# Health and Human Science Matters Season 3, Episode 10: Tricia Grady-Dominguez

Tricia Grady-Dominguez:

I was like, "I want to be a researcher, but I want people, I want to do research where I can see how this impacts human beings who are around me." So, I was like, "All right, I need to find a field that needs research about humans." At the time, because I really was craving this sort of human interaction, I was volunteering at the local children's hospital in Albany Medical Center, and it was really enjoyable and kind of met that need that I had, and I ended up talking to an occupational therapist who was there to see a child who had experienced a traumatic brain injury early in life, and he was about four months old, and-

Matt Hickey:

Oh, wow.

Tricia Grady-Dominguez:

... she was an occupational therapist and she was just helping this child bring his hands together to clap, which is a really important skill. Now, I understand how that impacted his play, how that would impact feeding different, kinds of activities later in life. But, at the time, I just said, "So, what's OT? Tell me about it." And she told me about it, and I was like, "All right, that sounds pretty cool, but I want to be a researcher," and she was like, "Oh, OTs are really interested in having more research in our field. We really need it, everybody wants it, everybody always talks about, 'We know what we're doing works, but we need the evidence. We need people who want to design the studies and ask the questions and put out evidence for OT.'" So, I said, "Okay, I'll be an OT."

Avery Martin:

Welcome to Health and Human Science Matters, a podcast by Colorado State University's College of Health and Human Sciences. I'm your co-host and digital media strategist, Avery Martin.

Matt Hickey:

I'm Matt Hickey, associate dean for research and graduate studies. In our college, we make it our mission to optimize human health and wellbeing through discovery and innovation. Don't just take our word for it. Each episode, we sit down with people who fulfill that mission, our college faculty and staff, and today we're lucky enough to have one of our dean's fellows with us, Patricia Grady-Dominguez is a PhD student, very close to defending her dissertation in the Department of Occupational Therapy and a PhD in Occupation and Rehabilitation Science.

Tricia Grady-Dominguez:

You got it.

Matt Hickey:

We continue to plug your unit because I don't want anybody to confuse that with the OTD program. It's a clinical doctorate in occupational therapy, that just says its first cohort on campus now. So, we're excited about that. But, you're in a different PhD program, a research-based program, we're here to talk about that. So, welcome, we're delighted to have you, and we're looking forward to our conversation.

Tricia Grady-Dominguez:

Thanks. I'm really excited to be here.

Matt Hickey:

We have this focus on big problems and who's the person behind the big problem. So, we'll start a little bit with you talking about when you think about your research as you're writing the final lines of your dissertation, getting ready to submit that to your committee, and you conceptualize what are the big problems that my dissertation is seeking to pursue. Can you share a little bit about what those are?

Tricia Grady-Dominguez:

Yeah, absolutely. I think that many of us will have heard before that there's an increase in amount of children with autism and other diagnoses that have associated sensory features. So, kids who are over-responsive or under-responsive or just don't correctly integrate the sensations that come into them on a daily basis, whether that's visual or auditory sensations, but also sensations about their body, where they are in space, how they're feeling on the inside.

So, the big problem that my research seeks to address, well, the big problem is that we have these kids and we have the capacity to treat them, we have some great interventions that have been shown to be really effective to help these kids, not to change their sensory systems as much as just to help them be more functional in the worlds that they live in, and whether that does take advantage of some of the neuroplasticity in their sensory systems or whether we're going for different approaches that sort of just help them compensate for areas that are more challenging.

We have these great interventions, but we don't have as many great assessments, ways to say, "What are the particular problems that this child is having? What are the source of these problems? How do we pick the best intervention to use with them?" So, I'm working on the Evaluation in Ayres Sensory Integration, the EASI, which is a novel instrument. It's a comprehensive suite of tests that OTs specifically, but also potentially clinicians from other fields can be trained to use and to deliver to these kids to have the best, most tailored intervention approaches for them and for their families and the environments where they live, and I'm looking at basically, "How good is this measure? How well does it work? Does it give us data that we could reproduce? Does it give us data that means something to clinicians?" And that really helps us make the decisions that we need to make to treat these kiddos.

Matt Hickey:

Part of what I'm hearing here, again, is tailored interventions that are child-specific, condition-specific and not a one size fits all approach, which I suspect a lot of parents will say, "Yahoo, because my child is an individual, they're not necessarily typical of any particular autism spectrum disorder or whatever else it might be." So, I think that's certainly ambitious, and I suspect you'd have an audience that is eager to hear. We should get you back in after you defend. You can tell us more about the outcome of your conversations with the committee-

Tricia Grady-Dominguez:

How it went?

Matt Hickey:

Exactly.

Tricia Grady-Dominguez:

Well, I'll tell you a spoiler alert, the instrument is working really well so far. It's long, and we've got some issues with is it going to be feasible for clinicians to give the whole thing in one session? So, we're working on that kind of thing, trying to make it as streamlined as possible. But, so far the data that we're getting from it is really promising.

Matt Hickey:

That's great.

Tricia Grady-Dominguez:

We have, just to plug in real quick, this has been an enormous effort with thousands of data collectors. We have normed this instrument in 50 countries. So, we've looked at typically developing kids' scores on this instrument in, I think, we're up to... It was 51 countries about a year and a half ago, and I think it might be as high as like 70 now, we have 18 different languages that it's been translated in.

Matt Hickey:

Oh, my gosh.

Avery Martin:

Wow.

Tricia Grady-Dominguez:

And over 5,000 kids.

Matt Hickey:

Wow.

Tricia Grady-Dominguez:

Typically developing kids, in addition to we have cohorts of kids with different diagnoses and different conditions that we're looking at their data as well.

Matt Hickey:

That is remarkable.

Tricia Grady-Dominguez:

I know. I don't know how I got this lucky, they just handed me this giant dataset and they were like, "Go ahead. This is a really meaningful project that's going to make a difference in your field. Do it."

Matt Hickey:

Wow. That was a great opportunity.

Tricia Grady-Dominguez:

It's like, "All right."

Matt Hickey:

And you did.

Tricia Grady-Dominguez:

Yeah, really was.

Matt Hickey:

Good for you. I have two questions I want to push a little further for the sake of our audience. When you talk about an instrument, you're talking about a tool, this may be in the old days of paper and pencil thing. Nowadays, it may be something that's on a iPad or something along those lines. But, is it the clinician that is somehow grading or scoring the child in this case?

Tricia Grady-Dominguez:

So, the EASI is a performance-based instrument. So, the examiner, the tester, the clinician, in most cases, we'll ask the child to do a series of activities, play some games, and during those, the kids will receive scores that are scored by the clinician, and it really is kind of a paper and pencil task right now. We do have a scoring program that's going to launch at the end of this month that will allow the testers to then input their paper and pencil data in and easily get standardized scores with interpretation guidance and everything for this. But, we're hoping eventually to pivot it to sort of computer adapted testing where the testers are guided on which items to give the kiddos to make the test less burdensome and more tailored to the kid's specific needs. But...

Matt Hickey:

That's great.

Tricia Grady-Dominguez:

Yeah.

Matt Hickey:

How long does the assessment typically take?

Tricia Grady-Dominguez:

An expert clinician and a kid who is regulated and ready to participate could do this in probably an hour. Most of our clinicians have given us the feedback that it takes longer than that, sometimes takes multiple sessions to deliver all the sub-tests of... Or, they're not sub-tests. All the individual tests within the EASI might take a couple of sessions, and it might take more than an hour for sure, and it depends on the expertise of the clinician. So, we have really rigorous training programs for clinicians wanting to give this instrument to make it as convenient as possible. But, a big part of my dissertation work has been cutting this instrument down, taking out every item that might be redundant, every item that doesn't give us valuable clinical information, and we have a thesis student right now that I'm supervising who's working on seeing if we can collapse some of the tests into more screener tests where you could say, "Okay, is there a problem with this child's praxis specifically? And if so, do I need to give individual tests within praxis? Or is this child kind of doing okay there?"

So, we're always trying to think of ways to make it more convenient for clinicians, but not to lose the comprehensiveness that you really need in order to tailor an intervention that is this kind of complex, to treat this kind of condition that really is so varied among different individuals.

Matt Hickey:

Indeed. Over the course of a lengthy session with a child, you may run into some issues that confound your interpretation at minute 55 or 60, right? They may be getting frustrated or fatigued, and suddenly the fidelity of your scale becomes-

Tricia Grady-Dominguez:

Absolutely.

Matt Hickey:

... [inaudible 00:09:11], those bite size pieces on occasion probably make clinical sense, right?

Tricia Grady-Dominguez:

Yep, sure do, and we try to have our clinicians trained to pay attention to that. Is this really an inability or is this test fatigue? If it is, how are we going to-

Matt Hickey:

And it's not always going to be verbal, simple verbal cues, right?

Tricia Grady-Dominguez:

No. Most of our kiddos typically developing are not between the ages of three and 12 are not going to tell us, "I've had enough." They will try to continue compensating, or they'll do what three-year-olds do, which is sometimes violent and always exciting when they're done testing. But, most of our clinicians know and are pretty good at interpreting the difference. But, it is an important piece because that can impact how good the scores are that you get, how meaningful they are.

Matt Hickey:

Sure. Yeah. Now, another thing I'd like you to unpack just a little bit is this phenomenon of neuroplasticity. What does that mean?

Tricia Grady-Dominguez:

I'm explaining it to a high schooler.

Matt Hickey:

Or me, which would be equivalent.

Tricia Grady-Dominguez:

Sure.

Avery Martin:

Yeah.

Tricia Grady-Dominguez:

Neuroplasticity is the idea that what we've got is not necessarily what we have forever. So, the connections that are built in your brain are plastic and that they are flexible, and especially when you have younger children, we're sort of able to provide different kinds of sensory input, and also really it's important that the child takes an active role in selecting the kinds of sensory input that they want and that their bodies feel that they need, and that can actually change the pathways in the brain and help them be more tolerant to different kinds of stimulus or to better understand different kinds of stimuli that are coming in.

So, that's sort of at the foundation of Ayres Sensory Integration is the idea that the nervous system is not fixed at any point, and especially in childhood, and through play, and child directed opportunities for enhanced sensory perception or for enhanced sensation, children can begin to show more, well, they call them adaptive responses. So, responses-

Matt Hickey:

That's the word I was looking for. Yeah.

Tricia Grady-Dominguez:

Responses that are appropriate to the situation that allow the child to play, to engage in dressing or bathing or whatever they need to do without maladaptive behaviors essentially.

Matt Hickey:

That ability to adapt, number one, is remarkable to me, and because we study it all across the collage in variety of different ways, whether they're talking about mitochondria, the little energy producing power plants in ourselves, to our brains.

Tricia Grady-Dominguez:

Yeah.

Matt Hickey:

It seems to me in this context that there's also a huge element of hope for parents that your child is not fixed in this condition. We can work with them and they can adapt.

Tricia Grady-Dominguez:

Yeah, yeah, absolutely, and part of this instrument, and it's not part of my dissertation, but it goes along with the EASI, we have a companion instrument called the FLIQ, the Family Life Impact Questionnaire, and that is really at the heart of what we as OTs do, which is to say, "How is your family life going? What's going well for your child? What's going well for your family? What's difficult for you?" Those are the areas that, as OTs, we target and we say, "This child may always have a sensory system that's different from the normal," whatever that is. But, if they can go make friends, if they can be happy, if they can achieve success in school, if you can get out the door to do errands, if you can sit with your family for a meal or whatever's important to that family, if you can do those things, then we've done what we need to do.

So, we take advantage of neuroplasticity, but not just for the fun of it. It's not about just changing the kids and making them more normal. We don't really care. We care about can their families function? Can they function? Are they happy? Are they able to achieve the things that are meaningful to them?

Avery Martin:

That's incredible.

Matt Hickey:

It's neat, isn't it?

Avery Martin:

Yeah.

Matt Hickey:

My goodness.

Tricia Grady-Dominguez:

It's really cool.

Matt Hickey:

Yeah.

Tricia Grady-Dominguez:

It's really cool, and as a researcher, I've had the opportunity to really be in touch a lot with clinicians who are doing this on a day-to-day basis, and I have my clinical degree, but I haven't really used it very much. But, one thing that I've really enjoyed about this easy project is that I get to talk to and hear from clinicians and families and kids, but who are seeing changes from these interventions, and they're really hungry for data that shows that this is working so that they can say this is an evidence-based intervention, and it is an evidence-based intervention. It's been certified as an evidence-based intervention, and they want to be able to tell families, "We're doing something that we know can make a difference with your child." Then show them at the end of the intervention, it did. You can do these things, you can sit at the dinner table, your child is making friends, playing on the playground, doing whatever it is that was important to that family and that child.

Matt Hickey:

This is exactly what we mean when we talk about impact.

Avery Martin:

Yeah.

Matt Hickey:

Right here.

Avery Martin:

Yeah.

Matt Hickey:

So, thanks for sharing. I really appreciate it. I want to move to your pathway. So, we're on the cusp of defending our dissertation, and we wish you every bit of good luck and fun for that day.

Tricia Grady-Dominguez:

Thanks.

Matt Hickey:

I know it's going to be... I had this conversation for 25 years when I talked to my own PhD students, you're going to be fine. That's exactly... Yeah.

Tricia Grady-Dominguez:

That's what I need to keep saying. Yeah.

Matt Hickey:

Yeah. You've been well mentored, and these pathways are meant to culminate with a celebration. It's also, of course, a challenge, you have to think on your feet and all those things. But, I want to rewind the tape a little bit and talk about your educational journey, maybe familial or social influences, particular mentors along the way. Yeah, again, could that might be a parent, it might have been a college professor, could be both.

Tricia Grady-Dominguez:

Sure.

Matt Hickey:

So, tell us a tale.

Tricia Grady-Dominguez:

I told you I would tell you a story about worms, right? This is the story about worms. I got my degree, my bachelor's degree at an engineering school in upstate New York. It's called Rensselaer Polytechnic Institute.

Matt Hickey:

I know it well.

Tricia Grady-Dominguez:

Yeah.

Matt Hickey:

I know it well, I grew up in upstate New York.

Tricia Grady-Dominguez:

No way, whereabouts?

Matt Hickey:

Well, I grew up near Utica, it's sort of closer to Cooperstown, but then my folks moved up north of RPI, up near Plattsburgh, actually a little bit north of Lake Placid. Yeah, so...

Tricia Grady-Dominguez:

Yeah, I'm familiar with that area. So, we were in Troy, New York, which is-

Matt Hickey:

By the way, this is the Harvard of New York. It's a phenomenal school.

Tricia Grady-Dominguez:

I had a tremendous opportunity to go there and learn about worms.

Avery Martin:

That's great to know.

Tricia Grady-Dominguez:

Let me... I'll tell you.

Avery Martin:

Yeah.

Tricia Grady-Dominguez:

So, I got my degree in not engineering. I got my degree in biochemistry and biophysics, and I chose it because I knew I liked science, and that had the most science names in it. It had bio, chemistry and physics in it. I was like, "I took all three of those AP classes, this is going to be great."

Matt Hickey:

I'm going all in.

Tricia Grady-Dominguez:

I loved it. I really loved the coursework, I loved the learning process, and I had a professor who needed some research assistance for his lab, and through working with this professor, I had the opportunity to learn about the research process, and I was like, "I love this." But, his research used worms as a model, which was great, and kind of gross, and really, really, really boring, and I was like, "I love the research process. I love the lab review. I love looking at what's out there, what's missing, what questions can I answer, how can I design a study that'll answer these questions. I got so excited about that, but I was not excited about worms.

Matt Hickey:

Go figure.

Tricia Grady-Dominguez:

As it turns out... Hey, listen, some people, everybody's got their thing, right? It was really just a model organism. I'm sure he was doing much cooler stuff that I didn't really understand at the time. He actually really was, he was doing cancer research with P53 and all kinds of cool stuff.

Matt Hickey:

Oh, sure. Yeah, yeah.

Tricia Grady-Dominguez:

But, I was like, "I want to be a researcher. But, I want people, I want to do research where I can see how this impacts human beings who are around me." So, I was like, "All right, I need to find a field that needs research about humans." At the time, because I really was craving this sort of human interaction, I was volunteering at the local children's hospital in Albany Medical Center. They had a pediatric wing, and I went there and I rocked babies in the NICU and I brought coloring supplies to kids in the medical ICU, in the pediatric ICU, and it was really enjoyable and kind of met that need that I had, and I ended up talking to an occupational therapist who was there to see a child who had experienced a traumatic brain injury early in life, and he was about four months old.

Matt Hickey:

Oh, wow.

Tricia Grady-Dominguez:

She was an occupational therapist and she was just helping this child bring his hands together to clap, which is a really important skill. Now I understand how that impacted his play, how that would impact feeding, different kinds of activities later in life. But, at the time, I just said, "So, what's OT? Tell me about it." She told me about it, and I was like, "All right, that sounds pretty cool, but I want to be a researcher," and she was like, "Oh, OTs are really interested in having more research in our field. We really need it, everybody wants it, everybody always talks about, 'We know what we're doing works, but we need the evidence. We need people who want to design the studies and ask the questions and put out evidence for OT.'" So, I said, "Okay, I guess I'll be an OT. That sounds fine."

Matt Hickey:

The stars are starting too high.

Tricia Grady-Dominguez:

Yeah. Well, it could have been anyone, right? I imagine if a speech therapist came in, I could be there too. But, I feel so fortunate that OT is where I landed and really found my home, and I also think that I could have been really happy as a speech therapist, they're also wonderful, but-

Matt Hickey:

Sure. Did the notion of physician, surgeon or cardiologist, any of those things ever cross your mind or?

Tricia Grady-Dominguez:

I love my life and all the things that I do that are not school.

Matt Hickey:

Good for you.

Tricia Grady-Dominguez:

It crossed my mind, it was always a path that my family thought would be a good fit for me.

Matt Hickey:

Now, do you come from a family of physicians?

Tricia Grady-Dominguez:

Lawyers, every single one of them.

Matt Hickey:

Oh, no kidding. Wow.

Tricia Grady-Dominguez:

My sister and my mother, my father. It's horrible.

Matt Hickey:

They're all lawyers.

Tricia Grady-Dominguez:

Yeah. Awful. Every lawyer joke you can think of, I've already-

Matt Hickey:

You've heard it.

Tricia Grady-Dominguez:

And they're all true. Yeah, every single one of them. No, I do. Yeah, I actually come from a family with a very few people in the medical field and a lot of people in the legal field.

Matt Hickey:

But, education was clearly part of your environment growing up, right?

Tricia Grady-Dominguez:

Sure, yeah, absolutely, and it was an expectation. I think they knew that I was never going to want to be a lawyer, and that I always wanted to... Well, when I was four years old, I made my Christmas list and I wanted all the things that I would need to build a hospital in the backyard-

Matt Hickey:

Oh, isn't that something? How about that?

Tricia Grady-Dominguez:

... including beds, and then they always kind of knew I wanted to go somewhere in the health related fields. I realized that research is kind of the marriage of my passions and my skills. I'm kind of an analytical person, I really like puzzles, I really like questions and figuring out ways to solve problems, and I really want to impact human health, specifically pediatric populations. But, I'm not really fixed to anything. I mean, I'm really interested in sensory integration. That's what I'm working on right now. But, for me, it's not sensory integration that brings me to it, I really love developing measures, and I think that measure development can bring our field to a place where we can show what we are doing matters, what we're doing has measurable impacts, and that's meaningful to payer sources, which is unfortunately a serious reality for the health field, we have to prove ourselves.

It's not just proving it to payer sources, we need to show families, what we're doing works, and we need to be able to tailor interventions and we need assessment for that. So, really my passion now I learned is not with worms or necessarily with sensory integration or with any particular population, I really believe that measurement is one of the most important things that we as researchers can contribute back to occupational therapy.

Matt Hickey:

That's great. So, tell me then about pursuing, if I heard you right, clinical training first in OT before you found your way out here to Fort Collins?

Tricia Grady-Dominguez:

Yeah, so I actually got my master's degree here at CSU as well, and I knew that I had to have a master's degree and I wanted to get a PhD, but I had already been accepted to the master's program, but the program hadn't started yet, and I just marched up to Dr. Bundy, to Anita, my advisor, and I told her, "I'm going to be your PhD student," and she was like, "I'm not accepting students right now," and I was like, "She just arrived at the university from Australia, and so she wasn't really ready to take on a PhD student." I said, "It's no problem, because I have to do my master's first," and she was like-

Matt Hickey:

You're just plotting it up.

Tricia Grady-Dominguez:

"Wait, sorry, who are you?" I was so bold and clueless, which is a pretty accurate statement for who I am as a person, that I just marched up and I told her, I was like, "I've been stalking your research," and I used that word, which is regrettable, and she'll never let me live it down, and I was like, "And I think it's excellent, and I would like to beat your PhD student, and we'll talk about it when I finish my master's."

Avery Martin:

Wow.

Matt Hickey:

My goodness. Yeah.

Tricia Grady-Dominguez:

So, I always knew I wanted to do research, and I think I didn't understand or appreciate the importance of having a clinical degree before becoming a researcher. But, having a clinical degree, despite the fact that I'm not practicing in a clinic every day, sets me up to think like an occupational therapist. I approach problems the way occupational therapists approach problems, and it's kind of built into every aspect of my research, and that's another thing I think is fun about measure development is that a lot of OT measures have been developed by people outside of our field.

A lot of times the psychometric properties, how well does the measure work, those things are evaluated by statisticians who are able to give us a lot of really good numbers, but not able to merge that with what the numbers mean, and so I think having OTs who can do measure development, who can do that statistical side on their own, can really enrich the quality of our data, and so that's why I want to be an OT measure developer.

Matt Hickey:

Cool.

Tricia Grady-Dominguez:

Yeah.

Matt Hickey:

So, you managed to talk Anita into the wisdom of taking you on as a PhD student?

Tricia Grady-Dominguez:

I didn't really give her a choice.

Matt Hickey:

Yeah, it sounds like it.

Tricia Grady-Dominguez:

Yeah. But, it went well. Yeah, she took me on as a master's thesis student during my clinical degree. So, I completed a research thesis with her. That was my first measure development project.

Matt Hickey:

Was there some element of the two of you testing each other out during that process?

Tricia Grady-Dominguez:

Probably, in retrospect. I was so enamored with her in everything she had ever done. I think there was no possibility that she could have let me down. But, really we found that I think we have a great working relationship, we have a lot of fun together, and she recognizes the areas that I need mentorship in and the areas that are my strengths, and she finds a really nice balance between building me up and also providing opportunities that are more challenging to me.

So, like she recently supervised me for a teaching course, so I actually taught the course, and that was a huge thing where I was so nervous, I was so uncomfortable with the idea of this, and she was like, "Yep, you're doing it. It's going to be fine." And it was, it was great, and I didn't expect it to go well, I probably would've tried to avoid it and tried to get out of it, but she pushed me, and I think she does a really nice job knowing when to push and how hard, and she expects a lot out of her students, but most of them rise to the occasion.

Matt Hickey:

Again, these are all the hallmarks of somebody, a mentor, who's has had an influence on you.

Tricia Grady-Dominguez:

Absolutely.

Matt Hickey:

I want to, again, just expand the view. So, I hear you think professionally that Anita's clearly had a strong influence on you. How you approach life, is there a mentor on that side of the equation? Mom, dad, a grandparent, a role model of some sort? I'm interested in the balance here.

Tricia Grady-Dominguez:

Lots. Lots, and specifically women in my life. I mean, I have a sister, she was a high school teacher for 10 years in New Orleans, and she just recently decided she's going to law school and that's the track for her. But, her-

Matt Hickey:

It's not too late for you, by the way.

Tricia Grady-Dominguez:

To be a lawyer? That's what my sister keeps saying.

Avery Martin:

I swing back.

Tricia Grady-Dominguez:

She's like, "Come on, just come to..." She's at BU, and she's like, "You would love Boston." I grew up in Boston, so she very much knows that there's a draw there, but-

Matt Hickey:

Sure.

Tricia Grady-Dominguez:

... no. But, she is an example for me of deciding what you're passionate about and not letting anything stop you from getting there, and she-

Matt Hickey:

That clearly rubbed off on you.

Tricia Grady-Dominguez:

Yeah, yeah, and she's my older sister, but she's 19 months older than me, and so we're really close in age-

Matt Hickey:

Oh, wow. Yeah.

Tricia Grady-Dominguez:

... and we've always been best friends, and that was my mom's plan. She was going to have two girls less than two years apart, and they were going to be best friends, and she did not let us deviate from that pack.

Matt Hickey:

Wow.

Avery Martin:

You all have a skill of speaking things into existence. I'll just say that.

Matt Hickey:

Exactly.

Tricia Grady-Dominguez:

My mother. Then there's also, there's a lot of women in my life who've been this example of there's not going to be any kind of barriers that stop us from doing the things that we're passionate about. I lived up until this past summer in a house with four generations of women. So, I had my daughter who's two and a half. My mother lives with me, and I won't tell you how old she is because she doesn't probably want me to share that. My grandmother, who is passionate about having people share her age, because she earned every one of those years, she passed away this summer at 93 years old.

Matt Hickey:

Oh, my.

Tricia Grady-Dominguez:

All three of them, in different ways, demonstrate the tenacity, the humor, the sort of the attitude that you need to approach life in order to get what you want, and all three of them do. My two-year-old with maybe less conventional means of getting what she wants, but she sure does, and my mom, who just can solve any puzzle or make anything work, and then my grandmother, who is just the most special, witty, social, she's just able to walk into a room and build a relationship with anybody, and that was what she loved. She was like a social person and she just loved to make friends and she could make friends anywhere, and so just seeing these examples of people who get what they want and who are able to make an impact on other people's lives just by going out and doing the things they plan to do and not letting anything stop them.

Matt Hickey:

You are fortunate.

Avery Martin:

That's great.

Tricia Grady-Dominguez:

I know. Not a lot of people get to have the experience that I've had for the last two and a half years since my daughter was born of having four generations in one household, much less four generations of mothers and daughters, and my poor husband who is-

Avery Martin:

He's there to witness it all.

Tricia Grady-Dominguez:

He's there to witness it all, and he is fantastic and so tolerant of all of us. So, yeah.

Matt Hickey:

So, if you don't mind my asking, tell me a little bit about your husband, he's getting short shrift here, and I want to give him just a few moments.

Tricia Grady-Dominguez:

We met in college, and have been-

Matt Hickey:

At RPI?

Tricia Grady-Dominguez:

Yep. At RPI. So, he's-

Matt Hickey:

Yeah, and was he also a science nerd?

Tricia Grady-Dominguez:

He got his degree in electrical engineering, and we came from very different lives. He grew up in Harlem in New York City, and I grew up in Franklin, Massachusetts, which is just about as opposite as from Harlem as you can get in your life, and we found that we just had a lot more in common than we had apart. But, he's fantastic. So, actually he got his degree in electrical engineering and then immediately decided that he wasn't going to be an electrical engineer because there's really not a lot of... I mean, there are a lot of job opportunities for that, but he is also a really talented programmer. So, he does IT work now, and he's a DevOps engineer, and if you ask me what that means-

Matt Hickey:

What does that...

Tricia Grady-Dominguez:

... it would be about as good as his explanation of OT. So, we'll just leave it aside.

Avery Martin:

That's good. That's good.

Matt Hickey:

That was [inaudible 00:29:30].

Tricia Grady-Dominguez:

But, he is the most gentle and kind... I mean, he really is just like he's the kind of person that nobody has a problem with him, everybody likes him, he never stirs the pot, he's always easy level, and I think I need that because I'm a lot of highs and lows, and he's a lot of just level, and I like to think that I offer him a little more excitement and he offers me a little bit more levelness. But, we've had the really fun opportunity in the last couple years to work together too, because the scoring program that we've developed for the EASI, the website, he initially volunteered and then eventually we decided it needed to be up.

Matt Hickey:

But, did he really volunteer?

Tricia Grady-Dominguez:

Volun-chosen, Volun-chosen.

Matt Hickey:

Yes.

Tricia Grady-Dominguez:

Volun-told. He was volun-told that he would be doing this-

Avery Martin:

Of course.

Tricia Grady-Dominguez:

... to help us with the sort of server management side of this giant project, and I knew he was really smart, but you don't really know how smart somebody is until you see them doing the thing that they're good at. That's really their wheelhouse. Man, he can do anything. If we ask, "Can you make it..." Yeah, he can figure anything out, and it's as fun to be his coworker as it is to be his partner. I mean, except when he is late for meetings, or it needs to be reminded to email people back. But, it's just been really fun to see that side of him and to learn about who he is as a coworker too, and I think a lot of people are like, "Ooh, you work with your husband. How's that going?" Generally it's just really fun.

Avery Martin:

That's awesome.

Tricia Grady-Dominguez:

Really, it just makes him seem so much cooler to me, and I already thought he was really cool, obviously.

Matt Hickey:

That's neat.

Tricia Grady-Dominguez:

Yeah.

Matt Hickey:

Thanks for sharing.

Tricia Grady-Dominguez:

He's a great dad. Not that you asked, but that's another thing about him that you should know is he's the most wonderful father in the world, and our daughter is just as enamored by him as I am, and she thinks that he walks on water and says yes to everything, which he does, but he's also just gentle and kind and easy and just a landing place for her when she's having a hard time, and I'm so grateful for that where I can be more reactive and get into battles of wills with the two year old, which happens to the best of us.

Matt Hickey:

Oh, yeah.

Tricia Grady-Dominguez:

He's just easy.

Matt Hickey:

That's so great.

Tricia Grady-Dominguez:

That's great. Yeah.

Avery Martin:

That's beautiful.

Matt Hickey:

Good for you. So, when you think about pursuing these problems that you've been pursuing for the last several years, again, I think for many of our listeners, we want to make the point that you don't just wave a magic wand and a dissertation is ready to defend there, and you've alluded to this, the amount of effort and it's broad network of folks who are involved in helping collect the data. Give us some sense of when you go to the lab, I say lab loosely, of course, you're working on your research. What is a day in the life like, and give us a little bit more sense of the team. You've talked about being able to mentor students that are earlier in their stages of development. Give us a picture.

Tricia Grady-Dominguez:

Yeah, absolutely. A day in the life for me involves a lot of time on my computer, and so my research is really heavy on analysis. So, I spend a lot of time crunching numbers, which I love, and I know it's not for everybody, but I really enjoy it. I get a rush from a big dataset, and have being able to answer any question I want to answer with that data, and so that's a lot of what I do. But, I do have a lot of opportunities too to work with other people and to collaborate with other people.

So, working on the EASI has allowed me to work with the whole team, their Collaboration for Leadership in Ayres Sensory Integration, which includes clinicians, researchers, and this just really incredible team of people who are passionate about Ayres Sensory Integration, and the passion really rubs off. So, we spend a lot of time just talking about how this can impact kids and families and why this project is important. We have lots of meetings that are just kind of like bring us together to sort of what are the big issues and what are we addressing with this and what do we need to do.

We spend a lot of time in the nitty gritty, and I especially as a data analyzer, which is mostly what I am, spend a lot of time looking at the numbers. But, because I'm surrounded by this team of people who are really brilliant and really knowledgeable about sensor integration, what does it mean is never really lost, and so I really enjoy working with them and having regular meetings that just keep me grounded in what we're doing and why we're doing it.

Then I have also had some opportunities to mentor master's students as well as fellow PhD students, teaching them analytical techniques, but also trying to get them to drink the Kool-Aid with measure development a little bit. Really to show them why it's important that OTs have the skills to develop our own measures, and why we need to be the people who can do the art and science of measure development. We can build the items because we know what's important for an OT to look at, and we can evaluate those items because we know how to do the research and we know how to ask the questions, and we know how to solve the problems with statistics and with the other kinds of things that need to be used. So, yeah, I don't know if that answered your question at all, but...

Matt Hickey:

It does, and I'm particularly pleased to hear you use the phrase art and science, right? Because making meaning of metadata requires some imagination, some sense of being able to see the horizon. So, we often talk about the weeds and we have to be down in the weeds sometimes, right?

Tricia Grady-Dominguez:

Absolutely.

Matt Hickey:

So, we build the datasets, right? In many ways. But, we have to be able to step up above the tall grass on the planes and look around and see where we're at. So, that exercise of imagination is something that I think is important and we need to figure out how to continue to stimulate that in STEM students who may get focused on, "I don't need that. We're data data data problems, problems, problems," but imagination goes a long way.

Tricia Grady-Dominguez:

Yeah, and I think, I mean, statisticians who are statisticians, and that's their main thing, are incredible valuable resource to us. But, I do think it's really important that OTs can at least be good consumers of research materials, good consumers of the statistics or of whatever kind of research outputs they need to use to understand that big picture understanding. OTs are really good at that big picture understanding, "What does this mean?" But, we have to be able to understand the nitty gritty as well. Which is also not what you asked, but will be the subject of probably the first course that I'm going to teach.

I hopefully will be teaching the OTD research course next semester, which is just teaching OT students, clinical... So, the OTD is the clinical degree, teaching them how to be good consumers of research, which I think is an incredibly important skill for a clinician to have. Do you need to be able to do it for what you're doing in your everyday work as a clinician? Not necessarily, but you need to be able to read it, to understand it, and to figure out how it applies or doesn't apply to the population that you're working with. So, Anita is twisting my arm to teach this course next semester, and it's not quite set in stone yet, but I think it would be something that I feel really passionate about and hope that I could pass on to future clinicians.

Matt Hickey:

This is fantastic, and of course, you anticipated my next question, so we'll run with it a little bit further. So, you defend here in a couple weeks, right? You'll be Doctor Patricia. That has a ring to it, doesn't it.

Tricia Grady-Dominguez:

Yep.

Matt Hickey:

That sounds kind of nice.

Tricia Grady-Dominguez:

Sure does.

Matt Hickey:

So, the short-term future sounds like if we're fortunate, well, we're going to twist your arm into staying here and teaching in the OTD program.

Tricia Grady-Dominguez:

Little bit. Yeah.

Matt Hickey:

Can you cast a horizon at least of aspirations? Again, I understand that there may not be plans in concrete yet, but give us the five to 10 year vision of-

Tricia Grady-Dominguez:

Yeah, absolutely.

Matt Hickey:

... what you're up to.

Tricia Grady-Dominguez:

I'm applying for postdoc positions now, both here at CSU and at some other research centers and universities, looking at different sort of opportunities for getting more mentorship and extending my skills that I have right now, and I am just learning, and maybe I'm a little late to the game on this, but I submit that I had a lot of responsibilities in the past two and a half years and haven't really been paying attention, but learning really what's out there for a researcher.

So, there's opportunities to work in an academic department, there's opportunities to work for research centers, there's opportunities to work in industry, and I haven't ruled out anything. I mentioned, and I'm not shy about the fact that teaching makes me nervous, especially teaching clinicians, future clinicians as somebody who hasn't had much clinical experience. But, I do think that, as a researcher, I have valuable things that I could teach clinicians, for example, how to consume research, in a way that is relevant to them as OTs. Because I am an OT and I do my research with the lens of an OT. I do everything I do with the lens of an occupational therapist. So, even though I'm not treating clients on a day-to-day basis right now, I am an OT, and I think that I can offer some things in terms of teaching.

But, I do want to find a position that allows me to gain clinical experience and to really have an understanding of the day to day of a clinician, while allowing me to keep one foot in the research world, because that's really where I think that is the best marriage of my passions and skills is in research. But, I think being a clinician and being grounded in the clinical realities of occupational therapy, which look different in every clinical setting and for every individual clinician, but having some experience in that area will be incredibly important if I do decide to teach, but also it'll strengthen my research.

So, to answer your question, I have no idea what's next. I have some postdoc opportunities that I'm really excited about and that I'm just hoping something comes through with that, and I probably should have been applying for them a year and a half ago, but I wasn't. So, here we are, about to graduate, and planning on teaching next semester, and we'll see if that turns into a longer term thing or if that's just sort of something to do on my maternity leave.

Avery Martin:

Well, good for you.

Matt Hickey:

Yeah, good for you. You've come such a long way from the undergraduate days at RPI in the biochemistry and biophysics. I wonder if you could reflect for a moment on what advice you might give to your undergraduate self now that you're a few years further down the road.

Tricia Grady-Dominguez:

I think for a little while, I beat myself up for getting a degree in something that I'm not really using in a traditional sense. But, the more that I reflect on what I had the opportunity to do as an undergrad was I learned how to think. I learned how to approach problems. I learned how to ask questions and to be self-sufficient in finding the answers to those questions. So, even though I'm not a biochemist or a biophysicist, and my husband is not an electrical engineer, and most people I know who got their undergraduate are doing something entirely different. My sister is not a linguist. What did she major in? Undergraduate education and bachelor's degrees are an opportunity to find something that you're really passionate about, but that's not always how it goes. But, they're always still an opportunity to learn how to think and to learn how to figure out what you want to know and what you need to know, and so I regret nothing-

Matt Hickey:

Good.

Avery Martin:

That's good.

Tricia Grady-Dominguez:

... at all.

Matt Hickey:

Good.

Tricia Grady-Dominguez:

Wouldn't change a thing, and my undergraduate years were some of the best of my life, and I would have reminded myself how much I'm enjoying it, so...

Matt Hickey:

That's great.

Tricia Grady-Dominguez:

Yeah.

Matt Hickey:

I have a couple questions as we draw to a close about the context in which you find yourself at the moment, and this is a layered one. So, CSU is a land-grant institution. We take that seriously for the 25 years I've been here that's been front and center in terms of our institutional identity and our mission, and so we're always interested in what that means to any particular individual on this campus. So, talk to us a little bit about your sense of what does it mean to be a doctoral student at a land-grant institution?

Tricia Grady-Dominguez:

Yeah, so I think that what has been impressed on me about having the opportunity to be at a land-grant institution is that we have a connection with, and a responsibility to, our community here in Colorado and our broader communities beyond that, and to each other as members of The Land-Grant Institution, and so the opportunity to work in an interdisciplinary way with people from other departments has been impressed upon me as something that's an opportunity, and that's really important, and that as a graduate of CSU, I'm a steward of my community, and I owe something back to that community in a way that I know that my community has given to me, and when I say my community, I mean my community in the OT program, my community in the College of Health and Human Sciences, all of CSU, in Fort Collins, in Colorado, and beyond.

So, I think working and studying at a land-grant institution has given me a sense of connectedness that my work and what I do, both personally and professionally, impacts others and has a ripple effect outside of just my individual self and my individual career trajectory, and I appreciate that that's something that's impressed upon us and reminded to us constantly in the College of Health and Human Sciences. I think we have a really good sense of that. So, that's kind of what that means to me. Did that answer your question at all?

Avery Martin:

Absolutely.

Matt Hickey:

It is beautifully stated.

Tricia Grady-Dominguez:

Okay.

Matt Hickey:

Yeah. I will editorialize not at all.

Avery Martin:

Yes

Matt Hickey:

Very well done.

Avery Martin:

Yeah.

Matt Hickey:

The next layer, of course, is this College of Health and Human Sciences often construed, at least at first glance, as an eclectic concatenation of different academic units. But, again, talk to us about the context of training in the College of Health and Human Sciences.

Tricia Grady-Dominguez:

Yeah, absolutely, and I think I haven't really talked about this very much in this interview, but I think it's important that I note that I have been supported in completing this dissertation by the College of Health and Human Sciences as a dean's fellow. They funded a year of my scholarship as well as actually I was able to hire a GRA who's kind of able to continue on that path that I have started here at CSU.

Avery Martin:

A grad research assistant, correct?

Tricia Grady-Dominguez:

Yes. Yeah, yeah. A research assistant who's also completing a master's thesis, which was not a requirement of hiring her, but I think we kind of convinced her that she would benefit from this too, and so being part of the College of Health and Human Sciences, I think is another way that we remain grounded in why we're doing what we're doing. I know that it's a little bit feels like an eclectic department. We've got hospitality and health and construction management all under one sort of umbrella, but I don't think it's difficult when you look at what our shared passions are for the human experience and for people and for community, what we have in common and how we approach the problems as sort of people-centered problems with people-centered solutions.

So, being part of the College of Health and Human Sciences and also being able to serve on the Dean's Leadership Council of the College of Health and Human Sciences for three and a half years, has really given me that grounding that I need to say, "Why are we all from these departments, these different departments? What are we all trying to do that we have in common? How can we work with each other and work with the other colleges to solve these bigger problems?" I've had opportunities to work with people in nutrition, in human development and family studies, but the OT program also collaborates a lot with construction management on finding accessible solutions for the physical world, and I think it really helps us stretch. Being part of this kind of eclectic college helps us stretch our thinking on what are different ways to make the human condition a better one.

Matt Hickey:

Well said.

Avery Martin:

Very well said. That's our mission.

Tricia Grady-Dominguez:

Yeah.

Avery Martin:

Yeah. You just summarized our exact mission.

Tricia Grady-Dominguez:

Well, I've heard it once or twice.

Avery Martin:

Oh, okay.

Tricia Grady-Dominguez:

Yeah. Being part of the Dean's Leadership Council, as well as the Dean's Fellowship program has really given me an opportunity to know why we're part of this college and what we have in common, and it's encouraged me to reach out to other people across the college who have different skills and similar passions that I have.

Avery Martin:

Great.

Matt Hickey:

That's [inaudible 00:47:10].

Tricia Grady-Dominguez:

Yeah.

Matt Hickey:

Tricia, I want to thank you on behalf of the college for spending some time with us today. I was somewhat hesitant given the context where we're dragging you away from dissertation writing for an hour on a Friday afternoon, but-

Tricia Grady-Dominguez:

I wasn't doing it.

Matt Hickey:

Well, we're thankful for the time you've invested with us. We wish you the best on the dissertation defense. I hope to hear that you'll be teaching for us in the spring, but-

Tricia Grady-Dominguez:

Fingers crossed.

Matt Hickey:

... I'll also stay tuned for news about postdoc opportunities, so-

Tricia Grady-Dominguez:

For sure.

Matt Hickey:

Yeah, good wishes go with you.

Tricia Grady-Dominguez:

Thank you.

Matt Hickey:

You bet. Another great interview is in the books. Thank you for listening to this episode of Health and Human Science Matters.

Avery Martin:

Stay tuned for the next episode. It's on the way. In the meantime, go listen to our episodes from seasons one and two, and if you want to learn more about our College of Health and Human Sciences at CSU, go to www.chhs.colostate.edu.