Parent Training For Challenging Behaviors in Autism Spectrum Disorder: The RUBI Parent Training Program

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Disclosures

Royalties

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Consulting

• Attend Behavior, Inc

Speaker Fees

• ABAC, Inc

Introductions

PhD in Clinical Child Psychology, University of Florida • PCIT

Postgraduate training, Yale Child Study Center

- PCIT
- Barkley's Defiant Children, Kazdin's PMT program
 RUBI
- Marcus Autism Center, Emory University
 - RUBI Clinic

Seattle Children's Autism Center, U. Washington

RUBI Clinic





Learning Objectives

An Introduction to Parent Training in ASD

- Discuss the role of parent training as part of a comprehensive treatment model for youth with autism spectrum disorder
- Compare the various types of parent training for youth with autism spectrum disorder, including research findings

Overview of the RUBI Program and Core RUBI Sessions

- Summarize the content of the RUBI Parent Training program
- Describe findings from a large-scale randomized clinical trial of RUBI

Strategies to Engage Caregivers in Parent Training

- Identify common barriers to treatment fidelity
- Design RUBI treatment plans that are responsive to clinic demands and family needs



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An Introduction to Parent Training in ASD





Autism Spectrum Disorder (DSM 5)

A: Deficits in social communication and social interaction (blends social with communication)

B: Restricted, repetitive patterns of behavior (includes insistence on sameness)

- C: Symptoms are present in early childhood
- D: Symptoms impair everyday functioning

American Psychiatric Association, 2013





Good News, Bad News

- Good News:
 - Better at identifying children with ASD
- Bad News:



- Limited (access to) evidence-based treatments
 - Costly, time- and personnel-intensive
 - Challenge to wide-ranging dissemination





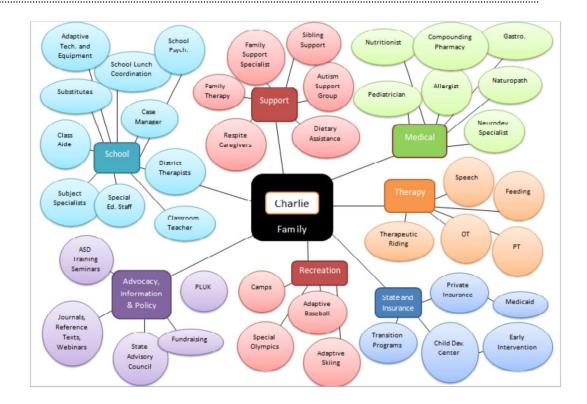
Added Challenges of Treatment

Parents of autistic youth juggle multiple, fragmented appointments

•Average 4-7 different treatments at any one time

> severity of symptoms, the more treatments in

USE (Goin-Kochel, Myers, & Mackintosh, 2007; Green et al., 2006)



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There is a pressing need to expand the availability of ASD treatments that are: <u>empirically supported</u>, <u>time-limited</u>, <u>cost-effective</u>





Parent Training

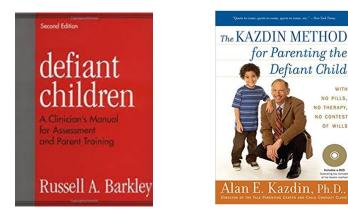
Traditionally a time-limited approach

• Few hours per week



Emphasizes role of parents as the agent of change

History as established EBT in child mental health











Why Target Parents?

- High rate of challenging behaviors (≈50%)
- Adaptive skills deficits
- High parent stress/ accommodation
- Parent inclusion in treatment is not common







Parents need specific instruction on techniques to:

Improve <u>core symptoms</u>

Reduce challenging behaviors, and

Improve adaptive functioning in their children





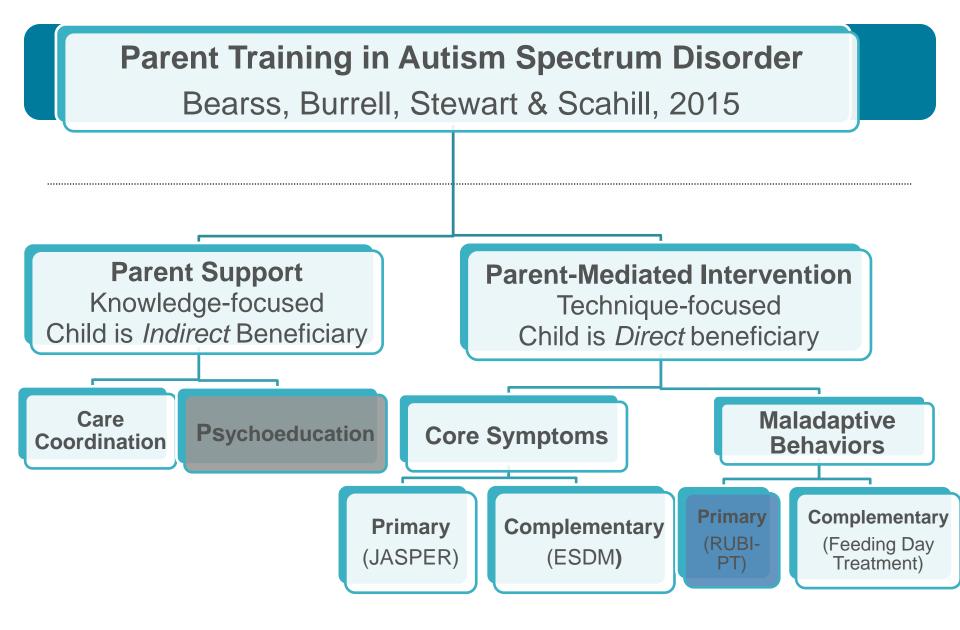


• Parent Training = Good

• What exactly is "Parent Training" in ASD











Research on PT in ASD

Core Symptoms

- 2013 Cochrane Review of 10 RCTs
 - only one study (Green, 2010) adequately powered
- Within the last 10 years:
 - Naturalistic Developmental Behavioral Intervention (NDBI)
 - ESI, JASPER, ESDM, PRT
- 2018 meta-analysis of 19 RCTs (Nevill et al)
 - ES=0.18 (communication) 0.27 (socialization)





Research on PT in ASD

Challenging Behaviors

- Single case design and small RCTs (proof of concept)
- 2017 meta-analysis of 8 RCTs (Postorino et al.)
 - ES=0.59





Challenging Behavior in ASD

- Up to 50% of children with ASD exhibit challenging behaviors
 - Tantrums, aggression, noncompliance, SIB
- DSM-V Criteria for Oppositional Defiant Disorder
 - At least 4 (out of 8) symptoms: Irritability, Argumentative/defiant behavior, Vindictiveness
 - Pervasive (lasting at least 6 months)
 - Developmental considerations
- Prevalence of ODD in ASD ranges from 1-11%

Why might it be difficult to diagnose ODD in ASD?





Challenges Diagnosing ODD in ASD

- Functional communication in relation to noncompliance
- Appropriateness of diagnostic criteria
 - "actively defies or refuses to comply"
 - "deliberately annoys"
 - "spiteful or vindictive"

Requires clinician to demonstrate that the child understands and is intentionally acting in defiance of age-appropriate societal norms

QUALITATIVE DIFFERENCE IN DBP IN YOUTH WITH ASD???





PT for Challenging Behavior in ASD

Modified for ASD

- Incredible Years (Roberts & Pickering, 2010; Dababnah & Parish, 2014; Hutchings et al, 2016)
- Parent-Child Interaction Therapy (McNeil, Quetsch, & Anderson, 2018)
- **Triple-P** (Tellegen & Sanders, 2014; Whittingham et al., 2009)

Developed for ASD

- An Individualized Mental Health Intervention for Children with ASD (AIM-HI) (Brookman-Frazee et al., 2019; 2021)
- RUBI Parent Training (Aman et al., 2009; Bearss et al, 2015; Handen et al, 2015)
- Predictive Parenting (Charman et al., 2021; Hallett et al, 2021; Palmer et al., 2019)

Common Elements in PT for Challenging Behaviors

- Improving relationship between parent and child (Praise, Special Play Time)
- Reinforcement Contingencies/Token Economies
- Planned Ignoring

Time Out

Compliance Training







- Emphasis on determining function of behavior to inform treatment approach
 - Evaluating "<u>Antecedent</u>, <u>B</u>ehavior, <u>C</u>onsequence" to hypothesize function of behavior [Escape, Tangible, Attention, Automatic]
 - Appreciating role of "setting events" (sensory issues, overstimulation, anxiety)
 - Noncompliance can be rooted in rigidities
 - "Can't" vs. "Won't"





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Let's Put This Into Practice

- Look for:
 - Antecedents
 - Behaviors
 - Consequences
 - Function(s) of the child's behavior
 - What setting events might be in play?
 - What is the child learning in this situation?





Video Vignette Example

How Function Informs Treatment

Example 1

- Turns classwork into paper airplanes
- Talks to neighbors
- Makes disruptive noises
 - TEACHER SENDS TO PRINCIPAL

Behavior is "escape-maintained"

Example 2

- Turns classwork
 into paper airplanes
- Talks to neighbors
- Makes disruptive noises
 - TEACHER SENDS TO PRINCIPAL

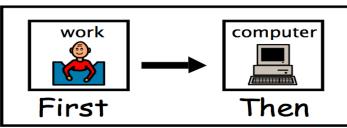
Behavior is maintained by peer attention





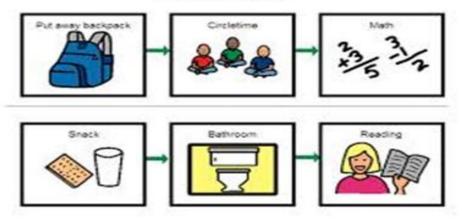
Antecedent management approaches





Use of visual strategies (telling vs. seeing)

Morning Schedule



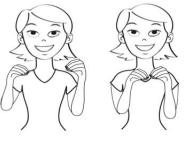




- Functional communication
 - Behaviors are forms of communication!
 - What is my child trying to say via this behavior??
- Focus on generalization & maintenance



It's Time For A Break











Emphasis on decreasing behavioral excesses <u>and</u> skill acquisition







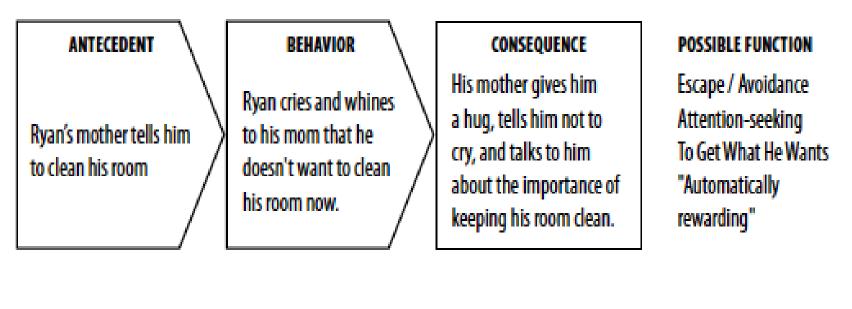
Pulling It All Together

- What behavior am I interested in targeting
 - Clearly defined
- What is the function of this behavior?
 - Informed by ABC Data
- Can I prevent it from happening?
- Can I change how I respond to it?
- Can I teach a new skill in its place?





Tailoring Strategy to Function: In Practice



ANTECEDENT	BEHAVIOR	\backslash	CONSEQUENCE	POSSIBLE FUNCTION
Ryan's mother tells him to do his homework	Ryan runs away into his bedroom.	$\Big\rangle$	His mother lets him stay up there because he is being quiet.	Escape / Avoidance Attention-seeking To Get What He Wants "Automatically rewarding"

Overview of the RUBI Program and Core Sessions





RUBI Parent Training Program

<u>11 Core</u>

- Behavioral Principles (the ABC's)
- Prevention Strategies
- Daily Schedules
- Reinforcement 1 & 2
- Planned Ignoring
- Compliance Training
- Functional Communication Skills
- Teaching Skills 1 & 2
- Generalization & Maintenance

PLUS

- Home Visits
- Telephone Boosters

7 Supplemental

- Toileting
- Feeding
- Sleep
- Time Out
- Imitation

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- Crisis Management
- Token Economies



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RUBI Intervention Targets

- Reduce challenging behaviors
 - Noncompliance, tantrums, aggression, transitions/daily routines
- Increase adaptive skills







Session 1: Behavioral Principles Let's Start at the Very Beginning... The ABC's

ACRONYM	What it Stands For	Definition	Examples
Α	Antecedent	Cue or trigger that occurs right before the behavior takes place	 Being told what to do Not getting what you want Not getting attention
В	Behavior	The target behavior that can be observed, counted, or timed.	 Hitting Yelling Talking Back Whining
С	Consequence	What occurs right after the behavior. Can be positive, negative, or neutral	 Time Out Privilege Removal Ignore Reward Hug/Praise



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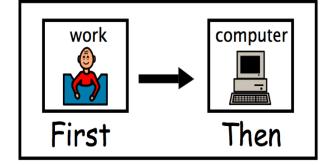
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Session 2: Prevention Strategies

- Identify and then eliminate (or minimize) the antecedent to a behavior
- Walk through 8 distinct strategies
 - Avoid situations/people
 - Control the environment
 - Small doses
 - Change the order of events
 - Respond to early signs
 - Change how you ask/respond
 - Address setting events
 - Use visual/auditory cues



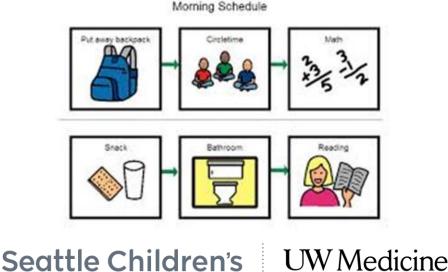




Session 3: Daily Schedules

- Unpredictable routines/changes in routine may elicit problem behavior
- Change order of routine/introduce visual supports
 - Help clarify expectations in daily routines and address difficulties with transitions





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Session 4 and 5: Reinforcement 1 and 2

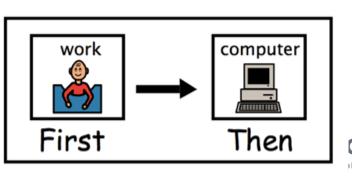
Reinforcer myth-busting

Identify reinforcers and target behaviors to increase

Plan a reinforcement contingency

Design a special play time







Session 6: Planned Ignoring and Session 8: Functional Communication Training

- Behavior is a form of (inappropriate) communication
- Behavior serves a function
 - 1) Ignore the inappropriate behavior
 - 2) Replace inappropriate behavior with functional communication tool







Session 7: Following Directions





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Sessions 9 and 10: Teaching Skills

Systematic steps to teach a new adaptive skill



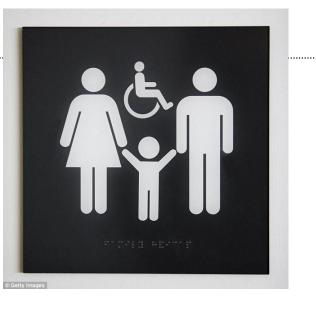




Session 11: Generalization & Maintenance









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RUBI Delivery

- Delivered individually to caregivers
- 60-minute sessions in clinic
- Components of sessions:
 - Homework review
 - Didactic Instruction
 - Activity sheets and video vignettes
 - Role-plays
 - Weekly homework assignments







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GOAL 1 Introduce overall goals of parent training, session formats, and requirements

The goal of this program is to teach you strategies that will be helpful in improving your child's behavior as well as promoting new skills. The strategies we will be discussing over the next several weeks have been used successfully for years with parents of children with autism spectrum disorder (ASD) who were hoping to improve their child's adaptive (or daily living) skills and decrease challenging behaviors, such as aggression, tantrums, and noncompliance. This program will involve you learning to implement a number of strategies that will help to prevent behaviors, teach new skills that could replace a problem behavior, and promote positive behaviors instead of the challenging ones. Here is a handout of the topics we will be covering [Review Parent Activity Sheet #1 of Session Topics]. We will be providing you with a handout each week that summarizes the key points from each session. We expect that your participation in session discussions, practices, and take-home assignments will have a positive impact on your child's behavior.

GOAL 2 Discuss how behaviors are learned

Today, we will review the ABC model. A central idea behind the ABC model is that the majority of behaviors we display are learned. That means that behaviors that have been a problem for your child at home or school are also learned. The good news is that if your child has learned to hit others, whine, or tantrum, he can also learn new, more appropriate ways to behave. This is not to suggest that someone set out purposefully to teach a child to hit others, rather the hitting is the result of certain conditions in the environment. For a classic example, consider a child who is yelling at the checkout aisle of the grocery store because he wants some of candy on display. His mother may initially say no, but when the child continues to scream, the parent may finally give him the candy. This makes sense in the moment, because the child is now happy and the mother is no longer embarrassed by the public tantrum and no longer has to listen to her child scream. However, how may this mother's response cause problems in the future? [Allow parent to respond: child 'learned' that screaming gets candy.]



Activity Sheet Example

How to Select a Reinforcer

1.	What are some unusual activities or preferences your child has that could be used as a
	reinforcer?

.....

What are some natural reinforcers that might be available for your child or other children in your family? ______

3. What are some privileges that your child currently has free access to that might instead be used contingently?





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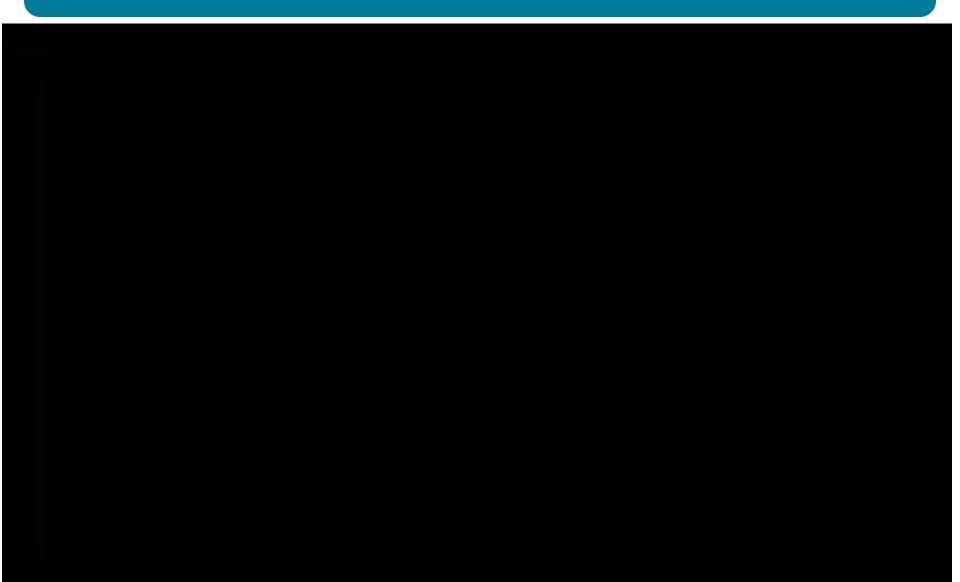
Use of Video Training Vignettes

- Depicts common challenging behaviors
- Supplements direct instruction
- Demonstrates flawed parent management strategies where parent was to identify error
- Assesses parent understanding & acquisition of techniques





Video Vignette Example



Behavior Support Plan (BSP)

- An organizing and living document
 - summarizes various intervention strategies that were devised and implemented for each child
- Introduced Session 1 & updated in subsequent sessions
- Serves as a final document of accomplishments, challenges, and solutions
 - Finalized at last session





PREVENTION STRATEGIES (ANTECEDENTS) What we are going to do so the behaviors do not occur in the first place

vvnat we a			
STRATEGY	SPECIFIC DETAILS	DATE INITIATED	
	Visual timers (time-timers) provide a great way to indicate to children when a transition or a reward will occur or when an activity is over.		
	 Instead of verbally telling Ben how much time until a transition will occur, <u>use a timer</u> to present this information. This avoids parents having to be the 'bearer of bad news' (i.e., that a transition needs to occur). When the timer goes off, it is important to respond immediately. 		
Timers (A type of Visual Cue)	 A timer was recommended to use as a cue that it was time to clean up the toys During Ben's dinner routine, a timer was introduced to help him to stay at the table for his entire meal (10-15 minutes) -We started with providing M&Ms every 3 minutes for appropriate sitting during dinner, then increased this to every 4 minutes Eventually, we moved to using timed intervals to consume portions of the meal (e.g. dinner divided into 4 segments; Ben had 3 minutes to eat each segment. Completion = M&M reward) 		
Changing the order of events/ "First-Then"	Changing the order of activities in the daily routine can make the day run more smoothly, making sure less preferred activities come first, followed by more preferred activities. Having preferred activities come second serves to motivate completion the less exciting activity. This was used during the morning routine:		
	"First get dressed; If there is time left over, you can watch TV."		
Changing the way that you ask	 Saying 'no' directly can often result in increased problem behaviors. Instead, it can be helpful to find alternative ways to respond. Giving choices can help to increase compliance and reduce difficult behaviors. Ben can be given choices as part of his routine (e.g., do you want to do this activity or that one) This was also applied in offering snack choices (to promote selection of healthy afternoon snacks) NOTE: if Ben does not accept your choices or offer an appropriate alternative, then you can say "Make a choice or I will make the choice 		UW Medicine
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Original Investigation

Effect of Parent Training vs Parent Education on Behavioral Problems in Children With Autism Spectrum Disorder A Randomized Clinical Trial

Karen Bearss, PhD; Cynthia Johnson, PhD; Tristram Smith, PhD; Luc Lecavalier, PhD; Naomi Swiezy, PhD; Michael Aman, PhD; David B. McAdam, PhD; Eric Butter, PhD; Charmaine Stillitano, MSW; Noha Minshawi, PhD; Denis G. Sukhodolsky, PhD; Daniel W. Mruzek, PhD; Kylan Turner, PhD; Tiffany Neal, PhD; Victoria Hallett, PhD; James A. Mulick, PhD; Bryson Green, MS; Benjamin Handen, PhD; Yanhong Deng, MPH; James Dziura, PhD; Lawrence Scahill, MSN, PhD

JAMA. 2015;313(15):1524-1533. doi:10.1001/jama.2015.3150







RUBI: Study Objectives and Design

- RCT of PT versus PE in 180 children 3-7 y.o. with ASD and Challenging Behaviors
 - PT RUBI behavioral intervention
 - PE psychoeducational program
- 24 Week Trial with evaluations every 4 weeks
- Follow-up at Week 36 and 48





Therapist Fidelity/Parent Adherence

Parent Training

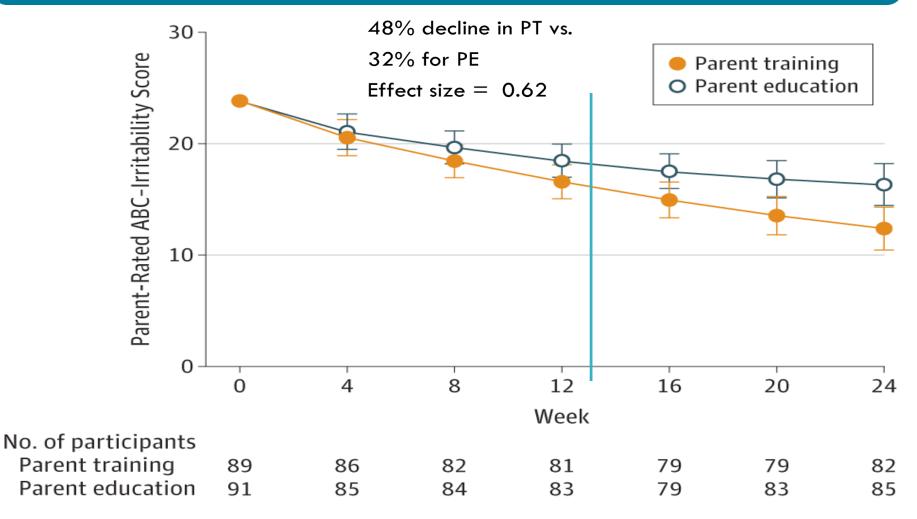
- THERAPISTS
 - 97% therapist fidelity to treatment
- PARENTS
 - 89% retained in 24 week program
 - 95% of parents would recommend

- **Parent Education**
- THERAPISTS
 - 97% therapist fidelity to treatment
- PARENTS
 - 91% retained in 24 week program
 - 86% of parents would recommend





The **JAMA** Network Least Square Means from mixed effects linear models N



Date of download: 4/24/2015

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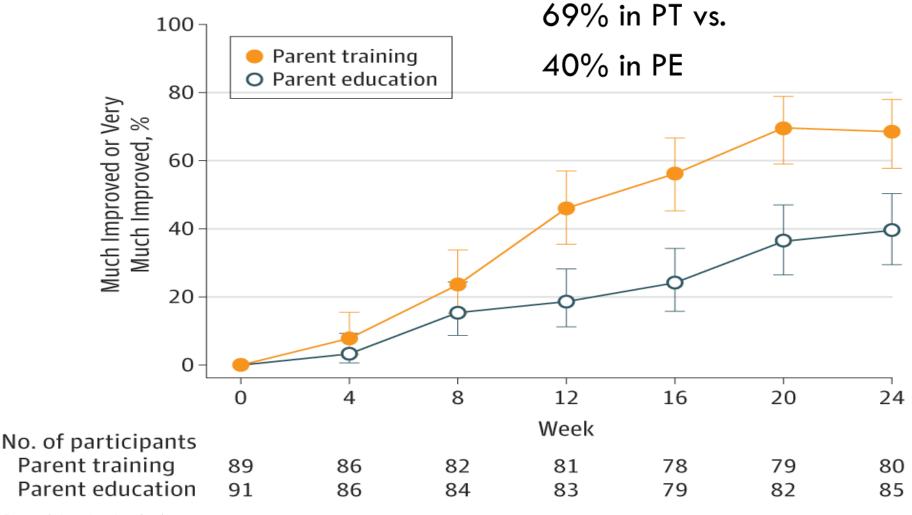


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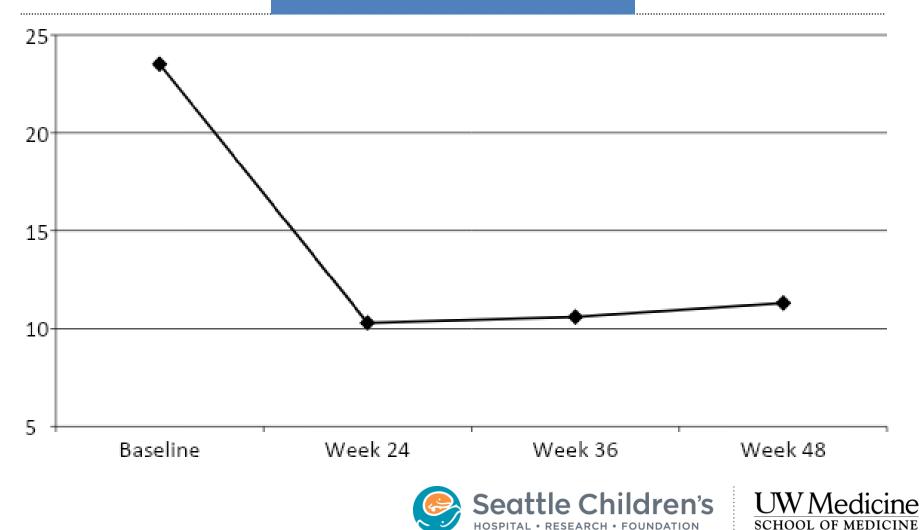


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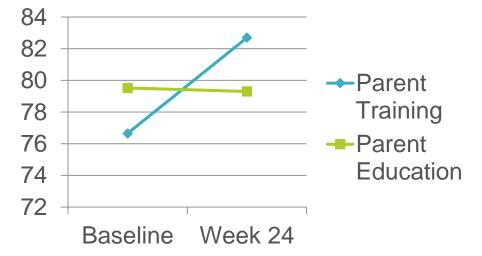
PT Responder Follow Up through Week 48

ABC-Irritability



Additional Findings

• Adaptive Skills (Scahill et al., 2016)

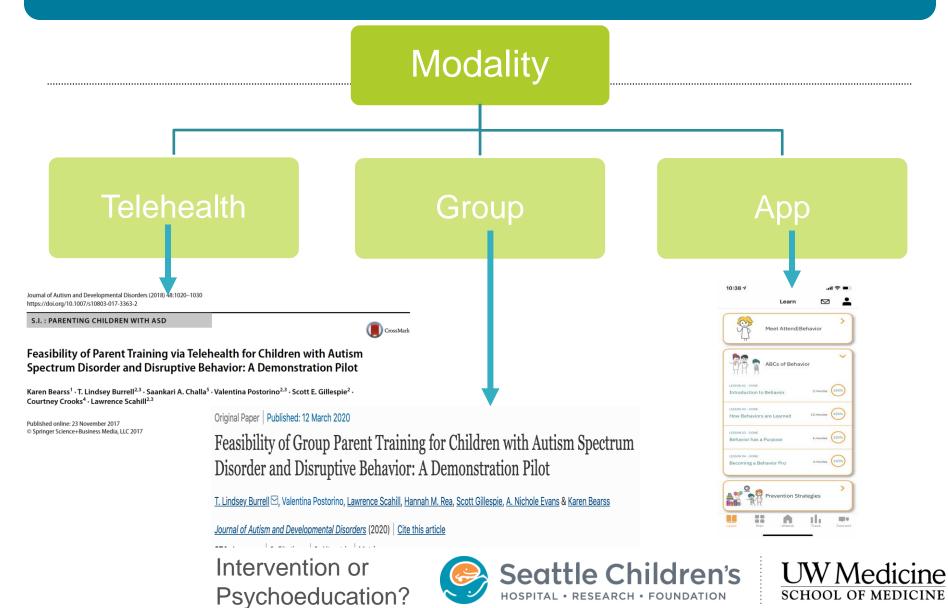


- Moderators (Lecavalier et al., 2016)
- Parenting factors (stress, strain, competency) (ladarola et al, 2018)

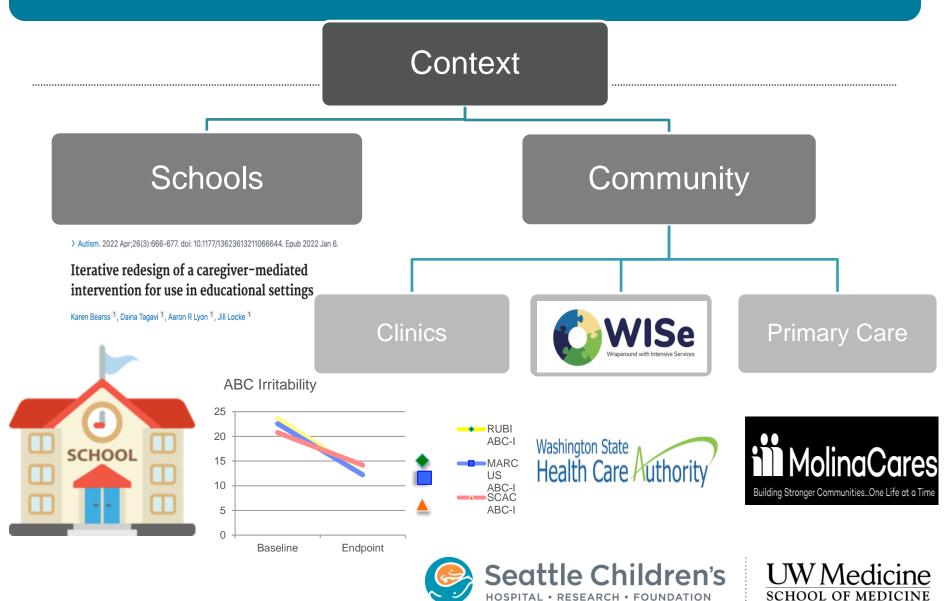




RUBI Dissemination/Implementation Targets



RUBI Dissemination/Implementation Targets



RUBI Dissemination/Implementation Targets



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Strategies to Engage Caregivers in Parent Training





Prototypical RUBI Clinic Case

RUBI SCREENER TO HELP ENSURE APPROPRIATE REFERRALS

3-14 years old

- Mild to moderate challenging behaviors ("Tier 1")
 - Tantrums, aggression, noncompliance, mild SIB, inappropriate language

This is all good...

- · Identified caregiver who can regularly attend
- Broad range of ASD severity and cognitive functioning
 - consider 12-18 month receptive language criteria

Exclusionary criteria

- Mild challenging behaviors (11 sessions can be too much)
- Focal issues (e.g. pica, elopement, encopresis)
- Behaviors resulting in hospitalization or tissue damage (self or others)









DELLAMOR CORENING FORM

		DER	AVI		REENING F	UR			
Child Information Today's Date Person making Referral									
Child First, Middle, Last Name									
Child Age		Date of	ate of Birth]		MRN		
Current Diagnosis of Autism	Estimated Intellectual Ability		Above Average		Average to Below Average		Intellectual Delay		
				Commu	nication				
How would you best characterize the child's communication skills?									
Sign I	anguage			Augmenta	tive Device		Picture System		System
Makes sounds				Uses sing	e words			Speaks i	in sentences
				Problem	Behavior				
	Which	behavi	ors ai	re problei	natic for the fa	amily	y and,	/or child:	
Hurts Others (e.g., hitting, scratching, pushing, kicking, biting, slapping)									
Destructive Behaviors (e.g., breaking/throwing items; kicking furniture/walls; slamming doors)									
🗌 Tantrum	ns (e.g., crying, screar	ning, ye	lling,	falling to th	ne floor)				
Inappro	priate language (e.g.,	swearin	ıg, say	ring hurtful	things, threate	ening	/teasi	ng others, c	alling names)
Noncom	pliance (doesn't follo	ow direc	tions)						
	Are any o	of the be	elow l	behaviors	of concern: (cl	heck	all tha	at apply)	
Hurts Se	elf (self-injurious beh	navior)	R	luns away i	n the communi	ity		overt behav lling/lying)	iors
🗌 Inapproj	priate Sexual Behavio	rs Plays with feces				Eats non-food items (Pica)			
Has anyone (including the child) gotten hurt as a result of these behaviors? (e.g., breaking skin, bruising, swelling, broken bones) Yes No									
Behaviors of Concern Occur in Which of the Following Settings: (check all that apply)				at apply)					
	In the Home	C		A	t School			Out in t	the Community
- I		1							
Other	r Services Wanted:			2	ric Medication sultation				Speech
Other Concerns of Note/Helpful Information to Inform the Referral? (Continue on back)									

The Art of Treatment

Principles

- Expert guided
- Family-centered
- Partnering
 - (co-construction)



Promotes **Promotes**

knowledge transfer meaningful targets new skills

behavior change



Engaging Families in Treatment

The role of the intake (aka therapy speed dating)

- Do they know what they signed up for?
 - Outline treatment targets (What are we working on?)
 - Outline treatment plan (How are we going to work on that?)
- Family rights
 - The right to say "not right now" (now and later)
- Family responsibilities
 - Attendance, engagement



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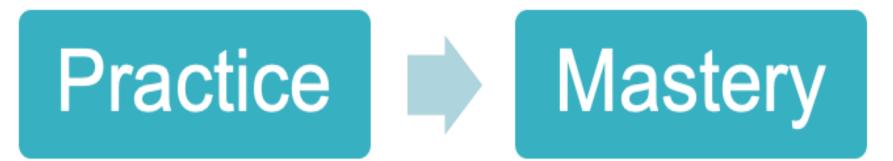
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Homework

Central to change

What do we want to happen?









What needs to happen?







RUBI Implementation Considerations

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- Caregivers do not see "eye-to-eye" on the child's behaviors/treatment approach



• A new crisis emerges each week



 Family experiencing significant psychosocial stressors (e.g. caregiver mental health, financial, housing)





When Treatment Isn't Working

- More time needed to consolidate strategies
- More intensive treatment
- More intensive coaching
- Alternative treatment referrals
 - Co-morbid conditions
 - Medication management
 - The "bandwidth" conversation









- 6 year old male
- IQ=47 ABAS General Adaptive Composite = 51
- Attendees: bio mom and dad
- TARGET SYMPTOMS:
 - <u>Noncompliance</u>. A constant issue is his refusal to wear his eyeglasses, both at home and at school. He also is generally noncompliant with daily routines such as getting dressed, feeding, and diaper changes. Noncompliance occurs multiple times per day.
 - <u>Rigidities</u>, which includes need for all upstairs doors to be open.
 - Mild <u>physical aggression</u>, which typically involves light pushing and occur a couple of times per week.
 - <u>Self-injurious behaviors</u>, which involves biting himself. Biting episodes are generally short in duration. Biting has been most often observed when he gets excited from playing his Wii and then his parents ask him to turn it off.





Case Study Treatment Plan

- Sputtered in the beginning
 - Timed intervals for wearing glasses
- Hit our stride Week 4
 - Visual schedule
 - Readily accepted, tolerated tasks previously refused (brush teeth)
 - Glasses
 - Added to schedule, generalized to other practice times (visual glasses on/off)
 - Reinforcement
 - Natural contingencies (put dish in sink, then dad's phone)
 - FCT
 - Use consistent approach (AAC)
 - Toileting (timed intervals paired with highly preferred video)
 - Stubborn Behaviors
 - Refrigerator (planned ignoring)



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Case Study Outcomes

	ABC-I	HSQ # of	HSQ Sum	HSQ Mean
		Problems	Severity	Severity
Baseline	18	21	87	3.63
Mid-treatment	9	7	15	0.63
Endpoint	Mom 4	5	5	0.21
	Dad 1	3	5	0.21
1 Month Follow up	2	1	1	0.04

At One Month Follow up:

99% decrease from baseline on HSQ.

89% reduction in irritability from baseline on the ABC-I.





Parent Training and ABA in the Context of the Neurodiversity Movement

- ABA Controversies
 - Top-down instructional control
 - Losing agency
 - Risk for abuse
 - Use of punishment procedures
 - Autistic adults' reflections on ABA experiences
 - Trauma
 - Training to neurotypical ("masking" autism)





Parent Training and ABA in the Context of the Neurodiversity Movement

- Parent-implemented interventions
 - Who defines targeted behaviors?
 - What is normative (within community/family)?
 - Is working toward the child joining the family for dinner ok?
 - What strategies are used?
 - "Compliance Training"
 - What should be off the table?
 - Sensory/stims/self-regulating behaviors





Parent Training and ABA in the Context of the Neurodiversity Movement

- Treatment goals (What are we after?)
 - Autistic individual has opportunity for voice and agency
 - Some things may be non-negotiable
 - brushing teeth, bathing
 - Some things are a little trickier
 - Playing outside vs. playing on screens
 - Is parent training for the child or the parent?
 - Teaching parents to speak their child's language





THANK YOU FOR YOUR TIME!

Questions?

