

# Social Communication Skills of Children with Autism Spectrum Disorders in the Second Year of Life

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## Earlier Identification Means Earlier Intervention

- ❖ ASD can be diagnosed reliably by experienced professionals down to 2 years
  - *Social and Communication Impairments* were prominent at 2 years
  - *Restricted Repertoire of Activities and Interests* were not prominent in some children until 3 years  
 (Lord, 1995; Stone, Lee, Ashford, Brissie, Hepburn, Coonrod, & Weiss, 1999)
- ❖ Retrospective studies of home videotapes show that social communication features distinguish infants later diagnosed with ASD
  - Lack of pointing, showing, looking at others, orienting to name  
 (Osterling & Dawson, 1994; Osterling, Dawson, & Munson, 2002)
- ❖ Prospective studies show that social communication measures distinguish children with ASD at 20 months (n=10)
  - Less social gaze to distress, fewer gaze shifts to activation of toys  
 (Charman Baron-Cohen, Swettenham, Baird, Drew, & Cox, 1997)

## Prospective Study in the Second Year of Life on Red Flags of ASD (n=18)

### 9 ASD Red Flags

#### Lack of Typical Behaviors

- ❖ Lack of showing
- ❖ Lack of appropriate gaze
- ❖ Lack of warm, joyful expressions
- ❖ Lack of sharing interest or enjoyment
- ❖ Lack of response to name
- ❖ Lack of coordination of nonverbal communication

#### Atypical Behaviors

- ❖ Repetitive movements with objects
- ❖ Repetitive movements or posturing of body
- ❖ Unusual prosody

### 4 ASD & DD Red Flags

#### Lack of Typical Behaviors

- ❖ Lack of pointing
- ❖ Lack of playing with a variety of toys
- ❖ Lack of response to contextual cues
- ❖ Lack of communicative vocalizations with consonants

<http://firstwords.fsu.edu>



(Wetherby, Woods, Allen, Cleary, Dickinson, & Lord, 2004)

## CSBS Developmental Profile

Measurement Parameters for the Behavior Sample

### SOCIAL COMPOSITE

- ❖ Shared Attention and Affect
  - Gaze shifts, shared positive affect, gaze/point follow
- ❖ Communicative Intentions
  - Behavior regulation, social interaction, joint attention
- ❖ Gestures
  - Conventional & distal gestures

### SPEECH COMPOSITE

- ❖ Sounds
- ❖ Words

### SYMBOLIC COMPOSITE

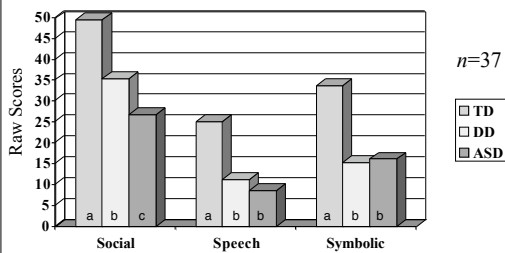
- ❖ Understanding
- ❖ Object Use

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## Characteristics of Older Cohort

	ASD	DD	TD
Sample Size	37	21	37
CSBS DP Age	21.4 months	20.6 months	21.0 months
Follow-up Age	35.4 months	35.9 months	36.0 months
Mullen V DQ	70.0 (31.5)	80.1 (22.9)	107.5 (13.6)
Mullen NV DQ	81.8 (24.8)	84.4 (20.1)	111.5 (13.3)

## CSBS DP Behavior Sample Composites Older Cohort (>18 months)



## Social Composite Items Group Differences for Older Cohort

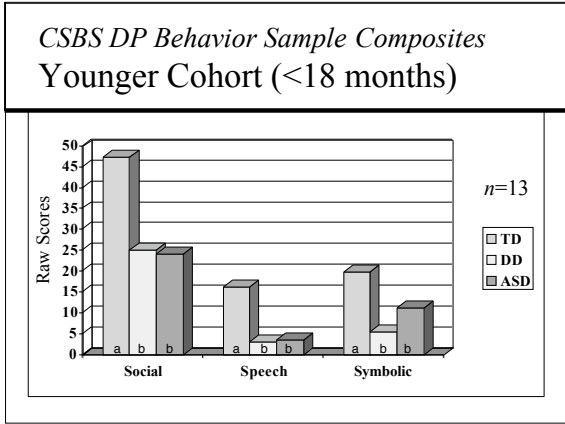
	ASD v TD	ASD v DD
<b>Shared Attention and Affect</b>		
❖ Gaze Shifts	***	***
❖ Shared Positive Affect	***	-
❖ Gaze Follow	***	-
<b>Communicative Intentions</b>		
❖ Behavior Regulation	***	-
❖ Social Interaction	***	-
❖ Joint Attention	***	***
<b>Gestures</b>		
❖ Conventional Gestures	***	-
❖ Distal Gestures	***	-

\*\*\*p<.001, \*\*p<.01, \*p<.05

# Social Communication Skills of Children with Autism Spectrum Disorders in the Second Year of Life

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Characteristics of Younger Cohort			
	ASD	DD	TD
Sample Size	13	13	13
CSBS DP Age	15.1 months	14.6 months	15.1 months
Follow-up Age	33.6 months	34.8 months	37.9 months
Mullen V DQ	85.7 (33.8)	87.1 (15.3)	111.6 (17.3)
Mullen NV DQ	96.4 (24.9)	90.32 (18.3)	113.6 (13.2)



Social Composite Items Group Differences for Younger Cohort		
	ASD v TD	ASD v DD
<b>Shared Attention and Affect</b>		
❖ Gaze Shifts	***	-
❖ Shared Positive Affect	-	-
❖ Gaze Follow	***	-
<b>Communicative Intentions</b>		
❖ Behavior Regulation	***	-
❖ Social Interaction	***	-
❖ Joint Attention	***	-
<b>Gestures</b>		
❖ Conventional Gestures	***	-
❖ Distal Gestures	***	-

\*\*\*p<.001, \*\*p<.01, \*p<.05

Social Communication & Language Outcomes in ASD		
Measure	Older Cohort (n=28)	Younger Cohort (n=10)
Gaze Shifts	-.16	.00
Shared Pos Affect	-.04	.06
Gaze/Pt Follow	.33	.59
Behavior Reg	.45**	.49
Social Interaction	.34	.74*
Joint Attention	.58**	.61
Gestures	.52**	.57
Sounds	.55**	.52
Words	.58**	-
Understanding	.73***	.60
Play	.44*	.52

\*\*\*p<.001, \*\*p<.01, \*p<.05

Regression Analysis for Older Cohort (n=28)				
	R	R <sup>2</sup>	ΔR <sup>2</sup>	ΔF
Shared Attention & Affect	.53	.29	.29	2.29
Communicative Intentions	.79	.63	.34	6.11**
Communicative Means	.80	.64	.01	0.22
Symbolic Capacity	.85	.72	.08	2.00

\*p<.05; \*\*p<.01; \*\*\*p<.001

## Conclusions

- ❖ Deficits in social communication can be detected in children with ASD early in the second year.
  - Deficits in gestures, sounds, words, understanding, or play in the second year are risk indicators for ASD or DD/SLI.
  - More precise risk indicators for ASD are deficits in gaze shifts and joint attention, and are more evident after 18 months.
  - Caution is needed to not rule out ASD prematurely in children under 18 months.
- ❖ Deceleration of growth may be characteristic of the unfolding of diagnostic features of ASD over the second year.
- ❖ Social communication skills in the second year are strong predictors of later language outcome in children with ASD.