

Dr. Erica Weber Credits Mentorship for her Career Path To Memory Rehabilitation Research - Ep15

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- JOAN BANKS-SMITH: 00:08 Welcome to a Fast Takes Women in Science podcast honoring the International Day of Women and Girls in Science. At Kessler Foundation, 70% of our staff are women making major contributions to the advances we achieve in rehabilitation research that changes the lives of people with disabilities. In this episode, I met up with Dr. Erica Weber, research scientist for our Center for Traumatic Brain Injury Research and Assessment and Rehabilitation of Everyday Cognition Laboratory. Welcome, Dr. Weber.
- ERICA WEBER: 00:41 Thanks so much for having me.
- BANKS-SMITH: 00:42 Can you tell us about your scientific background?
- WEBER: 00:45 So my interest in prospective memory besides, of course, that of my own daily failings as a person who's able to remember to perform different tasks, really came about just prior to me entering grad school. I was working as a research assistant on a project that looked at prospective memory in individuals who had HIV. So really learning about this process in disease paradigm where individuals were really required to remember to do important daily tasks requiring prospective memory. In HIV that really looks like remembering to take your medications on time and how and then being able to use that as an example of where cognitive functions have direct implications on someone's disease status, disease severity. As I went through grad school and explored that literature more, I really realized that we weren't doing enough to be able to improve this ability. We were learning a lot about what was going on and what were the mechanisms. But we really needed to do better work that integrated all of that information that we had with how to rehabilitate it. So I chose to come to Kessler Foundation for my postdoctoral fellowship knowing that there is a long tradition of memory rehabilitation work here and looking to combine my background in prospective memory with the strong tradition of memory rehabilitation here and really found that traumatic brain injury was a perfect area to explore this construct in and would be a great area of growth for the field and for my work, specifically.
- BANKS-SMITH: 02:30 Going back to your undergraduate and graduate work and even today, has there been anybody specifically who has mentored you?
- WEBER: 02:38 There have been so many people who have mentored me. And for that I am incredibly thankful. I think back to the people I work with when they were my boss as a research assistant and then even as a research assistant, I was being mentored by the older graduate students and postdocs. So in our fields, I think we're very fortunate enough within psychology to have this natural sense of mentorship and consultation that is actually a big part of APA ethics code is that if you aren't fully confident in what you know, you need to seek mentorship. And that's the most ethical thing to do for your research and for your patients. I've been lucky to be around individuals who have really embodied that. And it's something that you seek

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out and find at each step of the way. And those mentorship relationships, whether formal or informal, I have learned that they do persist over time. So the first lab I ever volunteered in when I was an undergraduate at Boston University, I worked under Dr. [Cami?] White on a project looking at non-cardiac chest pain and anxiety. And then later realizing that my interest lied in neuropsychology working under Dr. Alice Cronin-Golomb, who is still a big pioneer in the field. And I think being taken under the wing of two very strong women in their respective fields has been very helpful. I've been able to remain in contact with them throughout at different points throughout my career. And I still occasionally it's nice to reach back out and rewarding, I think, for them to say, "Okay, what if someone, one of my undergrads made it and is doing their own things now in the field," and psychology and neuropsychology specifically are fairly women dominated, and that's becoming increasingly so for a long time. Even though the bulk of the field was female, the leadership was remaining more male dominated. And I'm seeing that start to shift. A lot of the professional organizations like the American Psychological Association and the National Academy of Neuropsychology domains and they're both have specific women-related subgroup. So APA has women in neuropsychology. NAN has women in leadership. And even just interacting through these listservs, you get a lot of support by other women who have been in the field. For the most part many of them are mid career still at this point, but there are some mid career women who are really reaching for the golden ring and doing quite well. It tends to be a very supportive environment. So seeing that as a model at the broader national and international scales is something that I think has helped myself and my local colleagues at Kessler Foundation, as well as trainees that I've worked with in graduate school or on internship that we've tried to emulate that process. The amount of times that I go to a group text to ask my former lab mates different questions, whether it's about career development or it's about some neuropsychological norms, it's at least a couple times a week and happened just about an hour ago. I think mentorship is something that is thankfully a very broad construct and one that I think is just integral to success in the field of science and really helps to make good science because we're not just trying to do something on our own. We're acknowledging that we need support and with that support comes knowledge and wisdom.

BANKS-SMITH: 06:39

Dr. Weber, what's the contents of your research these days?

WEBER: 06:43

Mostly, I'm focused on memory rehabilitation in individuals who have had some sort of neurological injury or disease process. So I have a couple of studies that I'm working on looking at rehabilitation efforts to improve their ability to remember to do important things in their everyday life. One area that I have spent the bulk of my career thus far on is in prospective memory. So prospective memory is remembering to do something that you intend to do in the future. So, for instance, remembering that at 3 o'clock today we were going to have this call. So I had to keep that intention online in my brain for the afternoon. When I had other meetings, occasionally I would check the clock to make sure that I hadn't missed our appointment time. And then I also had to remember what it was that I had to do at 3 o'clock. There are a number of processes that are involved in remembering to perform specific intentions in the future. And because it is a fairly complex process, there are a lot of ways that it can go

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wrong, either just in the course of our everyday lives in healthy individuals, but especially so in individuals after they have a neurological injury or disease process.

WEBER: 08:05

I have one study that is looking to improve, basically, as I was describing that time monitoring process to make sure that individuals are keeping tabs on how much time has elapsed so that they can remember to perform that task at a specific point so they don't miss the boat and miss their appointment times or whatever it is, the task they intend to do. We recently wrapped up data collection on a project that looks to improve how well individuals are able to monitor for the cue in the environment that tells them that it's the appropriate time to perform a specific action. So we're looking forward to seeing what that data tell us about whether or not this can be something that can be enhanced in individuals with traumatic brain injury. So remembering to perform tasks at specific points in the future is quite important for everyday life. So that may relate to someone's ability to remember to take their medication at a specific time or follow any of their doctors' instructions, remembering to do work tasks as they come up, or even remembering to do specific tasks during the household procedures and social environment. It is something that is critical to being a functional member of society and feeling like you have still a very important role in your day-to-day life. So this is something that we're really looking to try to improve in individuals with brain injury and other diseases.

BANKS-SMITH: 09:40

Was that also in conjunction with you being awarded the Switzer Research Fellowship?

WEBER: 09:46

So the Switzer Research Fellowship that I was awarded in I believe 2016, and that project is the one I was referring to where we're looking to improve the emphasis on the prospective memory cue in improving their overall perspective memory performance. So that data is the process of being examined and we have a couple of things underway and we're looking forward to seeing what our data show and where we can go with it next.

BANKS-SMITH: 10:19

And do you find that there are any difficult parts related to this type of work?

WEBER: 10:23

Well, in science in general, there's a lot left to be explored and there's a lot that people have based their entire life's work on. So that often means that there are a lot of theories, a lot of opinions, and a lot of dialogue. One thing that I have become more aware of as I've progressed through my career is how as women we're often more socialized to internalize feedback that we get about job performance or work and than anything really intellectual, and internalize it as something that is related to our being as a static component. And in this field because where science really thrives is when we can have discussions that are open and debate among what theory we think is a better way to apply to our data or different interpretations. And there's a lot of valid points to be made. But the struggle can be to not internalize that feedback as criticism of yourself as a person. So throughout my training be it as a research assistant and then as a grad student and intern and postdoc and now as a junior scientist, learning to develop a bit of a thick skin is definitely critical. This happens both on the research side as well as even as a clinician in getting different feedback in terms of your interpretations on neuropsychological reports. Making sure to see the

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merits of what individuals are saying and not having it be a verdict on your worth as a scientist, but that people are looking to engage with you in these important ways because that is how we get good science done. And by allowing that process without taking things personally and continuing to persist even in the face of feedback is definitely important. But it is a challenge. It is a growth process. And for better or for worse, there is a lot of rejection in the field, especially in research where a good chunk of our day-to-day is writing grants to do new research or writing manuscripts and papers to talk about the research that we've already done. And a lot of times the feedback that comes back is that we try again or that maybe we need to rethink what we were doing. So oftentimes, grant rejection rates are close to three quarters and the [bend?] varies wildly based on the different grant mechanisms. So for most grants that you submit, you tend to get to a no and knowing to take the feedback that's provided, incorporate it so that you can strengthen your arguments for next time and then hit the ground running and not refuse to give up.

BANKS-SMITH: 13:43

Now before we wrap up, I have just one last question for you. What advice would you give to women in your field?

WEBER: 13:51

I think back to I think it was 2017 where originating in politics, there was the phrase of, "Nevertheless, she persisted." And I think that has been something that has been a mantra for me and my colleagues. And actually now as I flick over to a spot on my desk, I see that I have a magnet that says that as well. So I think persistence is really is key. You're going to have some days that are struggles and you kind of may forget the reasons why you got into this field or why did I spend all those years in graduate school instead of making a solid salary and being able to climb other ladders. But when you think back to the broader reasons of why you're doing what you're doing, who you can help, and what your research means for disability community or the aging community, whatever it may be, then that's the reason to persist. And there's definitely hurdles along the way. But that is just part of the process. And I'm a relatively junior in the grand scheme of things, but it's exciting to see things that you previously saw as hurdles or challenges that you didn't know how you were going to be able to overcome or how you were going to be able to turn a corner from that rejection, and yet here you are. That in and of itself is rewarding and refreshing and gives you more stamina. And I can only imagine that that's something that will continue to grow over time. So I would just say, stick with it. You're going to get a lot of-- you're going to have a lot of ups and downs. As long as the overall trajectory is going where you want it, consider that variability in the data and just keep on going.

BANKS-SMITH: 15:54

That's certainly good advice to share. Well, thank you so much for being on our show.

WEBER: 15:58

Thanks very much, Jody. Great to be here.

BANKS-SMITH: 16:01

For more information about Dr. Erica Weber, the Center for Traumatic Brain Injury Research or her lab, be sure and check out the links in the program notes. Tuned into our podcast series lately? Join our listeners in 90 countries who enjoy learning about the work of Kessler Foundation. Follow us on Facebook, Twitter and Instagram, listen to us on Apple podcast, Spotify, SoundCloud or wherever you get your podcasts. This

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