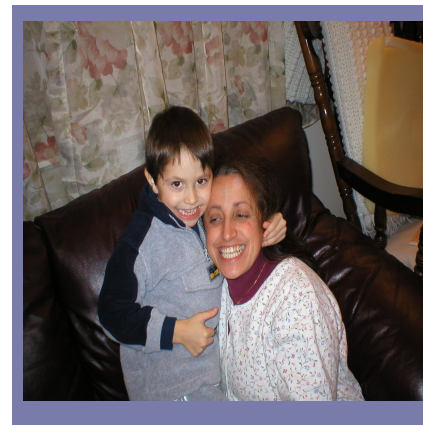


Based Practices to support social communication in ASD

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**New Hampshire Speech-Language Hearing Association
2014**

+ Categories of Strategies & Interventions

Physiologically-oriented	Skill-based	Relationship-based
<p>Change how information is received and processed by the brain</p> <p>e.g., Sensory integration, pharmacology, nutrition</p>	<p>Support the development of specific skills</p> <p>e.g., DTL, PECS, video modeling</p>	<p>Attempts to facilitate a child's attachment, affect or relatedness.</p> <p>e.g., Floor Time, RDI</p>
<p>Cognitive-based => supports thinking, planning & problem solving</p> <p>e.g., peer mediated intervention & social stories</p>		
<p>Comprehensive Programs</p> <p>reduce impairment across ability areas and improve long-term outcomes e.g., TEACCH</p> <p>(Heflin & Simpson, 1998; Simpson, 2005)</p>		

+COMPLEMENTARY & ALTERNATIVE MEDICAL (CAM) Interventions

Children with ASD

- At least 52% have had CAM therapies
- 70% of the CAM therapies are related to diet & supplements
- 75% felt the CAMs were effective

Children without ASD

- 28% have had CAM therapies

(Wong & Smith, 2006)

+ Continuum of Interventions

Traditional Behavioral End	Social Pragmatic Developmental End
Use highly prescribed teaching structure	Emphasize initiation & spontaneity
Follow adult's lead	Follow child's lead
Teach skills one on one	Teach within the natural environment
Predetermine correct response	Consider related responses
EXAMPLE: Discreet Trial	EXAMPLE: Floor Time

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Contemporary Behavioral Approaches

- ▶ Offer a 'middle ground'
 - Give children choices
 - Share control of teaching opportunities
 - Use preferred activities & materials

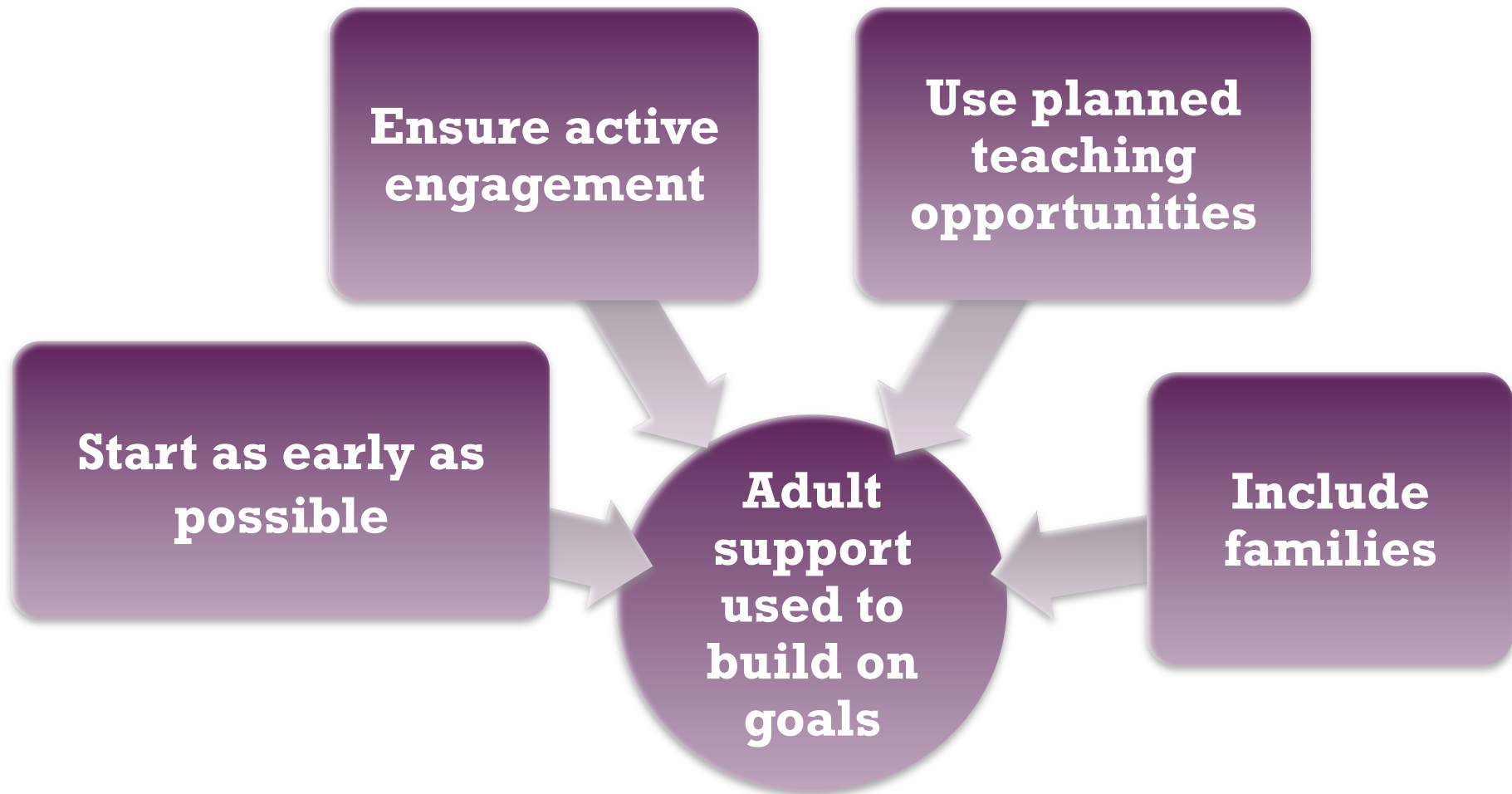


EXAMPLE: Pivotal Response Training

(Prizant & Wetherby, 1998)

+ EFFECTIVE EARLY INTERVENTION

(NATIONAL RESEARCH COUNCIL, 2001)



EFFECTIVE EDUCATIONAL PRACTICES for School Age Children

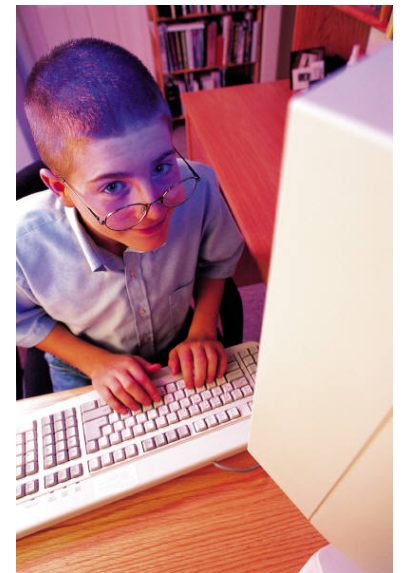
(Iovannone et al.,2003)

Six core components

Individualized supports & services=>matched to child's profile through the IEP process

Systematic instruction=>careful planning, valid goals, defined instructional procedures, evaluation & adjustment

Structured learning environment=> curriculum is clear to student & staff



EFFECTIVE EDUCATIONAL PRACTICES for School Age Children

(Iovannone et al.,2003)

Six core components

Specialized curriculum content=>focus on social engagement, initiation & responding to social bids, recreational & leisure skills

Functional approach to problem behavior=>focus on replacing problem behavior with appropriate 'replacement' behavior

Family involvement=>parent professional collaboration

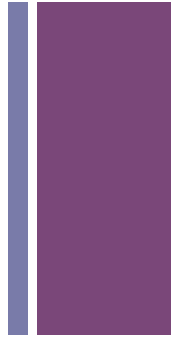


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+ **Evidence Base Decision Making for Intervention Planning**

(National Standards Project, 2009)

www.nationalautismcenter.org



- **Created a scientific merit rating scale based on:**
 - Experimental rigor of the research design
 - Quality of the dependent variable
 - Evidence of treatment fidelity
 - Demonstration of participant ascertainment
 - Generalization data collected

- **Examined treatment effects**
 - Across ages (birth to 21 years)
 - Verbal & Intellectual ability
 - Autism, Asperger's Disorder and PDD-NOS

Establishing an Intervention Evidence Base

(National Standards Project, 2009)



Classification

- **Established**
- **Emerging**
- **Unestablished**
- **Ineffective/Harmful**

+ Establishing an Intervention Evidence Base

(National Standards Project, 2009; www.nationalautismcenter.org)

Behavioral treatments had strongest support

Non-behavioral approaches make an important contribution & require further research



+ Selected Established TXs (NSP, 2009)

Treatment	Skills Increased	Behaviors Decreased	Ages	DX Classifi
Behavioral Package (e.g., FCT, contingency mapping, mand training, DTT, shaping)	Academic, Communication, Interpersonal, Learning readiness, Personal responsibility, Play, Self-regulation	Problem behaviors, Sensory/emotion regulation, Restricted, repetitive behaviors	0-21	Autistic Disorder PDD-NOS
Story-based Intervention Package (e.g., social stories)	Interpersonal, Self-Regulation	----	6-14	Autistic Disorder Asperger Syndrome
Self Management (e.g., check-lists, visual prompts, tokens)	Interpersonal, Self-Regulation	Problem Behaviors	3-18	Autistic Disorder

Selected Established TXs (NSP, 2009)

Treatment	Skills Increased	Behaviors Decreased	Ages	DX Classifi
Pivotal Response Training (e.g., pivotal targets, motivation, initiation, responsivity to multiple cues)	Communication, Interpersonal, Play	---	3-9	Autistic Disorder
Modeling (e.g., live modeling, video modeling)	Communication, Interpersonal, Play, Higher cognitive functions, Personal responsibility	Problem behaviors, Sensory/emotion regulation	3-18	Autistic Dis., Asperger Syndrome, PDD-NOS

+ Selected Established TXs (NSP, 2009)

Treatment	Skills Increased	Behaviors Decreased	Ages	DX Classifi
Naturalistic teaching strategies (e.g., focused stimulation, incidental & milieu teaching)	Communication, Interpersonal, Play	---	0-9	Autistic Disorder PDD-NOS
Joint attention (e.g., response to social bids or initiation of bids)	Communication, Interpersonal	---	0-5	Autistic Disorder PDD-NOS
Peer Training Package (e.g., circle of friends, buddy skills; peer mediation, IPG)	Communication, Interpersonal, Play	Restricted, repetitive behaviors	3-14	Autistic Disorder PDD-NOS

+ Selected Established TXs (NSP, 2009)

Treatment	Skills Increased	Behaviors Decreased	Ages	DX
Antecedent Package (e.g., priming, choice, time delay, cues, prompts, use of special interests)	Communication, Interpersonal, Play, Self Regulation, Learning Readiness, Personal Responsibility	Problem behaviors, Sensory/emotion regulation	3-18	Autistic Disorder
Schedules (e.g., written words, pxs, photos)	Communication, Interpersonal	---	3-14	Autistic Disorder
Comprehensive Behavioral Therapy for Young Children (e.g., ABA including DTT, incidental teaching, etc.)	Communication, Higher cognitive functions, Motor, Interpersonal, Play, Personal responsibility, Placement	Problem behaviors, General symptoms	0-9	Autistic Disorder PDD-NOS

+ National Professional Development Center (2014)

- Identified 27 EBPs
- Factsheets (<http://autismpdc.fpg.unc.edu/node/727>)
- Briefs (<http://autismpdc.fpg.unc.edu/content/briefs>)
- Training modules

<http://autismpdc.fpg.unc.edu/content/autism-internet-modules-aim>

+ National Professional Development Center (2014)

NPDC Established Interventions	Similar to NSP Interventions
Prompting, Antecedent-based & Time delay	Antecedent Package
Prompting & video modeling	Modeling
RF, Task analysis, DTT, FBA, FCT, Response interruption/redirection, Differential RF	Behavioral Package
Social narratives	Story-based intervention package
Naturalistic interventions	Naturalistic teaching strategies
Peer mediation intervention	Peer training package
Pivotal response training	Pivotal response TX
Visual supports & structured work systems	Schedules
Self management	Self management

+National Professional Development Center (2014)

NPDC Established Interventions	Similar to NSP Interventions
Parent implemented intervention	Not considered; although 24 studies reviewed were parent implemented
Social skills training groups	Social skills pkg identified as emerging
Speech generating devices	AAC devices identified as emerging
Computer aided instruction	Technology-based TX identified as emerging
PECS	PECS identified as emerging
Extinction	Reductive pkg identified as emerging
Did not review comprehensive models	CBTYC
Considers JA an outcome vs. TX	Joint Attention

+ Therapies for Children with ASD: Behavioral Interventions Update

(AHRQ, 2014)

- Focused on key questions related to behavioral treatments for children younger than 2 at risk for ASD.
- **KEY QUESTION 1:** Among children ages 2-12 with ASD, what are the short and long term effects of available treatment approaches
 - What are the short effects (≤ 6 months) on **core symptoms** (e.g., social communication & interaction, restricted & repetitive behaviors) and **associated symptoms** (e.g., motor, medical, mood/anxiety, irritability, and hyperactivity) in the short term?
 - What are the longer term effects (> 6 months) on commonly associated symptoms (e.g., motor, medical, mood/anxiety, irritability, and hyperactivity)?

+ Therapies for Children with ASD: Behavioral Interventions Update

(AHRQ, 2014)

- **KEY QUESTION 2:** Among children ages 2-12 with ASD, what are the modifiers of outcomes for different behavioral treatments or approaches?
 - Is the effectiveness of the therapies reviewed affected by the frequency, duration, and intensity of the intervention?
 - Is the effectiveness of the therapies reviewed affected by the training and/or experience of the individual providing the therapy?
 - What characteristics, if any, of the child and the family modify the effectiveness of the therapies reviewed?

+ Therapies for Children with ASD: Behavioral Interventions Update

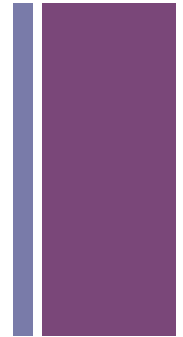
(AHRQ, 2014)

- **KEY QUESTION 3:** Are there any identifiable changes early in the treatment phase that predict treatment outcomes?
- **KEY QUESTION 4:** What is the evidence that effects measured at the end of the treatment phase predict long-term functional outcomes?
- **KEY QUESTION 5:** What is the evidence that specific intervention effects measured in the treatment context generalize to other contexts (e.g., people, places, materials)?

+ Therapies for Children with ASD: Behavioral Interventions Update

(AHRQ, 2014)

- **KEY QUESTION 6:** What evidence supports specific components of behavioral treatment as driving outcomes, either within a single treatment or across treatments?
- **KEY QUESTION 7:** What evidence supports the use of a specific behavioral treatment approach in children under the age of 2 who are at high risk of developing ASD based on behavioral, medical, or genetic risk factors?



+ Therapies for Children with ASD: Behavioral Interventions Update

(AHRQ, 2014)

■ **Early Intensive Behavioral & Developmental Interventions: Key Findings**

- 25 new studies, 8 were good, 13 were fair, and 4 were poor quality.
- Parent-report measures of adaptive and ASD symptom-related outcomes used, could be confounded by parental stress, involvement in treatment and nonrandom assignment.
- Studies compared a minimum of two treatment groups with control groups receiving some type of TX (school enrollment, medication or eclectic community-based therapies—OT).
- Studies with parent training showed improvements in language but inconsistent results for other outcomes.

+ Therapies for Children with ASD: Behavioral Interventions Update

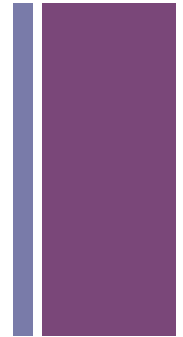
(AHRQ, 2014)

■ **Social Skills Interventions: Key Findings**

- 13 studies including children and adolescents with ASD found improved results compared to a previous review in 2011 review; 2 studies rated as good, 10 were fair and one was poor quality.
- Studies included school children without ID or language deficits (IQ>70).
- Parents and study measures reported short-term gains in social skills and emotion recognition. Maintenance and generalization showed variable results.
- Diverse intervention protocols and outcome measurements were limiting factors for assessing effectiveness of social skills interventions.

+ Therapies for Children with ASD: Behavioral Interventions Update

(AHRQ, 2014)

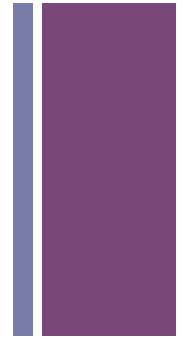


■ **Play/Interaction-Based Interventions: Key Findings**

- 12 studies: 3 good and 8 fair quality RCTs; 1 poor quality
- Joint attention delivered by teachers, parents, and interventionists reported gains in JA skills in TX groups compared with controls over a short duration (8 to 16 weeks).
- One TX (poor quality) targeting pretend play showed an increase in play dialog in both groups, with a greater increase in the TX group.
- Studies targeting parental responsiveness to child communication reported increases in responsive parent behaviors with limited increases in child communication.

+ Therapies for Children with ASD: Behavioral Interventions Update

(AHRQ, 2014)

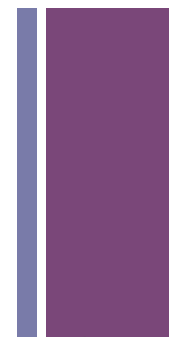


■ **Behavioral Interventions focused on associated behaviors: Key Findings**

- 5 good & 2 fair quality studies examining cognitive behavioral tx (CBT)
- CBT improved anxiety which was maintained over time in 6 of 7 studies
- 2 RCTs demonstrated positive effects of CBT on socialization
- 1 RCT found improvement in emotion regulation after CBT.
- 1 RCT showed improvements in executive function following CBT
- Risperidone + parent training improved adaptive behavior, socialization & communication vs. risperidone alone, but effects were not maintained

+ **Other Considerations in Treatment Decisions**

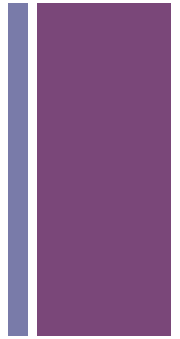
- **Parents choose interventions with & without evidence** (Miller et al., 2012)
- **Parent are most concerned about** (Macintosh et al., 2012):
 - **Treatment effectiveness**
 - **Provider relationship**
 - **Access to desired treatments**
 - **Costs, medication concerns & stress**
- **Families' SES relates to their access to services** (Irvin et al., 2012)
- **Influences on families' TX choices** (Patten et al., 2013):
 - **Severity of child's sensory issues—leads to earlier intervention**
 - **Higher education associated with diet/vitamin TX & greater number of services**



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Knowing the influences on TX
decisions . . .

**What is our responsibility
as providers?**

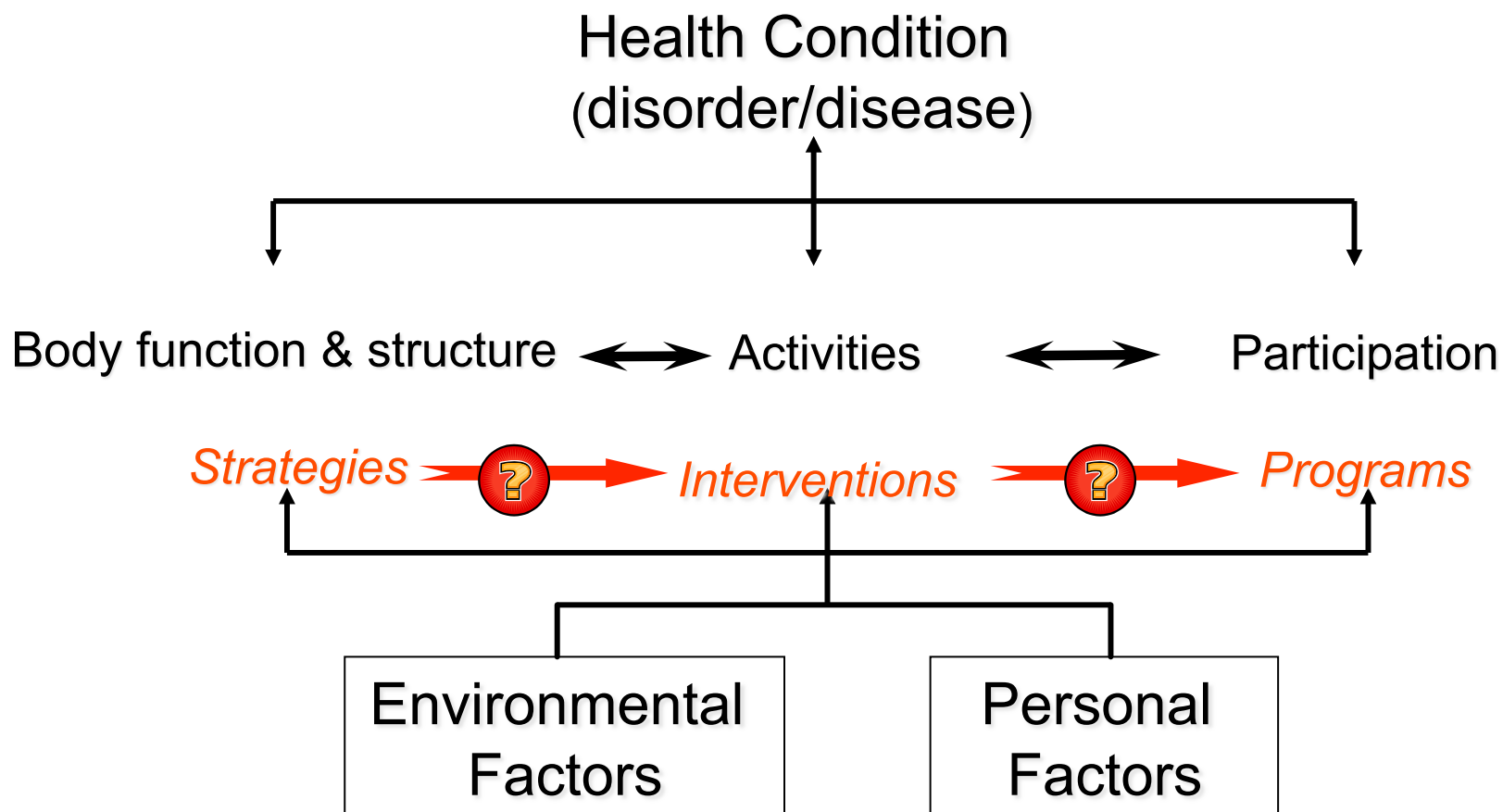
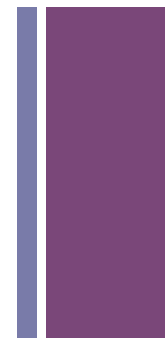


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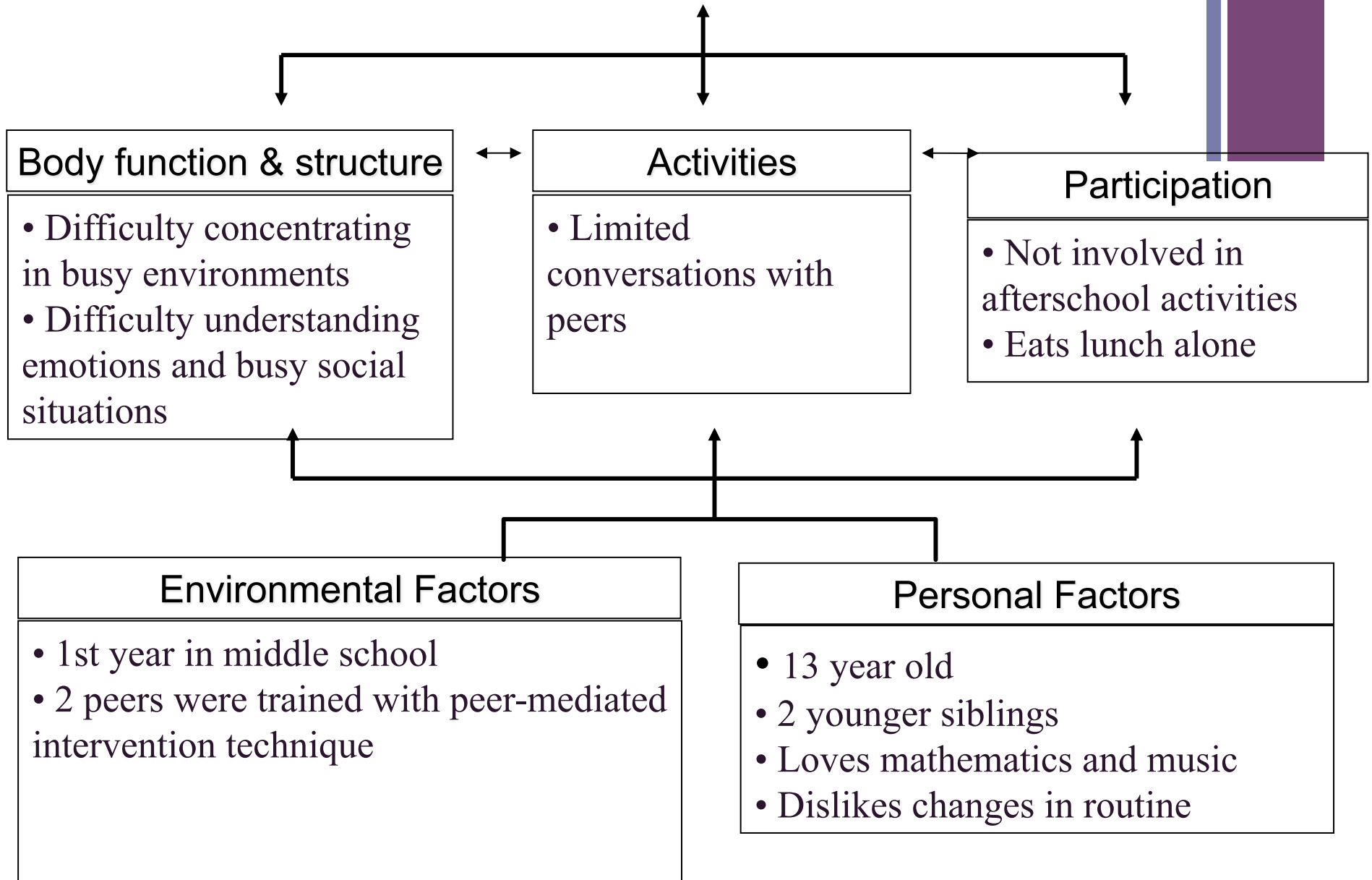
How do we support children?

Consider the ICF

(World Health Organization, 2001)



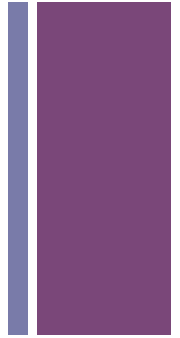
EXAMPLE: Ethan has ASD



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We search. We move along straight paths and come upon detours that take us to the most unexpected places. We keep going. Sometimes all that matters is that we are moving someplace. It doesn't matter where.

(Zimmerman, 1996, p. 54)



+ Our Challenge . . .

- To learn how we, as professionals, can **transform our relationships** with parents to move collaboratively along the paths of care for children with special needs, to **manage the detours cooperatively**, to **prepare for the unknown** together, to **keep moving forward** as a team & to **trust** in one another.



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 - **Factsheets** (<http://autismpdc.fpg.unc.edu/node/727>)
 - **Briefs** (<http://autismpdc.fpg.unc.edu/content/briefs>)
 - **Training modules** : <http://autismpdc.fpg.unc.edu/content/autism-internet-modules-aim>

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