Episode 13 - RSI Day 2023

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SPEAKERS

Yashoda, Reeman, Anna, Jejociny, Allee

A **Anna** 00:14

Welcome back to the rehabINK podcast. My name is Anna, and I am a third-year PhD student studying speech language pathology at the Rehabilitation Sciences Institute at the University of Toronto. I am one of your co-hosts of today's episode.

J **Jejociny** 00:33

Hi everyone. My name is Jejociny. I'm a research analyst at Toronto Rehabilitation Institute working on a long-COVID study. I'm one of your co hosts for today's episode.

A **Anna** 00:45

This episode, we will be speaking to three students studying at the Rehabilitation Sciences Institute (RSI).

A **Anna** 00:52

This episode was inspired by a well received episode from a miniseries produced earlier in the podcast where we invited students to share experiences with COVID-19. Following this idea, we were interested in having students students discuss their perspectives of trending topics.

A **Anna** 01:12

We do so by bridging together the current theme of our science research day and their focus on student research. To provide some context RSI research is an annual student led conference for graduate students from different disciplines present their research. They feature a different every year based on the current trends of research.

J Jejociny 01:36

This year's theme is person-oriented care. We will be hearing from three PhD students studying at RSI. Allee, from occupational therapy (OT), Yashoda from physiotherapy (PT), and Reeman, from speech-language pathology (SLP).

A Anna 01:52

We are here today to speak to Allee. Thank you so much for being here today.

A Anna 01:57

Can you tell me a little bit about you and your research?

A Allee 02:00

Of course. So, thank you for having me. I'm so excited to be here with you both. My name is Allee, and I'm a fourth year PhD candidate at the Rehabilitation Sciences Institute at the University of Toronto, co-supervised by Emily Lauder and Deirdre Dawson.

A Allee 02:13

And so for my thesis research, just like jumping right into it, but I am taking a user-centered design approach to examine how mobile technology, for example, mobile phones, apps, etc., can enhance strokes up management support in Canada.

A Anna 02:29

Awesome! So, how did you end up researching your topic at RSI?

A Allee 02:35

So fun question! I always love asking people that. So, I was lucky enough that my amazing supervisors, Emily and Deirdre (shout out to them)! They were so open and supportive of me really taking the time to fund a project that I'm really passionate about and was inspired by.

A Allee 02:53

So the inspiration actually came out of when I was in the Occupational Therapy Program at U of T. I had a placement on an inpatient stroke rehab unit, and on that unit, I saw health professionals, patients and caregivers start to integrate mobile technology like mobile phones,

tablets, apps, etc, into a therapy in some way or another. But I saw that, at that point, the integration of those sorts of technologies was far from systematic and not necessarily research-based. So based on my experience, I was inspired to try to help figure out how research can better guide that area of practice.

A Anna 03:30

So, there's definitely a lot of, I guess, lived-experience in a way in terms of being in the clinical environments.

J Jejociny 03:37

What does person-oriented care mean to you?

A Allee 03:40

So, to me, person-oriented care means placing the person, the patient, as well as their caregivers and family members, really in the center of everything you do. I think that means that their needs, preferences, and experiences are really foregrounded, and really guide all the work that you do. And so I think that this also seems to mean more... it tends to mean that patients are also seen as active partners, rather than passive recipients of care or research.

A Allee 04:09

Mmmm.

A Allee 04:09

Yeah, that's really because their expertise and perspective is so greatly valued, appreciated, and truly is the most critical piece of it.

J Jejociny 04:20

Okay, very interesting. Thank you. And where do you see your research in the theme, person-oriented care?

A Allee 04:28

I think my research fits really well within this theme because... So I'm taking, like I said, a user-centered design approach or like, that's the methodology I'm sort of following. And this methodology of user-centered design shares the same sort of principles and overall philosophy is person-oriented research or care. And so with user-centered design, it's more like in the technology space. But within this methodology, you're putting the user of the technology really

in the center like you would for person-oriented care. You're putting the person in the center, and so that means that you're foregrounding the user's needs, preferences, and experiences across and throughout the technology design and development process.

A Anna 05:06

I'm just curious. So, you mentioned a lot about the mobile technology. Can you tell us a little bit more about what this, I guess, tool is or looks like?

A Allee 05:17

Yeah. So with my research, it really started at the beginning of the user-centered design process where you're trying to understand the user's needs and the context. So essentially asking what you're asking, but to all the different end-user groups. So people were stroke, caregivers, and health professionals. And so instead of going out and being like, I think, as a researcher, "we should design an app to help upper extremity exercise," I want you to go and ask all the different end users their perspectives on what they think is needed, given their experience, which has been obviously especially interesting, given the pandemic. That actually aligned with my research. And yeah, so people actually do have a lot of experience with the pandemic, having already used a lot of mobile technology for stroke self-management support.

A Allee 06:02

So yeah, it's it's been interesting talking with everyone and learning experiences out there. And so everybody, all these different groups really are experts on this topic as well. It's not just researchers who are experts in this area, which I think it's really exciting for the collaboration.

J Jejociny 06:17

So I just wanted to ask. So, is this an app that's been developed already?

A Allee 06:21

My research is more like the foundational sort of like needs assessment, sort of, research to figure out what technology is needed and wanted without jumping to the conclusion that an app is going to solve everything, like it's "gonna fix things." Because I think we've all sort of like learned throughout the pandemic, that that's not always the case.

A Allee 06:40

Yeah, so I really didn't want to jump to the conclusion of an app. But through my conversations in the focus groups and interviews, it's no surprise that an app really is, like a good space to sort of collaborate on what a tool could be. But an app could be across different devices. But yeah, just something to sort of help everyone come to a common language, and shared goal on

stroke self management support, which is sort of essentially, when someone goes home from the hospital, how can they best support themselves? And, how can you support a loved one when you leave the hospital after a stroke?

J Jejociny 07:14

Okay, and technology will help to, for... them to decide on that?

A Allee 07:19

Yeah! It can connect people to obviously a lot of resources and information, as well as health professionals. And so I'm following certain theories and a taxonomy of self management support to help guide these conversations with the different end user groups. And that has been really helpful to show that everyone can really work together quite effectively. And then in the future, we co uld develop an app, for example.

A Anna 07:40

I'm actually also doing a user-centered design -

A Anna 07:43

- Oh! Right!

A Anna 07:44

- process as well. So, it's really exciting to hear about your research. So do you... Are you finding that right now... Where have your... I guess conversations gone? Like, do you find that certain groups of people and end-user groups are more interested in certain pieces of information, or, I guess, tasks, supports...?

A Allee 08:06

Honestly, there's a lot of similarities in that everyone agrees is across all groups that information is needed. Peer support is huge. And I don't think that has come out in other research and mobile technology for stroke self-management support as much because people aren't following the taxonomies and the theories as much, it seems like people are just sort of jumping to like, "Here's an app for exercise, and it's going to fix you, and you're going to do this by yourself," and that's self-management.

A Allee 08:33

But, you know, but what actually is a key piece of people's recovery, when you talk to them,

really is being connected. I think, obviously, with the pandemic, we will learn that. But yeah, having peer support seems so invaluable and then opportunities have opened up from pandemic. It's really, really great to hear, especially through like March of Dimes, there's been a lot of online groups, and with my research are trying to push forward the idea that mobile technology isn't just an app. It's just if you think about it, and its definition of its mobile or wireless technology, that can include things like laptops, because obviously they're unplugged, or just other technologies that don't necessarily exist right now or that aren't well as well developed, but that I think you can apply today's learnings of like what's helpful from mobile technology to the future and keep growing on this idea of a mobile piece of technology assisting you and your health management. It's really exciting a nd I'm excited to share ... all my participants... their amazing insights. It's been a pleasure speaking to all of them.

A Anna 09:34

Mhmm, it definitely sounds like you've really enjoyed your conversations with everyone so far.

A Allee 09:38

Yes, yeah.

A Anna 09:39

You mentioned a lot about the taxonomies. What did you find, I guess from, if you think of translating theoretical research into... kind-of applying it until you know more analysis and have I guess ... What taxonomy are you using and what do you find most helpful about it in terms of guiding your research process?

A Allee 09:58

The taxonomy that I have been using throughout my PhD research is called the practical reason self-management support taxonomy or the presumed taxonomy for short. And so this is a taxonomy, or framework essentially, that breaks down the concept of self-management support, and it was developed for chronic conditions broadly, with stroke being a chronic condition. But this. Yeah. This taxonomy was developed for all chronic conditions and it was developed in collaboration with a bunch of different stakeholder groups. It's been validated in different contexts, but not necessarily stroke as much recently. So, it breaks down what self-management means, which I think is first and foremost, extremely important in the sort of work where the idea with user-centered design is that you're supposed to all speak the same language, and come to like a shared goal to build something that makes sense to everyone.

A Allee 10:45

And so I think the beginning is, what is self management? What does it mean? What are we all working towards? So that's been helpful for me to figure out when I was early in the PhD and also, in talking with different stakeholders, the user- and end-groups, they also shared that it

definitely resonated with their experience of the term, but also felt new in the sense that they don't see it being used in practice. It was really exciting to see because that means that researchers, people with stroke, caregivers, and health professionals can all speak the same language, talk together, and yeah, work together in an effective way.

A Allee 11:17

The term self-management support - it's sort of a buzzword at the moment, especially in the field of m-health or mobile health. So I think that it's really fun to be in the stage of finding a definition and theory and taxonomy to help guide everyone so they can work together. But yes, so during my interviews and focus groups, I actually shared the taxonomy with all the participants. And I went through each of the items of the taxonomy with them to talk about where do you see gaps and practice currently, how may they possibly be enhanced by mobile technology or not. The taxonomy was used within my interview guide in that sense, and then also, I'm using reflexive thematic analysis to analyze my data. So I will be bringing forward like that taxonomy and other theories of self management support into the analysis.

A Allee 12:05

So that's how it's been integrated into my work. And yeah, I'm excited that it resonated with everyone's and hold hope it might be something that like, some people have, like explicitly said. I would, I would like that if like an app had you log into the app, and like, you see all the different items from the taxonomy. And then you can start to organize things from there and personalize your self management experience based on those items in the taxonomy. Yeah, so that was starting to like feel tangible then and like what this might look like, because of that.

A Anna 12:36

It definitely seems like that the taxonomy really helped to structure this whole process. And it was very much a person-oriented or like, person-developed taxonomy as well, which was

A Allee 12:47

Yeah

A Anna 12:47

along with your other ideas and how it can be applied moving forward. So I guess, if we were to kind of like put that all together, what would you kind of see as sort of like, the "end goal" I guess, from a person-oriented or I guess, user-centered design approach?

A Allee 13:09

My dream would be if I had all the money, all the research funding, I would go back to my

participants - who a lot of them are leaders in stroke advocacy work - and I would just give the money to them. And then be like, "Okay, you told me what to do," because they're already leading this work, but they could be more supported. And I think everyone could work better together. But I think it should be under people's lived experience. It should be them leading everything in terms of like the idea and where the direction of where things go. And they're already doing this work! So I mean, I'm appreciative of the people who spoke with me. Many people with stroke, were already leaders, and they're doing amazing work with these different groups and organizations, starting their own organizations across the country.

A Anna 13:53

Are you still thinking of staying within, like, the mobile health space?

A Allee 13:57

Yeah, yeah. It seems like this research definitely shows the promise of m-health is real in this space. It's worthwhile pursuing.

A Anna 14:07

Out of curiosity, I'm still thinking within your immediate next step, you're hoping you can work with the same people again? Are you thinking in the future, after you develop this wonderful mobile solution-

A Allee 14:17

Yeah.

A Anna 14:18

Are you thinking of still working in the stroke space or perhaps another?

A Allee 14:23

In the more, like , immediate future? I'm definitely interested in seeing this through with the population of stroke, but I'm also interested in... I think this research can be applied broadly to other chronic conditions, especially those that impact people in older age.

A Anna 14:40

Is there anything else you would like to share with listeners on the podcast about your research, or just like, if you want to to speak to a future collaborator who might hear this episode?

A Allee 14:54

I'm just gonna give a shout out to my committee members, Dr. Leslie Wang! Her framework, or the approach called the FASTER approach. This remember really helped me think about my methodology for this sort of work. So if people are interested in the user- centered design space, I'd recommend this paper, which I will make sure that's included in the podcast (description).

A Anna 15:12

Alright! So I think that's all the time you have here today with Allee. We thank you again, so much for coming.

A Allee 15:17

Thank you!

A Anna 15:17

and speaking! It's great to have you back again on the podcast to kind of tell us a little bit more about how your research has now evolved. And, you know, thank you!

J Jejociny 15:27

Thank you!

A Allee 15:27

Thank you!

A Anna 15:29

Welcome, Yashoda, to the rehabINK podcast. We're really excited to have you here. Just for our listeners at home - Can you tell us a little bit about you and your research? What field of rehab are you in?

Y Yashoda 15:41

For sure. So I'm actually a physio by trade and I graduated from physio school in 2019 from Queens (University) and I worked a little bit in private practice, but I've moved into in-patient rehab at St. John's, part of Sunnybrook. Then, I started my PhD in 2020, and my research is

really looking at "Is there a potential role or a clinical value of using technology in how physiotherapists conduct gait-involved risk assessments of older adults?"

Y **Yashoda** 15:45

So, thinking more towards my last study, I'm really interested in AI or falls risk predictive algorithms, and do they help how physios determine if someone's a high falls risk? Or do they actually hinder someone's decision-making? So that's kind of what I'm interested in. I guess, being a physio myself, I want to know, is there something that we can bring into clinical practice that could help make their jobs easier or make their assessments easier?

A **Anna** 16:39

Great. So you mentioned something about AI. I feel like there's a growing interest in what AI means - Can you tell me a little bit more about that piece?

Y **Yashoda** 16:48

Ai, I guess, is a very large term, but within that umbrella term are algorithms. And what I'm actually looking at is a falls risk predictive algorithm. So this was actually developed in my lab as a previous project, and that's from the AMBIENT study ran by Drs Andrea Laboni and Dr. Babak Taati. Basically, they've developed an algorithm, and it predicts the likelihood of somebody falling within four weeks, or an older adult falling within four weeks based on these walking videos that we have.

Y **Yashoda** 17:18

So I'm actually taking that information and comparing it to how a physiotherapist conducts a falls risk assessment. So I want to see when the physio is watching a video of an older adult walking, what is the likelihood that they think that person is going to fall and then compare that to what the algorithm said. So I'm doing like a head-to-head comparison between the technology and the human. And then I'm also going to be giving the physio the information of the algorithm to see if that helps make their predictions better or worse, I guess, in "high-level" terms.

J **Jejociny** 17:50

Oh, that's very interesting. I just have a question. Out of curiosity, do you think that in the future, AI can potentially take the role of physiotherapists?

Y **Yashoda** 18:02

That's a really interesting question! And I think the way that we hear about AI and algorithms and machine-learning in the news... it's that amazing technology, it's this amazing new thing

that's going to revolutionize the world, but there can be consequences with using these types of technologies in practice, like in some of the things that I was reading before, clinicians might overly depend on what the algorithm output is saying, forego their own clinical judgment, but algorithms aren't 100% accurate, like they make mistakes, too.

Y Yashoda 18:34

And so if we become overly reliant on these things, then we might not be making the better decision. So I don't know if AI will take over the role of a therapist. I think it actually misses a lot of information that clinicians can do. A lot of it we can't explain though. Like Anna, you might be even familiar with just like that, your intuition, like your gut feeling that something just doesn't seem right. How do you translate that into technology? And sometimes I don't think that you can. I think just by being a clinician and getting the experience of working with patients, you just develope a sixth sense as to whether something's going to happen or not. And so I think for that reason, amongst others, I can't see it doing like a complete replacement of, of a clinicians duty.

A Anna 19:23

I echo that for sure. I haven't practiced very much recently given my PhD, but I would say that I don't think AI will ever replace us. They will definitely be a tool that can help us.

Y Yashoda 19:35

Yes.

A Anna 19:35

So like, there's certain things that we do terms of like, assessments are very like routine. And for those things, I think we can definitely delegate to an AI to help us, but of course, given our knowledge that we gain from working with people, and also just like from research literature, things like that. There's information like that is not something that an AI is necessarily able to take in.

Y Yashoda 19:59

Yeah.

A Anna 19:59

In the same way that we do to integrate. At least the way I've understood how AI works right now, it's very much we tell it what to do. I guess it depends on what if we get to like more advanced

Y **Yashoda** 20:11

Correct. That's the exact thing, it only knows what it knows, like, based on that data set of numbers or videos that you're feeding into this thing. It's making a prediction, but there's so many other things that are happening. And so like the generalizability of these tools is also kind of questionable, because it's only learned what we've given it to learn.

Y **Yashoda** 20:35

Not that I'm an AI expert. It only sees what you show it, and so when you bring in something that's totally different, and you're asking it to make a prediction, I'm gonna guess that the accuracy of these things goes down, because it hasn't been trained on those videos, or the data that you were giving it before. Whereas as a therapist, I just feel like you've, you see so many different things as a clinician, but then also in your everyday life, but with like that clinical lens, so you're just exposed to a lot of training yourself. You can't put that into technology, I don't think,

J **Jejociny** 21:12

Yeah, that makes sense. You always need a human experience.

Y **Yashoda** 21:15

I think so. Yeah.

A **Anna** 21:17

I'd also like to say that, because we're working with people and humans,

Y **Yashoda** 21:23

Yes

A **Anna** 21:24

having a human work with a human - you really need that connection to really make clinical progress in terms of getting someone to feel like they've been heard and, you know, work with them, having discussions.

Y **Yashoda** 21:37

Exactly.

A Anna 21:37

Because there's, there's like this intangible, I guess, feeling or sense where you really need to connect with someone. And I don't know if that's possible with technology.

J Jejociny 21:49

Yeah, that's true.

A Anna 21:51

So given your topic, how did you end up researching this?

Y Yashoda 21:56

You know, I wish I had a good story for that. I don't actually have a very good story. I've always had great friendships with older adults. That is my group of people, I just have really good relationships with them. And so they've always been a group that I've been personally interested in, like leaving all of the falls risk stuff behind for a second.

Y Yashoda 22:20

But I guess the way that falls came in is because naturally, as a therapist, I feel like a lot of our job is about, like, especially in in-patient rehab, it's like you want to make someone, help someone get safe enough that they can go home and feel confident and comfortable about tackling whatever the world has and falls had big implications. Like, regardless of the facts we learn about in research, it's just on someone's life.

Y Yashoda 22:43

It makes them very scared to do different activities. It can cause family members to be very nervous about someone staying home alone because they've had a fall before. Putting two-and-two together I just wanted. I think that's how I got interested in the falls research, but I also love technology because I do feel like that stuff is the way of the future. Like I feel that all of these things like algorithms and making predictions about stuff happening, I think there's a role for it. I'm just trying to figure out what it is. So I guess that's kind of how I landed there.

J Jejociny 23:15

That is cool. That's very cool.

Y Yashoda 23:17

I think what I might be interested in though, too, is like looking at the structure of cities, or just towns. Like looking at our sidewalks and our ramps, and our stairs, and are all of those things accessible? Yeah. Is all of that stuff really helping people? I mean, it is helping people. But

Y Yashoda 23:37

Is it helping people to the extent they need to, I guess?

Y Yashoda 23:41

Yeah, yeah. And it's like, even if something is too cold, like a ramp is at the right degree, does somebody feel safe going up that ramp? Or like, how much effort does it take for them to get up there? Stuff like that, those smaller details that I think that are important to look at and and to consider moving forward. So I feel like I want to expand my research interested looking at older adults, but just anybody with any type of disability and not the older adults have disabilities. But we can't assume that somebody has an impairment because of their age. So I kind of also want to change people's attitudes to shift away from looking at someone being 90 or someone having a diagnosis of a stroke as defining who that person is because you actually don't know what what that means.

A Anna 24:30

There is definitely that perception where people who are older are just less capable, which is definitely not true.

J Jejociny 24:38

So what does person-oriented care mean to you?

Y Yashoda 24:41

I think for me, it's a lot about working with a patient and their family and helping them achieve their goals. I think one thing as a clinician as well is we obviously have goals that we want for a patient and we want them to be able to do certain things, but it's also just finding that balance of maybe your goals don't align with the patient's goals. And really working with patients and families and seeing what's on their list and making that a priority of things that you should be working on or considering.

J Jejociny 25:13

I really liked that answer because like, you know, you need to be able to work with their family as well.

Y Yashoda 25:18

Yeah.

J Jejociny 25:19

And with the patient to understand the patient much better. So, where do you see your research in the theme person-oriented care?

Y Yashoda 25:29

I think what I've also learned is that kind of going off of what we were talking about before, but really talking to people and seeing what is important to them, or what they want to see changed is the start of where my research journey is going to begin.

Y Yashoda 25:47

I have a lot of ideas and stuff. But for me, and the one thing I hate about research or dislike about it is that, one thing that I learned back in physio school many years ago was that it takes about 17 years for something in research to make its way into the real world. Like for those, for that information to be translated to a point where it can make it out. And I strongly dislike that because I want to be involved in work that's going to make an impact, like tomorrow. So I see person-centered care starting where my journey is going to begin. But I think it starts with talking to people, seeing what challenges that they have in their real life, and trying to find a solution for them.

J Jejociny 26:31

I really liked what you said, because in research, whatever we do ends up being in the research paper, but knowledge translation work doesn't take place. And after that, our work being implemented is very important. Research papers are only in like research institutions where we can look them up, but not many people know about it. And we do research for those people that don't have much knowledge about it. So some people, when they wanted to access research paper, they can't even be able to access it because you have to pay for it. Because we're associated with the institution, we are able to pull up those research papers.

Y Yashoda 27:08

For sure. And that's what I loved about the RSI Research Day when we had the caregiver talking about their role in specific research projects. I feel like that's really how you make things meaningful. And that's not to say that there isn't importance for other research. For me

personally, I want something more on the other end of things where I can see that meaningful impact. And so seeing that at research day, how there's just different people involved in projects from their inception, like conceptualizing of ideas. That, I think, is really powerful.

Y Yashoda 27:40

So, I think that is how I want to incorporate person-centered care, research, in my work. So I don't know what question I'm going to answer, but I know that I want to be working with the public to figure it out. As much as this is my passion in research, I struggle with if that's the journey that I want to continue on, because I am trying to find a work-life balance and find a place where I can live a very happy life. And so it's a real challenge for me if it's "Do I take these ideas and push them through research?" Or, "Do I take these ideas into more of like the industry type of way and make things happen and come to fruition there?"

J Jejociny 28:26

I'm curious. So, in the future, do you want to be a scientist? Do you want to be, you know... What, what does it look like for you?

Y Yashoda 28:35

I've always wanted to be a prof.

J Jejociny 28:38

Oh, okay!

Y Yashoda 28:38

I have not always - I should just say within the last three years. I never knew what I wanted to do growing up until like, I got into physio school and then I realized that there was something on top of clinical work that I wanted to do. But I think as I get to the end of my PhD, for me, having an impact in the world is like the top priority, and making a difference for people. I have to see where the road takes me.

A Anna 29:03

Wherever your journey takes you, it'll be in a space probably related to research, in some sense.

Y Yashoda 29:09

Yes.

A Anna 29:10

And also be able to put that research into real life.

Y Yashoda 29:14

Yes.

A Anna 29:15

And have some sort of meaningful impact based off of your engagement with the people, the public.

J Jejociny 29:22

Exactly.

J Jejociny 29:24

We've talked a little bit about your, you know, how you wanted to have this balance of personal and professional. You know, I just want you to give some tips to the listeners on what you think would be important to manage personal and professional life balance. And to those people who wanted to go to grad school.

Y Yashoda 29:45

Yeah, no, that's a great question! And I would honestly say if you asked me this a year ago, I would not be the right person to ask. I probably still am not the right person to ask, but I've changed a lot and the biggest thing that I'm taking away from all this today is there is space for absolutely everybody. And to not compare yourself to other people's success and just trust that whatever path you're taking, and whether that's you taking an extra year in grad school or it taking you six extra months to get the publication out because that's just when it's ready. That's totally fine. Like, you're still going to make it to your end goal.

Y Yashoda 30:27

And I think just having that, that like inherent belief in yourself, you will always be successful, and you will be the happiest person in the world. If you just believe that you can do it, 'cause you will do it. And I think that's like the biggest message for me is: there is room for absolutely everybody.

A Anna 30:48

I think what I really appreciate about our conversation so far is something that you mentioned about being transparent. I think when someone is able to first show that honesty and that transparency, will others be better able to be more vulnerable and share.

A Anna 31:05

And I think that concludes our questions. I don't know if you have any last words to say.

Y Yashoda 31:11

I think I'll just say, let's all keep going. We're gonna make it. And I will always be everybody's cheerleader!

J Jejociny 31:19

I love that.

Y Yashoda 31:20

Even if you don't know me, I am you cheering you on! Trust me.

A Anna 31:24

J Jejociny 31:24

Maybe you can say, "Yashoda is cheering!!!"

Y Yashoda 31:27

Yashoda is cheering!!!!!

A Anna 31:30

Awesome! And I guess that concludes this portion of the podcast.

A Anna 31:36

Thank you so much for joining us today. And being our transparent and an open book. We

Thank you so much for joining us today. And being our transparent and an open book. We really enjoyed having you. Yeah,

J Jejociny 31:44

Thank you so much. It's been a learning lesson.

A Anna 31:49

So, thank you so much Reeman. Can you please tell us a little bit about you and your research, and what kind of field of rehab are you with?

R Reeman 31:58

Yeah, of course. So I am a speech and language pathologist, and I recently defended my PhD and Rehabilitation Sciences from the University of Toronto. And my research is actually on an intersection between Rehabilitation Sciences and sleep medicine, looking at obstructive sleep apnea and stroke patients.

R Reeman 32:21

So, what's obstructive sleep apnea? It's a condition where recurrent obstruction of the upper airway occurs due to the intermittent loss of tone in the upper airway muscles. So obstructive sleep apnea is particularly significant among stroke patients as those with sleep apnea, they experience lower quality of life and higher risk of recurrent stroke. And the gold standard treatment for sleep apnea is the CPAP or continuous positive airway pressure, but it's often poorly tolerated by patients due to factors like discomfort or claustrophobia.

R Reeman 32:59

So this is where my research comes in. I explored the feasibility and efficacy of a new treatment, which is the oropharyngeal exercise intervention, which involves exercises for the tongue and throat muscles. And these exercises are being used to improve swallowing function and their potential will be in addressing sleep apnea arises from that they share the same muscle groups with swallowing. So potentially, they can improve the upper airway patency during sleep.

A Anna 33:30

Awesome. There's definitely a lot of interesting research in the intersection between SLP rehab and sleep medicine. How did you end up researching your topic at RSI?

R Reeman 33:43

First, like my journey into research in general began with my clinical background and experience. So I worked as an SLP for five years. I worked with stroke patients who had speech and swallowing disorders and also some of them had sleep apnea at the same time. When I uh, and when I moved to Ontario, specifically Toronto, I started working as a research assistant at the Speech Production Lab. And it was during this time that a sleep neurologist approached our team with the idea of conducting a feasibility clinical trial to evaluate the oropharyngeal exercises for sleep apnea treatment. Fortunately, the lab, or the PI Dr. Yana Yunusova, secured the funding for the project. And given my clinical experience with the stroke population, and really my passion for bridging clinical work with research I was entrusted to lead this research and this is how I started my PhD research at RSI.

J Jejociny 34:41

I was wondering if you can tell me about an experience that inspired you to do this research.

R Reeman 34:48

Yeah, absolutely. So one of the experiences that inspired me to do this research was when I was working with a patient after stroke. And really the patient's rehabilitation journey was marked by resilience as she faced not only just challenges of surviving a stroke, but also the difficulties of speech and swallowing, and also a sleep disorder. So really observing her daily struggles highlighted the impact and how these challenges had on her ability to communicate and her independence in general. What struck me the most was this patient's frustration with having to visit multiple doctors for her various issues.

R Reeman 35:28

I remember she said that I wish there was a multidisciplinary team that could address the interconnected nature of health concerns, because she has a speech, swallowing, and also sleep disorder. And she was saying they're all in the same region, why we don't have like a team that can address all these at the same time. So this really motivated me to do my, my PhD research and collaborate with experts from various fields. We had a team of stroke and slip neurologist Kinesiologist and also a speech and language pathologist. And we really we formed a multidisciplinary team to develop these treatments, and also, we assess that by conducting a randomized visibility trial. I believe, like future research should really aim to develop a holistic approach that not only improve physiological outcomes, but also to look at patient's preferences, and try to streamline their rehabilitation journey to improve their overall quality of life.

R Reeman 36:31

So, the episode's theme is related to person-oriented care.

J Jejociny 36:36

So, what is person-oriented care mean to you?

R Reeman 36:40

Person-oriented care to me is really one of the pillars for effective rehabilitation, because it's really, it's revolves around tailoring care plans to each individual unique needs and preferences and circumstances. In the context of my research, person-oriented care translates into understanding that each stroke patients with sleep apnea has a distinct journey, a different journey. So really, by recognizing their individuality, we can provide personalized treatment like oropharyngeal exercises, and also other treatments to really address not only their physiological needs, but also to consider their lifestyle preferences, and also potential barriers to exercise adherence, or even CPAP adherence.

J Jejociny 37:29

Where do you see your research in that the person-oriented care?

R Reeman 37:34

Specifically for my PhD research, the main study was a feasibility randomized control trial. Before asking participants to participate in the trial, we have to do the informed consent. So for example, during the informed consent process for the randomized control trial, we explained the potential benefits and risks of participants to participate in that study. It was very important to allow them to make an informed choice about whether to participate. Through my work, we developed an oralpharyngeal exercise therapy on a smartphone application, we call it OPEX. And also we conducted semi-structured interviews to learn more about the usability of the app, just to make sure that the app fits the patient's preferences and needs if you want to have this app on the market.

J Jejociny 38:24

So, an app being designed according to for the patient's care... is that the patient oriented care in your research?

R Reeman 38:33

Yeah, that's correct.

J Jejociny 38:34

I wanted to ask what inspired you to start that app?

R

R Reeman 38:39

Yeah, what inspired me to do this app is to give patients some autonomy in their rehabilitation journey. So instead of asking them to come to the clinic, for example, to do the exercises, or to have to follow up with the speech and language pathologists, let's say, or to complete these exercises, they would have their app and then they will be in charge of their rehabilitation journey.

R Reeman 39:06

And they can do the exercises on the schedule that suits them better. For example, in my research, we asked them to do the exercises twice a day. So we give them the freedom to choose the time to do the exercises during the day. And also they can do the exercises from their home or at work to be the main person in their rehabilitation.

J Jejociny 39:32

Sounds very interesting! Yeah, so patients being able to make their own decisions based on using this app is, is very interesting and I look forward to that app being developed and being available to you know, people in different parts of the world that could speak different languages as well.

A Anna 39:52

For our listeners on this podcast, who are not very familiar with be speech language pathology, sleep medicine, and all the associated terms. Can you give us an example of an oralpharyngeal exercise, and what the effects were of this exercise?

R Reeman 40:13

Yeah, oral pharyngeal exercises are exercises for the tongue and the throat muscles. These exercises are traditionally used by speech and language pathologists, and they're used to improve mainly the swallowing function, but they're still not being used for sleep apnea. And this is why I'm doing this research where we can look at the effect of these exercises on sleep apnea. One of the exercises for example, we have tongue-hold-swallow, where we ask the participants to stick their tongue a little bit out, like all either tongue tip will be outside of the mouth, and then we'll ask them to swallow. Swallow hard. And we will ask them to repeat this exercise, for example, 10 times per session. And the way that we assess the effects of these exercises. We didn't assess each exercise separately, we evaluated the whole exercise program, which consisted of six exercises.

R Reeman 41:12

The results were positive. We found improvement in the tongue strength and also we found reduction in the sleep apnea severity. And also assessed some quality of life measures such as the functional outcomes... the functional outcomes of sleep questionnaire. We also found

improvement and in this questionnaire.

A Anna 41:37

Given your experience in this field, what are you most excited about in like sleep medicine, speech language pathology, rehab... what are you looking forward to?

R Reeman 41:49

That's a great question. I am looking forward to seeing the future of the speech and language pathology field to look at impairments in a multidisciplinary context because we really, we can learn a lot about our patients while we are collaborating with our experts, and also with the patient and their caregivers and the family. Because really, our end goal is to improve the patient's overall quality of life and also to tailor each intervention or even assessment according to the patient's preferences. What do they want from our service? Not what we think that they need. We really need to listen to the patients and their families and caregivers to learn more about their preferences.

A Anna 42:38

Definitely. If you were to shell a message to the world, to kind of promote multi-disciplinary collaborations, what kind of message comes to mind?

R Reeman 42:49

I think the message that I want to emphasize today is that it's not only important to collaborate with experts from various fields, I'm talking as a speech and language pathologist, it's really important to also collaborate with the patients, and also their families and their caregivers, in order to develop a treatment or develop an intervention that would improve their quality of life.

A Anna 43:17

Thank you so much Reeman for your time, and for talking about your experiences, your research, and sharing little bits of wisdom.

R Reeman 43:27

Thank you so much for inviting me to this podcast. And it's a pleasure to be on the rehabINK podcast.

J Jejociny 43:34

Thank you.

A Anna 43:36

So we were able to speak to Allee from occupational therapy, Yashoda from physiotherapy, and Reeman from speech language pathology. It was a great conversation. We got to hear about their research, and how it linked to person-oriented care. We look forward to seeing how their research goes and what they end up doing in the future.

J Jejociny 44:02

As we move to the end of the episode, Anna I want to ask you - What does it mean to be involved with person-oriented care?

A Anna 44:10

Just thinking about what we've heard from the three students so far, I'm thinking that person-oriented care really revolves around putting the person first and considering the needs of the person. So this can involve psychological, social, and even financial needs.

J Jejociny 44:31

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