

Pathways to Employment for Transition Aged Youth and Young Adults with Autism Spectrum Disorders

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This Presentation is Based Upon the Following Research

Schall, C. M., Wehman, P., & McDonough, J. (2012). Transition from school to work for students with ASD; Understanding the process and achieving better outcomes. *Pediatric Clinics of North America*, 29, 189-202.

Wehman, P., Schall, C., McDonough, J., Molinelli, A., et al. (2014). Project SEARCH for youth with autism spectrum disorders: Increasing competitive employment on transition from high school. *Journal of Positive Behavior Intervention*, 15, 144-155.

Wehman, P., Schall, C., Carr, S., Targett, P., West, M., & Cifu, G., (2014). Transition from school to adulthood for youth with ASD: What we know and what we need to know. *Journal of Disability Policy Studies*, 25, 30-40; DOI: 10.1177/1044207313518071.

This Presentation is Based Upon the Following Research

Wehman, P. H., Schall, C. M., McDonough, J., Kregel, J., et al. (2014). Competitive employment for youth with Autism Spectrum Disorders: Early results from a randomized clinical trial. *Journal of Autism and Developmental Disorders*, 44, 487-500. DOI 10.1007/s10803-013-1892-x.

Ham, W., McDonough, J., Molinelli, A., Schall, C., & Wehman, P. (2014). Employment Supports for Young Adults with ASD: Two Case Studies. *Journal of Vocational Rehabilitation*. DOI: 10.3233/JVR-140677.

Wehman, P., Brooke, V., Brooke, A. M., Ham W., Schall, C., et al. (2016). Employment for adults with autism spectrum disorders: A retrospective review of a customized employment approach. *Research in Developmental Disabilities*. DOI: 10.1016/j.ridd.2016.01.015.

Wehman, P., Schall, C., McDonough, J., Graham, C., et al. (Accepted 2016). Effects of an employer based intervention on employment outcomes for youth with significant support needs due to autism. *Autism: Accepted*.

Why ASD?

- * ASD represents a number of challenges seen across the spectrum of neurodevelopmental disorders
- * Range of communication abilities
- * Range of social interaction challenges
- * Presentation of interfering behavior
- * Range of intellectual abilities
- * Presence of co-morbidities

What are the current outcomes for young adults with ASD?

- * Unemployed and underemployed at higher levels than others with disabilities
- * Low rates of independent living -- Most individuals with ASD continue to live at home with their parents
- * Low incidence of friendships and relationships



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According to the NLTS 2...

- * Had the second lowest “employed since high school” rate
- * 68.8% worked in “traditional, low-wage, low-skilled jobs” such as office support, food preparation, and building and grounds maintenance.
- * Had the lowest average hours worked per week, the lowest wage, and were among the lowest percentage receiving health insurance or retirement benefits
- * Had, by far, the highest percentage of workers in temporary jobs (45.5%)
- * Had the third highest rate of being laid off or fired

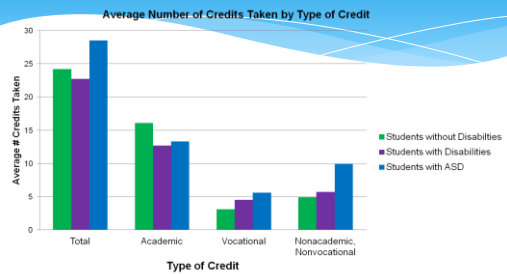
According to the NLTS 2...

- * 83% continued to live with their parents
- * Only 48.2% (lowest rate among individuals with disabilities) reported seeing a friend outside of work or school
- * 68.2% of one sample attended sheltered workshops, day activity centers or had no structured day activities at all
- * 29.2% of this sample had no engagement in work, post secondary education or training or any other daytime activity after high school. This was the highest rate of non-engagement after high school among all people with disabilities.

What Happens in High School? (Wehman, Schall, Carr, et al., 2014)

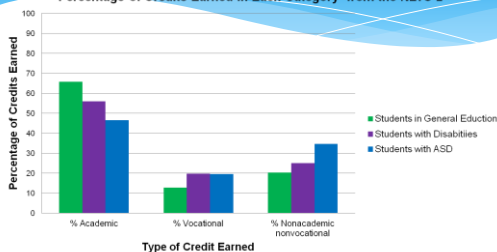
- * 84% in “regular” high school
- * 12% in special education center
- * 4% charter, magnet, alternative, private, home or hospital school
- * Majority of coursework in special education
- * Highest number of high school credits of any disability group
- * Highest GPA of any disability group (3.0)

High School Curriculum

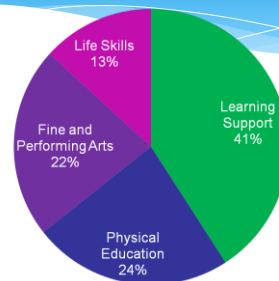


High School Curriculum

Percentage of Credits Earned in Each Category from the NLTS-2



Non-Academic/Non-Vocational

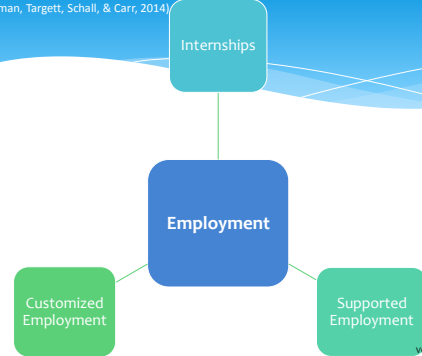


Findings and Policy Recommendations

- * Youth with Significant ASD have untapped potential
- * Youth with ASD are not challenged in high school
- * Youth with ASD do not consider college or Post Secondary Education
- * Youth with ASD do not work during high school
- * Improve High School Curriculum
- * Promote Post-Secondary Education
- * Promote inclusion and employment in high school
- * Provide Systematic Instruction to Increase Functional Literacy, Independence, and Self-Determination

Pathways to Employment

(Wehman, Targett, Schall, & Carr, 2014)



VCU-RRTC, 2015

Internships through Project SEARCH

An internship is an opportunity offered by an employer to potential employees, called interns, to work at a firm for a fixed, limited period of time. Interns are usually undergraduates or students, and most internships last for any length of time between one week and 12 months.

Our Research and Findings

(Wehman, Schall, Graham et al., In press; Wehman, Schall, McDonough, et al., 2015)

- * Randomized Clinical Trial of Project SEARCH Plus ASD Supports
- * 31 Treatment 18 Control between 18-21
- * Enrolled in 4 cohorts from 2009 – 2012
- * Data collected from 2009 – 2014
- * No significant differences in demographics and personal characteristics except for age:
 - * Treatment Mean Age = 20.23 years old
 - * Control Mean Age = 19.33 years old

Demographic Characteristics

Characteristic	Treatment (31)	Control (18)	p-value
Age	20.23	19.33	0.05
Gender	77.4% male	61.1% male	0.22
Race	38.7% African American 58.1% Caucasian 3.2% Asian	55.5% African American 38.8% Caucasian 5.5% Asian	0.42
Medical Diagnosis	70.9% Autism 19.4% PDD-NOS 9.7% Aspergers	72.2% Autism 33% PDD-NOS 11% Aspergers	0.57
General Support Needs	25.8% Support 48.3% Significant Support 25.8% Very Significant Support	33.3% Support 53.3% Significant Support 13.3% Very Significant Support	0.61

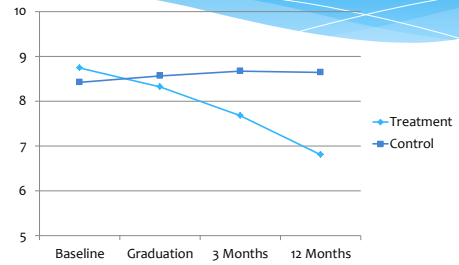
Prior Experiences and Family

Characteristic	Treatment (31)	Control (18)	p-value
Prior Work	1.52 unpaid internships 25.9% had paid work experiences	1.11 unpaid internships 33.3% had paid work experiences	0.27 0.37
Family Status	54.8% 2-parent household 38.7% 1-parent household	33.3% 2-parent household 11.1% 1-parent household	0.13
Parent Occupation	18.1% No outside work 45.8% Trade or clerk 16.6% Small Business Owner 31.6% Management or Professional	11.5% No outside work 23% Trade or clerk 7.7% Small Business Owner 19.2% Management or Professional	0.53

Employment Outcomes

Group	Baseline	Graduation	3 Month	12 Month
Percent Employed				
Treatment	0	74%	90%	87%
Control	0	6%	6%	12%
Hours Worked Weekly				
Treatment	0	15.24	19.27	19.90
Control	0	1.25	1.25	2.5
Hourly Wage Earned				
Treatment	0	\$7.01	\$8.61	\$8.46
Control	0	\$0.53	\$0.53	\$0.60
Support Intensity Scale Employment Activities Subscale				
Treatment	8.74	8.32	7.68	6.81
Control	8.42	8.56	8.67	8.64

Support Intensity



Findings

- * Individuals with ASD can work in Competitive Integrated Employment with supports
- * They can earn a wage commensurate with their peers in similar positions
- * The main way these youth found employment was through customized employment
- * Employment may be therapeutic

Supported Employment

Supported Employment refers to service provisions where people with disabilities, are assisted with obtaining and maintaining community-based, integrated employment with support from a job coach and/or the use of person-centered approaches.

Comparing Project SEARCH + ASD to Supported Employment

- * 45 individuals
 - * 25 – PS-ASD
 - * 20 – SE
- * Mean Age
 - * 23.12 – PS-ASD
 - * 29.05 – SE
- * Gender
 - * 72% Male – PS-ASD
 - * 95% Male – SE
- * Race
 - * 60% Caucasian – PS-ASD
 - * 80% Caucasian – SE
- * Education
 - * 100% High School – PS-ASD
 - * 40% High School – SE
 - * 60% Some College – College Diploma – SE
- * Diagnosis
 - * 56% Autism – PS-ASD
 - * 50% Autism - SE

Phases of Intervention

- * Job Development
 - * Job shadowing, Touring a company, Talking to employers, Pursuing assistive technology, Developing a resume, Conducting a job analysis, Applying and interviewing for jobs
- * Job Site Training: 100% to 20.1% of Support Time on Job
 - * Direct instruction of job skills, Soft skill training, Transportation training, Family supports and any service or supports needed to achieve and maintain employment
- * Long Term Supports: 20% or less of Support Time on Job
 - * Monitoring work performance, job satisfaction, Integration into the work culture, Support training with coworkers and employer, and Career advancement

Job Coach Intervention

Group	JD**	JST	LTS
Hours of Job Coach Intervention			
PS-ASD	80.64	125.27	62.22
SE	184.00	117.06	49.50

** p < 0.01

Retention

	PS-ASD	SE	p-value
6 Months	96%	75%	0.052
12 Months	84%	55%	0.033
18 Months	84%	55%	0.033

Findings

- * Individuals with ASD can work
- * PS-ASD provided advantages in
 - * Hours needed to secure employment in Job Development
 - * Retention
- * There continued to be support needs across the entire time of employment

Customized Employment

Customized Employment is a flexible process designed to meet the needs of the job candidate with a disability and the employer and can take such forms as task reassignment, job carving, and job sharing, leading to a new or modified job description

Customized Employment

- * Retrospective records review
- * 64 individuals sought SE services through VCU's employment services vendor, Business Connections between 10/1/2009-12/31/2014
- * This represented 100% of individuals who were referred to the agency by Vocational Rehabilitative Services during this time period for Supported Employment

Demographics

- * Male – 82%
- * Mean age – 26
- * Race
 - * Caucasian 63%
 - * African American 35%
- * Education
 - * High School 83%
 - * Some College to College Degree 17%
- * Special Education
 - * Had IEP 88%
 - * No IEP 12%
- * Disability
 - * ASD Only 33%
 - * ASD & Secondary Disability 67%
- * Support Needs
 - * High 71%
 - * Low 29%

Intervention: Customized Employment

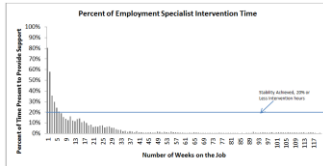
- * Jobseeker Profile, Discovery, Situational Assessment
 - * interviews, observations, and information gathering activities
- * Job Development and Career Search
 - * Identify employment options and fields based upon the jobseeker's preferences, education, and abilities
 - * Match the individual to business needs
- * Job Site Training
 - * Systematic instruction, natural supports and cues, and compensatory strategies and self-management procedures
- * Long Term Support Job Retention
 - * 20% or less support
 - * Employment satisfaction, expanding job duties, and career development

Findings

- * 63 of 64 (98%) of individuals acquired competitive integrated employment in 72 different positions
- * Majority of jobs were developed through customized employment (72.2%)
- * Employment was in:
 - * Health Care: 31
 - * Retail: 11
 - * Recreation: 3
 - * Hospitality/Food Service: 14
 - * Warehouse: 8
 - * Education/Government: 5
- * Wages ranged from \$7.25 to \$12.50 per hour
- * Mean = \$9.13 per hour
- * Weekly hours ranged from 8-40 hours per week
- * Mean weekly work hours = 24.25
- * Most (51 = 80.9%) worked between 20 - 40 hours weekly

Percentage of Job Coach Support Time

- * Mean percentage of support time dropped quickly as follows:
 - * Week 1: 80.5%
 - * Week 2: 58%
 - * Week 3: 35%
 - * Week 4: 30%
 - * Week 5: 24%
 - * Week 6: 20.5%
 - * Week 7: 19.8% (Stabilization)



Unique Supports Provided Included

Presenting Issue	Method of Support Used	Presenting Issue	Method of Support Used
Following break and lunch schedule	Alarms on iPod or cell phone Schedule for what to do on a break Instructions for appropriate lunch time choices	Handling downtime and Frustration	Schedule Self-monitoring plan
Following task list and transitioning independently	Visual schedule: pictures or written PDA schedule Voice reminders on PDA Decision Tree	Staying awake, alert and on task at work	Alarms set to go off every 20 minutes Visual cue cards what to do if sleepy
Interacting with patients and coworkers	Written Scripts Audio Scripts	Task initiation	Circular web schedule List of tasks which is numbered daily
		Recognizing private vs. public conversation topics	Visual list of appropriate work tasks Visual signal to get back on track Role-playing

Major Findings

- * Individuals with ASD can work with the right supports
- * Customized Employment is a viable option for this group

Specifics

How do we accomplish this? What are the supports?

Internships

- * Coronary Care Unit
- * Employee Wellness
- * Print Shop

- * Currently Employed with Print Shop
 - * Mail delivery
 - * Metering mail
 - * Copying/binding

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Internship Key Points

- * Paid or unpaid?
- * **NOT** volunteering
- * Working in a real job with support
- * Has onsite mentor
- * Is there for educational purpose
- * DOES NOT replace a paid employee
- * May not actually do a whole job, but purpose is to learn job skills and behaviors

Supported Employment

- * Part Time Office Assistant
 - * Shreds documents
 - * Sorts mail
 - * Puts together folders & instructional materials
- * Employed for over a year
- * Long term employment supports provided by job coach plus natural supports on the job.

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Customized Employment

Employment:

Inpatient Pharmacy:

- * Check dates & pull expired drugs
- * Short-date those expiring next month (put drugs in a clear bag with "short date" sticker)
- * Dust & organize shelves
- * Clean break room
- * Re-shelve drugs that have been removed from hospital units
- * File Chemotherapy orders by patient name

Outpatient Pharmacy:

- * File prescription slips in numerical order
- * Restock beverage cooler
- * Make runs to OPIC with needed items

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Challenges Faced for Individuals with ASD: Behaviors!!!

- * Aggression
- * Darting
- * Tantrum
- * Self stimulatory behavior
- * On task
- * Adjusting to changes in routine
- * Accepting correction
- * Adjusting to demands of work/supervisor expectations

- * Theft
- * Coping with independence
- * Separating personal needs from work expectations (sexuality)
- * Cursing
- * Communication
- * Personal hygiene/independence
- * Suppressing impulses
- * Personal relationships
- * "Professionalism"
- * Life beyond work

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Just another day at Project SEARCH (Text Version)

Jenn: Did you know Lisa kicked a coworker yesterday. On the face. FYI. Licked not kicked. Darn spell correct.

Carol: Oh no... Wow! That's not good, but not as bad!!!! LOL! Why on earth would she lick someone?

Jenn: From mouth to ear.

Carol: Yuck!!! Why?

Jenn: She was a dog yesterday. That's what dogs do.

Carol: Wow... What's the fall out...

Jenn: None. That I have heard at least. The coworker "put her stern face on" and told her it was inappropriate.

Just another day at Project SEARCH (Text Version)

Carol: That's good. Maybe we should have her do a think sheet?

Jenn: In addition - Jerry had a seizure. Davon was sneaking food. Andrew was cursing. The care van left Charlie and Nicole at home. Susan's father broke his elbow. Barry didn't show up. Kate sent a note to a male coworker. Elizabeth wore a zebra print bra with a see through white blouse. All in one day. I think they may need some consultation. The afternoon was good though.

Carol: OMG! I am saving this txt for ever!!!!

Employment Supports

(Wehman, et al., 2014; Wehman, et al., 2014)

- * Behavioral Consultation
- * Consistent Structure to Seemingly Unstructured Internships
- * Behaviorally Defining Idioms, Social Skills, and Work Expectations
- * Visual Supports to Increase Implementation of Strategies
- * Self Monitoring Checklists and Reinforcement Programs
- * Role-Playing and Practice for Required Social Skills
- * Ongoing Intensive Instruction and Monitoring of Student Success



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Behavioral Consultation with Behavior Analyst

- * Weekly Meetings
- * Use a Positive Behavior Support model to develop interventions
- * Provide "on-call" support as needed
 - * Example:
 - * Paul had aggressive episode and Behavior support was available that same day
 - * Meeting with parent to review incident and develop plan was completed within 24 hours

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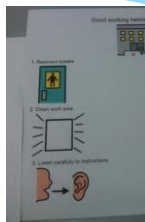
Behaviorally Defining Idioms, Social Skills, and Work Expectations

- * Individuals with ASD do not necessarily understand idioms or know what is expected of them at work or in social situations
 - * Example: The High Road
 - * 1. Say I'm sorry
 - * 2. Walk away
 - * 3. Call your job coach or your supervisor

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Visual Supports to Increase Implementation of Strategies

- * Make everything you can VISUAL!

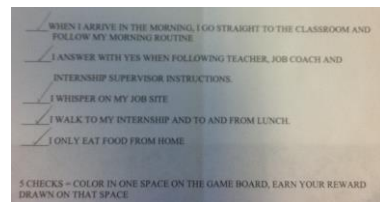


5	Red voice = Yelling	Outside
4	Orange voice = Loud	Outside
3	Yellow Voice = Normal Inside voice and/or	Outside
2	Green Voice = Quiet Inside voice private	Outside
1	Blue Voice = Little Talking or Whisper Quiet!	Outside
0	Gray Voice = No Talking	Quiet!

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Self Monitoring Checklists and Reinforcement Programs

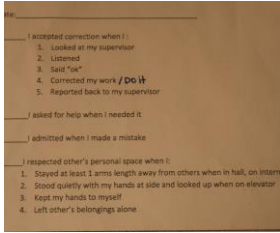
- * Teach the person to monitor and collect data on their own behavior



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Role-Playing and Practice for Required Social Skills

- * Perfect practice makes for perfect performance
- * Example: Accepting corrections



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Ongoing Intensive Instruction and Monitoring of Student Success

- * Training provided not only to interns/employees but also to staff/ supervisors/ co-workers in departments



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Consistent Structure to Seemingly Unstructured Internships

- * Jobs are frequently not structured
- * Ask for the tasks they complete every day
- * Create regular schedule
- * Example: Materials Management
 - Completed Deliveries in the Morning
 - Completed Inventory Counts on "high use" floors in the afternoon



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Recognizing Frustration & Learning to Cope & Return to Work



Role Playing & Practice for Required Social Skills

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Overall Findings

- * Individuals with ASD can work and achieve independence
- * Require a high degree of intensity at first
- * Require long-term supports
- * Require access to behavioral supports on the job