Episode 4: Physical and Mental Health in Autism Spectrum Disorder

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SPEAKERS
Patrick Jachyra, Julia Rybkina, Kyla Alsbury

[intro chime]

Julia Rybkina 00:15
Hi, everyone, and thank you for joining us on our last episode of the year. My name is Julia. I'm currently a master's student, but I'm this close to graduating. I study cognitive rehabilitation for people living with neurological disorders like traumatic brain injury and multiple sclerosis.

Kyla Alsbury 00:30
And my name is Kyla, I'm a physical therapist and PhD student studying community based exercise programs for older adults with balance and mobility concerns.

Julia Rybkina 00:37
Today we're joined by Dr. Patrick Jachyra, who is a postdoctoral fellow at the Center for Addiction and Mental Health or CAMHfor short, in Toronto, Canada, and of course instructor at the Faculty of Kinesiology and Physical Education at the University of Toronto. His research is focused on trying to figure out how physical activity impacts the lives of individuals with developmental disabilities. in the community. Patrick is the founder and former director of a community recreation program for youth and young adults with developmental disabilities. Patrick's work in the community has been recognized by numerous awards, including the prestigious University of Toronto awards for excellence. In his spare time, Patrick enjoys spending time with his little niece and can be found outdoors cycling, skating and playing baseball.

Kyla Alsbury 01:26
That sounds like great work life balance. Patrick, thanks so much for joining us today. How are you doing?

Patrick Jachyra 01:35
I'm fantastic. And thank you, Julia, and Kyla for having me on the show. I don't know about work life balance, but that is where you can find me outside of computer.

Julia Rybkina 01:44
Well, that sounds great. It's always important to do something outside of work, especially during the COVID times. So, to begin, can you tell us a little bit about your PhD work in a nutshell?

Patrick Jachyra 01:56
Yeah, absolutely. So my PhD work focused on trying to understand why children and youth with autism spectrum disorder are not physically active. So generally speaking, kids with autism are less active than their age related peers. And the older they get into adolescence and even into adulthood, what we see is a pronounced decrease in their activity levels. And as we know, physical activity can contribute to numerous physical health benefits, mental health benefits. And for people with autism specifically, it can kind of also help with some of the challenges that come with autism, such as having difficulties with routine and if you are physically active, for example, being active gives you a sense of routine, a sense of predictability. And so in my study, what we tried to do is understand what are some of the barriers and facilitators to why kids with autism are not active. And so we did a province wide survey to try and get an idea of what they're doing, who are they doing with it with and how often and then we did a qualitative study where I got to work with the youth. And we created a digital story, which is kind of like a YouTube video. And we did some interviewing to get a better understanding of what their daily lives look like, but also, again, to dig into what are some of those things that are both enabling their participation, but then also, potentially constraining them? So that was my PhD in a nutshell, reduced in a minute, five years of work.

Kyla Alsbury 03:21
It sounds like really interesting work, Patrick, thanks for sharing that with us. For our listeners who might not be familiar with some of the terms that you use, you're talking about neurodevelopmental disabilities, and autism spectrum disorder, maybe you can give us a bit of background info on these types of conditions.

Patrick Jachyra 03:36
Yeah, absolutely. So we'll start with like the family of neural developmental disorders of disabilities, and those are sometimes used interchangeably. But generally speaking, it's a disorder that kind of impacts the development of the nervous system, and also then impacts other parts of development such as emotion, it could be learning, it can be self control, could be memory, could be physical skills. And under that umbrella, we think about certain diagnoses such as Autism Spectrum Disorder, which we'll get into in a second, attention deficit hyperactivity disorder, obsessive compulsive disorder would be one of them. But also something like cerebral palsy is considered a neurodevelopmental disorder, because the idea is that a lot of these things are kind of occurring and stemming from the brain itself. And if we compare, you know, the development of a child without one of these conditions, generally speaking, they're reaching milestones at a different rate, or usually a faster rate than these kids who are impacted. So that's kind of the broad family of neurodevelopmental disorders. Then autism spectrum disorder is, like I said one of the members of the family of neurodevelopmental disorders and it's characterized as developmental disability that is lifelong with usual onset in early childhood. It tends to impact someone's social skills, their communication skills, relationships, and self-regulation. And because it's a spectrum, we use that word to try and highlight that it impacts people in very different

ways. So some people like for example, have impairments or challenges and communication, while others might have challenges in social skills or behaviors, right? So there's no real uniformity to what someone with autism spectrum disorder, kind of how they develop and how they would live life. Because again, there's just such wide heterogeneity, which is a big word to say, it looks very different across different people.

Kyla Alsbury 05:32
I think that's a really important distinction to make, right? That it's not that people with autism have the exact same experience, but in different degrees that that, as you said, it can be these different experiences. And based on how you know, how their brains have developed, it's going to be different person to person. That's really interesting.

Patrick Jachyra 05:48
Yeah, absolutely. And I think that's some of the new things that we're finding in research where, you know, in 1940, autism was thought to be caused by mothers who were called to their children, they were called refrigerator mothers. And that was no the dogma of the time from Leo Kanner, who was one of our leading psychologists at the time and in autism research. And so we've obviously come far away from thinking that autism is the result of mothers not responding to their children when they cried, because that was the theory of the time, right. And again, a lot of it's now being focused on the brain and understanding how the brain impacts the development over time. But there's just so much research from genetics, through behavior, to physical and motor skills work, I'm kind of interested in like the field has really taken off in the last 20 years.

Julia Rybkina 06:30
So in your research, would you say that people with neurodevelopmental disorders often have physical impairments? And do they impact their ability to participate in physical activity?

Patrick Jachyra 06:42
Yeah, so I think one of the new things we're finding across the research sphere is, you know, initially, when we used to focus on neurodevelopmental autism, specifically, we just think about the cognitive impacts that have until impacts but we didn't think about motor skills. And what we're finding increasingly, is that there are for some people, impairments and kind of motor coordination skills, if you think about the child back in the day, and when we talk about the clumsy child in class, right, that was kind of what people used to laugh at. But now that has actually been classified as developmental coordination disorder, which increasingly, one of my colleagues in Australia, John Carney is finding that for some kids with autism, they're also being diagnosed with developmental coordination disorder. So if they're having these kind of rudimentary biological challenges, which are impairing the ability to learn gross motor skills, then those issues alone, including challenges with trunk function, challenges with mobility, sometimes that itself can be what I would say, like the biological barriers to physical activity. And again, sometimes you think about what our motor skills look like, right? So for some of us, it's just, we learn how to run, jump, throw, hop, skip, without even really thinking and without necessarily even trying to be taught how to do it. But for someone who has these delays in physical development, especially at the motor level, these skills almost have to be taught explicitly. And what we're finding is

kids who don't have them early on, across neurodevelopmental disabilities oftentimes continue to get older without these skills.

Kyla Alsbury 08:15
And I suppose related to that, it's whether or not these children have the opportunity to develop those skills as well. I think you mentioned earlier that children with neurodevelopmental disorders are typically less active than their neurotypical peers. And I was wondering why this might be the case? Or if you have any ideas for that?

Patrick Jachyra 08:31
Yeah, that's a really good question. I think if anyone has the answer to it, we'd be you can just retire from research. It's a highly complicated scenario, right? So if we go back to the biology, which is I think, important, always to put in context of what's happening, right, we just talked about the challenges that come with potentially motor, learning motor skills, and then executing motor skills. But then we have all these other social and psychological pieces that come as well, right? So if we think about it at the psychological level, physical activity can be a very stimulating and potentially overwhelming environment for people, right? So there's lots of stuff going on in terms of rules, there's lots of stuff going on, in terms of understanding people's space and having spatial awareness. Also, lots of things going on in terms of not being triggered by the environment if it's too loud, or if it's too noisy, or if there's just too much heat or too much light. So we have all these other receptive things that are happening in the environment that can limit participation. And then some of the research that my PC kind of focused on integrating these two perspectives, the biological and the psychological, was looking at what are the social barriers? So some of the social barriers that we've found so far, is that you know, there's not only a limited number of programs for people with autism in general, people who have neurodevelopmental disabilities to participate in but some of these programs are actually exclusive in nature. So what I mean by that is we had a few parents tell us that they sign up for a program, they're ready to go, they show up and the program says, 'Well, we can't take your child because they have a disability. You don't have a support worker, therefore they can't participate.' Right? So it's like okay, so we just turned a kid away. And I understand it from the program's perspective, because you know, you don't have the staff and the resources, I get that on the one end. But at the same time, if we do this over time, the kids who are developing those skills to begin with are much further ahead than kids who are not as active. So there's, there's that one piece of the social level. And the other thing is the challenges that come sometimes with having a neurodevelopmental disorder, where therapy might be something that is also part of their lives, right. So for a child, without a disability of any kind, they might not necessarily be going to therapy several times a week. And autism, if they're doing intensive behavioral therapy can take anywhere between 20 to 40 hours a week, depending on what's going on. So if you think of that, and put that into the context of a family life, put that in the context of the life of a child, there's just very little time for them to be active in a structured environment, right? So again, there's this really complex interplay between the biological kind of challenges that might be going on, interspersed with the psychological. And then all these other social factors, which in my PhD work, I tried to say, when we're developing interventions or solutions, or we're thinking about why kids are inactive, we need to think about these three, the biological, the psychological, and the social together as integrated, rather than trying to kind of focus on each little thing.

Kyla Alsbury 11:16
Yeah, because everything kind of has to go right for that experience to be successful. Right? Or to be enjoyable.

Patrick Jachyra 11:22
Yeah, absolutely. And I think for you think about ourselves, it's like, if I asked you to run a marathon, you haven't trained and you hate running, the likelihood of you running is pretty tiny, right? And that's an extreme example, but it's another example of like, what you just said, where you need the ingredients to come together so you can make that perfect cake, right. And if you're missing an ingredient or something's off at any certain point in time, then our challenge becomes that no kids are, are not being active, let alone all the pressures that come on families with all the other expectations of what it's like to raise a child with a disability.

Julia Rybkina 11:54
Do you know where the research is at this point about like, Is there an optimal amount of exercise or a certain amount of training that people with neurodevelopmental disabilities need to alleviate certain symptoms or just to feel better?

Patrick Jachyra 12:12
So I think generally speaking, those are two kind of separate issues, the first being usually will refer kids and youth to the Canadian physical activity guidelines that we have in place for all age groups. And the idea is to try and get kids to get about 150 minutes of physical activity per week. And especially if it could be in moderate to vigorous intensity. So moderate could be something like walking at a pace where you're increasing your breathing. And if we think about the breath soundcheck, right, where we know, we can hold a conversation at a particular exercise activity, if it's walking, if we can hold the conversation, then we know we're either not working at a level, that's a little bit too low. But if we can't hold the conversation, we're working too high. So we want to try and find that kind of in between medium. So that's kind of moderate intensity, activity. And then the vigorous one would be something like heavy breathing, where you're really exerting yourself hard. So we want kids to be generally working toward that. And that can be achieved through a lot of different ways, whether it's organized , or house chores, whether it's workouts, chairs, stairs, whatever, there's a few different approaches. So that's kind of what I would call the recreational approach. And then we have the second approach in terms of the therapeutic benefits, where increasingly we're finding that individuals with notable disorders, and especially autism, we're seeing kind of benefits at the level of communication skills. So kids who are physically active in the lab, on a treadmill, for example. And what we're seeing sometimes are improves improvements in communication skills, kind of decreases in maladaptive behaviors that we don't want to see. Sometimes even improvements in cognition in terms of memory, and kind of recall and retention. So all those lab based things we're trying to figure out, but we're having a hard time translating what that looks like into real life. So there's still no real magic answer in terms of what is best, there's a little bit of debate going on if the moderate activity's better than the vigorous. But where I stand on that is this activity is better than activity at all. So if you're doing something, it's probably better than nothing. So therefore, we should focus on providing and promoting something.

Julia Rybkina 14:23
What do you think about the idea of prescribing exercise and having it more, I guess, formalized?

Patrick Jachyra 14:30
Yeah, I think, I think it certainly has a place and a purpose. I mean, even just talking to some friends who are going through medical school, and now they're talking about, you know, exercises that are something that they're asked about, which is so different from clinical practice 10 years ago, where exercise was never been part of the conversation, right? I mean, I have a colleague in Australia, Simon Rosenbaum, and he's been really pushing the Australian kind of side of things to talk about training physicians to not only think about physical health and just terms of you know, traditional medication use But also looking at lifestyle impacts in physical activity. With that, if we can provide them guidance through the physical activity guidelines that we talked about that we have in Canada, I think that's one way forward. For me personally, I think, especially in my population, when you start to prescribe things and make it completely prescriptive, and you kind of instrumentalize activity to try and achieve a certain means, I think that might work for some people might not work for all. So certainly, it shouldn't be a one size fits all be a be all end all solution. But I certainly think it can be a tool that we could use to say, Hey, you know, based on this, try this many minutes this many times a week in this activity. And I think that can be a guiding tool, but it certainly shouldn't be the only tool we use.

Julia Rybkina 15:41
Yeah, I agree. I feel like physical activity can be such an individualized thing, like everyone chooses their own way of exercising so that you can pursue multiple different methods of exercise. And it's nice to be able to choose that.

Patrick Jachyra 15:55
Yes, yeah. I think like as a society, I think we're slightly obsessed with certain activities more than others, right. So if you think about like yoga, yoga has exploded and has become almost like a thing on its own. Think about running and people think about the gym as primary forms of exercise. But there's so many other things you can do to be active, right, we can talk about house chores, you can talk about going up and down the stairs, we can talk about going for walks, right? I think sometimes as scientists and in medicine, we almost kind of complicate things a little bit more than we should. So I almost try and bring always our work back to the ground level. And by talking to people I think is one of the most impactful ways we can do it. So that when we do create policies, and they are informed by people at the ground level, providing not only evidence, but then also suggestions of what they can do gardening, you know, housework, cleaning, the windows, whatever, like those things do add up. And if we know anything about dosage, right, little bits of doses of exercise add up to big doses over time. And that to me is better than doing nothing at all in like one big bout of the gym or something right and especially during the pandemic where everything's closed. So it's being creative with not only how we conceptualize physical activity, you know, in research and in practice, but then also communicating that information effectively to everyone else.

Julia Rybkina 17:09

Sure. And I found it very interesting that in, in your study found that the feelings of pleasure associated with exercise were very important motivators. And so I just, again, reiterate the point that might be good to be able to choose the exercise that you want to pursue, because then you'll feel you know, more motivated to adhere to it and actually experience pleasure doing it, which can be hard to experience when you just get prescribed a certain dose of a running exercise, for example.

Patrick Jachyra 17:36
Yeah again, and the prescription piece might have a time in place for some people and it might not I think, anything we see in physiotherapy, right, like the hero instant physiotherapist. Kyla's a physiotherapist by training, right? Like, people fall off the bandwagon really early. As soon as they start feeling better. It's like, Yeah, right, I'm not seeing you again. I mean, I'm so guilty of that. And so physical therapy thinks the same way, right, we can provide them tools. But at the same time, we need to find other ways to have people continue with being active through adherence. And one of the things that that I found was like the pleasure and the emotional connections, like it took my PG to realize that people get emotional benefit out of physical activity, whether somebody is blowing off steam after a stressful day, or sometimes just feeling connected to the ground. And you know, I had one participant talk to me about, you know, enjoying the feeling of having the water go through his hair. And that was a calming effect, or when another participant was running and feeling the pounding of his feet on the pavement. And that helped him calm down after just having a pretty stressful day or dealing with whatever he was dealing with. And, again, the pleasure piece in physical activity messaging, I think has been missing a little bit, we oftentimes are focused on the health benefits. And we've been really good at scaring people. If you're not active, this is what's going to happen. But similar to if you look at By comparison, smoking research, I mean, that kind of doom and gloom approach eventually doesn't work. And it's not working for physical activity promotion. So I think it's not only timely, but also important to find other messaging, such as promoting the effect the affective, emotional and pleasure components of physical activity, which I think can bring people back time after time again.

Kyla Alsbury 19:05
Yeah, I would agree. I think this conversation is making me reflect on my clinical practice. And I think I will try to bring in those conversations about like, what do you enjoy being physically active with? Is it dancing? Is it yoga, whatever it is, and just bringing that up a bit more. So I think that's really important. I think I've been focusing on trying to make, you know, people's therapeutic exercises, easy for them to access. I had somebody recently who, the thought of sitting down to do you know, 20 minutes of their exercise program was not happening, like their life was just too busy. And I said, Okay, we'll do the standing exercise while you're brushing your teeth, you brush your teeth twice a day, right? So do it then and that totally worked and they were improving. So finding those ways you can build that activity in but then also that finding those different ways of being active that are pleasurable. I think that's really important.

Patrick Jachyra 19:51
I think that's like that example of itself is super interesting, because I think in what we do, it's almost our responsibility. Find ways on how to engage our patients or participants in the population in general, I mean, humans are complex, there's no doubt about it. Right? And I know people have studied the impacts of can we pay people money? If we reward people with money, will they be active? it's like,

initially this was happening in Canada, we saw like, an increase in participation. And then eventually, when the money reward was taken away, activity also dropped, right. So it's again, trying to figure out that balance between those internal kind of motivators, which is kind of intrinsic motivation versus the external stuff, such as money, which in this study didn't really work out for them.

Julia Rybkina 20:30
I'm very curious to see whether the pandemic might have had an impact on you know, people's usual kind of routines, because the gyms used to be quite popular, but with them being closed now, I'm just wondering if people maybe have turned to figuring out ways of exercising that might be a bit more pleasurable for them?

Patrick Jachyra 20:48
Yeah, I guess we'll have to wait for that data.

Julia Rybkina 20:51
Great. So just to lead us back to our discussion. You mentioned health promotion on a few occasions, and I was just wondering what your personal experience has been like promoting physical exercise in the neurodevelopmental population?

Patrick Jachyra 21:04
Yeah, I mean, I think it's been a bit of a mix to try and take what I've been doing my PhD in terms of research and applying in the community. Like I said, at the top, working with people on the ground level has significantly improved my understanding of like, how effectively are we communicating research to people? And then how do we program it and what does that actually look like? So the committee program that I ran, which initially started with five people, and it was at an hour of physical activity over a three hour time slot each Friday night, honestly, I was just trial and error and experiment. Like, there's one time remember, we were trying to do basketball with the group. And in my head, it was designed so perfectly, all the activities were set, I had a few drills, and then you do it, and it was a disaster. The way I explained things clearly didn't work. There's so many rules, right, double dribbling, it's like, Okay, so that was like an ‘aha’ moment being like, you know, the things that I take for granted as a scientist, and as a person working on the ground level, it's like, I need to find a ways to not only adapt my instruction, but then also the rules of the game, right. So rather than having double dribble as one of our big rules that we couldn't do in basketball, I took that rule out, I said, as long as you run and bounce the ball as many times as you want, then we worked to then bringing back dribbling as being a fundamental skill, right. So that was kind of the one of the ‘aha’ ground level moments, promoting exercise directly. And realizing sometimes that what we talk about in research doesn't work the same way in the community. And I think it's a real treat to be able to work with people directly and, and try and figure this out, because sometimes these failures, so to speak, inform my research moving forward big time, because it's like, Okay, this is not working. Why isn't it working? How do we then change? Do we need to change our pedagogy in terms of the way we teach students to change rules? And again, my approach is some activities better than no activity? So then how do we promote exercise for all? And that's, again, working on the ground level has been instrumental in shaping my research, and also just my own kind of experiences?

Julia Rybkina 23:02
Absolutely.

Kyla Alsbury 23:03
So looping back to your experience, running this physical activity program, as well as your PhD research. What suggestions would you have for community programs who are trying to provide opportunities for physical activity for people with neurodevelopmental disorders? Both children and adults?

Patrick Jachyra 23:22
Yeah, it's a fantastic question. I feel like by the time I finished my PhD, I ran out of energy to say it all. I think there's a few things that go into it. The first thing is consult with people who are on the ground. So honestly, talk to families, see what they need, see what their interests are. I know we, with the City of Toronto, they developed a great skating program for people with disabilities, but no one knew about it. And there's a long time of them trying to figure out like, Okay, how come no one's coming? Like, what are we doing wrong? It's like, actually, it wasn't well advertised, people had no idea. Then they ran a yoga program and through consulting with families and asking, 'Well, you know, what are the interests? How can we make this happen? What is it cost is a free? How do we get there? Where is it located?' All these questions that oftentimes, we can answer, just simply by working directly with people on the ground level. I know it is time consuming and it certainly does take a lot of effort. But a lot of the questions that we tend to kind of find out along through failure get answered by working directly with people. So that's kind of the first thing is to work directly with people. It's almost like bringing it back to the ground level is for me the place to start rather than the place to end. We still are part of the equation to be the ones who are implementing or thinking about programs, but again, working from the bottom up with people directly and then that informing our practice is certainly one way I think that we can form programs and, and other opportunities for people with neurodevelopmental disabilities.

Julia Rybkina 24:45
Starting from, you know, those collaborations and working on the ground level, it really I think, ensures that your research will be there's going to be uptake of your research in the community and it's going to be a lot more seamless and you're going to have those collaborations within the community and you kind of know what the community needs, instead of taking a more prescriptive approach and trying to tell them what the community needs.

Patrick Jachyra 25:06
Yeah, definitely one way forward, if you think about all the research that has been happening with sport for development right across other parts of the world, and oftentimes, these programs have a good intention, they start off really well, but then once organizers leave, they tend to fail. People are not trained or people don't understand how to run it or don't know the benefits, right. So I think that example equally applies in this context, where we want to eventually get individuals active on their own terms, rather than having us quote unquote, "the experts" being the ones for leading it. Because we can't be everywhere all the time, we need to be able to effectively communicate our research and our thoughts on how to optimally structure programs or provide solutions in a way that works for people across a wide range of abilities.

Julia Rybkina 25:46
Sounds very transdisciplinary

Patrick Jachyra 25:48
certainly not easy, very time consuming, I will tell you that much. And in science, we're used to go go go all the time and being quick, not always valued. But it is important.

Julia Rybkina 25:58
That was a really interesting discussion about I guess a lot of your PhD work. Just to jump in to more of your recent work. It seems like you've started to focus a bit more on now uniting the physical and the mental health in people with autism, what inspired you to make that shift to this new area of research?

Patrick Jachyra 26:17
it actually happened during my PhD when I was working with people with autism and talking to kids with autism, as much as they were having issues being physically active, a lot of their issues are also coming from mental health challenges, whether it was anxiety, whether it was issues with depression, whether it was suicidal thinking, and to me initially, I never really thought of this being a problem, even though I knew it was a problem in the field. For some reason, it just kind of went over my head. So then after I started really thinking about this toward like, the last year, my PhD being like, 'Okay, well, what is the connection between their activity participation, their mental health?' And how are they you know, informing each other. And when I looked at the literature, again, we talked about the benefits of physical activity on mental health, but not the other way around, right. And so I was like, okay, there's something else going on. And so I became super interested in understanding what is that relationship between activity and mental health and physical health in general. And that kind of led me down to this rabbit hole of reading more autism literature about suicide, where youth and adults with autism spectrum disorder are about seven times more likely to die by suicide than those who don't have autism. And it's about 7-10 times more often than they think about suicidal things. And five years ago, there's no one writing about this, now, all of a sudden, is a massive interest. And for me, that interest, again, came from my PhD work and activity, whereas some of these issues were coming up and I was like, 'Okay, if it keeps slapping in the face, you've got to eventually pay attention to it.' Right? So that's kind of where I've taken my work now was to better understand suicidal thoughts and behaviors among youth and young adults with autism.

Kyla Alsbury 27:54
Wow, that's really significant.

Julia Rybkina 27:56
Is that research specific to Canada?

Patrick Jachyra 27:58
So that research so far in Canada, we haven't done a big epidemiological study. My supervisor and I are trying to launch that piece right now. But across the US, we've had one study done in Sweden, we

have two study done studies done one in Australia and one in I think was Taiwan, and consistently between people are from like administrative large scale epidemiology research, we're finding that people with autism are 6-9 times more likely. So sevens like the average of a 6-9 is kind of the range, more likely to die by suicide, which again, five years ago, no one was even thinking about this as an issue for some reason, or just overlooked as something that was, you know, probably the population.

Julia Rybkina 28:36
So it sounds like you're finding this on an international scale. Because I know there's a bit of research showing that like suicidality can be dependent on culture. Have you found any similar distinctions in different cultures? Or is that that rate approximately similar across all?

Patrick Jachyra 28:53
the rates are generally in this population, pretty consistent across cultural groups, which has been interesting, because normally, like you said, it gets fluctuated influenced by culture, but so far, it's been pretty consistent. What we do need as a next step, though, in the research is to have a cross cultural kind of analysis, because everything's been specific to one area of one locale. We haven't really done cross cultural things. But that is certainly one way forward to try to understand what does that impact look like? And does it look different across different cultures? And what does that mean?

Kyla Alsbury 29:28
Such an important line of research, I think it's it's great that you're starting to pursue this and it sounds like the field is starting to go that way as well. I think hopefully, as a society, we're now becoming a little bit more comfortable with talking about mental health and the research coming along with that too, so that we can improve our mental health right? Because it is interesting, I think even in my training as a physical therapist, we really didn't talk about mental health a lot in my master's and I think, more and more am realizing and my patients that it does go hand in hand, and it seems like they're kind of in the past, we thought of them as two different siloed lines of research or patient care. And I'm just wondering why you think that's the case and, and what the potential impact of that might be on patient care and on research as well.

Patrick Jachyra 30:11
Yeah, absolutely. I would agree with that in terms of the silo piece. I mean, it's so fascinating where we know that they're connected but we think that they tend to be separate, right, but they really influence one another. And the other kind of big indicator that I found so far, in my early work, as a postdoctoral fellow at CAMH is the impact of sleep like I was reviewing clinical charts and a lot of from the emergency room, and a lot of the individuals who were coming into the emergency room for suicidal related issue in the days before and especially even the night prior to the suicidal event, I mean, they were not sleeping, right. So it's like, we know sleeps important, right? We know that physical health is important. We know they intersect. But yet when it comes to talking about it, when it comes to even think about treatment, or approaches or asking questions, we still tend to think of it strictly as like a brain based psychological phenomenon, when we really know that it's not, it doesn't just originate in the brain, right? That might be the endpoint that doesn't mean it's the starting point, right? So some of the stuff that I'm trying to do in this work and just like a long term career goal, to try and bridge that gap and say, look, to understand this from a more holistic standpoint, when we're asking about suicide, or ask

about mental health, when we're asked about physical health, we need to be taking into account all those things, because they intersect rather than trying to understand them each in isolation. I think we shouldn't start thinking about them in isolation in terms of asking those questions, but then putting that into context and cross examining it with the other issues such as physical health.

Kyla Alsbury 31:40
And maybe it's how we ask those questions to like as clinicians and researchers, right? Like, not just saying, 'How are you sleeping? But how many hours a night Do you sleep? And what position do you sleep in? And how often do you wake up?' Maybe trying to get more kind of detailed information on that?

Patrick Jachyra 31:56
Yeah, it's really I think that's one way we can move forward, right? Is exactly asking those questions. And it gets tough, because when you ask it in a clinical standpoint, right, when we have a big focus on assessment, and standardized testing, and approaches, I mean, we need those standards to sometimes help us, you know, determine clinical scores or determine access to therapy. And sometimes we need those tools. But again, I don't think it should be our be all and end all. And when we lose sight of some of these other questions, like the way that you've just asked about physical activity, right, like, you can get a very different answer from that, rather than saying, Are you active? Yes or no. And it goes back to even the mental health world, right. But again, when we're so focused on getting these standardized clinical scores, which again, are important, I'm not downplaying that they're not. But I think we need to also reframe sometimes, how often we ask them, and what are the questions that we supplement with them.

Kyla Alsbury 32:45
So related to that, Patrick, what recommendations do you have for clinicians or researchers who are looking to integrate more of that physical and mental health for patient care or for research?

Patrick Jachyra 32:57
I think there's a few ways we can kind of go out this, I mean, the first being, trying to think about the person kind of in a holistic way, right? So rather than trying to split up the mind being the mental health piece, and the body being physical health is two separate entities or dualism, I want, I would say, to start a movement where we think about them as connected and understanding how those connections overlap and how they interrelate, right? If we even think an example, like anxiety, I mean, anxieties is a very kind of specific thing to mental health, but has such physiological implications. If someone's feeling anxious, right, your heart starts racing, you might, you might have sweaty palms, you might start feeling you have shortness of breath, right, and those are so connected, but often we don't talk about them that way. So one way to talk about bridging the kind of holistic approach for research and practice is to ask those questions, kind of in a holistic understanding to try and tease out what those differences are, and then use that as kind of evidence so to speak, to determine a course of action in clinic. The other approach, I think, that we can take to bridging kind of mental health and physical health is to take mental health seriously. And I would argue that we're getting closer, but we're not there yet. Because when we think about mental health, oftentimes, if you disclose to someone that you know, I'm having an issue with being anxious, or I'm having an issue with thinking about ending my life, those things

aren't taken to the same degree as if someone falls and breaks a leg and we take it to the hospital and we treat the leg issue itself, right. So trying to start not only the conversation, but keeping that conversation going where we take mental health seriously, because as much as it's CAMH's motto, which is mental health is health, I mean, it is so important, because as soon as one of those things is out of sync, they tend to be debilitating in some way or another. So, again, bringing awareness to physical health and mental health is another way to move forward. And then the last way I think that is important is to teach mental health in schools and I don't know about you guys, but being in school as long as we have, we're lifers, I don't remember a time in which I had a dedicated opportunity with teachers and physical education or otherwise to say like, this is what mental health is, this is what it feels like, this is how you can address it ,these might be some ways that you can cope. And I almost feel like we're living in a very reactionary kind of society. It was like, Okay, if you have a mental health issue, we react to it go to the hospital get support then right? but it's almost putting like, a bandaid on a stab wound. Because that approach we know doesn't work when you have a band aid trying to cover a huge gash. So, to me, I almost think we need to start as a society to try and teach, you know, not only coping with mental health, but then also understanding what does it feel like? What does it sound like? And especially to kids, right? I mean, there was just a huge study that came out in Toronto a few weeks ago that showed that kids are in high school and elementary school have, you know, higher rates of anxiety and depression than ever before in the last 20 years of research. So it's okay, what are we doing in research and also in practice is trying to alleviate this issue. So for me, going back to the ground level, and trying to work there, because you know, mental health issues, don't go away necessarily. And if we can provide people with the right tools, to mitigate them, and then provide those clinical supports, when needed, and as needed I think that's one way forward.

Kyla Alsbury 36:18
I think those are certainly good tips, I think we can all take those to heart and in whatever arenas we work and live, we can hopefully try to affect some change. I know mental health has been a big topic at U of T. And, you know, hopefully, we can continue to improve all of our mental health from kids to adults and older adults all the way across.

Julia Rybkina 36:41
All right, so we've covered a lot of ground here today, from some of the more conceptual themes such as the importance of obtaining a holistic view of well being, to the more hands on practical work you've done helping kids with developmental disabilities in the community. My last question for you is what have been some of your most exciting moments throughout your academic journey?

Patrick Jachyra 37:03
That's a very loaded question, Julia, I think there's a few things. I mean, I think what excites me every single day to get up out of bed is just being able to use our brains is our job, I think we have one of the best jobs in the world. I know, sometimes it's debilitating when we can use our brains because they don't turn off. But the biggest 'aha' moment for me, I think, is just working with people directly in what I do in my research. And whether it's finding out you know, even like those digital stories that I did during my PhD, I did them in 2017. And, to this day, it's like once in a while, I'll get an email from a participant, and we get to, like, just interact. And you know, when we made those videos, we spent about 25 hours with each participant just because it's so time and labor intensive to do interviews and stories, right.

And like, making connections and impacting people's lives through research in that moment, to be able to do directly and have people feel good about themselves and talk about being active. I think that was kind of a major ‘aha’ moment. And for me, that's more rewarding than getting, you know, any sort of academic accolades or citations, which we rely on. I mean, that's what our field is, there's no denying that. But in terms of making a direct ground level impact, that's kind of my major ‘aha’ is being able to work with people, I tend to joke with people I have the best job in the world is to get to hang out with kids and do research and figure it out from there. So honestly, and that's, that really impacts even like my suicidal thinking about research, right? It's like listening to people and working directly with people from a qualitative standpoint, really informs this massive epidemiological study that we're about to launch using Ontario OHIP data, right, because again, like a lot of the research questions that I come up with come from people themselves. So again, the major ‘aha’, and my takeaways, we got to bring our research back to the ground level to, to try and figure it out. Because I think even during COVID, you know, I was part of a discussion with some colleagues across the world and we're developing these like, optimal strategies on health promotion, and communication and messaging. And then there's one group in the UK for it was a group for people with disabilities and they've been active the entire time, and they organize themselves, they mobilize themselves and they're being active and it's like, well, what's the missing piece? We keep harping, that people aren't active, but then at the ground level, some people are. So it's really trying to focus working with people rather than on people, which I think traditional research we've had a major focus working on. So it's trying to level out that playing field with people I think was my major ‘aha’.

Kyla Alsbury 39:31
Fantastic. Well, thank you, Patrick, so much. This has been a really interesting discussion and I'm sure that our listeners will learn a lot from you as we have today as well. So thanks again.

Patrick Jachyra 39:41
Thank you both for having me. They wish you guys all the best over the holidays and hope you get some time to relax because we also suck at that and research we need to learn how to relax better.

[chime]

Kyla Alsbury 39:54
We hope you enjoyed this episode and perhaps felt inspired to find some physical activity that feels good to you. Over this winter break we certainly did.

Julia Rybkina 40:02
You can find the rehabINK podcast on pod bean, Spotify, Apple podcasts and Google podcasts or on our website rehabinkmag.com/podcast. That's rehabinkmag.com/podcast. Thanks for listening.

[outro chime] 40:30

-end- 40:45