

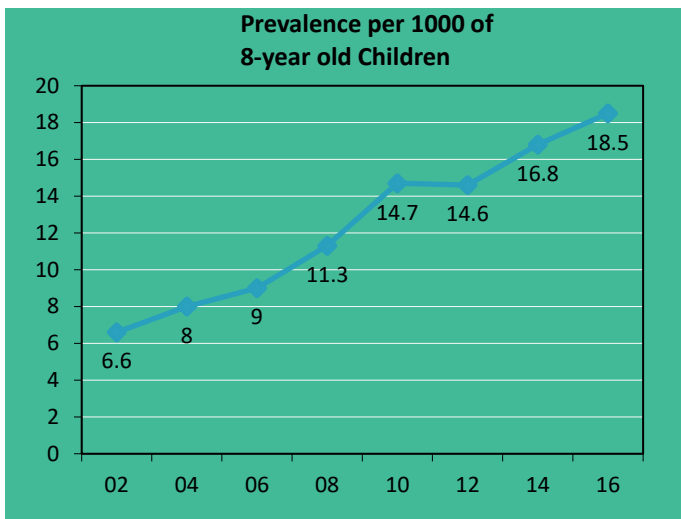
TRANSITION TO POST-SECONDARY EDUCATION AND EMPLOYMENT: SUPPORTING POSITIVE OUTCOMES FOR AUTISTIC ADULTS

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ADULTS WITH ASD: ANTICIPATING INCREASED REQUESTS FOR SERVICES AND SUPPORTS



Prevalence increase
from 1 in 150 to 1 in 54
8 year old children
across the US.

The 2002 cohort is now
27 years of age.

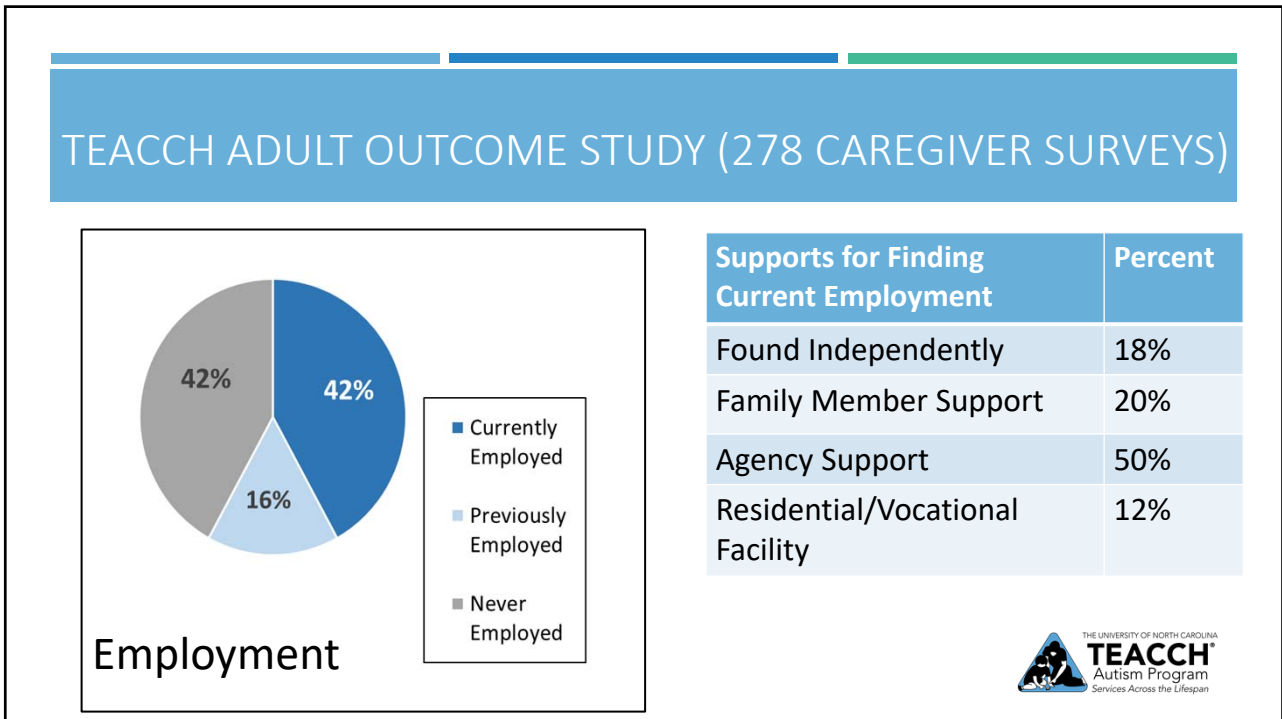
Autism and Developmental
Disabilities Monitoring Network
Centers for Disease Control

2



What Happens When Children with Autism Grow Up?

3



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BEING EMPLOYED IS ASSOCIATED WITH:

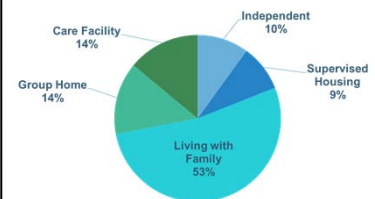
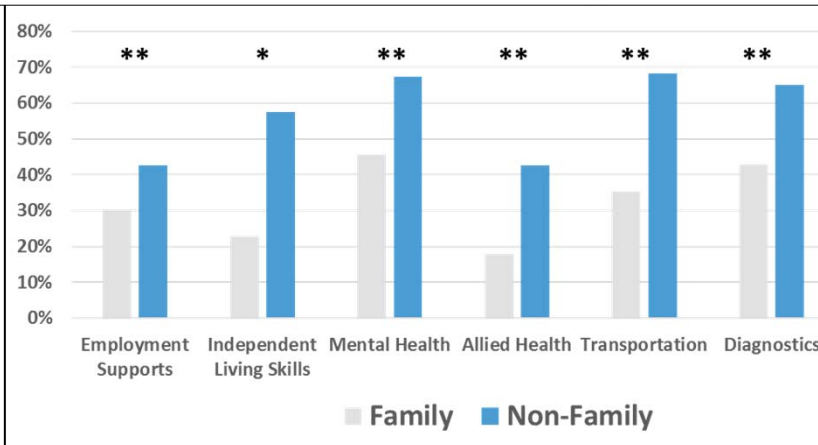
- Increased contact with friends ($d=.56, p<.001$)
- Fewer symptoms of anxiety ($d=.46, p<.001$)
- Fewer symptoms of depression ($d=.39, p=.002$)



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Understanding Service Usage and Needs for Adults with ASD: The Importance of Living Situation

Journal of Autism and Developmental Disorders; 2019, Volume 49, Issue 2, pp 556–568
 Katerina M. Dudley · Mark R. Klinger · Allison Meyer · Patrick Powell · Laura G. Klinger



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J Autism Dev Disord (2017) 47:3204–3219
 DOI 10.1007/s10803-017-3238-6

ORIGINAL PAPER

Patterns of Age-Related Cognitive Differences in Adults with Autism Spectrum Disorder

Patrick S. Powell¹ · Laura G. Klinger² · Mark R. Klinger³

	ASD (n = 29)	Typical (n = 30)	
	Mean (SD)	Mean (SD)	Range
Age (years)	49.0 (11.7)	48.7 (12.1)	30-65
Gender	Male = 24 Female = 5	Male = 23 Female = 7	
WASI FSIQ	113.2 (9.5)	113.1 (10.2)	93-130

MONTREAL COGNITIVE ASSESSMENT (MoCA)

NAME: _____ Date of birth: _____
 Education: _____ Sex: _____ DATE: _____

Years-Low: 7-3, 0-1 (p/10th), Years-Low

VIOSPATIAL / EXECUTIVE (5 points)

NAMING (3 points)

MEMORY (5 points)

ATTENTION (2 points)

LANGUAGE (2 points)

ABSTRACTION (2 points)

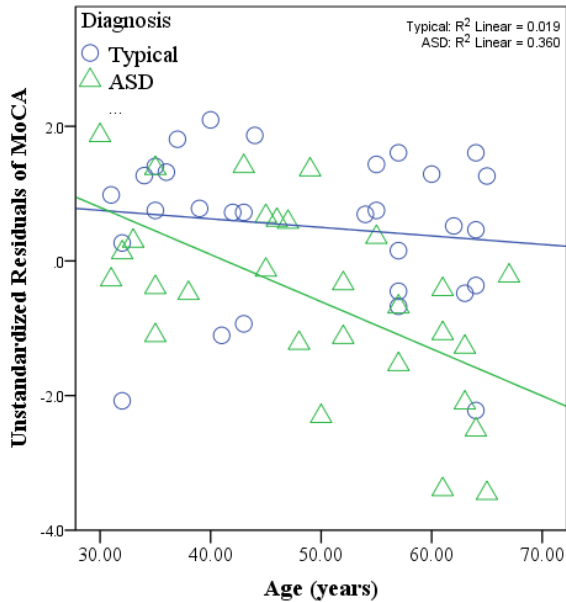
DELAYED RECALL (5 points)

Optional

ORIENTATION (6 points)

TOTAL: 30

7

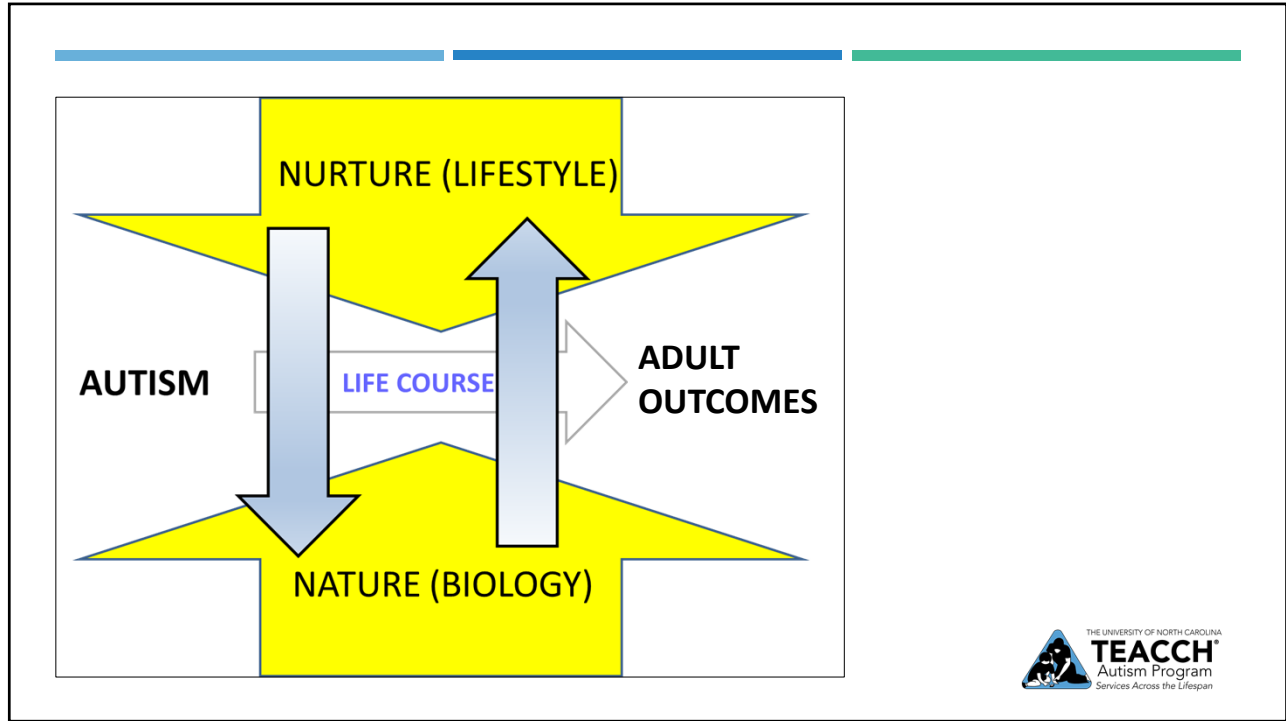


Montreal Cognitive Assessment

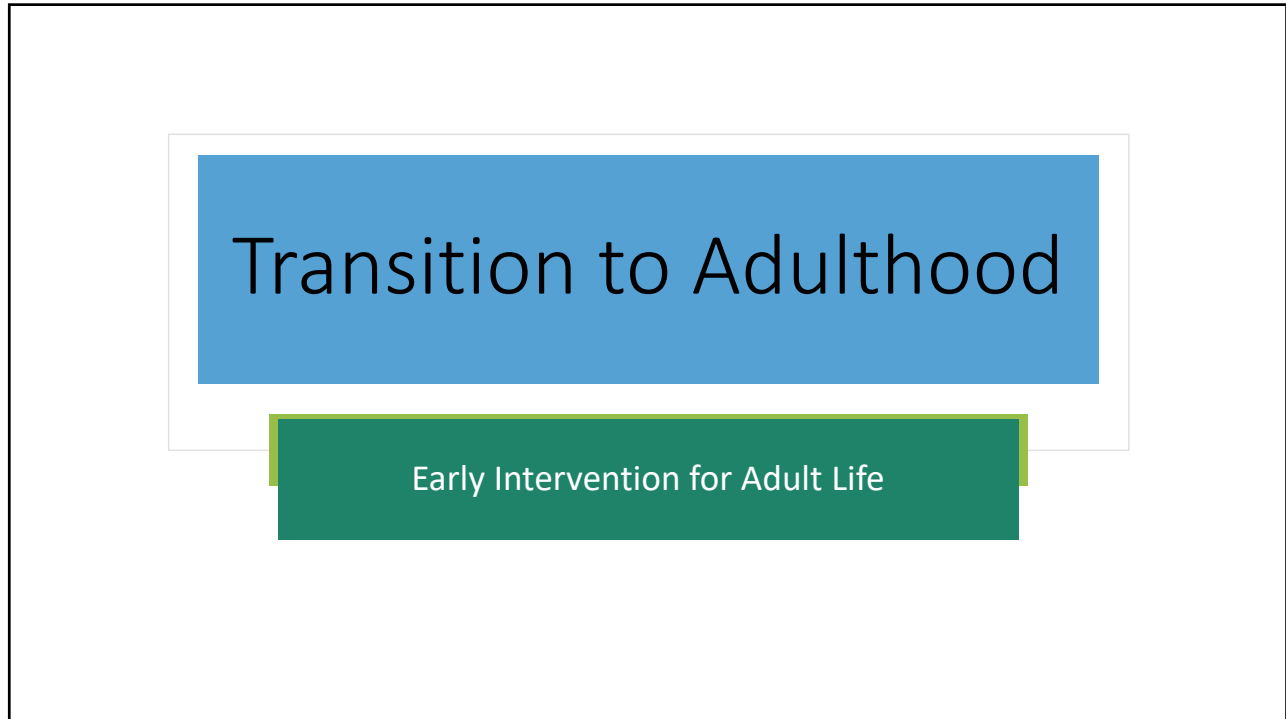
Accelerated cognitive decline for those with ASD

Age by Diagnosis	R^2 change	F change
	0.05	$F(1,54) = 4.64, p = .04$

8



9



10

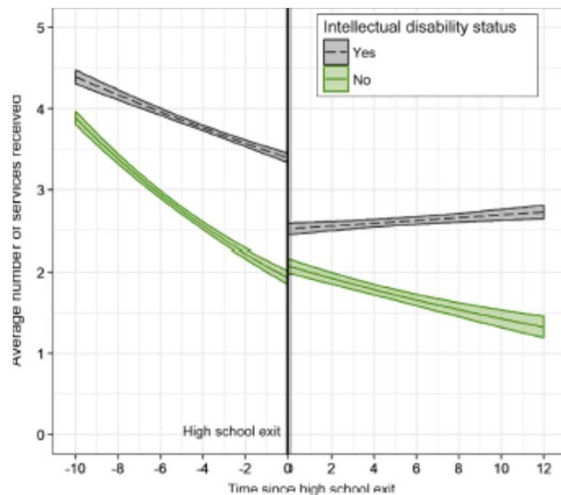
VOCATIONAL REHABILITATION SUPPORTS

- Increasing access to Vocational Rehabilitation (VR) services for adults with ASD has not improved employment outcomes much across the last decade.
- 33% employment success rate (Burgess & Cimera, 2014)



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DECREASING SERVICES FOR ADOLESCENTS AND YOUNG ADULTS WITH ASD



Laxman et al., 2019



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EMPLOYMENT & POSTSECONDARY OUTCOMES FOR YOUNG ADULTS WHO HAVE ASD BUT DO NOT HAVE AN INTELLECTUAL DISABILITY

- Three times more likely to have no daytime activities after high school than those with ASD and comorbid intellectual disability (Taylor & Seltzer, 2011)
 - Only 18% received employment services (compared to 86% with comorbid ASD & ID).
- For those that are employed, they switch jobs often, have difficulty adjusting to new job settings, and make less money (Hendricks, 2010).
- Only 39% of students with ASD who started a postsecondary program completed their postsecondary education (Newman et al., 2011)



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IDENTIFYING CHALLENGES FOR A SUCCESSFUL TRANSITION

Daily Living (Adaptive Behavior) Skills

Learning Differences (Executive Function, Attention, Theory of Mind

Emotion Regulation)

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CHANGES IN ADAPTIVE BEHAVIOR THROUGH ADOLESCENCE

Journal of Autism and Developmental Disorders (2018) 48:2870–2878
<https://doi.org/10.1007/s10803-018-3538-5>

BRIEF REPORT

Brief Report: Developmental Trajectories of Adaptive Behavior in Children and Adolescents with ASD

Allison T. Meyer^{1,6} · Patrick S. Powell² · Nicole Butera³ · Mark R. Klinger⁴ · Laura G. Klinger⁵

- 186 participants with **ASD**
- 1-33 years of age

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ADAPTIVE BEHAVIOR IS LOWER THAN EXPECTED BASED ON IQ

FSIQ Group	FSIQ (Mean)	Vineland-II DLS (Mean)	Mean Difference Score
FSIQ 85-99	91.9	77.8	14.1
FSIQ 100-114	106.5	79.9	26.5
FSIQ > 114	125.8	82.9	42.8

- Bishop & Duncan, 2013
- 417 participants with **ASD**
- 10-18 years of age

Figure 2. Mean FSIQ-DLS difference score across three FSIQ groups.

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LEARNING DISABILITIES ASSOCIATED WITH ASD

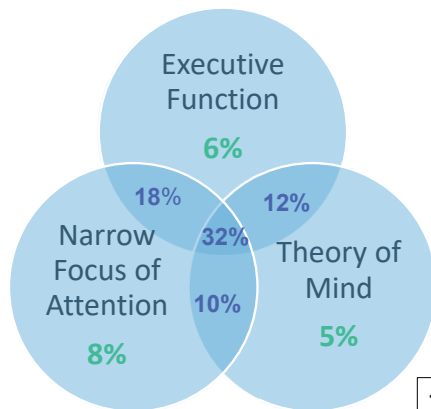
- Narrow Focus of Attention (narrow spotlight; misses the big picture)
- Poor Executive Function (organization; sequencing)
- Limited Theory of Mind (limited perspective taking)



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LEARNING DISABILITY VIEW OF ASD



Atypical Performance:

- All 3 areas: 32%
- Two areas: 40%
- One area: 19%
- None: 9%

Brunsdon et al. (2015)

181 adolescents
Age: 12-16 years
IQ: 55-128; Average: 94



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EMOTION REGULATION CHALLENGES

- Prevalence estimates for comorbid anxiety range from 42% to 79%, with most studies reporting a prevalence rate of 50% (Kent & Siminoff, 2017).
- CBT is effective at reducing anxiety in individuals with ASD.

Journal of Consulting and Clinical Psychology
2018, Vol. 86, No. 3, 205–217

© 2018 American Psychological Association
0022-006X/18/\$12.00 <http://dx.doi.org/10.1037/ccp0000285>

Training Clinicians to Deliver Group CBT to Manage Anxiety in Youth With ASD: Results of a Multisite Trial

Judy Reaven and Eric J. Moody
University of Colorado Anschutz Medical Campus

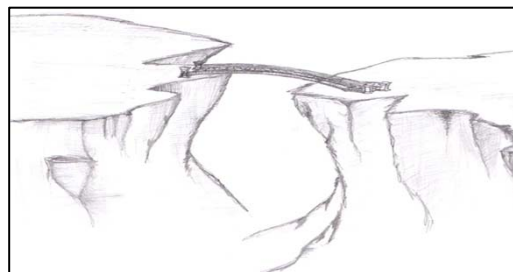
Laura Grofer Klinger
University of North Carolina–Chapel Hill

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BRIDGING THE GAP BETWEEN HIGH SCHOOL AND ADULTHOOD: CREATING TRANSITION SERVICES

GOALS:

- Establish sustainable transition to adulthood programs targeting transition readiness skills.
- Accelerate the translation of research findings to communities by creating and implementing intervention in community settings.



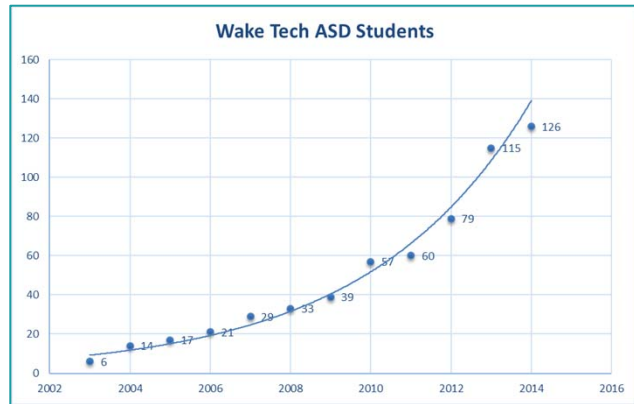
Goals from NIH Community Based Participatory Research Program



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ISSUES OF ACCESS

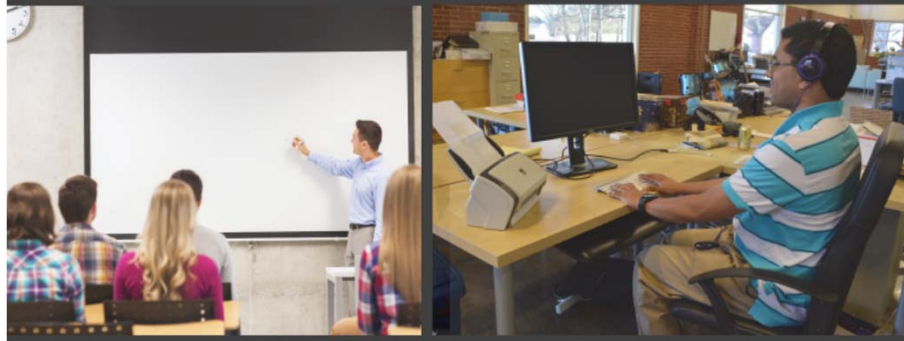
- Community Outpatient Clinic or Community Education Setting?
- High School vs. Community Colleges
 - 981 public high schools
 - 58 community colleges
 - 80% of students with ASD enrolling in postsecondary education attend a community college (Roux et al., 2015).



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TEACCH SCHOOL TRANSITION TO EMPLOYMENT AND POSTSECONDARY EDUCATION



Glenna Osborne




Tamara Dawkins



Mark Klinger

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TEACCH Autism Program
Services Across the Lifespan

T-STEP Program

NC COMMUNITY COLLEGES
CREATING SUCCESS

VR


TEACCH School Transition to Employment and Post-Secondary Education

- Collaboration with TEACCH, NC Community Colleges, & NC Vocational Rehabilitation
- Targeted Students
 - 16-21 years with ASD
 - General education high school diploma
- Non-credit earning continuing education course on college campus
 - 12-week academic program
- Co-taught by TEACCH outpatient clinician & community college instructor
- Costs covered by VR (Pre-Employment Transition Services Program)

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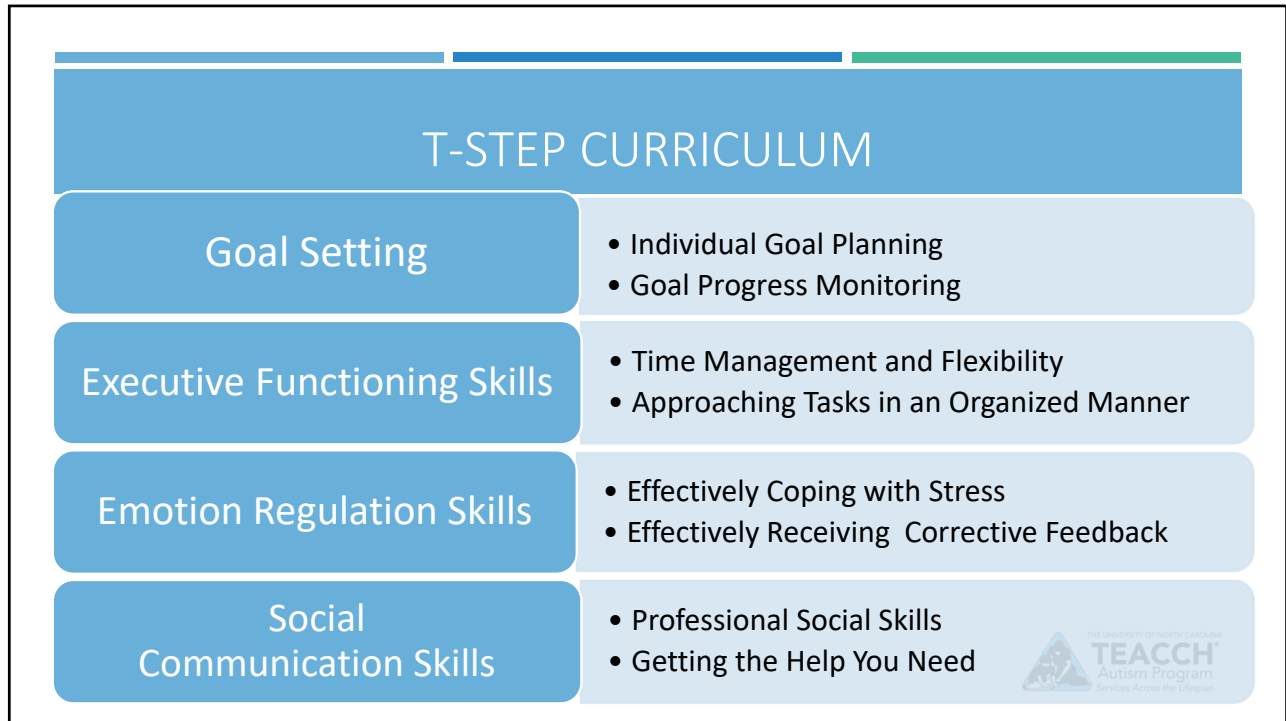
FOCUS ON TEACHING ROUTINE STRATEGIES

- Teach **routine strategies to support learning and generalization.**
- Practice strategies across settings to **promote generalization**

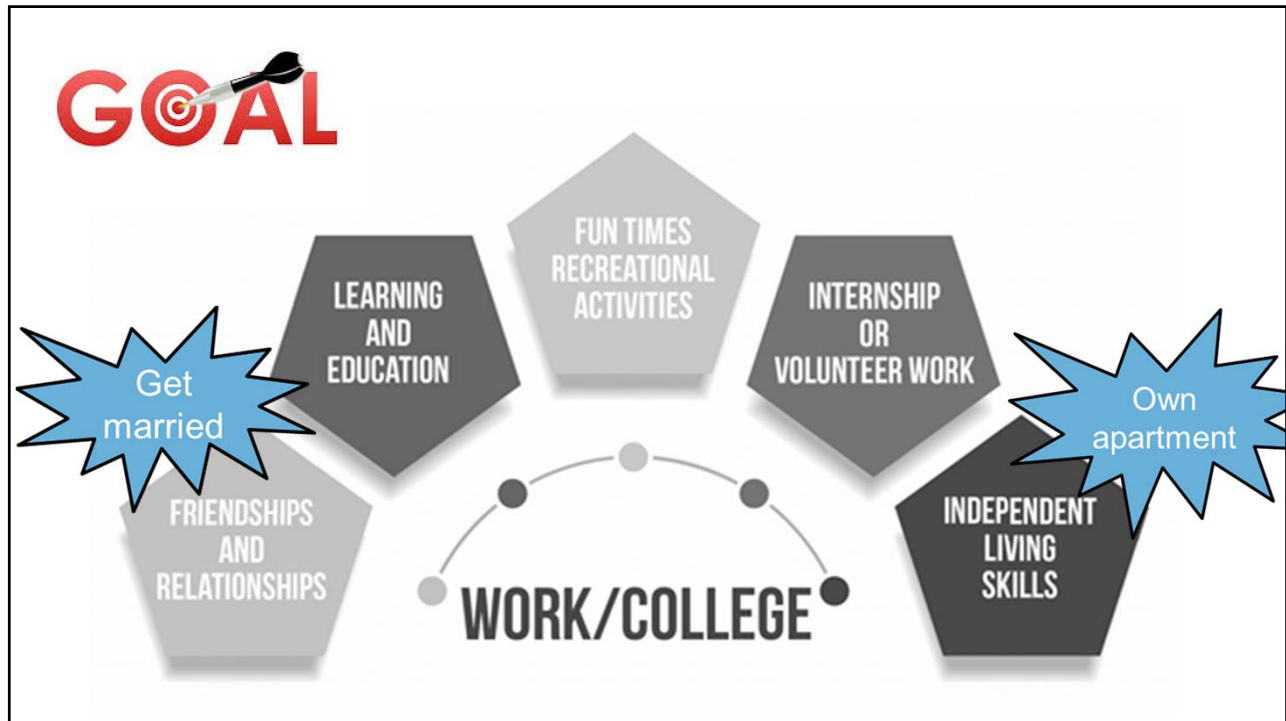


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Services Across the Lifespan

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Goal Action Sheet				
Goals	WHAT DO YOU DO NOW?	ACTION STEPS (1 per week)		SHORT TERM GOAL
Goal Area: Living Responsibly	I do a few chores (make a sandwich)	Choose a meal and go shopping	Cook a meal with my mom or dad	Cook some meals on my own
Goal Area: Friends in Life	Talk to a few peers at school	Text T-STEP friend	Text T-STEP friend to go to movie	Do 3 fun things with friends.

Own apartment

Get married

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Developing Your Tools: Creating Your Own Schedule for Adult Life

	Monday	Tuesday
6:00 - 7:00	up and ready	up and ready
7:00 - 8:00	breakfast	quick breakfast
8:00 - 9:00	prep and travel to college	prep and travel to college
9:00 - 10:00	Spanish	English
10:00 - 11:00	study	tutor
11:00 - 12:00	History	Intro to Business
12:00 - 1:00	lunch	study
1:00 - 2:00	lunch	lunch
2:00 - 3:00	walk/run at track	lunch
3:00 - 4:00	homework	Spanish lab
4:00 - 5:00		Work
5:00 - 6:00		Work
6:00 - 7:00	laundry	
7:00 - 8:00	dinner	dinner
8:00 - 9:00		clean bedroom
	video games/TV	video games/TV

Key

- fixed activities
- prep and travel time
- get up and ready
- eating meals
- college and work flexible activities
- weekly chores
- social, health and recreational activities

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DEVELOPING YOUR TOOLS: ROUTINE STRATEGY TO STAY CALM

At least 1 Mental Distraction	At least 1 Breathing Tool	At least 2 Tense & Release or 1 Energy Release	
<input type="checkbox"/> Count to 20 <input type="checkbox"/> Count backwards <input type="checkbox"/> Sing a song in your head <input type="checkbox"/> Focus on environment <input type="checkbox"/> Recite the alphabet <input type="checkbox"/> Other: _____	<input type="checkbox"/> 4 count breathing <input type="checkbox"/> Elevator breathing <input type="checkbox"/> Other: _____	<input type="checkbox"/> Clench both fists <input type="checkbox"/> Touch shoulders <input type="checkbox"/> Shrug shoulders <input type="checkbox"/> Wrinkle forehead/raise eyebrows <input type="checkbox"/> Close eyes tightly <input type="checkbox"/> Press teeth together <input type="checkbox"/> Push head backward <input type="checkbox"/> Push head forward <input type="checkbox"/> Arch your back <input type="checkbox"/> Take a deep breath <input type="checkbox"/> Suck in stomach <input type="checkbox"/> Flex thighs <input type="checkbox"/> Point toes upward <input type="checkbox"/> Curl toes downward	<input type="checkbox"/> Punching in air <input type="checkbox"/> Swimming arm movements <input type="checkbox"/> Riding a bicycle movements <input type="checkbox"/> Hard kicks <input type="checkbox"/> Short walk <input type="checkbox"/> Exercise
At least 1 positive thoughts tools (Positive Self- or Visualizations)			
<input type="checkbox"/> "Relax" (say it <i>slowly</i> 5 times) <input type="checkbox"/> "I am calm" (say it <i>slowly</i> 5 times) <input type="checkbox"/> "I am safe" (say it <i>slowly</i> 5 times) <input type="checkbox"/> "I can do this" (say it <i>slowly</i> 5 times) <input type="checkbox"/> "Everything's fine" (say it <i>slowly</i> 5 times) <input type="checkbox"/> " _____ " (say it <i>slowly</i> 5 times)			

Mental Distraction: Sing a line from "Lovely Linda" in my head

Breathing Activity: (Images of sun and candle)

Energy Release Activities: (Image of hand clenching)

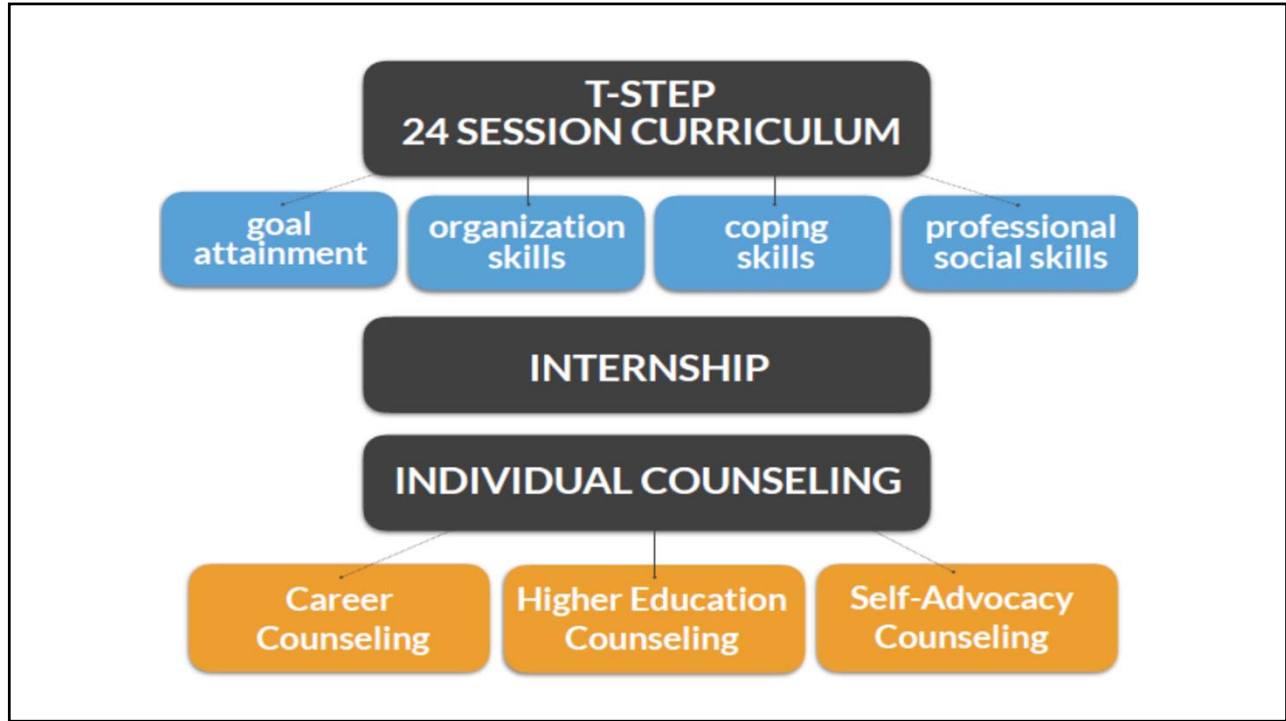
Positive Mantra: "Relax, I can do this!" (Image of person in yoga pose)

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DEVELOPING YOUR TOOLS: CREATING A GETTING THE HELP YOU NEED PLAN

WHO?	WHEN & WHERE?	HOW?	WHAT?
Who to ask?	When & Where?	How to get attention?	What to say?
<ul style="list-style-type: none"> Professor TA Peer Boss Parent 	<ul style="list-style-type: none"> Office Classroom Email Staff desk Phone Call Right away? 	<ul style="list-style-type: none"> "Excuse Me" Knock on office door Call Name Email Phone Call 	<ul style="list-style-type: none"> "I need more info about _" "I need assistance with _" "I need _"

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OPEN TRIAL EFFICACY STUDY	
Community College Sites	3 Community Colleges 8 T-STEP Class
# of Students	57
Age	19.3 Years (SD 1.4) (17-21 Years)
Gender	41 Male; 16 Female

Parent Report

- Becker Work Adjustment Profile
- Waisman Activities of Daily Living

Self-Report

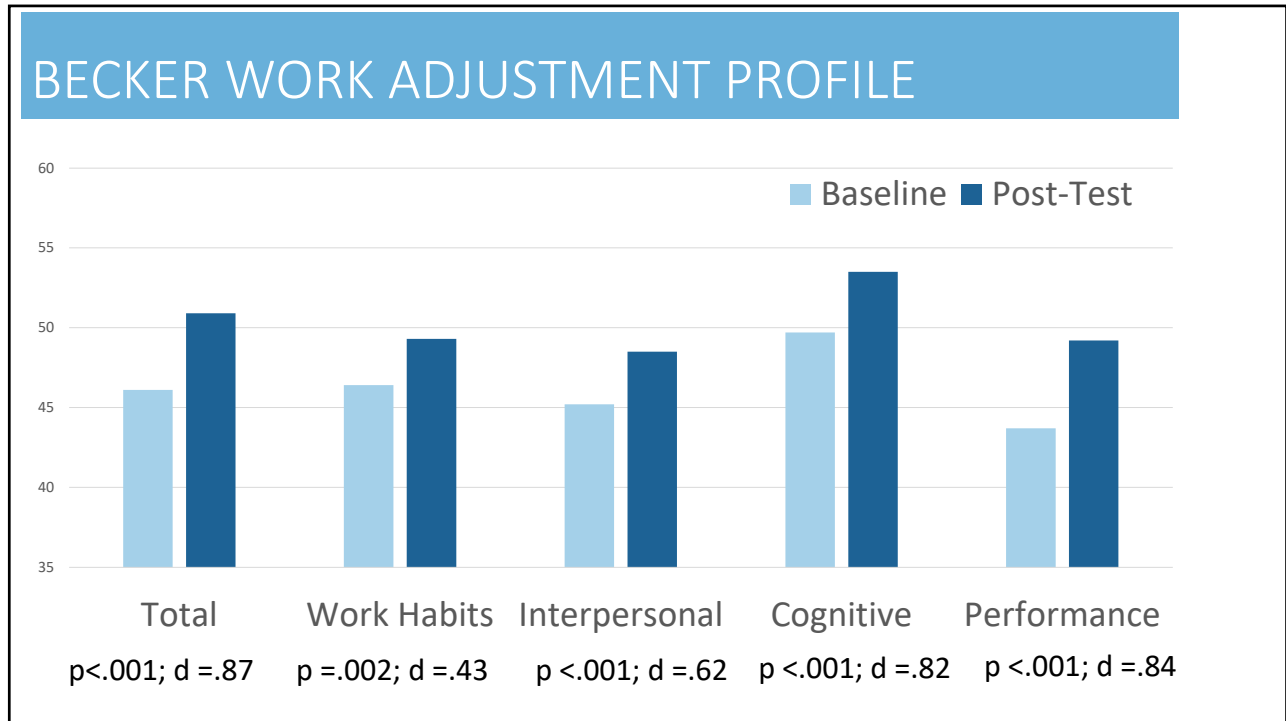
- Center for Epidemiological Studies – Depression (CES-D)
- AIR Self-Determination

Observation

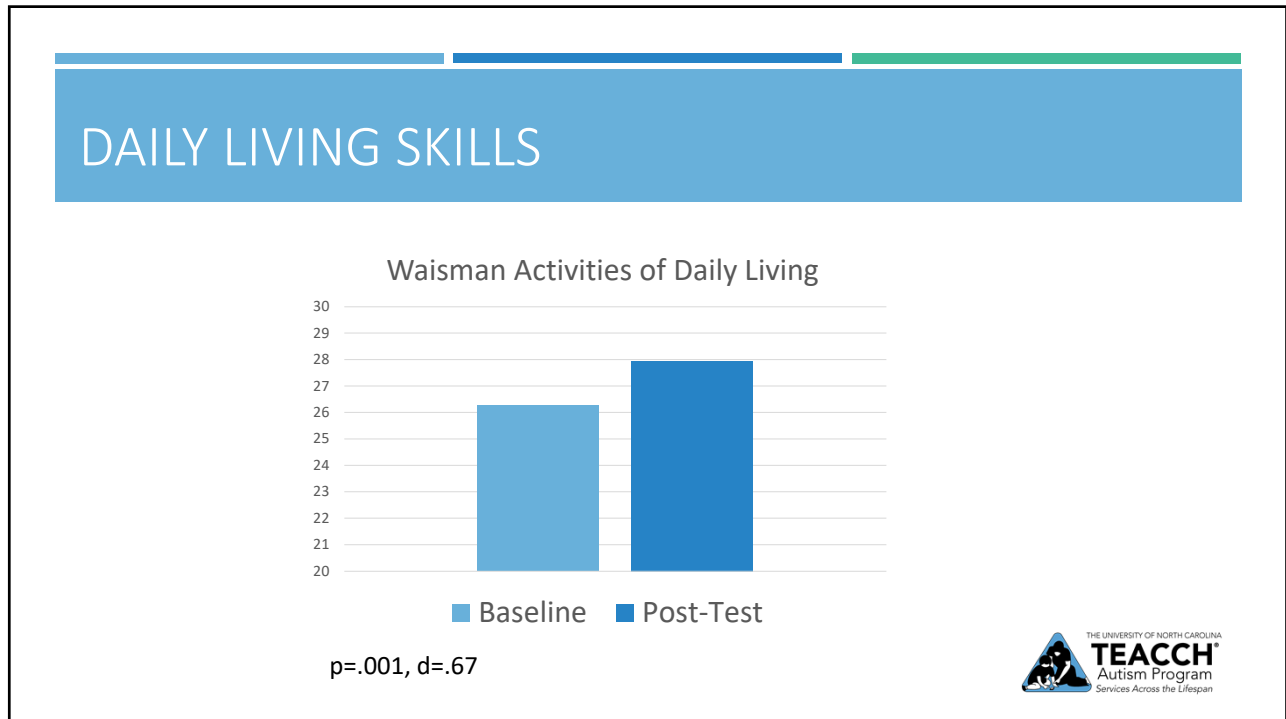
- Transition Readiness & Employability Evaluation (TREE)

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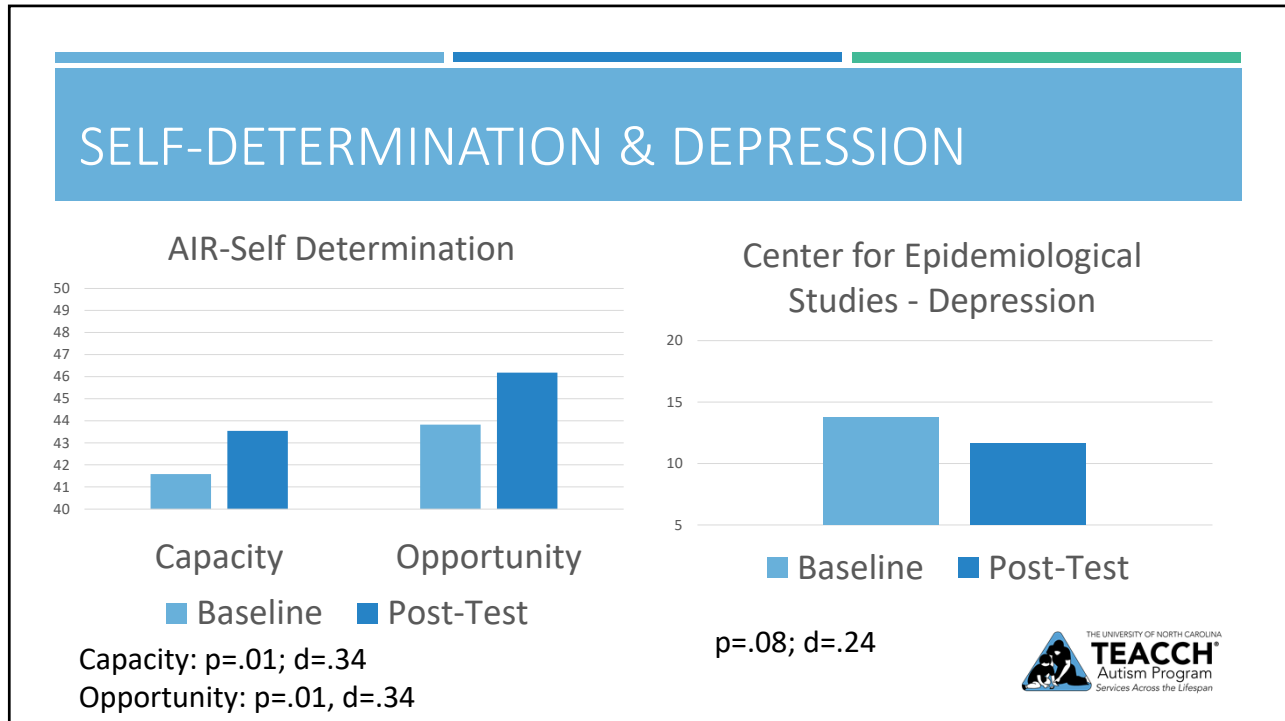
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TRANSITION READINESS & EMPLOYABILITY EVALUATION (TREE)




30-Minute Observation

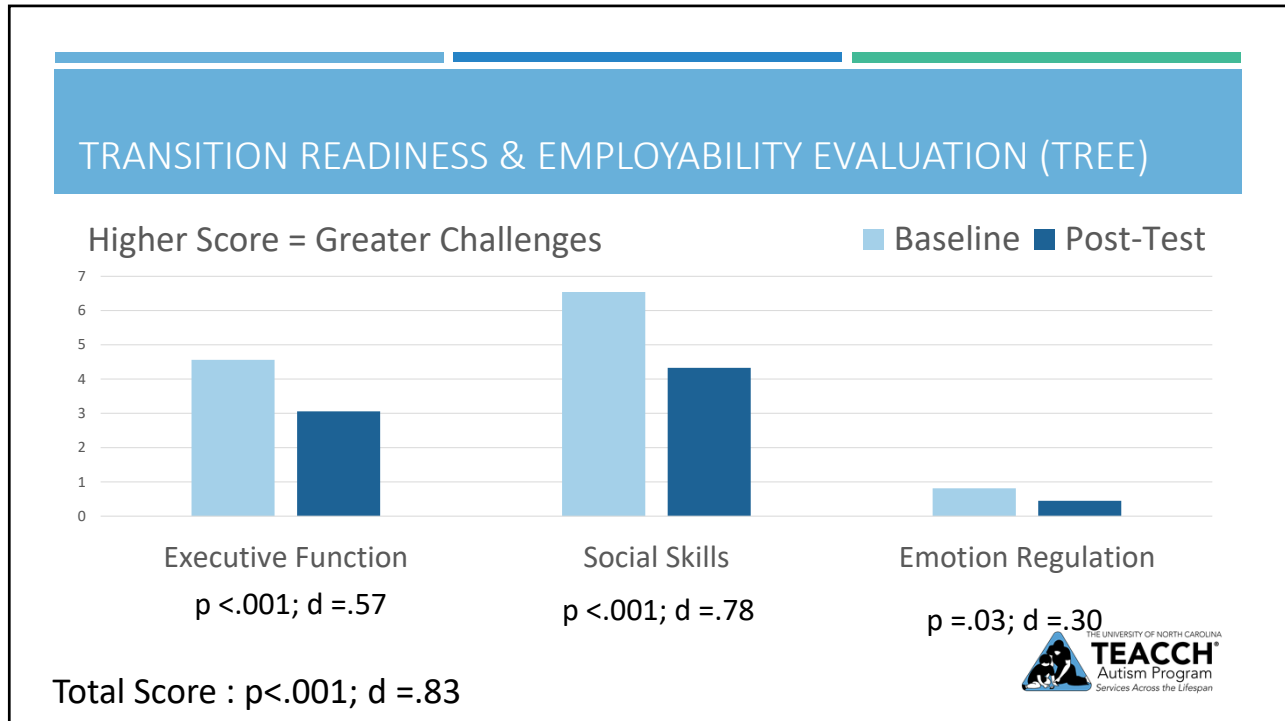
1. Office Paperwork Task
2. Data Entry Task

Presses to Assess T-STEP Skills:

1. Executive Function
2. Social Skills
3. Emotion Regulation



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STUDENT FOCUS GROUPS (4 GROUPS ACROSS 3 COLLEGES)

What Did You Learn?

- Ways to be successful as a college student and in the workplace.
- “Adulting;” functioning in the adult world.
- New strategies for getting organized and manage time.
- How to improve social interactions.

Would You Recommend the Program?

- Definitely. It was worth the time
- Yes. I’ve already told some people about it.
- Yes, I feel more prepared.



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T-STEP NEXT STEPS

- Transitioned to Online Program During Pandemic
- Conducting 2 Randomized Control Trials
 - Waitlist control design
 - Comparing complete program to counseling services alone



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Front Row: Brianne Tomaszewski, Elena Lamarche; Back Row: Katerina Dudley, Rachel Sandercock, Laura Klinger, Mark Klinger, Glenna Osborne Tamara Dawkins

Not pictured: Nancy Bagatell, Anna Berman, Jenny Kribbs, William Lehrer, Linda Varblow



Much Appreciation
to Adults with ASD
& Their Families



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Autism Program
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Website: www.teacch.com
Email: teacch@unc.edu
Facebook: TEACCH Autism Program

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