Speaker 1:

Welcome to The Michigan Minds Podcast, a quick and informative analysis of today's top issues from University of Michigan faculty.

Speaker 2:

Thank you so much for joining us on Michigan Minds today. I'm really looking forward to this conversation and learning from the valuable information that you have to share with us today, so I want to go ahead and get started. Can you please introduce yourself and tell us about your role at The University of Michigan?

Matthew Smith:

Yeah, of course. I'm Matthew Smith. I'm a professor in the School of Social Work. And I'm the founder and director of the Level Up Employment Skills Simulation Lab. And really, the overarching work in the lab is to develop and evaluate technology based solutions or interventions to help adults and youth with disabilities obtain and sustain employment.

Speaker 2:

Wow, that's incredible. Thank you again for joining us. I'm really looking forward to talking about the Level Up Lab and some of your other work. Before we get into that, can you tell us a little bit about your areas of research and where your research focuses?

Matthew Smith:

Sure, not a problem. I began my career in research actually by studying how schizophrenia affected families. And then I expanded kind of on this research topic to look at social outcomes of adults with schizophrenia, and that work led me to begin developing and evaluating a virtual reality job interview training among adults with schizophrenia and other disabilities. The virtual interview tool simulates a Zoom type job interview. And this tool provides trainees with automated feedback in real time, as well as kind of after you're done with the practice interview. And you use that feedback to improve your performance and get better at your interview skills. And our first group of studies that tested this tool did so under ideal research conditions where everything was pretty controlled and you used the tool as much as you wanted to.

But more recently, we partnered with a mental health services agency, who delivered the tool within their gold standard employment services. And we still found actually that the tool helped clients above and beyond their usual services to improve their skills, reduce their anxiety, and gain access to competitive employment. And so from this work, I've begun to center kind of the focus of the Level Up Lab on developing and evaluating the technology based tools, such as the job interview tool, to improve employment outcomes among marginalized and underserved communities more broadly. And one way we're expanding beyond the job interview tool is through a new intervention called Work Chat, a virtual work bay, where trainees get to practice talking with customers, coworkers, and supervisors within a work setting. And then they can practice those skills to help support them socially in a work setting.

Speaker 2:

Wonderful. Thank you so much. Continuing to talk about the Level Up Lab, can you explain a little bit about how the employment skills simulation lab helps bridge the equity gap in employment opportunity for underserved groups?

Matthew Smith:

Of course. So over the past 10 years, my research has mostly focused on adults with serious mental illness, where the employment rate was around or is around 25%. However, around 75% of this community voices their desire to work. And so we see this huge gap between who wants to work and who is actually working. And so there are some services such as the individual placement and support model of supported employment, known in the community as IPS, where that employment rate actually is around 55%, so it's a big jump from the general community of adults with serious mental illness, but access to these types of services are still pretty limited compared to who needs the services. Another example is justice involved adults who are preparing to leave prison, where their employment rate during their first year back in the community also hovers around that 25%. And we see that, again, that 25% or so employment rate also shows up in young adults with autism.

And so even though employment readiness services are available, they're still pretty scarce and underdeveloped within prisons. And that unemployment is a major risk factor for re-arrest after one's release. Meanwhile, as I mentioned, the autistic youth and young adults on the autism spectrum, they kind of face that similar disparity and low employment rates. And they also have underdeveloped resources to help them get jobs. And so our mission within the Level Up Lab is really to focus on developing and evaluating highly accessible ways to help these groups gain access and support their access to and support their ongoing employment. I mean, I think the tricky part is that we don't know if these tools are actually going to help, which is why we need to maintain that unbiased view and we lead that research to answer those questions of whether or not these tools can be helpful because if they're not, we have to move on and maybe tailor the tools or improve the tools until we can find tools to research that kind of help improve these outcomes.

Speaker 2:

Thank you so much. So thinking about how interview skills can present a barrier to employment, can you tell us a little bit more about how the virtual interview training program works and how it can help people with developmental and intellectual disabilities prepare for job interviews?

Matthew Smith:

Sure, of course. So the virtual interview training for transition age youth, it's a website where people can log in, click a few buttons, and all of a sudden they come face to face with a real person who interviews for a job. The difference is that real person is actually a virtual hiring manager played by an actor or an actress. And these actors record thousands of brief videos of dialogue and then the program itself splices these videos together so it comes across as a seamless conversation. And then for every question the interviewer asks you, the trainees get six to eight answers that they can give back. And so they can read through these different answers that range from super helpful and helping you get the job, to answer that are sort of hurtful to your rapport with the job interviewer.

And so one thing that's pretty cool about the tool is it uses speech recognition software, and that recognizes the responses. It helps generate the feedback. And the tool also updates the mood of the virtual hiring manager all kind of during this process, and it happens in real time, which is pretty exciting. And I would say that one thing that's kind of fun about the tool is you could interview with somebody who is a very friendly hiring manager, and they're sort of helpful to you. Or as you move along, the interviews get a little harder. And then you might come face to face with an interviewer who's kind of grouchy, it's their last interview after eight hours of interviewing people, and they're sort of dismissive of you and your answers. And so trying to navigate the social complexities really give a broad range of the interview training experience.

Another thing that's really great about the tool is that it does provide four levels of feedback. First, when you give a response to the virtual hiring manager, there's a little coach in the corner of the screen that gives you thumbs up and a smile, or kind of thumbs down and a frown in real time, so you get that immediate feedback, which is really helpful to our participants. They seem to really like it. Then the second level of feedback is there's a transcript of the entire conversation, where you get color code feedback on what you said. And so we use kind of green light, red light, where when you say something helpful to your rapport, your feedback is in green and supportive.

And then when your statement kind of hurts your rapport, then the feedback is in red and then gives you constructive feedback for how to improve. And then the tool focuses around 10 job interview skills, and then after you're done interviewing with the hiring manager, you get a performance assessment of all 10 skills. And then you get a numerical score. So across those four levels of feedback, it really reinforces the concepts that folks are learning and gives them practice on kind of saying the helpful thing during the job interview. And then we found out our trainees actually practice anywhere from just one to as many as 38 interviews with the tool over the course of four to six weeks.

And our data actually suggested that kind of the optimal number of interviews to practice was nine, kind of three with the easy character, three with the medium level of difficulty, and three with the hard character is sort of what the data shows. And so overall, our trainees just engage in this practice with the tool over several weeks, and they've been doing that out in the community in mental health agencies and special education programs, and some of our work in prisons.

Speaker 2:

Are there ways that people can utilize the Americans with Disabilities Act to support them in finding employment? Or do you have any advice or additional resources for those who are seeking employment, anything that would be helpful in addition to everything you have shared so far?

Matthew Smith:

Sure, sure. Not a problem. I would say although the ADA helps protect against discrimination and provides supports for accommodations in the workplace, I would actually refer folks to the Workforce Investment Partnership Act of 1998, and more recently, the Workforce Innovation and Opportunity Act of 2014, where these acts actually provided a coordinated infrastructure, kind of a network nationally, to help facilitate or to help increase access to vocational education and training for adults, young adults, and adults with disabilities. And these services are available at both state and local levels. And this infrastructure's sort of known as the Centers for Independent Living, also kind of called CILS for as kind of an abbreviation. And many of the CILS provide employment readiness services. Every state has CILS, and they have them at kind of the local level. Ann Arbor has its own CIL here locally, but you can find CILS across every state. And sometimes they go by different names, like here in Michigan, the CILS are also known as the Disability Network.

And so for those listening who are in Michigan, or in any state really, there's a national hotline that can get you started, which is 1-800-677-1116. And then if you're web friendly, there's a web address that's long and complicated, but you could probably find it from acl.gov, which is another resource that they can access. There's also a website called careeronestop.org that also can help you navigate these services at a state and kind of a local level. And then even here in Michigan, every state has a Division of Vocational Rehabilitation, which is a great place to start. And then here in Michigan, it's known as MRS, Michigan Rehabilitation Services. And a number there is 1-800-605-6722. And there's a complicated web address. Maybe we can put it on the website. And then I would say, that being said, I would still say as a resource, the job interview is a major gateway to employment.

The tools that we've helped develop, have studied in more than two dozen scientific publications, they are commercially available. They're pretty inexpensive. And these tools that my lab has been evaluating, there's more scientific evidence supporting their impact on job interview skills and access to competitive employment than any other job interview trainings in the entire field. I of course have to say this while acknowledging that I do receive small royalties on the sales of the youth version of the tool, but I don't receive any royalties on the original version of the tool that was designed for adults. But I mean, that being said, passing the job interview is just the first step. And once you get the job, young adults and adults with disabilities can really benefit from engaging in services that provide ongoing support during someone's job tenure, services like supported employment, or the evidence based version I mentioned earlier called individual placement and support, or IPS, which is a great place to start.

Speaker 2:

Thank you. And yes, we will absolutely link to those websites in the show notes and the article that will accompany the podcast. A recent study that you authored found that the virtual reality job interview training improved job interview skills, interview anxiety, and interview confidence among clients of an individual placement and support model of supported employment programs. Can you share a bit more about this study and future implications of the virtual reality job interview training program for people who have serious mental illness?

Matthew Smith:

Yeah, I'm happy to talk about the study. Like most research in the community, our study enrollment actually started off slow because in part, we are really strict with who can join. And at first, we only were recruiting clients who were brand new to supported employment services and hadn't been using it much. And we found that we really needed to include clients who had also been engaged in these services for a longer period of time, but weren't successful in getting jobs through the service. And so we basically opened our enrollment to be more inclusive of folks that were still struggling to get jobs within this model. And then by the end of our study, we ended up finding out that the participants who benefited the most from the virtual interview training were those clients that they've been in supported employment for months and months, and they struggled to get a job.

And when these clients started using the virtual interview tool, they were more likely to get a job out in the community. They were more likely to get jobs faster compared to those who didn't use the virtual interview training. And one of our main takeaways from the study was that the clients who linger in employment services, they might be doing that because they're avoiding job interviews. They're sort of scared, or the job interview causes too much anxiety, or they might be not doing so well during the job interview, and once they're able to practice their interview skills in a safe setting where they can make mistakes and get feedback, and no one's sort of judging them, then they were able to improve their skills, reduce their anxiety, and then find those jobs out in the community.

And with this type of finding, it really speaks to recommending that youth and adults with disabilities for this study in particular, adults with serious mental illness, such as schizophrenia, bipolar disorder, and major depression, if these folks are struggling with job interviews, they might benefit from using this tool or adding them to their existing services. And I would say one of the other things that was really important about this study is that there's a lot of interventions that are developed throughout the field, and a lot of interventions end up collecting dust so to speak. They might work in the lab, but when you bring them to the real world, they just don't work or people don't like them. And so one thing to keep in mind when we're doing this research, or when you're trying to partner with the community is evaluating whether the people that will be working every day with adults with serious mental illness, for example, in IPS, or the IPS model supported employment, these folks are called employment specialists.

And if an employment specialist doesn't like an add on intervention like the virtual interview tool, they're not going to use it. And so one thing that was important for us was to look at that question. And we ended up finding out that not only did the clients really enjoy using the tool and practicing with it, but the staff really liked it too. They thought it would be easy to use for their clients. They found it appropriate for their clients. And they really supported the agency moving forward and trying to adapt it on a larger scale, which is really important for interventions trying to help people.

Speaker 2:

On an episode of Psych Central's Inside Schizophrenia, you talked about high functioning schizophrenia, a term that is often heard when describing how someone is managing life with schizophrenia. Can you talk a little bit more about this and tell us what exactly it is?

Matthew Smith:

Sure. In our prior research, we used data to guide this definition of high functioning schizophrenia, specifically individuals in our study. They were more socially engaged with things like work, friends, or family, and going out in the community and doing fun things, or taking part in recreational activities like going to the movies or something. And what we learned from our research is that folks that were more socially engaged were considered to be more high functioning. And then we also found the same kind of group of high functioning adults with schizophrenia, they had stronger abilities when it came to things like organizing information, or how quickly they could organize information, being attentive during conversations, or with kind of the world around them, remembering things, stronger in things like problem solving.

And one thing that's really helpful to know when it comes to learning about high functioning schizophrenia and some of these what we call cognitive abilities, there's actually several research groups that have developed and have been evaluating ways to help improve these cognitive abilities like attention and memory and problem solving. And so there are groups out there that are trying to work through ways to help adults with schizophrenia being able to work towards their recovery and leading a life that is meaningful to them.

Speaker 2:

I do want to ask you one of my favorite questions to ask each expert who is kind enough to give us their time on the podcast, and that is: What is a takeaway that you want everyone to remember? What is the thing that you hope everyone listening takes with them from the information that you've shared with us today.

Matthew Smith:

Sure, of course. Knowing that it's National Disability Employment Awareness Month, I would just share that there's a lot of resources out there to support folks with disabilities who are looking for jobs. We've talked about a few of them today. But just know that there are people out there who are trying to help you, from the employment specialist working with you every day, to research groups like the Level Up Lab, where we're partnering with communities to develop tools that you can use to improve your chances of finding a job, especially for those who fear things like job interviews, where many of our research participants avoided job interviews for months or years, but then got to practice using the virtual interview training, which helped alleviate those fears and helped them get jobs.

And so I would just share that there's resources out there, and I thank you for the opportunity and the platform to talk a bit about what we do in the Level Up Lab. And I hope everybody has a great day.

Speaker 2:

Thank you so much, Dr. Smith. We very much appreciate it.

Matthew Smith:

Yeah, of course.

Speaker 1:

Thank you for listening to The Michigan Minds Podcast, a production of The University of Michigan. Join the conversation on social media with hashtag U Mich Impact.