

**Symposium Title:** Behavioral Interventions to Support Employment Transition Services for Autistic Transition Age Youth

**Chair:** Matthew J. Smith<sup>1</sup>

**Discussant:** Lauren Bishop<sup>2,3</sup>

**Overview:** Over the next 10 years, approximately 800,000 autistic youth will exit high school and transition into adult roles (e.g., the labor force) (Maenner et al., 2020). Given the profoundly low rates of employment (approximately 33%) among autistic transition age youth for the first two years after graduating high school (Roux et al., 2015; Bureau of Labor Statistics, 2020), the field seeks to optimally position these youth to live independently and productively by ameliorating the challenges they face when securing employment. To target these low employment rates, the Individuals with Disabilities Education Act (Individuals with Disabilities Education Act, 2004) mandated the inclusion of pre-employment transition services (Pre-ETS) offered via secondary and post-secondary educational programs. Our symposia highlights research evaluating the feasibility, fidelity, efficacy, effectiveness, and implementation of two different interventions designed to enhance employment for youth receiving special education Pre-ETS. The interventions use technology- and community-based methods to target the development of job interview skills and work-based soft skills critical to obtaining and sustaining employment. The first presentation will share the results from a quasi-experimental, pre-post design study examining the feasibility and preliminary efficacy of an 11-week employment readiness intervention program among 25 autistic transition age youth. The second presentation will present the results from a school-based randomized controlled trial evaluating the effectiveness of a computerized job interview simulator, Virtual Interview Training for Transition Age Youth (VIT-TAY) among 71 autistic transition age youth. The third presentation will share the results from an implementation evaluation of VIT-TAY disseminated in five high schools. Collectively, these presentations highlight the emergence of novel interventions that can effectively enhance the access to and sustainment of employment among youth receiving special education pre-employment transition services.

### Paper 1 of 3

**Paper Title:** Feasibility and Preliminary Efficacy of an Employment-Readiness Intervention for Transition-Age Autistic Youth

**Authors:** Connie Sung<sup>4</sup>, Annemarie Connor<sup>5</sup>, Alicia Strain<sup>4</sup>, Christiana Okyere<sup>4</sup>, Amy Nasamran<sup>4</sup>, June Chan<sup>6</sup>

**Introduction:** Many transition age autistic youth struggle to meet the varying demands of the work environment due to limited employment-readiness skill development and training, which continues to impact chronic un-/under-employment for this population (Wehman et al., 2015). Despite the high needs, there are limited programs offering manualized, systematic teaching of employment-readiness skills applicable to employment preparation, obtainment, and retention. Developed based on the Social Cognitive Career Theory (SCCT; Lent, Hackett, & Brown, 2000), the Employment Preparation & Applied Skills Support (EPASS) is a theory-driven, manualized, group-based training program designed to improve employment-readiness skills for transition-age autistic youth. In this presentation, we will share the findings from a EPASS pilot study examining its feasibility and preliminary efficacy among high functioning autistic youth.

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<sup>1</sup> University of Michigan

<sup>2</sup> University of Wisconsin

<sup>3</sup> Waisman Center

<sup>4</sup> Michigan State University

<sup>5</sup> Florida Gulf Coast University

<sup>6</sup> East China Normal University

**Methods:** A quasi-experimental, pre-post design was used in this study. A total of 25 transition age high functioning autistic youth (mean age=20.74;  $SD=1.41$ ; IQ:  $M=95.64$ ;  $SD=17.11$ ) completed Employment Preparation & Applied Skills Support (EPASS). The program was delivered in a staggered manner across six intervention groups over three years (4-6 participants per group). EPASS was developed by an interdisciplinary team of experts. It consists of 11 weekly sessions and focuses on teaching skills important for obtaining and maintaining employment, including: *Employment interests and goals, Job searching, Informational interviews, Personal branding, Job application, Resume building, Pre-employment screenings, Job interview, Disability rights and accommodations, and Job maintenance*. Two categories of intervention outcomes were examined using self- and informant-report questionnaires: (1) adaptive functioning and (2) job self-efficacy across baseline, immediately post-intervention, and at four-month follow-up.

**Results:** The preliminary results of the study indicate that the EPASS program for high functioning transition age autistic youth was associated with significant gains with adaptive functioning and self-efficacy. Specifically, informant (teachers) observed significant ( $p<.05$ ) skills improvements in participants immediately post intervention (POST) and/or at four-month follow-up (FU) in various domains ( $p<.05$ ): communication skills (FU:  $d=1.51$ ), social skills (POST:  $d=0.49$ ; FU:  $d=0.98$ ), work skills (POST:  $d = 0.73$ ), and self-direction (POST:  $d=0.82$ ; FU:  $d=1.54$ ). In addition, participants reported significant ( $p<.01$ ) improvements in self-efficacy related to: developing job goals (POST:  $d= 0.82$ ; FU:  $d=0.79$ ), finding employment (POST:  $d=0.98$ ; FU:  $d=0.86$ ), exercising work-related self-advocacy (POST:  $d=1.39$ ; FU:  $d=1.29$ ), and utilizing job retention strategies (POST:  $d=0.61$ ; FU:  $d=0.42$ ) immediately post intervention and/or at four-month follow-up. Further, EPASS participants overwhelmingly reported high levels of satisfaction with program design, demands, and content (ranging from 4.63-4.71 out of 5).

**Discussion:** In addition to assessing a manualized, work-related, group-based intervention, this study of the EPASS program assessed the utility of SCCT as a theoretical framework for program development. The results of this study align with the constructs of SCCT in that improvements in adaptive functioning as a result of skills building were associated with significantly increased job self-efficacy. Further, these results support the use of SCCT as a guiding framework in the development of employment-readiness intervention programs for transition age autistic youth. Recognizing that self-efficacy is a primary driver of work-related decision-making and goal-directed persistence, the durable and statistically significant improvements EPASS participants demonstrated in adaptive functioning and job self-efficacy at post-intervention and four-month follow-up bode well for continued pursuit of employment in a population that has traditionally been facing employment challenges. Thus, the use of theory-driven, manualized, and empirically-validated approaches in intervention programs is essential as they contribute to the evidence base of practice and promote efficacy and equity among populations served (Anderson et al., 2017).

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- Wehman, P., Sima, A. P., Ketchum, J., West, M. D., Chan, F., & Luecking, R. (2015). Predictors of successful transition from school to employment for youth with disabilities. *Journal of Occupational Rehabilitation*, 25, 323–334.

## Paper 2 of 3

**Paper Title:** Virtual Interview Training for Transition Age Autistic Youth Receiving Pre-Employment Transition Services

**Authors:** Matthew J. Smith<sup>1</sup>; Kari Sherwood<sup>1</sup>; Brittany Ross<sup>1</sup>; Lauren Bishop<sup>2,3</sup>; Leann Dawalt<sup>2,3</sup>; Justin D. Smith<sup>7</sup>

**Introduction:** Extensive unemployment among autistic adults increases poverty and poorer independent living skills; thereby reducing their overall quality of life. Over the next 10 years, approximately 800,000 autistic youth will exit high school and transition into adult roles (e.g., the labor force) (Maenner et al., 2020; United States Census Bureau, 2019). Given the profound disparities in employment experienced by autistic transition-age youth (Bureau of Labor Statistics, 2020), we evaluated the adherence to and initial effectiveness of Virtual Interview Training for Transition Age Youth (VIT-TAY) in a randomized controlled trial within school-based pre-employment transition services (Pre-ETS).

**Methods:** We trained teachers to implement VIT-TAY in 5 schools and autistic youth were randomized at a ratio of 2:1 to receive VIT-TAY and Pre-ETS (VIT-TAY+Pre-ETS, n=48) or Pre-ETS only (n=23). Feasibility outcomes included participant's adherence to the recommended VIT-TAY curriculum. Effectiveness outcomes included job interview skills, job interview anxiety, and employment by 6 month follow-up. Local teachers trained and supervised students using VIT-TAY. We conducted repeated measures analysis of variance to evaluate the significance level of the group-by-time interactions among job interview skills and anxiety. Meanwhile, we used a chi-square analysis to evaluate whether groups differed on the rate of integrated, competitive employment by 6-month follow-up.

**Results:** Participants randomized to use VIT-TAY largely adhered to the training protocol with 72.1% of participants completing at least 13 of 15 recommended virtual interviews (m=15.3, sd=5.4) interviews with the virtual hiring managers. Regarding effectiveness outcomes, we observed two significant group-by-time interactions revealing that VIT-TAY+Pre-ETS, as compared to Pre-ETS only, had improved job interview skills between pre-test and post-test ( $p < 0.001$ ;  $\eta^2 = 0.15$ ). We also observed that VIT-TAY+Pre-ETS, as compared to Pre-ETS only, had greater reduction in job interview anxiety between pre-test and post-test ( $p=0.029$ ;  $\eta^2 = 0.053$ ). Lastly, 22% of VIT-TAY+Pre-ETS obtained integrated, competitive employment compared to 0% of the SAU only group by 6 month follow-up ( $p<0.05$ ).

**Discussion:** The delivery of evidence-based job interviewing training is a major gap in Pre-ETS for autistic transition age youth. Our evaluation of VIT-TAY suggests that participants adhered to the training, enhanced their interview skills, reduced their interview anxiety, and higher rates of employment by 6 month follow-up. Thus, VIT-TAY has the potential to help fill a major gap in federally-mandated Pre-ETS and a fully-powered trial is needed to validate its effectiveness.

### References/Citations:

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<sup>7</sup> University of Utah

### Paper 3 of 3

**Paper Title:** Mixed-Methods Implementation Evaluation of School-Based Virtual Interview Training for Transition-Age Autistic Youth

**Authors:** Kari Sherwood<sup>1</sup>, Matthew J. Smith<sup>1</sup>, Jeffery Johnson<sup>1</sup>, Meghan Harrington<sup>1</sup>, Brittany Ross<sup>1</sup>, Shannon Blajeski<sup>1</sup>, Leann Dawalt<sup>2,3</sup>, Lauren Bishop<sup>2,3</sup>, Justin D. Smith<sup>7</sup>

**Introduction:** Although recent studies suggest that a large proportion of employed autistic youth are interviewing to get hired (Smith et al., in press), few practices to support this skill are being implemented in pre-employment transition services (Pre-ETS). Although technology-based interview interventions have recently demonstrated efficacy among autistic youth and adults, these interventions need to be more rigorously evaluated with the goal of implementing such tools at scale. As part of a recent randomized controlled trial (RCT) evaluating Virtual Interview Training for Transition Age Youth (VIT-TAY) effectiveness among autistic youth, we conducted a mixed methods, multi-level evaluation to understand implementation of VIT-TAY across 5 schools. Using the Proctor et al. (2011) conceptual model, we sought to identify barriers and facilitators to salient implementation outcomes for VIT-TAY in schools based on teacher and student reports.

**Methods:** Schools (n=5) were recruited from Southeast Michigan and Northwest Ohio as part of the RCT. Schools consisted of a combination of public high schools, charter schools, and transition programs. Teachers (n=21) were recruited from these schools as trainers, along with transition-age autistic students (n=71). Training scripts and fidelity checklists were used to orient teachers on how to implement VIT-TAY for students. The intervention was implemented over six to eight weeks to 48 students in the intervention group. Following the implementation of VIT-TAY, we used a mixed methods approach (via self-report surveys and semi-structured interviews) to evaluate the acceptability, usability, feasibility, and sustainability of VIT-TAY. Descriptive statistics characterize the acceptability, usability, expected implementation feasibility of VIT-TAY. Meanwhile, we conducted a thematic network analysis (Attride-Stirling, 2001) of the qualitative data from the semi-structured interviews and student acceptability and usability surveys, revealing a network of global themes, organizing themes, and basic themes.

**Results:** Analysis of student acceptability and usability surveys (n=48) revealed 98% of students found the intervention to be easy to use, 94% reported VIT-TAY helped them prepare to interview for a job, and 92% reported the tool improved their confidence to interview for a job. Students also reported they could use VIT-TAY independently (96%). Student acceptability and usability surveys revealed one global theme of favorite things about VIT-TAY, along with three organizing themes: interview preparation, ease and enjoyment in usability, and interactions with interviewers. Analysis of the semi-structured interviews with teachers (n=8) revealed one global theme of usability, along with three organizing themes: student engagement, real-world scenarios, and barriers. Teachers mentioned introductory materials and in-depth training for teachers and students as important facilitators of implementation. Meanwhile, teachers identified scheduling VIT-TAY within their curriculum, space to implement VIT-TAY, and staff training as potential barriers to future implementation. Approximately 84% of teachers (n=19) were confident that they would be able to deliver VIT-TAY training with fidelity. Regarding implementation feasibility and sustainability, 95% of teachers (n=19) reported that VIT-TAY would be easy for educators to deliver, while 64% of teachers (n=11) reported their schools were “somewhat” to “very” well equipped to support continued delivery of VIT-TAY.

**Discussion:** Multi-level evaluation of VIT-TAY implementation with autistic youth in secondary special education settings is critical to taking this effective tool to scale. Student and teacher-reported acceptability and usability and teacher-reported feasibility collected in 5 schools revealed agreement that VIT-TAY was user-friendly, provided useful feedback, and allowed students an opportunity to practice their job interview skills independently. Implementation of evidence-based interventions in schools is a critical component of measuring their ecological validity. Previously identified challenges of implementation in schools include school organizational factors, scheduling constraints, level of implementation support, and training of school professionals, among other factors. The results of this evaluation align with this prior research. Despite these limitations, schools are a vital setting for interventions for transition-age autistic youth. Particularly during this time of a global pandemic, technology-based

interventions such as VIT-TAY could play a crucial role in helping youth practice job interview skills somewhat independently. This initial implementation evaluation can be used to inform a larger scale implementation evaluation of VIT-TAY in schools.

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**Discussant:** Dr. Lauren Bishop is an Assistant Professor in the Sandra Rosenbaum School of Social Work at the University of Wisconsin-Madison and Waisman Center. Dr. Bishop's research focuses on reducing disparities in health and well-being in adults with developmental disabilities.