

Christian Lucca on Balancing Research and Clinical Skills

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- CHRISTIAN LUCCA: 00:07 [music] Just knowing that what I'm doing can make a difference and can help these people come out of it and come back to their lives, it really is an inspiration, I would say.
- JOAN BANKS-SMITH: 00:19 I'm your host, editor, and producer, Joan Banks-Smith, Creative Producer for Kessler Foundation. Welcome to our podcast series, My Life as a Research Assistant. This series is brought to you by Kessler Foundation, where we are changing the lives of people with disabilities. Throughout this series, we'll meet up with research assistants from our mobility, spinal cord injury, stroke, traumatic brain injury, and neuroscience and neuropsychology centers who have been with the Foundation for over a year and some that are now senior research assistants, nurses, MD/MS candidates, postdocs, and those that have entered into many more professions. Research assistants are on the frontlines of our research studies, collecting data, conducting interviews, testing subjects, and are the face of Kessler Foundation to our research study participants. In 2020, Kessler Foundation was ranked among one of the best nonprofits to work for and best places to work in New Jersey. In this episode, I met up with Christian Lucca, a former research assistant in our Center for Traumatic Brain Injury. Christian is currently a neuropsychology extern at Staten Island University Hospital and a graduate teaching assistant at the Ferkauf Graduate School of Psychology. Let's listen in. Give us in a nutshell what you do on a day-to-day basis.
- LUCCA: 01:47 It really depends on the day. I work in a number of different studies with TBI and other acquired brain injuries. And usually, my schedule revolves around whatever patients I'm currently working with. All of my studies are inpatient studies. So I basically spend half of my day on the hospital floor, screening new inpatients to find out if they're eligible for any of my studies, meeting them if they do qualify, interviewing them and seeing if they're interested in the research, and then actually running through study procedures with them. Some of my studies are shorter than others. Some of them are just surveys. Others are longer procedures. They might take multiple days. I might have to bring a laptop computer or an iPad, and we run E-Prime software, like cognitive tasks or any sort of motor tasks on the keyboard.
- LUCCA: 02:40 And sometimes I'm actually involved in two sleep studies. And for those we use ActiGraphs, which are these wristwatch devices. They measure light and motion. They're sort of standard devices for measuring sleep cycles, sort of getting a feel on when people are resting and active, essentially. The sleep studies that we do, we use that equipment and balance it with self-reports of sleep tendencies. That's a broad picture there, but really my day could involve little to no work on some studies and a ton of work on another. It really depends on who's signed up for different studies at any given time and when they're available. Because as part of a research department, we're usually the lowest priority in terms of the clinical demands of these patients. So we usually have to work around the schedules of the nurses, the physical therapists, the occupational therapists, the speech therapists. And we have to find a way where we can make sure that all the patients that qualify get their time, at least, get the opportunity to volunteer for research if they can.

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- BANKS-SMITH: 03:51 The types of research participants that you have for traumatic brain injury, is there a typical age that you see a lot of head trauma, or age has nothing to do with it?
- LUCCA: 04:04 That's actually an interesting point because it depends a lot on the facility I go to. So I work inpatient at all three of the Kessler Institutes, so the West Orange site, the Saddle Brook site, and the Chester site. And they all have slightly different patient populations. If you go over to Saddle Brook or Chester, usually their populations skew towards the older generations, and there tends to be a lot more patients that are there for orthopedic rehab, like post surgery. Whereas here at the West Orange site, which is where I spend most of my time, we tend to work with patients with much more acute injuries that lead to more severe deficits of cognition in addition to mobility. So the traumatic brain injury patients that I work with at West Orange, a complete variety of ages. I've seen patients that were 17 years old, below the age of consent, where we need to get their parents to actually consent them into the research. And I've also spoken with patients that were over 90. And I don't really see here at West Orange any real trend in age. Traumatic brain injury comes in many forms, but it doesn't seem to discriminate as far as the population that we see here that come here.
- BANKS-SMITH: 05:27 What types of traumatic brain injuries are there?
- LUCCA: 05:29 Well, it depends on-- I guess, the biggest classification would be the difference between external, like blunt force, versus a penetrative traumatic brain injury. The vast majority of TBIs that I've worked with have just been like someone hits their head. There's no direct penetration of the skull or anything. There might be a fracture of the skull, but usually it'll be a subdural hemorrhage or a subdural hematoma, so a brain bleed or a swelling in the brain as a result of the brain being bruised on the inside of the skull. And depending on the severity of that, there might be certain motor or cognitive desk deficits. But once again, it really depends. I've seen one or two people who've come in with penetrative injuries. I can think of two or three distinct times when someone came in with a gunshot wound. Fortunately, none of those were too bad. They were more like glancing wounds off the side of the brain, but they were still very severe injuries.
- BANKS-SMITH: 06:27 When you have a participant in the program, what types of studies are you currently working on?
- LUCCA: 06:33 The most important study that I'm working on right now is the Traumatic Brain Injury Model Systems project. My involvement with the project is a bit smaller than some of my coworkers. For the most part, I'll be covering for them if they can't get to participants, or I'll be covering at other Kessler sites where TBI inpatients are a little bit less common. But nonetheless, in terms of the study overall, I would say it's the most important thing I work on. It's relatively short. It's usually just a 5-to-10-minute survey, some information about demographics and past medical history and then follow-up interviews over the phone, follow-up surveys at 1 year, 2 years, 5 years, and every 5 years after the injury. The whole purpose of that project is sort of to collect information on traumatic brain injury as a whole across the lifespan. The purpose of it, I would say, is to figure out who gets traumatic brain injuries and what are the

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effects of a traumatic brain injury as it develops as the person recovers, which is why I say that it's probably the most important thing I do.

LUCCA: 07:38

This study actually has been going on since the late 1980s, so that's a good 30 years plus. Here at Kessler, we've been doing it for at least the last 10 years. We're actually 1 of 15 or 16 different sites around the country that participate in this federally funded study. The publications that come out of the data that have been collected by all the hundreds of participants that have enrolled in the study is essentially what's been informing the practice of physicians that work with TBI on a regular basis. The initial survey that sort of figures out who's getting the TBI, that goes into all the public health initiatives about traumatic brain injury and prevention. And all the follow-up surveys that collect additional information about how the person's recovery is going and if they need any sort of tools to assist them in their daily living, that all informs the treatment that doctors in the future, basically, decide to give patients because now they have a frame of reference through which they can determine if other patients with similar traumatic brain injuries-- how their course of treatment should be laid out. I would definitely say that in terms of its ability to sort of paint a picture of traumatic brain injury as a whole, it's one of the most important things that we do here in the Traumatic Brain Injury Lab at Kessler.

BANKS-SMITH: 08:57

Obviously, you seem passionate about what you're doing. Has the work that you've been doing here at Kessler Foundation impacted you looking at furthering your education and what you'd like to do in the future?

LUCCA: 09:11

I would definitely say so, and it's in a surprising way, ways that I probably didn't anticipate going into this job. Working the research studies, the thing about the research process is that it's a very sort of long bureaucratic process, where studies need to be approved. Then data needs to be collected. Then it needs to be analyzed. Then it has to be written and published. All the results need to be forwarded to journals. And then once the research has been reviewed, then it can start to be applied, like information can be learned from it that can inform future research or practice. So in terms of the actual day-to-day activities of collecting data, I wouldn't say it really gives me a full sense of the full picture of what it is that I'm actually studying. So doing studies where I just collect information for a survey, that doesn't necessarily make me fully understand what patients are going through, for instance, or what I'm really going to be seeing once all the data has been accumulated.

LUCCA: 10:16

And I would say that I've really learned two things from this. First thing has to do with the fact that this job, being that I work inpatient, it kind of balances research skills and clinical skills. As a part of my job, I have to learn how to work within the research process. I have to consent patients. I have to collect data. I have to analyze data. But I also have to use good clinical judgment when working in the hospital setting, working with patients at bedside, communicating with all the other types of healthcare and support staff. And that's really the best I could have asked for at this point in my life because, in terms of my professional development, I know I'm going to be heading to graduate school, but I'm not sure if I want my focus to be in research or sort of clinical fieldwork. It really depends on the sort of-- my experience here is really helping me to decide where I'm going to end up. And from my experience, I can firmly say that I'm going to be doing some clinical work in the future. So even if I do work in research, it's going to have at least some sort of clinical aspect because, working with individual

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people, I've gotten to hear their stories. I've gotten to learn how their injuries have had an effect on them. And I've gotten to see them grow and develop and change and move through these debilitating times in their lives.

LUCCA: 11:46

Usually, when I go in to approach a patient, it's business first. We're very amicable. We want to make the people feel comfortable. But we're really just there to sort of figure out if they want to be a part of a study or not and then move on with our day if they say yes or no. But there've been a few times, for sure, when a person has just stopped me and basically just spilled their whole life story to me right then and there. Some people, when they're cooped up in a hospital room all day, they get kind of cabin fever, and they just want someone to talk to and sort of engage with. So oftentimes, I find myself just listening to all of these people's life stories. And I would say that is probably the most important thing that I've learned from this job is the degree to which these injuries have affected people's lives, and not just in negative ways, but in a lot of positive ways as well. For some people, coming to the hospital-- or certainly once they've gone through a major injury and then they survive and they come here and they start to sort of recover and recover all their basic functions, it gives them a whole new perspective on life and the value that they-- all the things that they take for granted.

LUCCA: 13:02

I can think of some people who were in positions before their injuries where they didn't even know what they were doing with their lives. And then they would get in a car accident and on the verge of death and then pull through. And then their eyes are suddenly open. They realize anything is possible. As soon as they leave the hospital, they drop everything, and they go pursue their dream job. For a lot of people, this is the turning point. And I think that's probably the coolest thing that I've gotten to experience, secondhand, at least, here at Kessler. It's really helped me put everything in perspective. And it sort of helped me realize that my passion is really working with people at this level and figuring out what I can do to help them, whether it's through an immediate intervention in some sort of clinical scenario or if it's in a large-scale intervention like the kind that can be developed through these research programs. Just knowing that what I'm doing can make a difference and can help these people come out of it and come back to their lives, it really is an inspiration, I would say.

BANKS-SMITH: 14:09

That really sums up what you and our other researchers strive for each day here at the Foundation. Thanks, Christian, for taking the time to chat with me about the work that you do.

LUCCA: 14:19

Thank you.

BANKS-SMITH: 14:21

To learn more about our current or former research assistants or career opportunities at Kessler Foundation, be sure and check out the program notes for links. 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 Podcasts, Spotify, SoundCloud, or wherever you get your podcasts. This podcast was recorded during the spring of 2016, was edited and produced by Joan Banks-Smith, Creative Producer for Kessler Foundation.