

ALLEN HEINEMANN:

Thank you Jose, it is an honor to have Dr. Debra Brucker with us today and to be a part of the Wrigley research seminar hosted by the Shirley Ryan AbilityLab.-- Outcome research, the hospital is recipient of the rehabilitation research and training Centre award unemployment for people with physical disabilities. We are now in the 3rd year of the project and by background for research projects focused on telehealth intervention, for chronic back pain of people who are employed, a couple of surveys of employers, and vocational rehabilitation requirements regarding job applications specific on Parkinson's disease, employment as well as management in job accommodation process. In addition to the 4 research projects, we've got a robust knowledge translation set of projects, overseas including webinars. Without further ado, Linda, would you like to introduce our speaker?

LINDA EHRLICH-JONES:

Thanks Alan, it is my pleasure to introduce our 2021, Dr. Debra Brucker, - with a concentration of social policy, University of Delaware. She received her PhD in urban planning and public policy from Rutgers University where she studied substance abuse and disability benefits, Dr. debra is a research investor a University of New Hampshire and Institute of disability, she's currently an online lecture at Northwestern University and the school professional studies, she is a coinvestigator on the RTC and disability statistics and demographics, and the possible investigator on the funded project on opioid use to sort of persons with disabilities, just over 40 publication entry book chapters.

As part of her lectureship, Dr. Debra Brucker will be available for consultations regarding employment and disability and food insecurity to other areas of expertise, if you're interested please contact me for further information.

Dr. Debra Brucker's presentation today will include an overview of current labour force and employment statistics for persons with disabilities in the US, she will present findings from a recent study that examined job quality, among workers with disabilities, she will conclude her talk by discussing pulmonary results from a study that she is testing the effectiveness of an intervention, designed to support workers with physical and mild cognitive disabilities and re-grafting certain aspects of their jobs. Please welcome Dr. Debra Brucker are 2021 lecturer.

DR DEBRA BRUCKER:

Thank you, Jose, Allen, and Linda for inviting me to this lecture, I'm glad to be here and thank everyone for joining us. I will share my screen and then we can get started.

As Linda mentioned, I have broken the stock into 3 related but separate sections, my area of interest is employment among persons with disabilities. In my research spans data and statistics related to that, as well as looking at issues of job quality for persons with disabilities and then also testing intervention that aims to help people with disabilities remain employed and be successful in their jobs.

I would like to acknowledge funding for this research was provided by Nadler to rehabilitation research and training Centre on employment policy and measurement grant that I am the PI of as well as funding we received to do our career self-management through job crafting projects I am co-PI of the project so I would like to thank both as well as a host of other people at UNH including Abby Baker, Kristin King, and the Kessler foundation for some of collaborating on some of the research that I will be sharing here.

To start, I will provide some context in terms of job numbers. What we know about the number of people that are employed that have disabilities and how that employment has changed, given the COVID pandemic. Then I will shift to talk a little bit about job quality and what we know about the quality of jobs that persons with disabilities hold stop then I will finish by talking about the specific job crafting intervention that we are in the first phase of study and test.

This is a broad context of the job numbers, US population in 2019 323 million people about 13% of those people had a disability and this included people who are measured as having disability, if they had a vision limitation, hearing limitation, ambulatory or cognitive limitations, self-care independent limitations. The percent employed among working individuals among 2019 was huge gap with about 40 percentage types, around 39% of people with disabilities were employed at the time at any level full or part-time, and this right was 79% for people with disabilities.

This also relates to what we see is B disparities in terms of poverty among people of working age, receive 26% of people with disabilities who are living below the poverty line compared to 11%, of working individuals with disabilities. Some employment office we can help fix some of this gap and poverty that we might see between people without or with disabilities of working age.

This figure is drawn from our national employment-- that we conduct and share your webinar every month, and it shows the labour force participation rate in February 2010 one as well as the employment population ratio in February 2021 for people with and without disabilities. In the labour force participation rate includes people who are working as well as people who are not working but are looking for work or who are on temporary layoff, that is a bigger pool of persons, the implement population ratio includes just people who are employed.

So, this graphic shows a comparison from February 2021 to February 2020, showing that there wasn't a huge amount of change in the labour force participation rate at that time, for people with disabilities. And there was a slight drop for people with disabilities from 2020 2021. If you look at the bottom portion you can see the employment population ratio, there was a slight decrease for people from 2020 to 2021 and increases well for people without disabilities.

I have a different way of showing the impact and how things changed and have recovered a bit during the pandemic. So, the slideshow shows the

employment population ratio in March 2020 and really before the pandemic was being felt and affecting the common in most of the country. You can see the large drop happened in April due to the pandemic and started to impact the workforce. For both people with and without disabilities. There was a slight rebound in May. It continued in June, July and August, September and October, and November we start to see somewhat of flattening out. This has persisted with slight decreases in January and February. What we saw after this huge drop in April is that things have crept up a little bit but seem to have levelled all four people with and without disabilities in terms of employment. You can see in both cases that the numbers aren't yet where they were in March 2020 prior to the pandemic, so we will dive into these numbers a little bit deeper.

We explore the labour force participation rate. Which as I mentioned includes people who are working as well as those who are not working but are looking for work or on temporary layoff. This is an important indicator to track because it gives us a sense if there is a significant portion of people leaving the labour force altogether and have given up looking for jobs or they may have applied and received disability benefits, etc. so it is important to track this as well as the employment rate. This is our labour force participation rate in March and we will go through each month as I did with the employment rate. You can see, in January how the graph shows the changes through January and to February. We ended up with 76% of people without disabilities in the labour force and this is in comparison to 76 point 9 It Was in March 2020 and 33% of people with disabilities compared to (inaudible) in March 2020.

This slide, this chart includes all of the months that I just reviewed in the other graphs but in a different way. We like to play around with our numbers. It also shows the not in labour force percentage for people with and without disabilities which I mentioned is an important thing to track. You can see in April 2020 that was where we saw the biggest drop in employment for both groups and you can see the increases in unemployment as well as the percent not in the labour force. In January 2020, I will highlight that, you can see there was a slight increase in the percent of those not in the labour force with people with disabilities compared to those without an you can see that at the top of the charts and significantly higher for people without disabilities at that point as compared to prior to the pandemic.

We also were interested in breaking down? Missing a slide there? We also looked at more detail around unemployment. Trying to look at the differences as I mentioned between temporary layoff and looking for work. That is what this slide is showing, I have to apologize and I have to move my controls in the zoom call. You can see the temporary layoffs remain significantly higher for both groups compared to where they were in March. People looking for work were significantly different than they were in March for both groups. People are still searching for work and people that are not working at the moment and the percent that are looking for work remains high.

You can see some of the impacts of the pandemic on the employment on people with disabilities and we need to continue to monitor this and see how the economy recovers and if people with disabilities are able to

regain the ground that they had prior to the pandemic. Another area of interest of mine is seeing whether people with disabilities will flee certain industries or occupations that perhaps were more likely to lay them off or had more of a public facing type of position that put them at higher risk of obtaining COVID-19. Those are the types of things we like to track going forward. Now we know a little bit about the employment situation as a whole in the US. What do we know about the quality of the jobs that are held by the 4 million workers with disabilities in the US? On the international stage, this is an area that has got ? I gained prominence. The measures of job quality internationally. They are becoming more important as additional indicators to measure the strength of economic activity for the general population. There are different ways that this can be measured: the European quality index includes measures of pay, intrinsic quality of work, employment quality, health and safety, worklife balance and it is not just about whether you have a job or what you are getting paid but it is all of these other factors as well. The UN economic commission for Europe, incorporates even more factors and includes safety and ethics, income and benefits, working time in worklife balance, security of employment and social protection, social dialogue, skills development and training, relations and work motivation. And then there is the Ankara declaration that speaks to the living wage, labour market security and quality of the working environment. These are all international measures of job quality.

In the US some researchers have looked at this in general and not specifically for persons with this abilities. Horwitz for example, looked at individual task distraction, monetary compensation, job security, low work intensity and safe work conditions. Others have looked at the ability to develop a new skill at work as well as task discretion, work pressures and job insecurity. Jones and Smits "good jobs" study which I will talk about more in a minute looked at whether people earn the salary of \$19 plus per hour, employer-sponsored health insurance and some form of retirement plan. People who met those criteria were seen to have had a good job. That informed the first study I would like to talk about that I conducted with Megan Henley another researcher here. We wanted to take that Jones and Schmidt framework and see if workers with disabilities were less likely than other workers to hold good-quality jobs in the US.

We used data from the current population survey which is a survey conducted with the Bureau of Labor statistics and senses and we took the annual supplement for 2014 to 2016 to mirror the timeframe of the data that they used to have a comparison. We restricted it to persons ages 18 to 64 employed by someone other than themselves who work for most weeks of the previous year and earned an income of at least half the minimum wage. We had an unweighted letter and of 93,000 people and waited everything using replicant weights and conductive descriptive and bivariate analyses and logistic regression.

As I mentioned following Jones and Schmidt we considered a good quality job to offer health insurance, paid more than median wages which in the data we had equated to about \$832 per week for a full-time position about \$43,000 annually. And offered a pension or retirement program. We considered a good job to be a job that included all three of these and a fair job was one or two and a bad job was none of the above.

Included a number of independent variables including disability, obviously, as well as health status where we categorize people as good/fair/poor versus excellent/very good including age, educational attainment, race, sex and urban or rural status.

The sample ended up having including 3% with disability, 70% with excellent or very good health. About half were age 34 to 54. Educational attainment was about to thirds with some college or more and about 80% were white non-Hispanic and half were female and about 87% were residing in an urban area and only 12% were working part-time.

Overall this was among all workers and we found that 26% had a good job. 58% had a fair job where they got one or two of the criteria mentioned and 16% had what we termed a bad job or their jobs had none of the above.

Next we did some bivariate analyses comparing with and without disabilities comparing fair or good job? We you can see on the graph that we found 22 present held a good job and 26% of people with no disability held a good job. These rates were low for both groups in my opinion. The fair job they were similar around 60% for both groups and then the bad job where at 16 and 18%.

That was if we adjusted for full and part-time status, we found you are more likely to have a good job if you had a full-time position but even still, only 29% held a good job among all of the workers we looked up. Meeting the three criteria. Part-time was much more less likely to have a good job if you are working part-time only 6%.

We move on to our multi-very it analyses which we conducted separately for full and part-time workers thinking there might be some level of selection at least that people choose a part-time job for different reasons and those measures that we were considering. They may value the flexibility or the interest in that position more than they do the three categories that we discussed. We did run as series of different regressions and for a while there it looked like disability was going to be significant until we added in health status. In which case disability was no longer a significant predictor of whether or not someone held a good job. The control for health status, it means people who are in excellent or very good health are significantly more likely to hold a good job than people who do not have that level of health status.

We also found that education was a strong predictor of whether or not someone held a good quality job or not. This held true for the full-time workers that I show here as well as the part-time workers which had similar findings in terms of education being extremely important, health status being important and disability not being important.

Lastly we ran some predictive probabilities to estimate controlling for all those characteristics what could we say is the probability of holding a good job. Controlling for those independent variables I mentioned before. We could see for a full-time people who were employed, the predicted of abilities are fairly similar about 36% for people with a disability and 39% for people without a disability. For part-time this

was significantly smaller so about 7% of people with a disability and a percent of those without a disability held a good job by the definition that we use here.

So for this project we had mixed finding about job quality for people with disabilities and without disabilities controlling for health status and my hope is that we can do some additional work looking back to see how this might have changed over time or is changing in one direction or another. With more recent data. There is a 2nd since education was a strong predictor of job quality, we restricted the study to college graduates to look at whether or not they are differences in job quality by disability status. For this study, we were looking really at the intrinsic quality of work, not the other factors that I mentioned before but something that was suggested by the index. By intrinsic quality of work, this is subjective, obviously, measured. It speaks to skills as some of the areas of work that are important to people and this national survey of college graduates has information about that, we restricted the analysis to imply college graduates under age 65, 65,000 people, 11% had a disability and in the survey, they measure disabilities having at least one or 5 possible functional limitations, concentrating the memory, seeing, hearing, walking, and lifting.

There are some characteristics with people with and without disabilities that were similar on these 2 surveys in terms of the percent employed full-time, in terms of race, gender, whether or not they held the supervisory spots ability or work in science, technology, engineering field. And as a reminder, these are all full-time, among all college graduates who are employed between 18 and 64.

This slide shows where there were some differences, our sample with disabilities were slightly older, they were less likely to have an advanced grade, they have a lower average full-time salary, or part-time salary, entire percent of those with disabilities were self-employed, these were all significant differences between these 2 groups in our sample. This graph shows the differences that we found among people with and without disabilities in these 5 different areas, these intrinsic qualities that in the survey, they measured people's satisfaction with these different areas of autonomy, in terms of what they felt was their degree of independence in their job, their powerfulness, which was measured as their level of responsibility in their job, the meaningfulness, what they thought was her contribution to society of their job, and their self-fulfillment which was measured as the jobs intellectual challenge. Then in terms of skills, the employees were asked to what extent was work at their principal job related to their highest degree?

They could say it was closely or somewhat closely agreed that their job they used their skills or not, and you can see that there are significant differences in every case that people with disabilities lower proportions agreed with each of these areas, although, overall, it seems like most were at least three quarters or higher in both groups, the felt their jobs met these criteria.

We can develop our own measure of having a good job as we did with that last study, and we turn this is the probability of having a job in all 5 dimensions of intrinsic qualities of work, holding all the covariance constant, and we did this, we did find there were differences by disability status work lower proportions 35% held a good job compared to people with disabilities which was 43%.

Our conclusion for this study is that even when people are college-educated, as I mentioned earlier, we found education important in terms of job quality, there are significantly less likely to possess jobs they use their skills in advanced training, have the autonomy with the pendency were, professional responsibility, and have what they believe is important contribution to society. Why is this the general question that would lead to more research to try and figure this out? The different line of research that I'm interested in is looking at skills development on people with disabilities and how that can be fostered in the workplace or isn't fostered in the workplace at several levels for people with disabilities hopefully you can answer some of those questions.

So, from part one, the job numbers, we know that smaller proportion to people with disabilities work and from part 2, the job quality, we can see some variation in the quality of jobs from persons disabilities or health conditions, and part 3, the final part, job crafting, I want to share some from preliminary information with employee engagement for workers with disabilities or chronic conditions that impact work. This work was really conceptualized by an occupational therapy faculty member at University of New Hampshire, we worked on a project, how crafting is a process of redesigning and imagining a job and it can occur in the list of people can do it on their own or it can be taught and there are a number of workbooks and trainings that have been used and studied among the general population, but not among persons with disabilities to examine and promote job crafting, there are different ways people can graph their job, we can think about task grafting, relational crafting change in the nature of the interactions in the workplace, cognitive crafting, changing their perceptions about their jobs or tasks, and as I mentioned, studies conducted among the general population have found a positive association between job crafting some of the outcomes we think that a really important for people with disabilities to maintain their engagement in the workplace, including work performance, job satisfaction, job retention and job work. Job crafting, you may be thinking, if you do employment policy and research, and there are a lot of other types of interventions out there, how may this be different?

It is a bottom-up approach that focuses on different employees and employees really initiate this process and are responsible for taking charge of crafting their jobs and figuring out the goals that they want to set and differs from some of the examples that I hear in terms of customizing employment or supporting employment and natural supports, or disability management program, list can go on and on, but, it does seem to be, this is kind of a thing that hasn't been tested yet with people with disabilities and it is a generally low cost initiative as well, and could be shorter-term, that might have some promise for helping people with disabilities maintain employment.

So, at our purpose as I mentioned this develop and test the job craft intervention on work-related self-efficacy and crafty behaviours of people with disabilities and we basically enhanced the traditional workbook approach to job crafting with a very brief one hour maybe 2 hours, foam or web-based coaching support and weekly online check ins about goal attainment for a period of 5 weeks, and this was almost like a pilot study, little beyond a pilot study to try and figure out how this might work. Our preliminary research questions and how we want to understand how people with disabilities craft their jobs, and how successful are they in obtaining their goals and crafting their jobs, we designed it as a mixed method and current design, we sampled using a convenient sample by creating word-of-mouth pinnacle recruitment companies for recruiting 80 participants, the results all presented here and 41 we are up to 75 people now, our latest recruitment so, we will be wrapping that up soon and have more results to share at some point soon. Our operational definition-- resulting from a chronic condition that affects their ability to work included people who were 18 to 64 years of age, people comprehensive English and had physical or mild or mental psychological disability, and were working at least 10 hours a week that were not self-employed.

We included people that were primary diagnosis of psychiatric disorders, and on the understanding the cognitive limitations by the prevented informed consent from the study. In terms of data collection, we have different phases, preintervention, obviously, to screen for eligibility, we had to get informed consent, and administer the preintervention survey they would complete online, and did some baseline information about themselves and their job and their disability, their levels of self-efficacy organizational commitment and other things they were interested in and measured in and in terms of the intervention we had the initial interview we had a job crafting workbook that was already in existence in 2008, created this, and this trademark, but we use that, and we would also help them after they worked through that, to develop some goals that they could set and follow with the post intervention where they would be sent a weekly online survey, a goal of accomplishment scale and some other questionnaires.

So, as of when we crunched these numbers for this first, about half of our participants, you can see they are fairly split in terms of age, we have significantly more females about 65% of the 70% who were white, 60% had a bachelor's degree or more education, they were fairly split among industries and in terms of work, those who are working, at least 35 hours a week or more.

We also asked that they select one or more condition that they experience, we had a whole list as they enrolled in this study, and it was interesting to know that nearly half and they could select more than one condition, most of the quarter had arthritis, but 12% had vision impairment, about 12% had MS, nearly 10% had ADD or ADHD, obviously, as I mentioned, there were somewhat convenient sampling, for example, the MS Society webpage turned out to be a very helpful source of recruiting, perhaps where we have fairly large portion of people enrolled who had MS.

Once participants enrolled, we would have them work through this workbook which was available online, these construct their jobs into specific job tasks, then they would take each task as requiring different levels of time and energy, high, medium, and low, then identifying the values personal motivations, associated with each task, then evaluating the fit between so the high, medium, low energy or time versus where they would like to be focusing in terms of their values and personal motivations for each task, and once they could see the congruence or disconnect between those 2 things, we would help them develop goals that they would focus on for the 6 weeks of the study. This is a smart goals framework where the goals had to be specific measurable and attainable, relevant and Time balanced.

And we would put those into a goal obtainment scale, worksheet for a participant, and you can see if you review, as expected, working to implement the strategy one day a week, to help organize their task to be more efficient and productive, than anything higher than that of +1 or +2 would be attaining that goal much better-than-expected and a negative one or -2 less progress than expected or to stay at the current level where they were before and try to implement some changes.

The 2nd example is establishing self-care routine with chronic pain, as expected level of attainment schedule implement one self-care activity at the current level, they have identified at least that they need to do this, and enhance self-care to manage chronic pain and as I mentioned earlier, pain was issued for a large portion of our participants. One thing that we did find that was interesting to us was that many of the goals had nothing to do with the person's chronic condition or disability. We knew it was more this related to that or perhaps related to workplace dynamics or working with their goals and things like that. Here are some other examples of goals that we included here, these are all different participants and we have tied these 2 different times of craft and the people would have to go through. Thinking about a goal that related to the leader in the workplace by connecting to cognitive crafting as well as relational crafting and things like increasing upper body strength, or using new time management strategy toward the task crafting and how you could change those particular tasks with your jobs, near the bottom or someone is faced to be organized there task list, office is a combination of task and crafting and in many cases, we did not want to have the employees get in trouble.

I did my comparison of my key tasks that I need to accomplish my value goals and I don't value these tasks are to want to do anymore thinking of ways more productively to perhaps engage with their supervisor about ways to change things that were possible to change and they are sending some tasks are central to the job, etc. Overall most participants came up with about three goals to work on on the course of the six weeks. As I mentioned, they were a mix of better time management, different ways of accomplishing tasks perhaps to minimize pain in some cases, improved communication with colleagues or bosses or supervisors and acquiring new skills, tragedies for managing stress and these expand the different types of crafting. About 1/3 were relational crafting and 9% were cognitive crafting. It is important to note that a lot of this was going on and our current data collection was happening in the midst of COVID-19

so it was quite interesting to talk to people about how their jobs were changing over this time and the additional stresses that they and many of us have felt over this period and figuring out ways to address that and maintain their employment.

Overall we found that participants were successful in achieving their goals usually in the first 1 to 2 weeks. In this graph anything about the zero means that they were achieving goals at a higher rate than expected even. Anything above that zero line is quite good and they were able to sustain that for the six weeks of the project.

We also found, we had time to ask some open ended questions in the questionnaires to them as well as some participated in exit interviews that many of the participants tended to continue using job crafting. They found it very helpful, this process a different way of thinking about their job and it could be helpful as he tried to move forward in their career and within maybe even without staying in that organization but even if they ended up working elsewhere.

In general, for this project we found not just for intervention but some other secondary analysis that we have run that people with disabilities craft less than people without disabilities and their jobs in relational crafting and lowering task crafting but more in cognitive crafting like attaching meaning to their jobs. The people with disabilities might benefit from coaching or facilitating for job crafting which increases awareness about their overall job situation. As I mentioned, a lot of the goals a lot of the participants had goals that were disability and non-disability related. It is important to work on things outside of the disability and look at the person as a whole and their work environment and think about that as the intervention is being rolled out. We found from the feedback that we received that job crafting can help participants feel invigorated about their jobs by reimagining them and thinking about the implications of what they are doing and the value of it. Obviously there are limitations to this study and as I mention it was a small sample size and when we have our larger sample and analyse that data and it was a short duration of the intervention so in this particular study we have no six-month follow-up to see you if there is benefit to keep crafting jobs and so we hope to correct for that in the future, in some future studies. Overall we think it is a promising approach. It is very low cost and employee directed intervention. Obviously as I mentioned we need additional research and when we do have our full sample we will have additional information other than goal attainment. We will have information about whether or not there was changes in self-efficacy for these employees, organizational citizenship, etc. and we should have that information available in the fall of 2021. Here are two recent publications related to job crafting that came out last year. To summarize, we know the employment gap persists when we saw people with and without disabilities and even when people with disabilities are employed they might perhaps work in lower quality jobs. It suggests the need for research and there are also given the gap, a need for additional research and dedication to developing evidence based interventions to maintain good quality jobs over the longer term. I will open it for questions and remind people if they would like to talk more

specifically, I think Linda has my schedule and you can emailed her directly.

JOSE PONS:

Thank you very much Deborah this was an excellent presentation. We have a number of questions in the chat. I would like to open that discussion with Alan can you unmute and ask your question directly.

ALLEN HEINEMANN:

Thank you for the wonderful presentation, as always up to date and very knowledgeable. Given the persistence and employment challenges that people with disabilities face despite years of investment in vocational rehabilitation and various policy initiatives, I am wondering at this point what policy initiatives or changes you think would be necessary to improve the labour force participation people with disabilities.

DEBRA BRUCKER:

My personal thoughts at this point my career is that perhaps we need more of a focus on job retention then job placement. And job search. A lot of the research I have conducted over the last couple of decades as well as some research, recent speaking to key stakeholders involved with people with disabilities this past fall, in 2020, we talked to an ADA coordinator, and employee assistance coordinating, HR p -- rocess -- professionals? That would work with people with disabilities including long-term employment disability insurers. A lot of those cases those people we spoke to had a few common complaints: first that by the time they learned that a person with disabilities is struggling on the job it is almost too late. The person has either decided in their own mind that they want to disengage from employment or they might be at risk of being written up for performance at that point and it is very hard at that point to get the person reengaged. Actually, the second point they mentioned and I'm not sure how to fix this because is not necessarily a policy thing but a lot of stakeholders that we spoke to talked about the challenges of interacting with clinicians to get the information they needed around employment and the clinicians having the time and ability to speak with not only the stakeholder but the employee about employment and how perhaps their treatment could be changed to facilitate employment or understand the functional limitations in terms of employment. It spoke to their still being a need for additional training within the medical field in general. For non-rehabilitation professionals. Perhaps your family doctors etc. to understand the importance of employment for people with disabilities and helping them maintain employment should be the primary goal.

JOSE PONS:

Thank you. You indicated that education is a good predictor in terms of participation and job quality so I think we have a question related to this. Can you unmute and ask your question?

SPEAKER:

Thank you for your presentation, my question was more related to education and learning as a job or converting and learning a new job, more specifically, whether what kind of policy changes or improvements you would see in education on a structural level so this gap of

employment could be closed between adults or children with disabilities and the rest of the population.

DEBRA BRUCKER:

I think it is in area I hope to go to next. I have some proposals in the pipeline to better understand development informal and formal skills development, people with and without disabilities and how they might differ. Looking at people who are in different roles within different occupations or industries. Whether or not that is built in as jobs are changing and technology is changing, how are people able to keep up with those changes and shifts and what does it mean for the workplace? I know those are areas I am interested in and that social security administration is interested in as well. I would say stay tuned.

JOSE PONS:

Thank you. I have a question, and your different studies you are including subjects with different disabilities: motor and cognitive disabilities, pain related disabilities. Do you have a breakdown data on how these different types of disabilities affect participation or job quality?

DEBRA BRUCKER:

I do have that but I don't have it to pull up right now. If people would like to email me directly I can certainly send you some follow-up information. In general in employment literature, I know we do find quite broad variation just in terms of employment rates by disability type or people with sensory limitations in general have employment rates that are higher than people who have cognitive disabilities. I could send more specific information if people are interested.

JOSE PONS:

Thank you Do we have any other questions? If not, we have? We are close to the end of the seminar. I would like to close this seminar. Let me remind you that Doctor Brucker is available for consultation? Let me thank you for being with us today for the presentation and sharing with us your study on participation and job quality in this population and let me also thanked Linda and Allen for their introductory remarks. And for all of you for joining today and before I close the discussion let me remind you that we will resume our activities next Monday, April 12 with Doctor Jason Carmel who will be speaking about spinal cord associative plasticity. And with this I would like to thank you all and close the webinar. Thank you.

DEBRA BRUCKER:

Thank you so much.