

From Research to Practice in Treatment of Individuals with Autism Spectrum Disorders

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Autism as a developmental disorder:
What is manifested as autism changes with
development

Development is affected by having autism



- ❖ Both positive (abnormal) behaviors, and negative (the absence of normal) behaviors are required to make a diagnosis of ASD.
- ❖ This means that developmental level and contextual effects (in what kind of circumstances does the child or adult function?) can both have significant effects on diagnostic judgments.



North Carolina/Chicago Early Diagnosis Study



- ❖ Multiple measures
- ❖ Parent reports and direct observations
- ❖ Large sample
(n = 213)
- ❖ Diversity

Best Estimate Diagnoses at 2 and 9 (NC and Chicago)

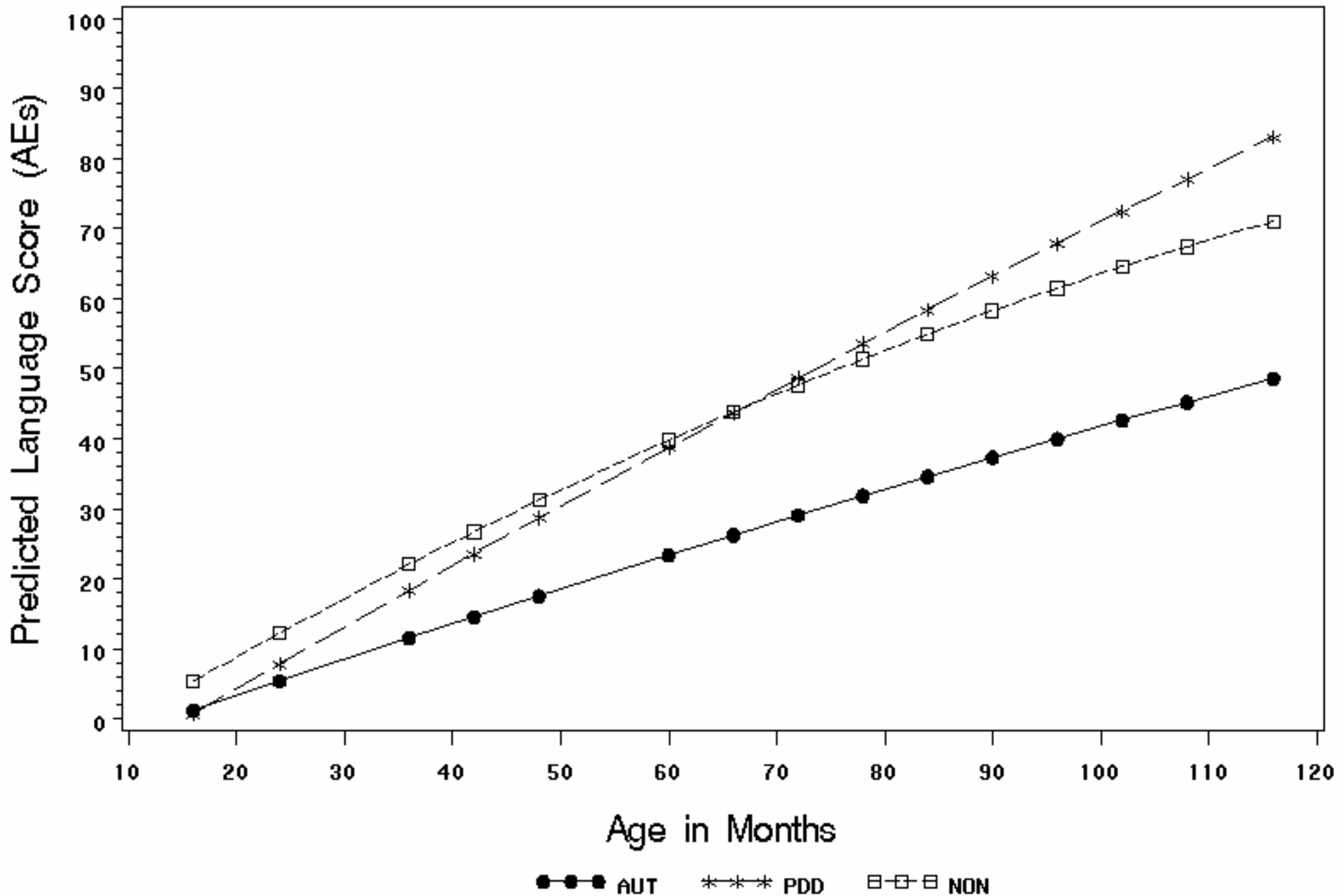
At 9 years

At 2 years

	Autism	PDD-NOS	Nonspectrum
Autism	76	13	1
PDD-NOS	27	11	6
Non-spectrum	2	9	34

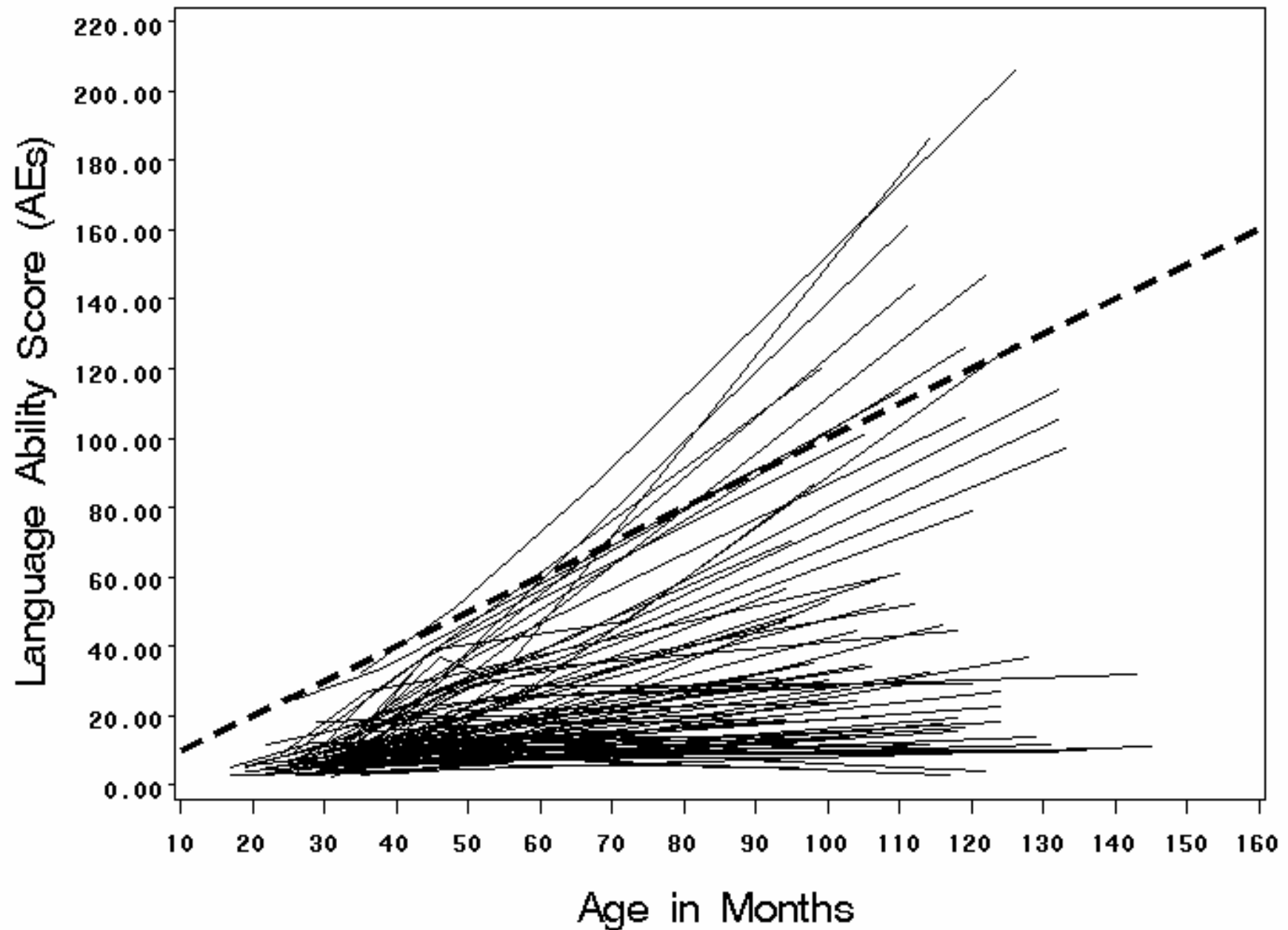
Predicted Language Trajectories by Age 2 Diagnosis

(with covariates included)



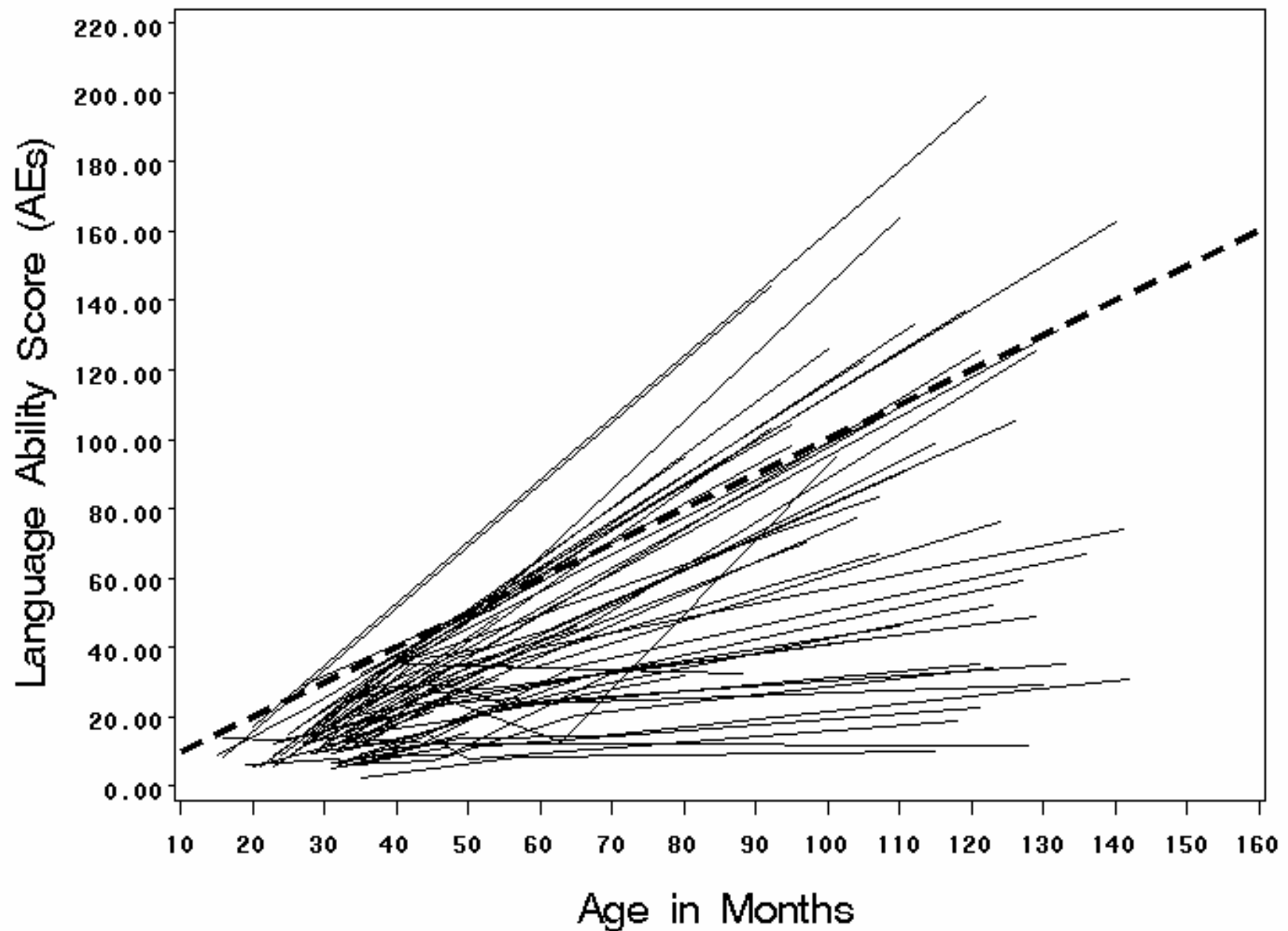
Individual Language Trajectories through Age 9 +

Autistic: Based on Age 2 Diagnosis



Individual Language Trajectories through Age 9 +

PDD: Based on Age 2 Diagnosis

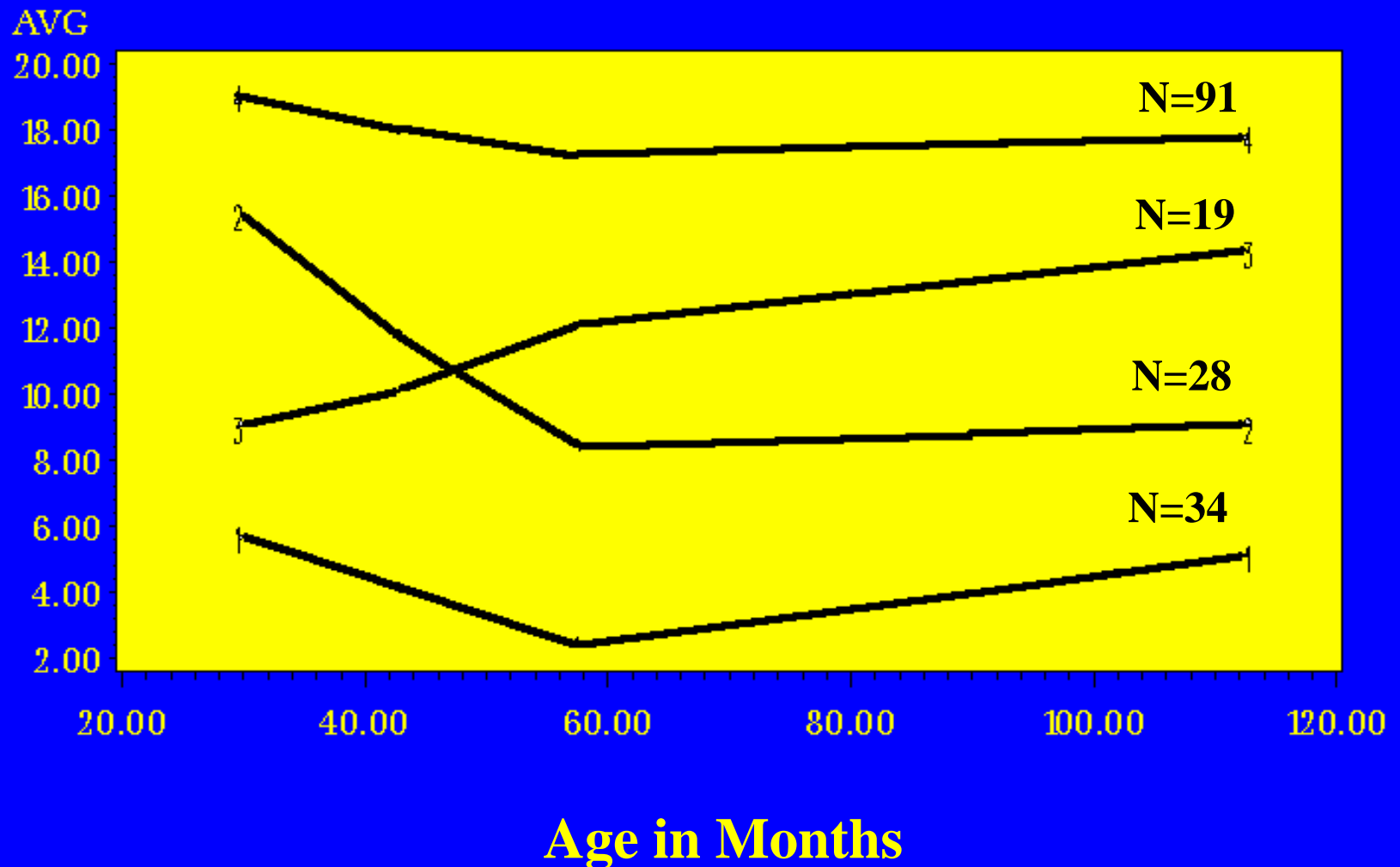


Patterns of Change in ADOS Algorithm Totals

From Age 2- to 9-Years

A
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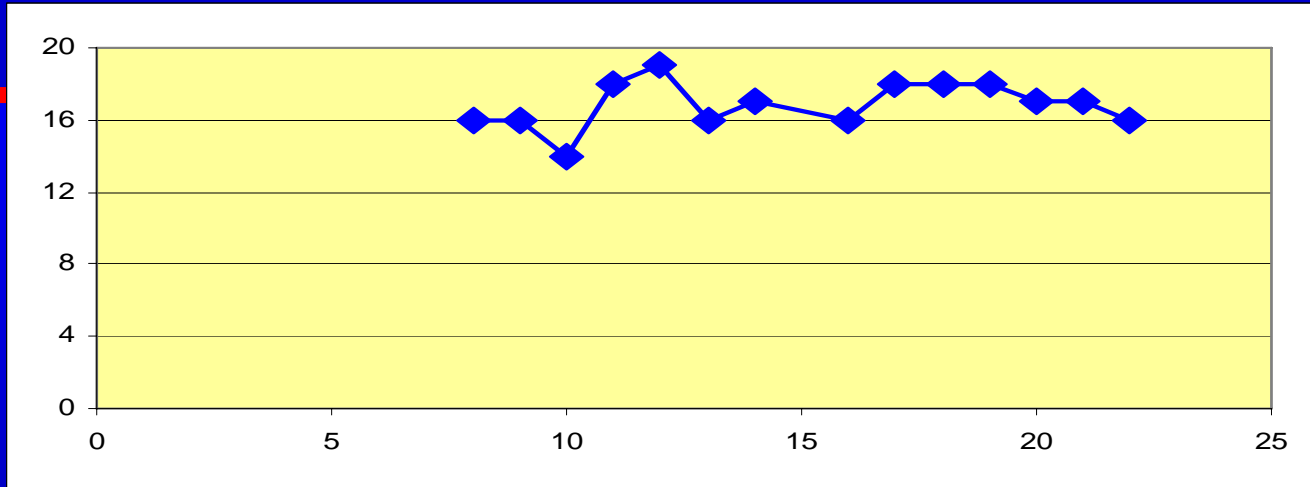


Estimates of Expressive Language Level at Age 9 -- Percent of 151 Participants

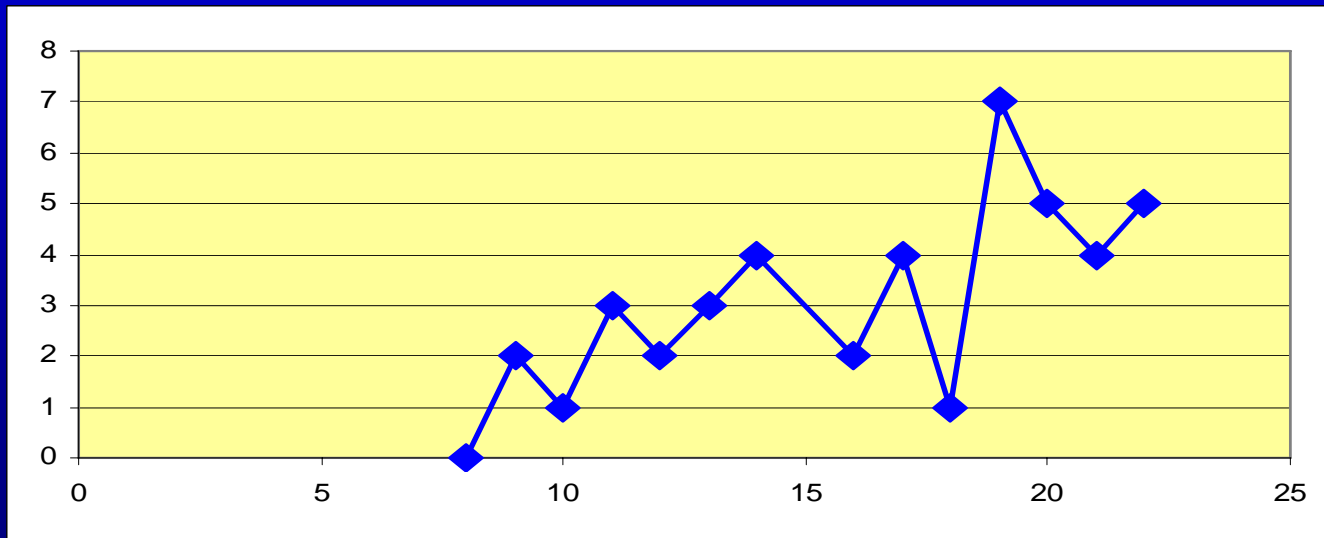
	Chicago	North Carolina
Complex sentences (ADOS Module 3)	40.9	39.6
Sentences but not fluent (ADOS Module 2)	35.3	28.9
Words but not sentences (ADOS Module 1; ADI-R = 1)	10.5	16.8
No or few consistent words (ADI-R=2)	14.3	14.4

Mullen Ratio IQ(7/29/05): VIQ – 55; NVIQ – 95
Younger sibling; minimal intervention

ADOS
Social
Scores



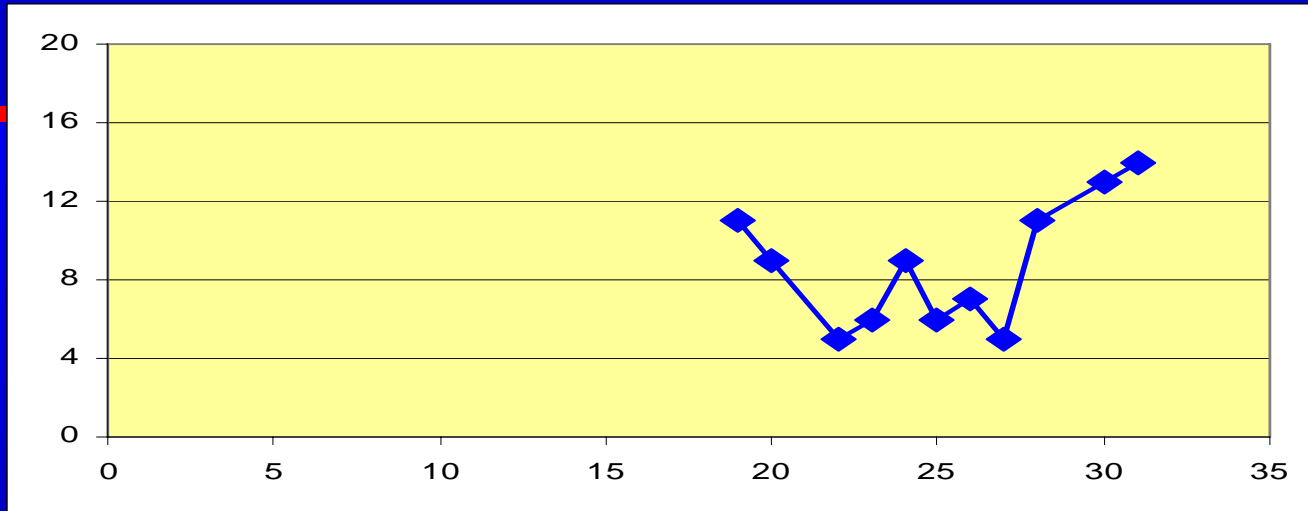
ADOS
Repetitive
Scores



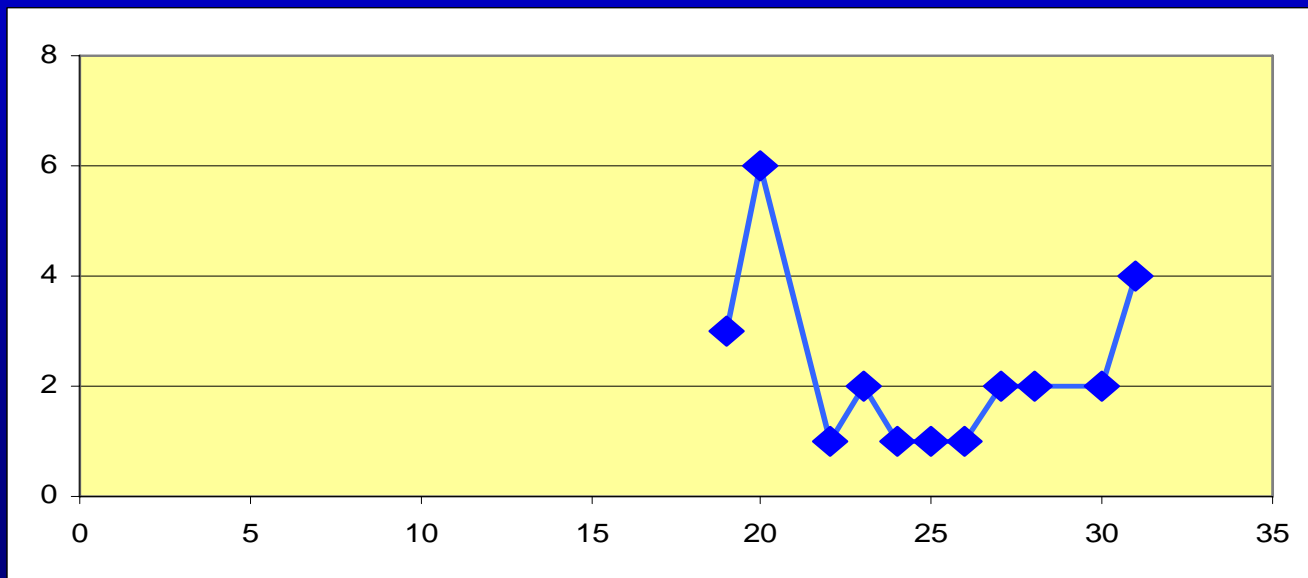
Age (mos)

Mullen Ratio IQ(5/26/05): VIQ – 112; NVIQ – 98
Younger sibling; intensive intervention (Verbal Behavior)

ADOS
Social
Scores



ADOS
Repetitive
Scores



Age (mos)

Committee on Educational Interventions for Children with Autism

- ❖ Catherine Lord,
Chair
- ❖ Marie Bristol-Power
- ❖ Joanne Cafiero
- ❖ Pauline Filipek
- ❖ James Gallagher
- ❖ Sandra Harris
- ❖ Alan Leslie
- ❖ Gail McGee
- ❖ Samuel Odom
- ❖ Sally Rogers
- ❖ Fred Volkmar
- ❖ Amy Wetherby

Committee's Process

- ❖ To conduct a **systematic and rigorous assessment** of research studies with an eye toward **convergence of evidence** from independent sources and different methodologies.

Running Themes

- ❖ **Simple contrasts between “pure” treatments and “placebos” are not realistic.**
- ❖ **The need for a variety of strategies for research in treatment and education.**
- ❖ **The need for time, expertise and funds.**

In Summary

- ❖ **Autism spectrum disorders involve complex problems that affect different children and their families in different ways.**
- ❖ **Solutions to these problems will mirror this complexity and the need for individualization.**





- ❖ In children identified by age 2, a higher proportion had complex language and spontaneous phrases at age 9 than expected from previous estimates. There are many reasons to hope that this number can grow.

Primary Sources

Early Diagnosis Study: Lord et al., Archives of General Psychiatry, in press.

Committee on Educational Interventions for Children with Autism Birth to 8 Years:
National Research Council, 2001
(www.nap.edu)



University of Michigan Autism and Communication Disorders Center (UMACC)

www.umaccweb.com

