, it's their memory going down or Alzheimer's disease, that right now we don't have a cure, you know, even with a few medications coming out that, whether you like them, or don't, we know that there's no cure. And so prevention is the best option that we have. So I try to tie it to, we can't guarantee anything based on behavior. And I use lung cancer as an example, oftentimes, that, you know, people will say, "Oh, this person never smoked at all, and they have lung cancer, or this person is smoked all time." There's not a one-to-one relationship between something that we see as a strong risk factor and the behavior, but that the risks are dramatically reduced if you don't smoke. So the fact that you can't guarantee it doesn't mean it's not worthwhile. And because people tend to have heard about something like lung cancer has been known for so long, that sometimes can be helpful with like, we're trying to reduce risk we're trying to do what part that you can, we can't change our genes, which affects our brain and how we age. You know, we can't change some of the early environmental exposures, whether it be how much education we had, or things like that, but we can change our behavior now. And since brain health is a lifelong process, what you do now matters. And it can help sort of move the needle in terms of risk factors. So I try to frame it that way. I think it works. Obviously, depending on the person, it might work more or less. But I think just emphasizing, kind of,

empowerment, saying, you know, you have, giving information that can empower you to make your odds of developing some of the things that you're concerned about as you get older, is one way of saying you're healthy now. But you know, what you do now determines whether or not that stays that way. And also that there can be even shorter term benefits as well, if someone's cognitively intact. You know what, people who exercise when they're cognitively intact sometimes get a boost. Sometimes their memory gets a little bit better, their attention get a little bit better. Who doesn't want to have, you know, better thinking abilities, as I'll say it. So also emphasizing that you get your moods better, you feel happier, you sleep better when you exercise, all this, all the things that can happen more short term, can also be a way of getting people to think about, "This is helpful for me right now and can help me sort of age better down the road."

John Bellone 28:11

Yeah, I love that approach. I take a similar approach of telling patients, you know, "You, you could be doing everything right and still develop Alzheimer's disease." We all have some degree of risk just at baseline, and some people have more of a risk than others, if they have, you know, one or two alleles of APOE4, for for example, but I also don't, I don't want people to feel guilty if they do end up developing neurodegenerative condition or have a stroke or something. It's not necessarily that it was something they did wrong. So I was gonna ask you how you frame, kind of, genetic risk with patients, but you answered it. I don't know if there's anything else you wanted to say about that, though?

Vonetta Dotson 28:48

Yeah, I'll just add that I make a point to make sure I'm being realistic when, when I communicate to the patients, because I think the worst thing we can do as a field is to undermine ourselves by making claims that are too extreme. And so saying that, "You know what, the genetic risk is there, and I can't sugarcoat that. But what I can tell you is that the research shows that you can reduce the negative that comes from genetic risk by doing these things, but I can't guarantee anything." And like you said, I can emphasize, if something still comes up, it's not blaming you. But it's saying hey, take what whatever control you could potentially have, and try to make whatever shift in that risk that you can, knowing that nothing is absolute. It's a balance, right? You want to give them some hope and make them feel empowered but not sell them something that's not true. And I really think we have an ethical responsibility as neuropsychologists to make sure that we give accurate information in a way that makes people feel empowered but not over selling what we know or what the benefits are. Sometimes for myself, I have to get, be careful because I get really excited about all this. So when I'm talking about exercise, I'll kind of say, "Oh, exercise is a cure-all kidding, not kidding." And I'm like, okay, I gotta be careful. When I say that to my students, that's one thing, but was there to a patient, I want them to say Dr. Dobson told me that exercise cures everything. I'm like, okay, it does not cure everything. But it does affect every aspect of your life. And if you do it, you're going to feel better and reduce your risk. And so trying to convey that enthusiasm without making someone so like, "Oh, exercise for a week, and you don't get dementia!" I'm not saying that. So I always want to make sure that I'm being clear about why I'm enthusiastic and what the potential is for the benefits of these different behaviors.

Ryan Van Patten 30:39

You know, like what you said earlier about how we know that all these brain health behaviors, exercise, sleep, nutrition, have positive effects, on cognitive functioning, and in other areas. So by the time we're having brain health conversations with our patients, typically, we know them quite well. And we can steer the conversation in a direction that's important to them, like you mentioned sleep. If trouble sleeping is something really critically important to somebody, and we want to talk to them about exercise, we might also mention, you know, it's not just your memory and thinking that exercise can help with. It can also help you sleep better, which helps other things, you know, down the line, heart disease, and if somebody gets sick a lot in the winter, they get, if they're prone to catching colds, we can go there, if they're worried about cancer, we can go there. So without, you know, overwhelming them with a list of all the benefits, we can sort of tailor the conversation to what is important to that person and hopefully get some leverage.

Vonetta Dotson 30:39

Absolutely. It's like being a salesman, but in a ethical way. It's saying, "Okay, what does this person seem to want, you know?" The car salesman's like, "This person is dressed this way and has this kind of bad, I can get them to buy this expensive car." We're saying, akay, again, in an ethical way, these... they've said these things, I'm getting a clue for what's important to them, or ask them directly. And if it's accurate, of course, then I'm going to use that as my in, trying to see what's going to be the best way of getting buy in from them that is tied to the literature, that is reasonable, and that is realistic in terms of our claims.

John Bellone 31:37

And at its base, sales should be about filling a need that somebody has and taking a values-based approach. What do they value most, what do they care about most? And then offering interventions targeted at getting what they, what they want. It's not, a not a sleazy thing at all, I mean, we're all selling all the time.

Vonetta Dotson 32:31

Right.

John Bellone 32:33

I also like, I like how you said, we don't oversell the potential upside, there are plenty of people and companies doing that already, so, you know, promising things that are not evidence-based. So we have to couch it in the research, of course. But, but I think it comes down to control as well, like you were talking about. Let's... there is this genetic risk, but there are plenty of things under your control. Let's focus there, and we can reduce risk. I'm curious if you have thoughts about the application of epigenetics to brain health education, because I think it could even strengthen our approach in potentially reducing the genetic risk.

Vonetta Dotson 33:14

Yeah, I think a lot of people aren't aware, a lot of laypeople are not aware about the role of epigenetics. And so I think that's another place where being realistic, but also giving information is helpful. You know, that, you know, even when there is... there, there, our environment, our behaviors, and our choices can actually literally affect our genes in ways that we didn't realize years ago. So I think that's what we have to definitely be really careful, because we don't want to make it seem like, "Oh, we're going to take away whatever genetic risk you have for X, Y and Z." That's not gonna, that's not gonna work, because at some point, again, the field loses legitimacy if we go too far with it. But I think giving that bit of, of information and hope that, okay, even with some genetic risk, research shows that there actually is an impact of what we do and the environment we're in on the genes themselves, although more reason why still empowered to even do some things to try to affect your trajectory throughout your life. So I think that's an important bit of information we can include in some of our discussions with patients.

John Bellone 34:25

Yeah, yeah, the genes and environment, they're bidirectional. So, yeah.

Vonetta Dotson 34:28

Exactly.

John Bellone 34:29

I've heard some claims that certain brain health domains like physical activity or sleep are more important than others. You know, typically, I've seen this come from a researcher or clinician who might work primarily in that area that they are, are claiming is the most important, which isn't a surprise, but I haven't really seen any rigorous empirical work that supports the notion that any one of the domains is consistently more important than others. And of course, they're all closely intertwined, intertwined, as we've been talking about, but do you think it's possible to rank them in terms of overall importance for the general population? Are there individual difference factors that are important when thinking about a ranking list for your specific patient?

Vonetta Dotson 35:09

Yeah, that's such a tough question, because they're all important. But at the same time, it's hard to get someone to just like, do all these different things at one time, you know, people do actually, for themselves need to sort of rank order. So I'll give you my kind of thoughts as a researcher, and then I'll tell you what I tell clients, which might be a little bit different, because it's individualized. So as a researcher, I tend to focus on the state of the research, right? Like the amount of research, the number of meta-analyses, the strength and quality of the research is where I'm gonna put my most confidence. And so with that lens in mind, there's a reason why I say exercise is a cure-all. I do think that exercise kind of like stands out as being like the best thing that you can do

for your brain. Having said that, that is not minimizing the impact of cognitive stimulation, social, you know, connections, sleep, heart health, all the other things that we know are really important. But I will say exercise, which is tied to heart health is probably what we have the longest history of research, quality research, clinical trials, numerous meta analyses that are supporting it, and research that can be done in a rigorous manner, that some fields are harder to kind of meet. When you talk about nutrition, it's hard to do nutrition research that has that quality. You can't do a one year randomized clinical trial of nutrition that is controlling everything someone consumes. You might have a year of them eating certain foods, you know, every week, but you don't know what else they're eating, you know, we can't have that control on people. And so by definition, the quality of the research just can't quite reach the same level. And that's not knocking nutrition research. Like, it's so important. And we know so much. And there are studies that try and mimic that. But I'm just trying to be honest... I'm honest, when I give talks, and I'm honest with my patients about, you know, some of the research is, I don't want to say easier to do, but more feasible to control than others. And so from that standpoint, I can kind of rank things based on that with, again, exercise coming to the top. Having said that, though, so much is individual. What, what is most important for an individual patient is going to depend on their current lifestyle, what is feasible for them, any edition of brain healthy behavior is better than none. The research does seem to show that having multiple brain healthy behaviors is better than just having one. So there's some kind of additive effect, you know, that you don't want to pick one and stick with it. It's better to, you know, have more, but how the person approaches that depends on their circumstances. And so when I'm talking to patients, you know, I'll say, "Okay, you have these things, and I'm staying really healthy is what research shows, where's a good place for you to start?" And that might be based on, if I want to, if, if they have significant cardiovascular or vascular history, and they're already getting feedback from a cardiologist, "You really need to have a heart healthy diet is problematic." I'm going to probably stress nutrition and exercise first, not because I'm saying that sleep isn't important, nor social network isn't important. But they already have something medical going on, where this probably needs to rise to the top for this person. And so we'll say, "Okay, what's one step you can take when it comes to moving more? What's that you can take when it comes to your diet? And so make one goal for each of those things start there." And I encourage people to sort of make a list of steps they're gonna take over time. So if I'm not going to see them again... Okay, let's say if you had, let's just say realistically, like five things that you want to change, eventually, about your exercise habits or your diet. Write them out, start with one work on that, get it to be automatic. It might take a few months, you might fall off the wagon, if you will, you might need to come back to it, that's fine, but you know what your goals are. And that becomes a priority for them, because that was based on their health history, and them being able to identify particular goals. So I said it's complicated for a reason. It's a big question with a lot to say about it, but I do think that being realistic, as always, individualizing is what it comes down to.

Ryan Van Patten 39:22

One of the critical topics that you cover in your book is what you call the physical environment. So this is related to social determinants of health and includes someone's neighborhood, local community, clean air and water, lead paint, access to healthy food and safe outdoor spaces, and really everything else in a person's environment. Socioeconomic status, or SES is closely tied to physical environment. Of course, SES, itself is very multifaceted, income, education, occupation other things. Importantly, here people of higher SES have, generally have easier access to brain health promoting environments and behaviors compared to people of lower SES, and those in

underserved communities are disproportionately affected by environmental barriers to brain health. So how should we assess people's physical environments and how can we work to overcome barriers?

Vonetta Dotson 40:15

Another really good question, one that I think is complicated, because there's so many aspects of the physical environment, as you kind of listed, that are important, and some of which are harder to assess than others. So I try to start at a basic level by asking people about sort of where they live. "Do you have difficulty, you know, getting to places at... stores that have fresh produce?" Or, you know, I won't say produce, I'll say fruits and vegetables, you know, "Do you have a hard time getting access to fruits and vegetables? Do you feel safe walking in your neighborhood?" because I... walking tends to be like a very basic thing I recommend for people to start moving. But some people live in a place where they, they probably shouldn't be going out walking in their neighborhood, particularly at night, because it's not so safe. Or there's not sidewalks that are, you know, going to be flat enough for someone to be able to, you know, walk if they're older without having a risk of falls. So while sometimes I'll just ask very specific questions, and as part of my process of trying to get at barriers, and so I end up getting it from aspects of the physical environment in that way. I will be honest, I think that, that probably one of the more challenging things to assess as neuropsychologists where, at least to my knowledge, we don't have good, like, standardized, like, measures for being able to ask about this. It's a good area for research for... So for all the professionals listening, hey, this is a great grant idea, I'm gonna saying. I think to develop a way of more systematically getting at some of those issues for research. We tend to do it not as much clinically, but I do think that as we're talking about things that can get in the way, barriers to brain-healthy behaviors, we can intentionally ask about some of those aspects of the physical environment. Maybe we don't even frame it that way to them, but we know what we're getting at, trying to see, okay, this could be number one impacting my overall conceptualization in this case, so it's just good clinical work, period. But number two, it's helping me think about how to help them overcome the barriers to having a healthier life. So it's challenging. I think that as we're getting more research about how important physical environment is, the field will start to move towards that being more standard, kind of, parts of our assessments that we ask about.

Ryan Van Patten 42:21

Yeah, so there's assessing it. And then there's also what we can do to help. And some of the work that needs to be done here is sociopolitical with policy and public health, you know, it's very big picture. And we're talking so far more about sort of a one-on-one or one-on-several, like, if we're working with a family, in a small group, work that we do, like in feedback sessions or cog rehab. So given structural limitations, any pearls of wisdom about what we can do to help when we run into this issue, that we have these great brain health recommendations and the persons on board, but my neighborhoods not safe, I don't have good health care, I don't have healthy food?

Vonetta Dotson 43:02

So I think you mentioned the word advocacy. And that's what it comes down to. And efficacy does not have to be at the sort of broad national level that we often think about what can include that, and we need that. Advocacy goes down to the individual patient level. It goes into within the system, they're in the hospital system. It can be in their community. It can be, you know, local, state, national, there's, it's a range of things. So I think the degree to which we can incorporate advocacy into the work that we do, and also educating and empowering our patients to be able to advocate for themselves is a big deal. You know, maybe we can't for, you know, each patient we see, ensure that they're going to have clean water, right? But we can say, you know, "You're living in this neighborhood." And if there's, if it's known, for example, that particular areas of town have more of an issue with pollution or with their water, it's not so easy for them to just move and relocate somewhere else. But you can say, "Hey, we know that health... the environment we live in is important." If they're cognitively intact enough to be able to be involved more in how they... anything from how they vote, to going to, planning commissioner meetings or things like that, that we might not think to do as neuropsychologists, we can tell them, "These things actually do matter if there's change you'd like to see happen, it has to start small. So maybe you can do that." Or you can say, "You know what, I know this is hard where you live because there's an issue of the drinking water. So here's how to get water that's cleaner for you to be able to drink." Sometimes it's going to be hard because of finances. But you know... This sounds so basic, but getting a water filter, here's how to get a really cheap water filter. That's going to be more helpful than you know, putting in your body something that we know coming out of the faucet isn't clean. It sounds very basic. It sounds very much not neuropsychology. But I think that when something like that does come up and it's clear, that's helpful. And the last thing I'll say about that is that it can sound like a lot to a professional to hear, "Oh, do all these things that are like involving all this, like, homework and research that you have to do yourself. But you can have some ready-made lists of resources for you... that you know that you can turn to when people need it. So I'm not saying have cookie-cutter reports, I'm saying that I can have a list of resources in my community, online, etc, that I know I can go to and say, "Oh, yeah, this person needs this particular connection. I remember I wrote this down, let me recommend this." And then you add to it as more things come up. And I think that when we do that, the initial work does take more time. But it's worth it. It's also a really great way of involving trainees. So I actually love saying... telling my students, "Oh, you know what, we need to figure out how, if there was any good free online exercises for people who are mobility-limited, so go find them and tell me what you what you found." And they go have fun looking for these videos, I have fun checking them out, you know, have someone from exercise science check it out and make sure that it looks good. And then boom, we have this list of resources that the... modeling for the students or trainees how to sort of tailor what we're doing and what recommending to the person's individual needs. I have something that's been searched for one time, that will be good for a while, I'll have to double check and update every now and then. But we don't have to keep reinventing the wheel because we've already done that research to, to begin with. And I think it's a nice way of showing the different sides of what we do.

John Bellone 46:37

I like your recommendation to have patients advocate in their local communities. And that also hits the cognitive and social activity piece too, if they're joining groups and writing letters to the representatives, things

like that. Yeah, they can, you know, petition to get a park put in their neighborhood. I mean, there's so many ways that somebody could do that.

 **Vonetta Dotson** 46:37
Absolutely.

 **John Bellone** 46:37
We're going to talk about your company CerebroFit in a little bit. But I know you have a registered dietician on your team, and I think that might be another potential intervention to help people learn how to cook healthy, even in their limited geographic area. And I think there's always some way to find healthy ways to cook and eat, especially nowadays with delivery services and different options. So...

 **Vonetta Dotson** 47:26
You bring up such a good point. And I think sometimes people have a limited view in their mind of what can be done to be healthier, and they just assume, "Okay, well, it's not really possible, because it's just I don't have anything around me." But helping them, again, identify the options outside of them. You know, there's all kinds of organizations that have free or really cheap meal delivery that's customized to the person's health needs, when they are lower income, you could qualify, of course. But just things like that, that people wouldn't think, "Oh, okay, I didn't realize that I might not have access to be able to easily drive and to get healthy food, but I can actually have it delivered to me, because based on my income level, I qualify for this and I got admitted to this program." People don't always realize that, so getting people to think outside the box, and do the best they can. Maybe it's not going to be like the ideal Mediterranean style diet that we might want to suggest. But it's still better than nothing when you're getting, you know, more consistently lower sodium food because of some changes that you made, as an example.

 **John Bellone** 48:23
Yeah. And I think it's also somewhat of a myth that you can't eat healthy for a reasonable price. My wife and I consistently get meals down to $1 per person per meal, and, you know, you make a soup in batch, you can you can really reduce the costs. So I don't think it's mutually exclusive that we have to choose between eating healthy or saving money.

 **Vonetta Dotson** 48:43
Absolutely.

 **John Bellone** 48:44

One example. Also, I was thinking, you know, we could potentially interface with other community resources, like if there's a social worker in our area, or other allied disciplines. So finding who's in your area...

Vonetta Dotson 49:01

And that's part of what I was saying, in terms of having a list that you go to that, you know, we can probably name off quickly, allied professionals who we probably would want to, at some point, refer a patient too. And so depending on the setting you're in again, that might be kind of set up for you. But if not, then even before you see someone who needs it, you can start getting a resource list together. And then let's say you go to a talk in your university in a different department and you here's my give a great talk, you say, "Oh, they'd person I wonder if they are seeing people clinically." You ask him and he says yes, and then you write that down. You have a new person. So you're, kind of like, constantly updating and adding to your list of people to send someone to, really building this network that is already in place, so it is not scrambling trying to find a way to fill a need, but you already have a list at your disposal for a lot of the professionals that you might need. And again, taking advantage of opportunities to use things online. So obviously some things need to have someone having one-on-one work, but sometimes it could be just realizing, for example, that the area, area agency on aging throughout the country, their websites are going to have all kinds of lists of resources for, particularly for older adults, of course, for different community resources for lots of things that end up being tied to brain health. So go there, see what they have, send your patients to the website, figure out if some of the links are more useful than others. That's something that can oftentimes, if a person has difficulty getting to a professional, there's at least some information to get them going, and some online things that can be helpful.

John Bellone 50:36

I really liked developing relationships with allied health professionals in our community. It also benefits us, not that that's the reason we're doing it, but that becomes a referral source to us. So if I, if I reach out to a geriatric care specialist, I might send patients to them, they would in turn send patients to me, and it's a really good way of building the community up, I think so...

Vonetta Dotson 50:59

Absolutely.

John Bellone 51:00

The other potential barrier, aside from just low SES is, is stigma that often happens with patients who are maybe less inclined to reach out to professionals like neuropsychologists for assessments and also for intervention services. I don't know if you have anything you wanted to say about stigma in different, different groups of people and how it relates to what we do.

Vonetta Dotson 51:22

Yeah, that's a big topic, stigma. It still continues to be an issue as much as for some groups, there seems to have been a shift where there's less stigma associated with, you know, psychologists and other mental health professionals, it still, it still exists in all communities, and especially in, unfortunately, some of the most vulnerable communities. So, you know, people who are from, you know, racial and ethnic minority backgrounds tend to have more stigma. But oftentimes, there's these disparities where there's actually a higher risk for any kind of problem with brain health, whether it be mental health, mental health and brain health are the same, even though we don't always think of it that way. But mental health is brain health, because when your brain... everything ends up being tied to the brain, but people and in their mindset wright them. But there's a stigma for both, sometimes. People don't want to acknowledge that they're having memory problems, because they think that they're going to lose their independence. People don't want to acknowledge depression or anxiety, because of the long-standing stigma that can be there. I think that we can do a lot to help reduce that stigma, or at least, again, we're laying the groundwork for things, we can't necessarily change someone's mind about how they felt about an issue, like by snapping our fingers. But we can give information, normalize experiences and behavior and make... I like to make comparisons to physical health, because oftentimes, people don't feel as much stigma about a lot of physical health conditions. Some they do. But if someone has heart disease, they tend to not feel stigma about it, because kind of see it as like the happens. And so, or someone has diabetes, I love using the diabetes example when I'm talking about something like depression, let's say, you know, "If you have diabetes, you have things that you need to do the rest of your life to keep this managed. So it's going to be your diet, it's gonna be your exercise, depending on what type of diabetes, maybe you need insulin, you have to keep doing this to sort of maintain your health, depression is the same way. You know, depression is something that... it can pop up, it can be a constant sort of struggle, if you're not doing what you need to to maintain it. Might be medication, might be therapy, hopefully it will be exercise, the things that you do, but it's the same thing as diabetes, it is a chronic condition that is based on something in your body that needs to be adjusted and see it as the same way." So again, that's not going to necessarily automatically erase the stigma, but it can help to start changing the thinking to reduce the stigma when we compare it to something that feels kind of normal, that feels like something that's not bad, that they don't feel guilty about and saying it's really the same sort of thing.

John Bellone 53:59

I'm glad I'm glad we're talking about mental health now, too, because I know, that's a big topic that you cover in your book. It's a big area of interest for research for you, aside from just how you approach it in terms of the stigma just in general, how do you recommend framing and approaching conversations about mental health with patients that you know are coming in for a neuropsych eval with you?

Vonetta Dotson 54:22

Yeah, a big part of what I do is making that link between mental health and cognitive functioning or just kind of general brain health. I don't know how many times a week I say mental health is brain health. I say all the time, but... because it's one of my mantras, because I think it's just so important for people to see the two as

connected, particularly because if I'm seeing someone for neuropsychological assessment and there's depression or anxiety or something else going on. I'm almost always seeing that reflected in their cognitive test scores. And so, being able to explain how there's this link between the two, which comes down to the brain, right, and when, when there's something that's kind of off, if you will, in the brain that affects both mood and cognitive functioning, which is very common, then it seems like it kind of clicks a little bit more. So it's a way of not getting too technical, but just saying, you know, the brain controls everything we do, as I said, at the beginning of this interview, and so when, when something is, you know, sort of off when it comes to brain, it can affect all kinds of ways it can affect your physical functioning, your, your memory, your attention, your mood, your anxiety level, all those things can be affected. So what can we do to get at that root cause, you know, here are some things that actually could affect both things, it might actually help to sort of stabilize or even improve your cognitive functioning, also it could help with, with your mood, because they're so interconnected. So I like to stress the interconnectedness of basically brain, cognition, mood all together. And in that way, that helps to sort of normalize the experience, like I said before, it helps to reduce the stigma. But it seems like it also, at least in my mind, can help to motivate those healthy behaviors, because it's saying, you're getting a lot of bang for your buck, when you do these things, because you're improving multiple aspects of your functioning, and not just saying... I can say, "Okay, if you exercise, your heart's gonna be healthier, your brain is going to be healthier, your, you know, speed and your attention could be better, and your moods gonna get better." My gosh, that's a, you know, I said, cure-all earlier and there's a reason for it. Again, I got to say the cure-all park. But just emphasizing the interconnectedness, I think, is a really helpful thing. And so I try to approach conversations about mental health from a brain health standpoint, when I'm seeing someone for neuropsychological assessment.

Ryan Van Patten 56:45

I love your enthusiasm. I feel the same way. Sometimes in a feedback session, I think, similarly, I'm toning it down, just so you know, as to be professional and meet them where they're at. And maybe they're not as excited about exercise or sleep as I am.

Vonetta Dotson 56:58

Yeah, sometimes I'll have a patient who will tell me... so, "You can't really about this," essentially, and I say I do because I believe in it and I know, I know this to be true. I've been studying this for a while, you know, I've been seeing lots of patients, as... I live it, I try to live, live it, practice what they preach. And, yeah, I think we can show enthusiasm in a way that is still professional and so, and of course, it's depending on the person, sometimes the situation might not sort of warrant that. But in other situations, like, let's just be enthusiastic and excited and say, "Hey, we're gonna help here, what can we do?"

Ryan Van Patten 57:30

Great. So most of our questions and topics of conversation thus far have been geared toward one-on-one or small group conversations about brain health, although we did touch on public health, but as brain health

experts, we can also be involved more broadly, such as giving talks about brain health in our local community. So what's the role of the neuropsychologist at the public health level?

Vonetta Dotson 57:51

I think it's so important. So one of my favorite things to do is actually giving talks in the community. That's where all the enthusiasm, I don't hold back, you know, I can give a talk and just be you know, off-the-wall excited about this is really, really interesting, exciting. I've been told that I shouldn't use the word cool, because that like no one thinks it's cool except for me. But I think it's cool, these links between the brain and behavior. So I think that we have to get out of our clinics or our ivory towers and to people, I've brought our groups of people, obviously, when we see patients, we're helping them in their families. And that's great. But the degree that we're able to, and to the degree that it fits within our own careers, thinking about that public-facing message, I mean, that's why I wrote the book that I did, because I wanted to have something for the public, and not just something for other, you know, scientists, other psychologists, so thinking about how to translate what we do to groups of people. And those groups can be different subsets of the public, but just thinking about how we can convey it and spread the message more broadly, I think is really important. Again, understanding that not everyone is going to have that be a big part of their career. And I understand that we all have specializations within neuropsychology. But when the opportunity is there, I think it's a really important thing to do. And one that we don't get trained to do that much. I think it's changing maybe a little bit, and as more and more programs are trying to think about science communication, and that sort of, sort of topic. But it's challenging sometimes, because we think that we're being clear to a lay-audience, but we're not. And when I say we, I'm saying, talking about myself, because I had to get a writing coach for my book because I was realizing that I'm like, "This isn't coming off that convincing." Let me be clear, I didn't say that the editor at the publishing company said we liked this idea but it feels like it's not quite orally audience as I thought it was. I worked with a writing coach and transformed the, the sample chapter that I had for my book proposal and it just came to life and the editor was like, This is awesome. This is what we wanted, let's move forward with it. So I guess I learned firsthand that, um, engaging a lay audience, reaching different communities sometimes requires more work than just using small words. I shouldn't say sometimes, it always does It's not the saying, "I'm going to use small words to explain this," it's saying, "I'm going to come to where they are, give examples, tell stories, connect with what they care about. And then convey that information in ways that are bite-sized doses for people who don't want to spend an hour and just looking at data slides, that kind of thing." So there's a lot of work that has to go into it. But I think it's really important as neuropsychologists that we take advantage of the opportunities to do that.

John Bellone 1:00:45

Well, whatever you did for your book, it worked because Ryan and I really both got a lot out of it and enjoyed it.

Vonetta Dotson 1:00:51

Thank you.

Ryan Van Patten 1:00:52

I give it away to patients pretty frequently. Like, I have a copy in my office and when I'm talking, you know, a giving feedback to a patient and it's so well suited for them, so I often give them my copy, and then just get another one. And then put that one away.

Vonetta Dotson 1:01:07

Well, I appreciate that, that's really great. I love hearing that. To me, that's like the best response I could possibly have for the book because it's doing what I want it, which is that it's like it's reaching people who don't necessarily have the scientific expertise to read my peer-reviewed journal articles, which are interesting in a different way, but not the same as writing the book.

John Bellone 1:01:27

Right.

Ryan Van Patten 1:01:28

We just have two quick questions before we let you go. These are our so-called "bonus questions." They're about the field of neuropsychology more generally. They could be related to anything we've talked about today, but they don't have to be. So if you could improve one thing about the field of neuropsychology would it be?

Vonetta Dotson 1:01:44

So hands down, it's addressing diversity issues, both in the field in terms of who's coming into the field and how we address the needs of people from, from different backgrounds who aren't represented as well. But then also, I would argue, probably more importantly, how we actually address the needs of the community. And right now, there's just... the people who are most at risk for this... neuropsychological, psychological brain health disorders are that people who often are having less access to services, don't have norms that represent them, again, don't have professionals who kind of match their identity, which can oftentimes be really important, and aren't getting the information about how to have better brain health. So to me, we have to address that the population is aging and becoming more diverse, both things are happening. And the field is not fully prepared for either of those changes, because age is an aspect of diversity. So actually, including that I'm using diversity very broadly to refer to all the individual variables that make us people and individuals, and that oftentimes aren't addressed. So there's efforts being made, which I appreciate, but we've got a long way to go. We got a lot to do, particular when it comes to norms. I could be here for another two hours talking about norms, so I'm not going to get into that war. But we have a lot of meat there and, I love this field. I think the best where we have our biggest weakness.

Ryan Van Patten 1:03:04

We're with you.

John Bellone 1:03:06

Alright, and the last question, what is one bit of advice that you wish someone told you when you were training, or maybe somebody did tell you that really made a difference? We're looking for an actionable step that trainees can take.

Vonetta Dotson 1:03:16

So, such a hard question... I think, probably it's something that I saw as opposed to someone telling me. So what I mean by that is that I observed two faculty members in particular when I was in grad school, who seemed somehow to be able to be really, really successful, but also have a life. And that for me was a big deal. I actually emailed both of them and said, "Can I have a meeting to talk with you about how you are so successful in academia and still have a life because no one else around here seems to be able to do that." And I was thinking about, "Do I want to go into academia? Is this going to fit the kind of life I want to have?" and that, that observation, and then talking to them and getting advice from them, has made it possible for me to do what I do and still have balance. It sounds almost cheesy to talk about balance. I think everyone talks about it, but few people do it. But that is huge to me, like I, I work really hard to do all the things I do and still stop working by 5:30. Every now and then by 6:00 because I want to have my evenings to spend time with my husband and play with my dogs and talk to my family and do things with my friends. I minimize working on weekends, and I'll set a big grant deadline. You're not going to be working on weekends. Like this last weekend, I was watching NFL playoffs, like that's what I do. I have my hobbies. I practice what I preach when it comes to brain health, but it's hard. It's hard to do. And I think that what has made me able to stay this enthusiastic about the field and to juggle multiple responsibilities is because I made it a priority early on to work really hard but also play hard and to know that, as much as self care is like a buzzword that you have to have that, like, you have to do things to actually be a person, and that makes you a better professional and it makes you have longevity. I joke with my husband like, "I could do this forever." He goes, "No, you're not. You're going to retire one day." He's like, "We're gonna, like, be, you know, older people who are just traveling and not flipping." I'm like, "Okay, that's fine, too, but I think both, right?" But I say that jokingly to say that that's how much I feel like I'm keeping things in balance. And that has been huge for me. And so that probably would be, yeah, one of the most influential things that I saw by modeling, other people modeling, that I tried to pick up on, and that has really changed my career.

John Bellone 1:05:33

Yeah, that's so excellent. Yeah, me too. Great. Well, yeah. Thank you so much.

 **Ryan Van Patten** 1:05:37
Yeah, thanks. This is great.

 **Vonetta Dotson** 1:05:38
Super cool. Thanks for inviting me. It's a lot of fun. You guys were fun to talk to you on all of these topics. This was great. Thank, thanks again, Vonetta. Take care and hopefully I'll see you in a couple weeks.

Exit Music 1:05:48

 **Ryan Van Patten** 1:05:52
Well, that does it for our first conversation with Vonetta. As mentioned in the intro, the INS neither promotes nor recommends any commercial products or services discussed in this episode. Be on the lookout for follow up episodes on Vonetta's work with CerebroFit and NASA. We also have upcoming content related to ecological validity and digital assessment, neuropsychiatric symptoms and degenerative diseases, Parkinson's disease, cognition and addiction, neuropsychology in infants and toddlers, and other topics. As always, thanks so much for listening and join us next time as we continue to navigate the brain and behavior.

 **John Bellone** 1:07:00
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 **Ryan Van Patten** 1:07:12
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