

REGRESSION AND AUTISM

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CONFLICT OF INTEREST

I receive royalties from the publisher of the diagnostic instruments, the ADI-R, ADOS and SCQ.

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OUTLINE FOR TODAY

A few general issues related to regression in ASD

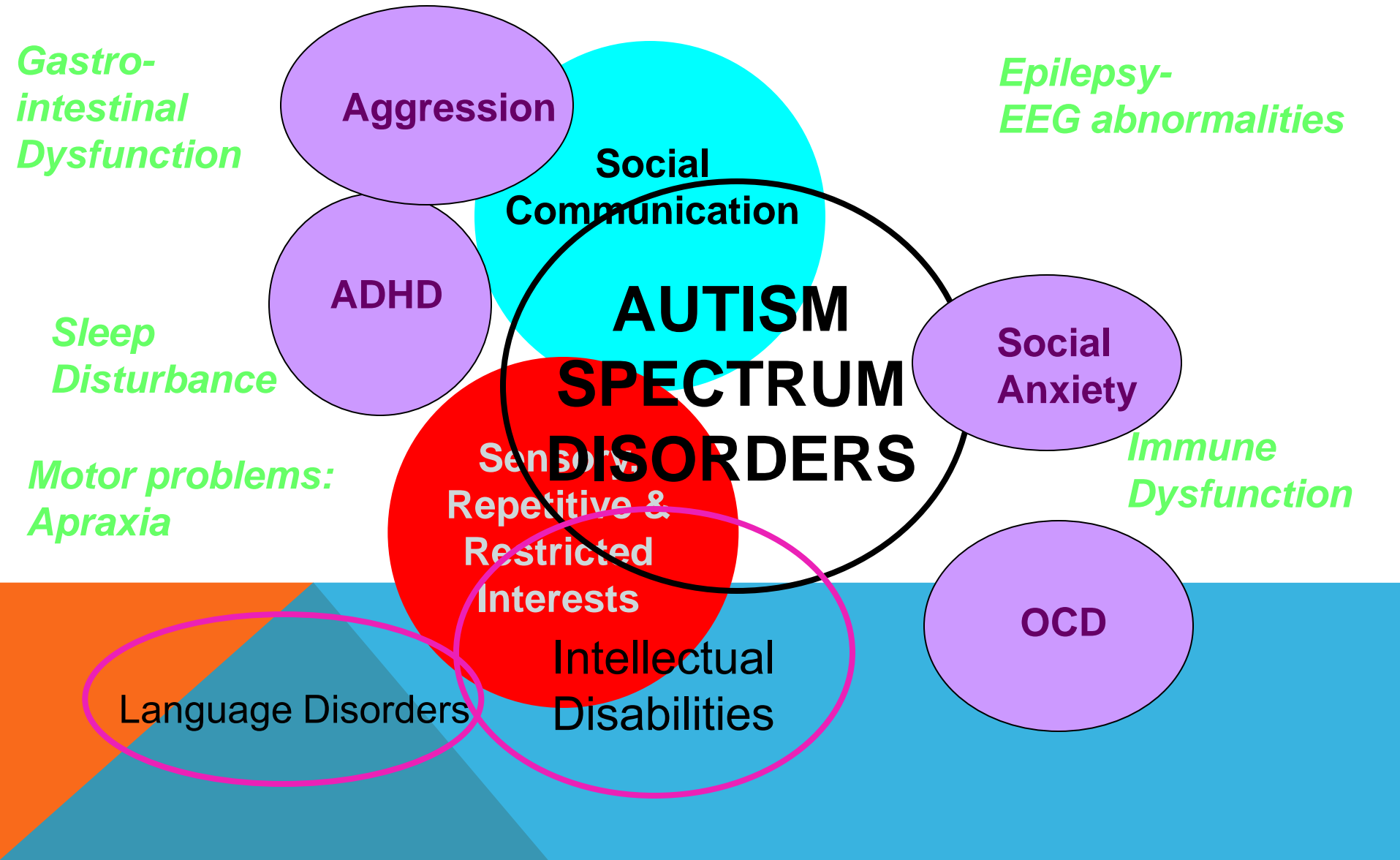
One study following 78 children under 15 months followed until age 3 and seen as close as possible to every month until 36 months (Lord et al., 2011)

Factors affecting how people report ages and events in the past

Reality check that there are marked regressions though they are rare

Summary

CORE SYMPTOM DOMAINS PLUS ASSOCIATED MEDICAL FEATURES



- 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.



ASD AS A NEUROBIOLOGICAL DISORDER OF LEARNING AND PROCESSING

A developmental disorder:

Having ASD affects basic aspects of behavior (e.g., eye contact, vocalization) and attention (to certain kinds of stimuli) and maybe motivation

Which in turn affect learning

And opportunities for learning

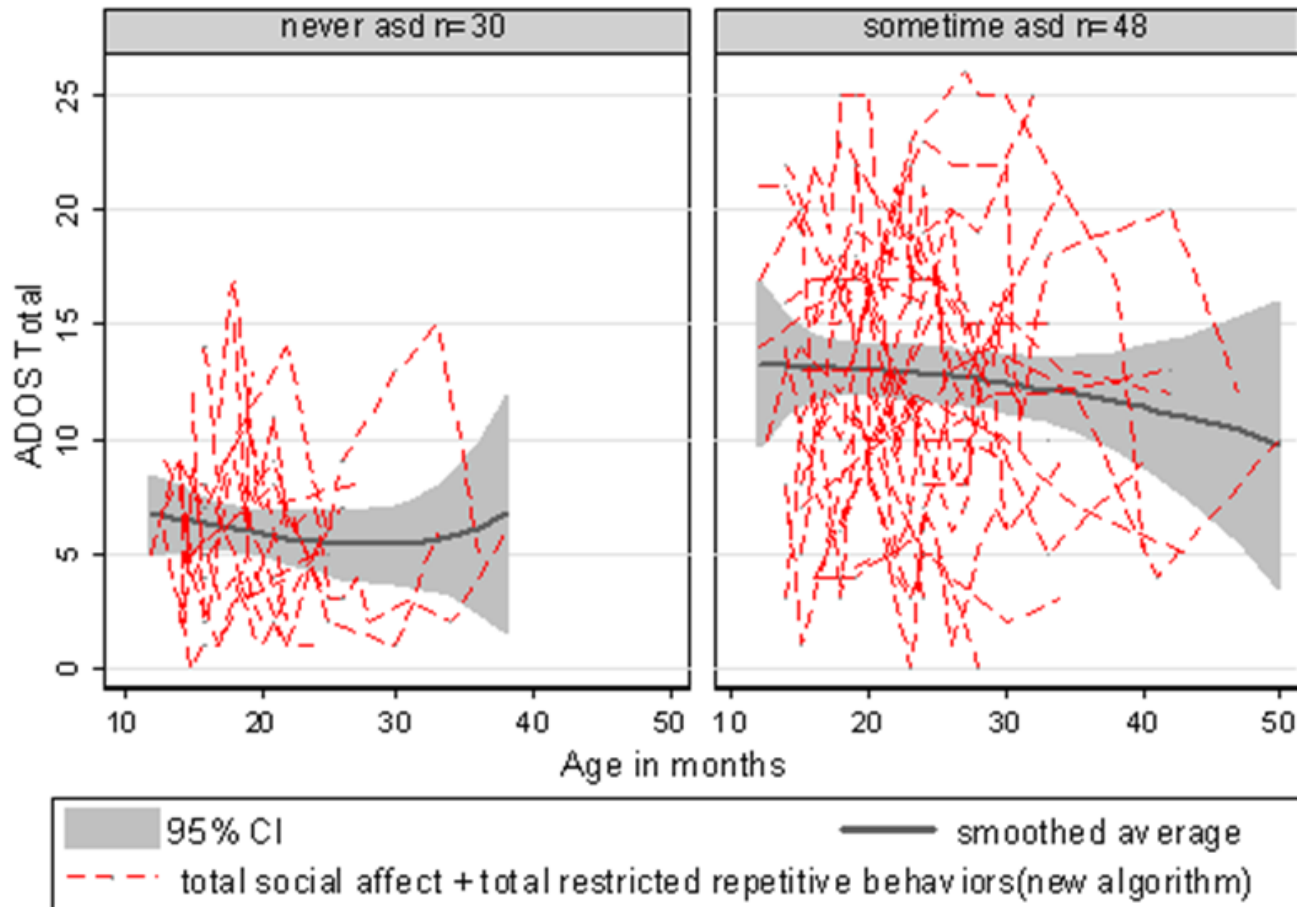
And the families in which this learning occurs



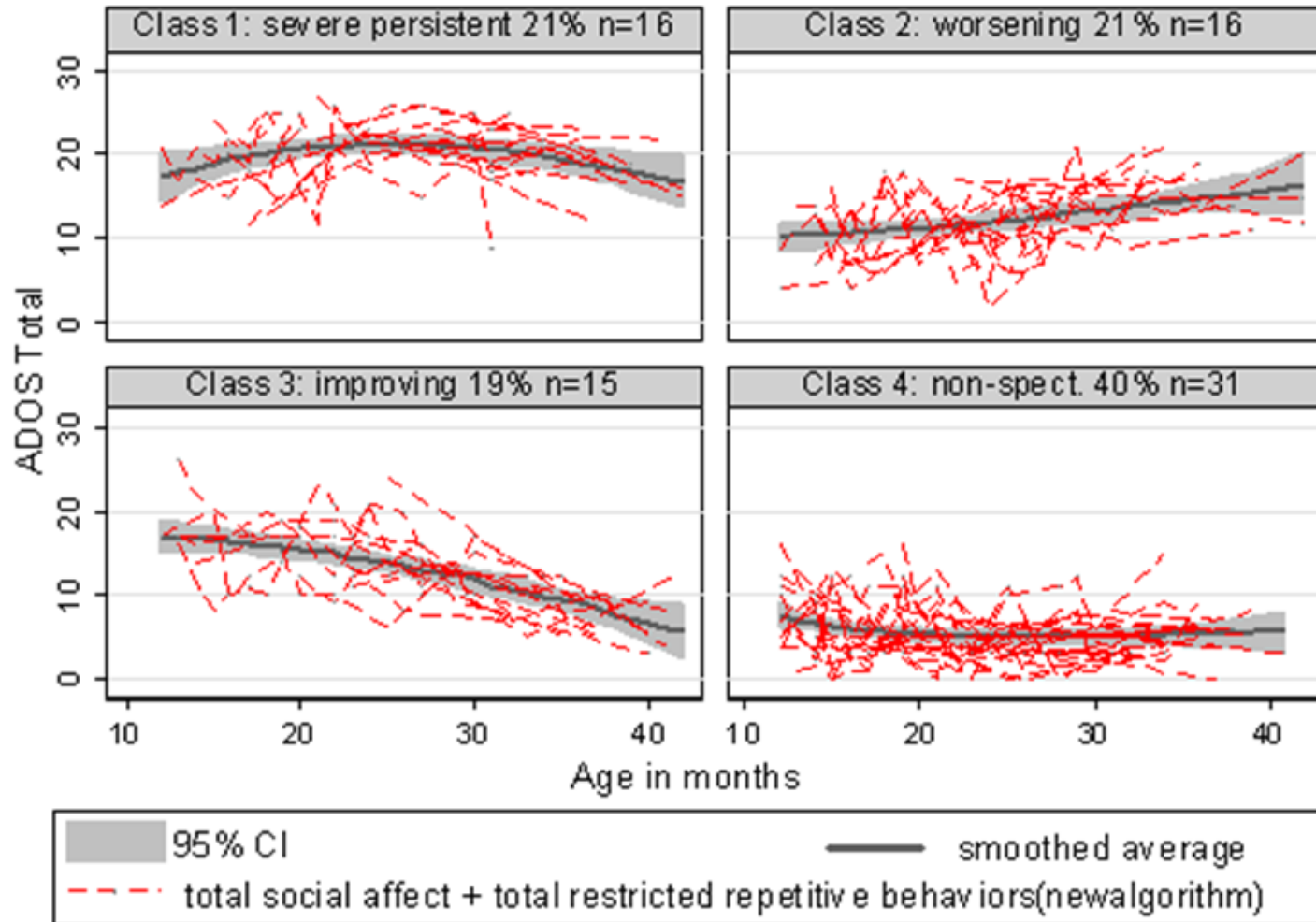
DEMOGRAPHICS (LORD ET AL, 2012)

	Autism (n=32)	PDD-NOS (n=16)
Gender		
Female	18.8%	14.3%
Ethnicity		
Caucasian	75.0%	90.5%
AfricanAmerican	9.5%	9.5%
Test scores		
New ADOS total	18.1 (5.5)	12.6 (4.0)
Nonverbal IQ	79.5 (21.4)	94.2 (26.2)

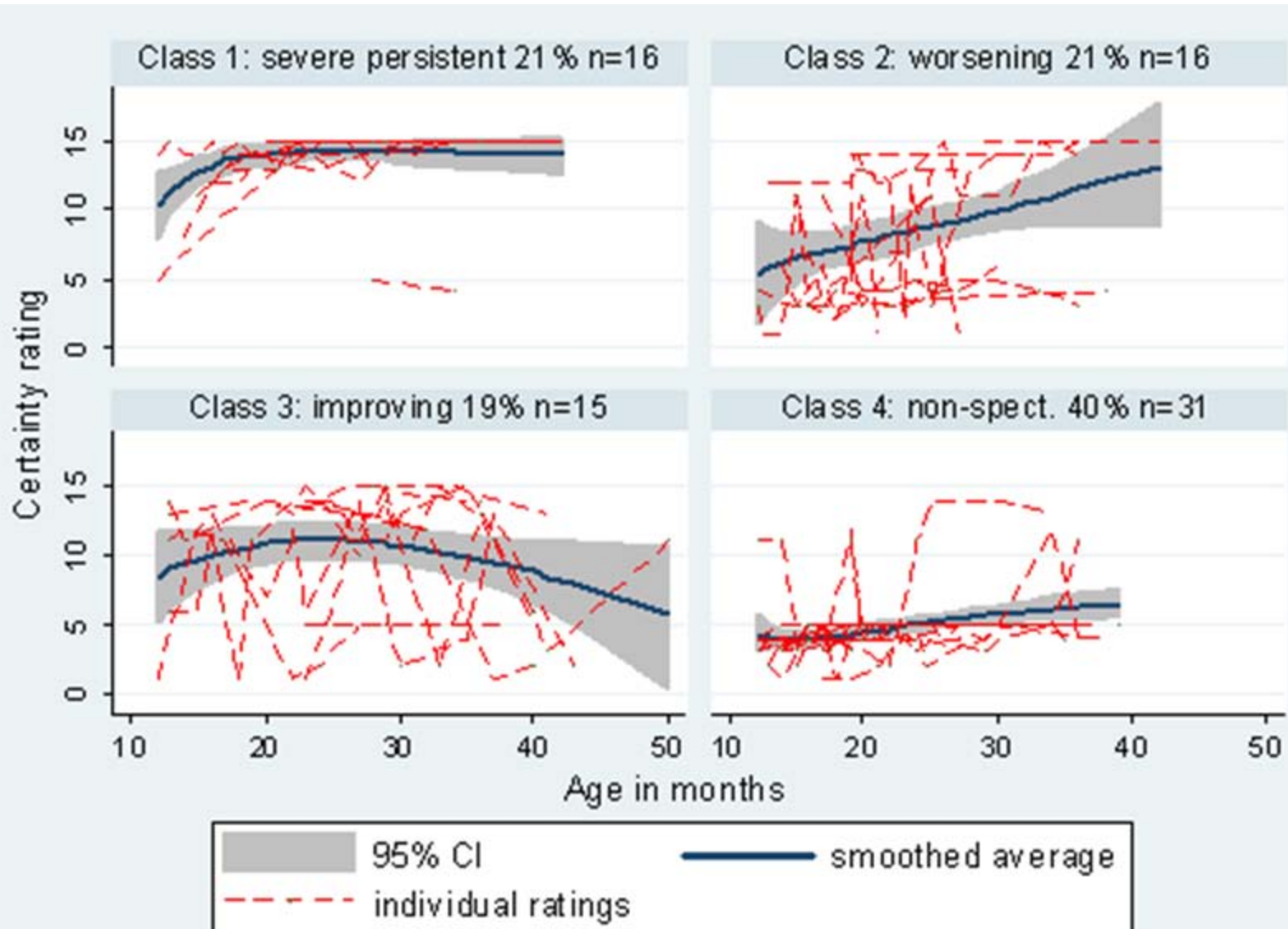
FIGURE 1. ADOS TOTAL ALGORITHM SCORE TRAJECTORIES FOR “EVER ASD” AND “NEVER ASD” CHILDREN



TRAJECTORIES FOR FOUR CLASSES



Changes in Clinician Ratings of Probability of ASD Diagnosis for the Four Trajectory Classes



OTHER FINDINGS ABOUT THE 4 CLASSES

No differences in gender

No differences in ethnicity

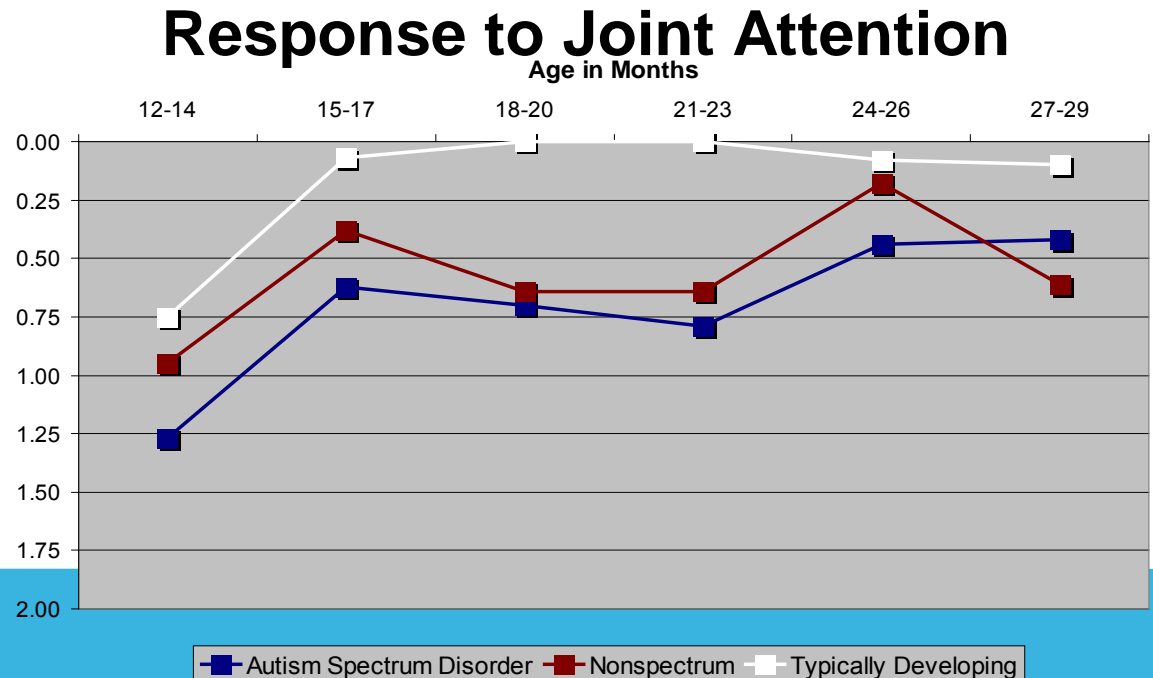
More siblings, proportionately in the “mild” group than other groups (recruitment)

Still quite a lot of change at 30 months



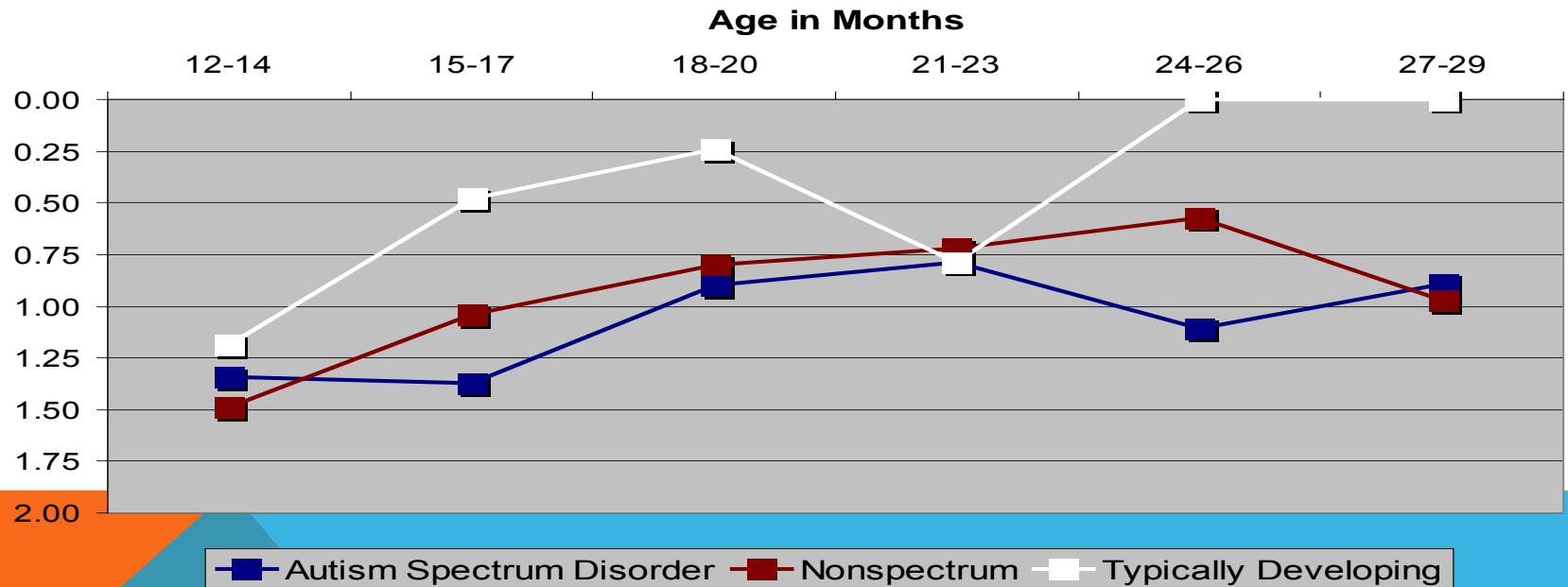
INTERACTIONS OF AGE AND DIAGNOSIS: IMPROVING TRAJECTORIES

- All groups showed improvement over time in Joint Attention and Amount of Requesting.

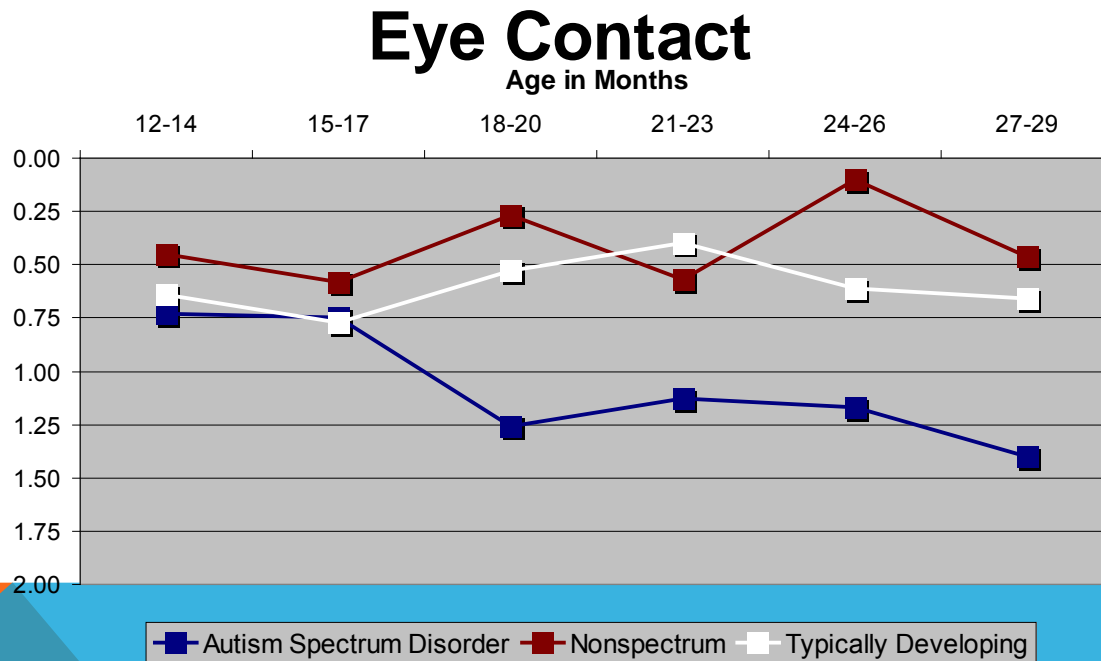


IMPROVING TRAJECTORIES

Gestures

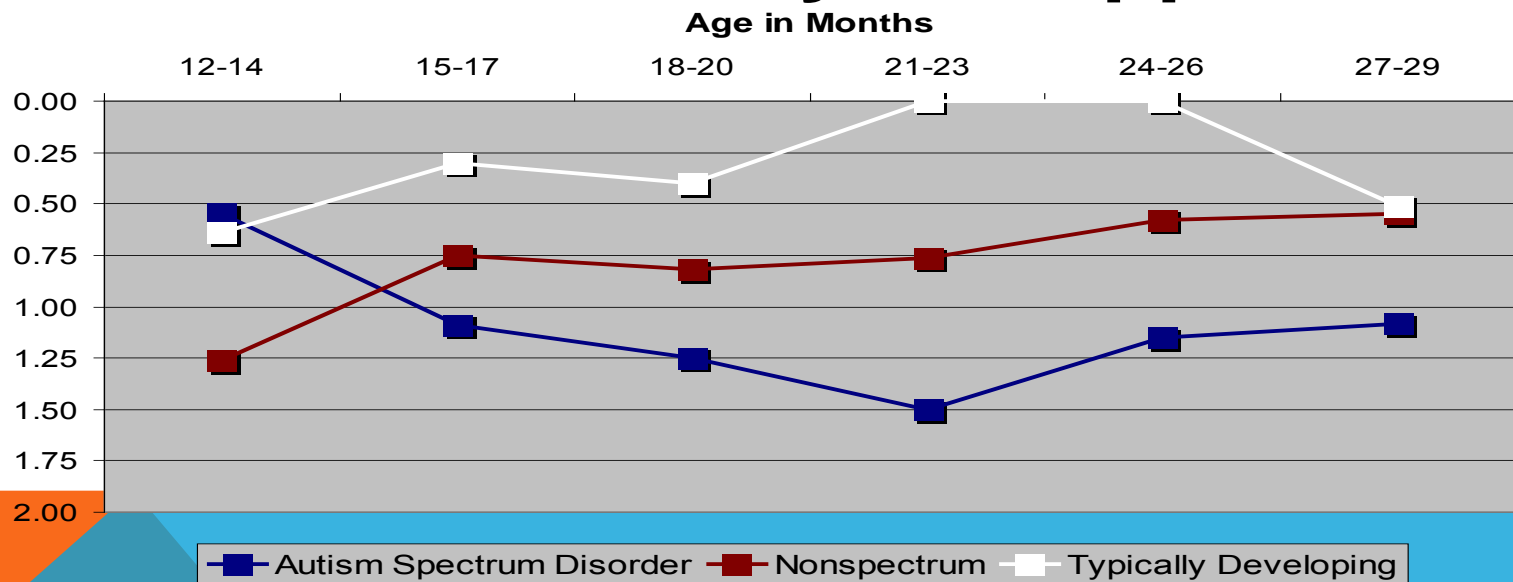


WORSENING TRAJECTORIES



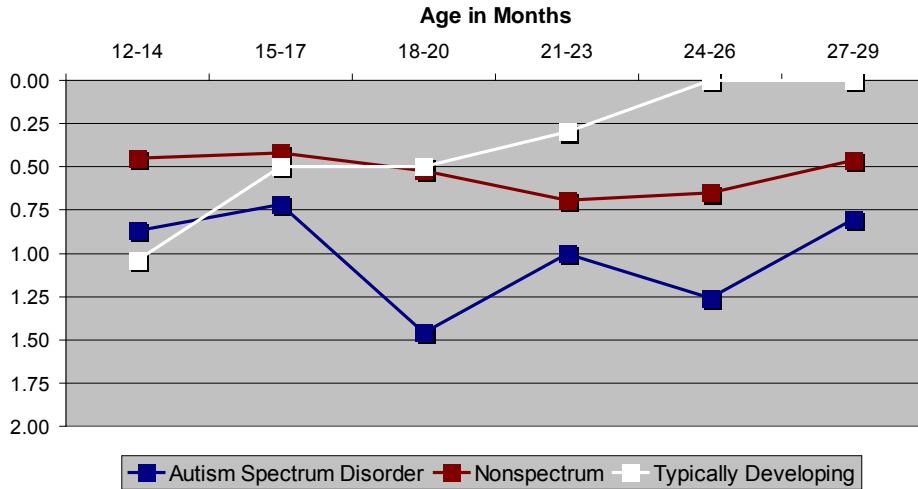
WORSENING TRAJECTORIES

Overall Quality of Rapport

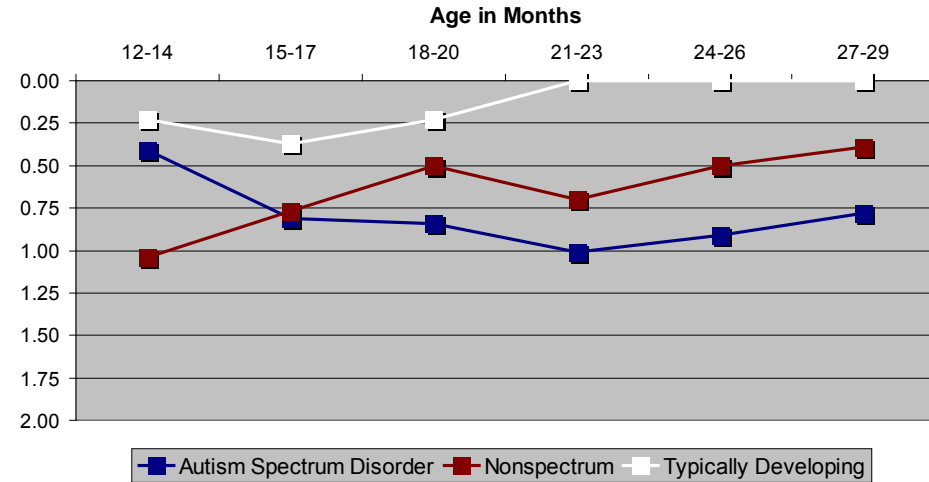


MAIN EFFECTS OF DIAGNOSIS: ASD WITH LOSS VS. OTHER DX

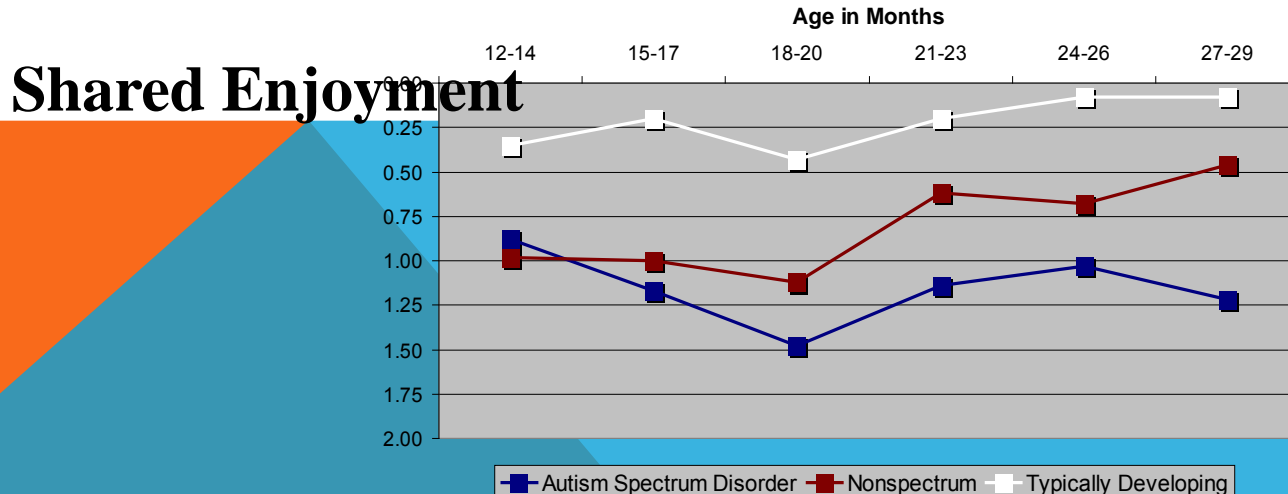
Response to Name



Level of Engagement



Amount of Overtures to Examiner and to Parent



REGRESSIONS AS REMEMBERED BY PARENTS

Strongly linked to ASD diagnoses vs language disorders or intellectual disability

Are more reliable across time and parent when they involve a child who was speaking and stops talking

Ages reported are affected by a number of factors that affect other behaviors that families are asked to remember

Telescoping

Rounding

Tagging to significant events

Severity of behaviors reported are also affected by how parents are asked

TELESCOPING OF AGE OF FIRST WORDS

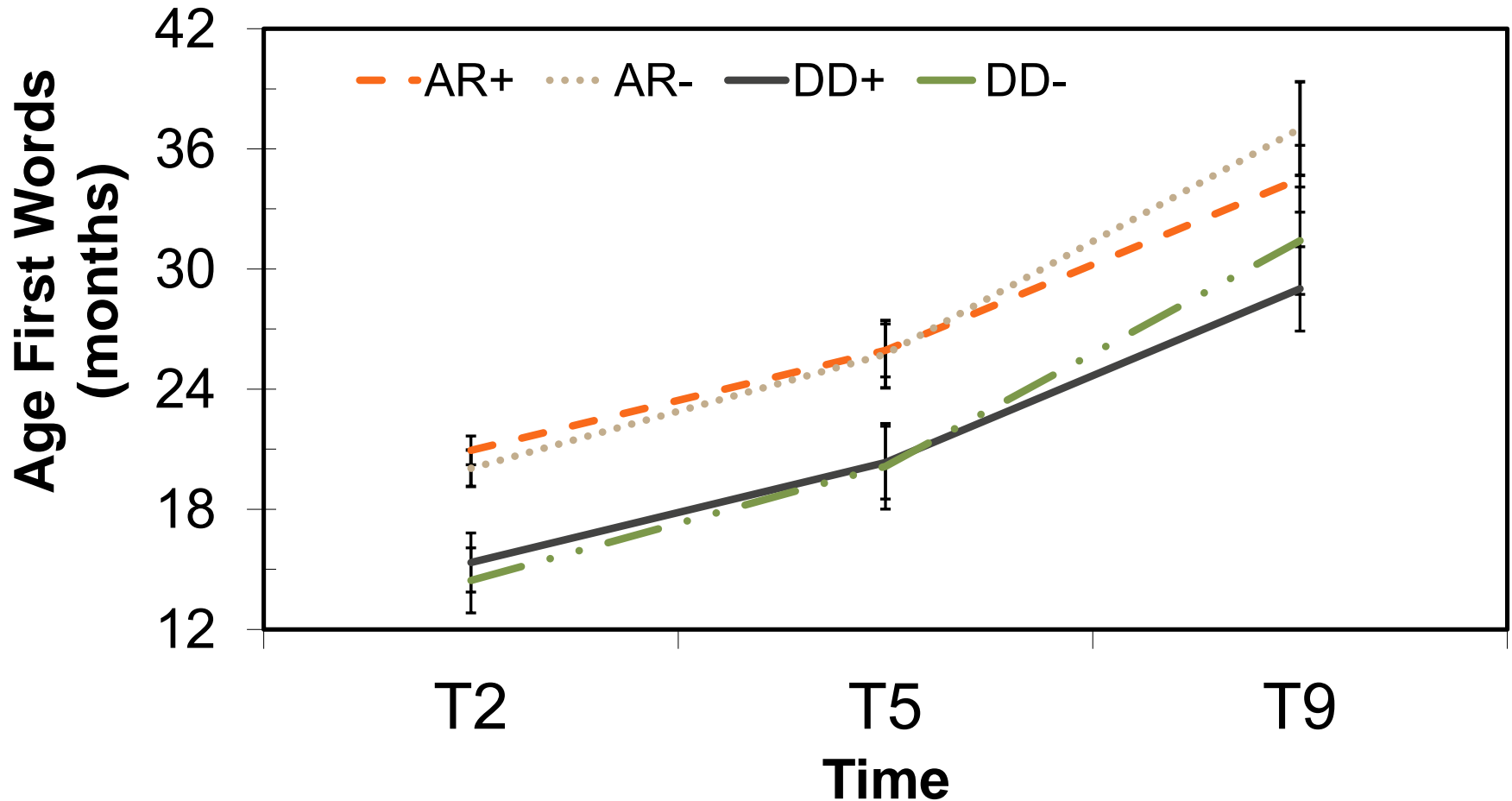


Figure 1. Caregiver-reported age of first words by referral group.

Error bars represent standard errors.

+ = centered Verbal IQ+15; - = centered Verbal IQ-15;

Hus, Taylor & Lord, *JCPP*,
2011

PROPORTION OF FAMILIES WHO REPORTED LANGUAGE DELAY WHEN ASKED AT DIFFERENT AGES

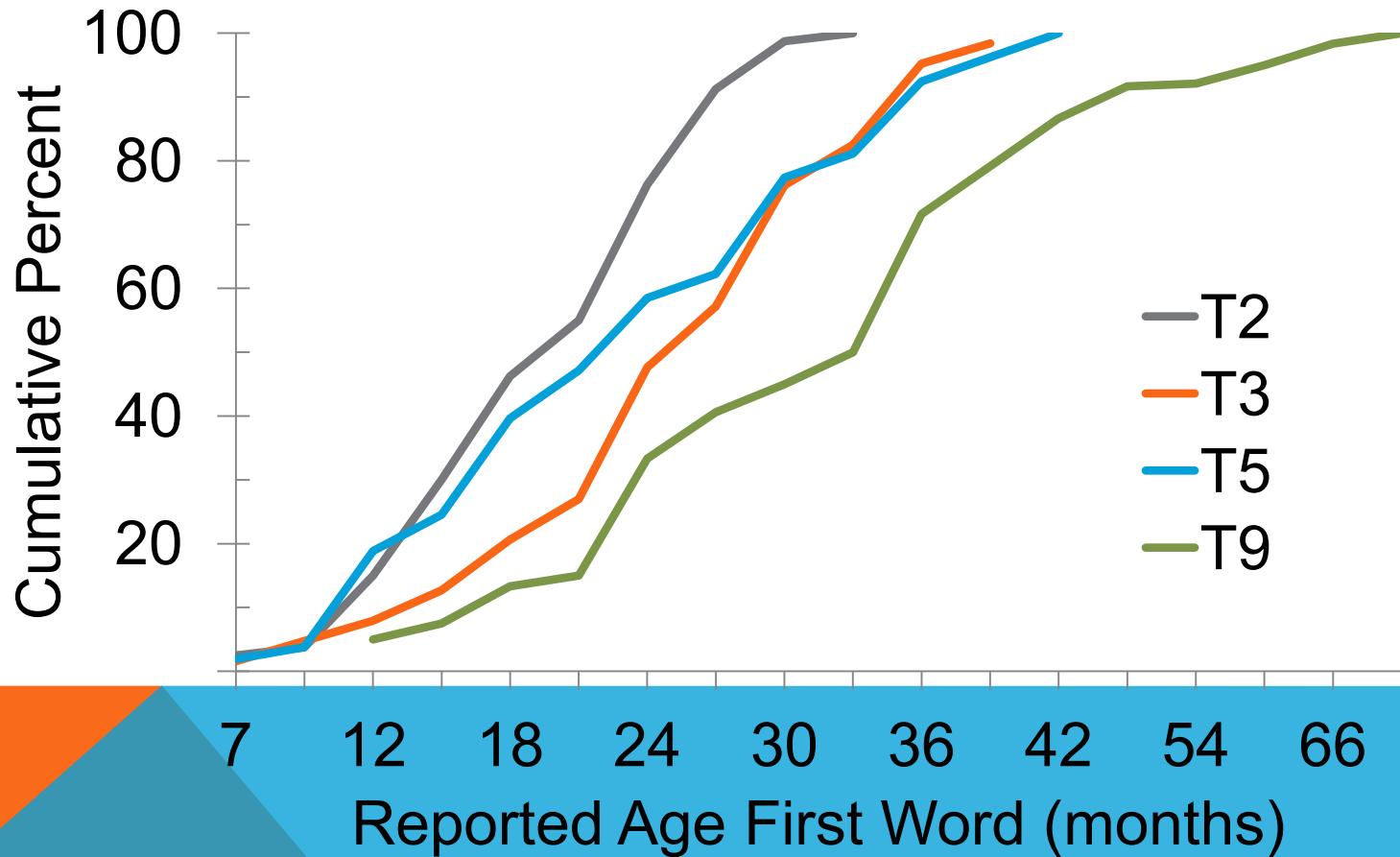
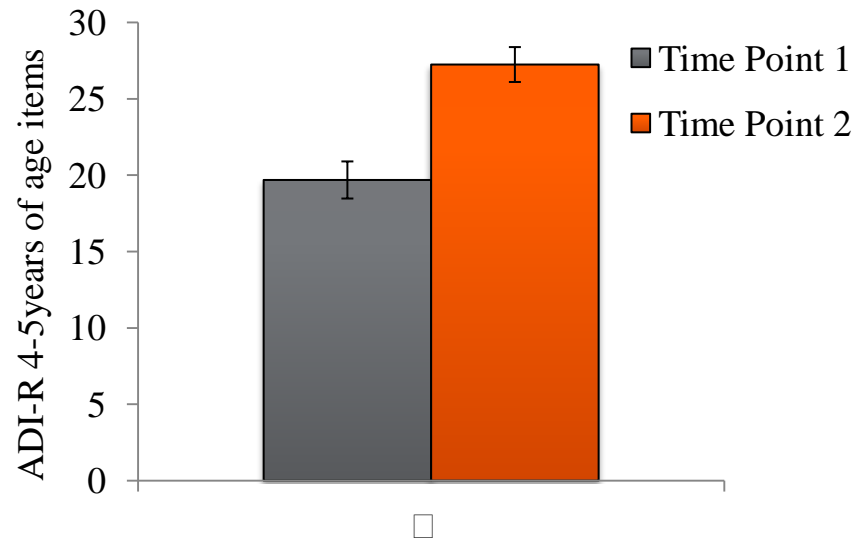
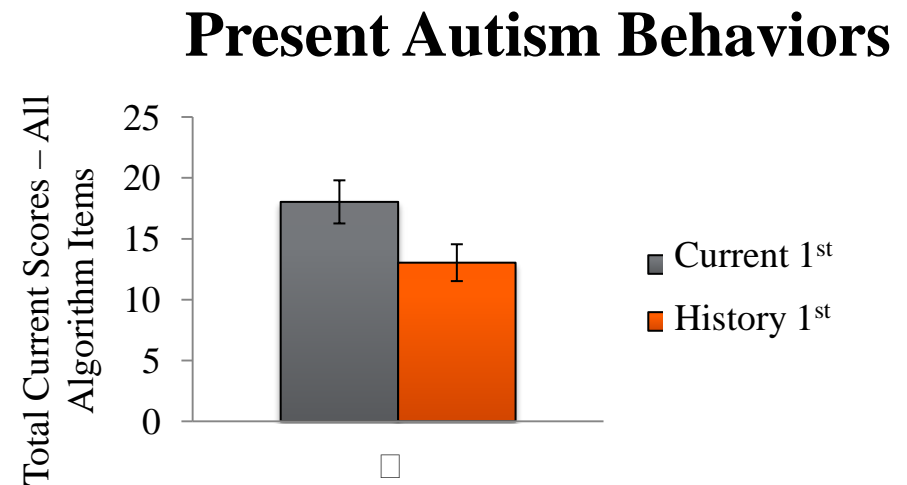
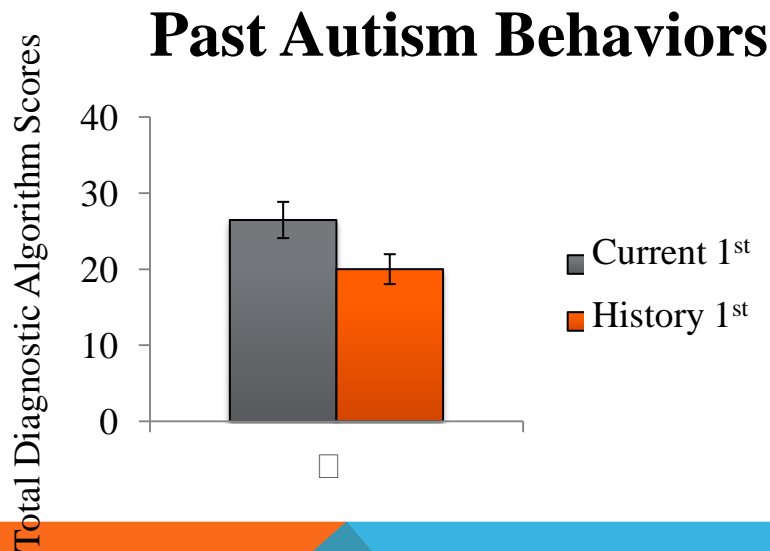


Figure S1. Cumulative percentage of reported age of first words by time point. At T2, 80

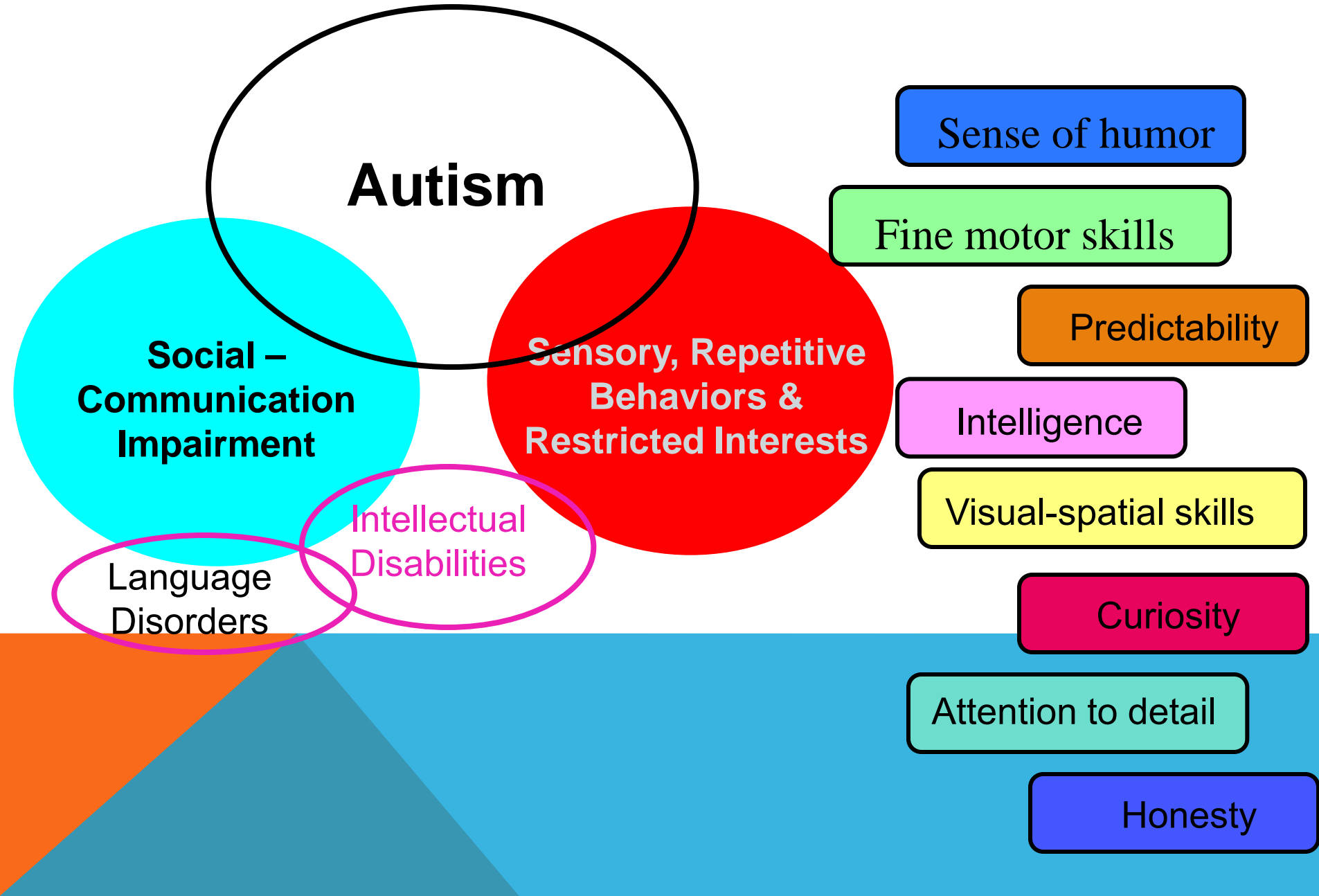
Does how caregivers remember symptoms in the past change over time?



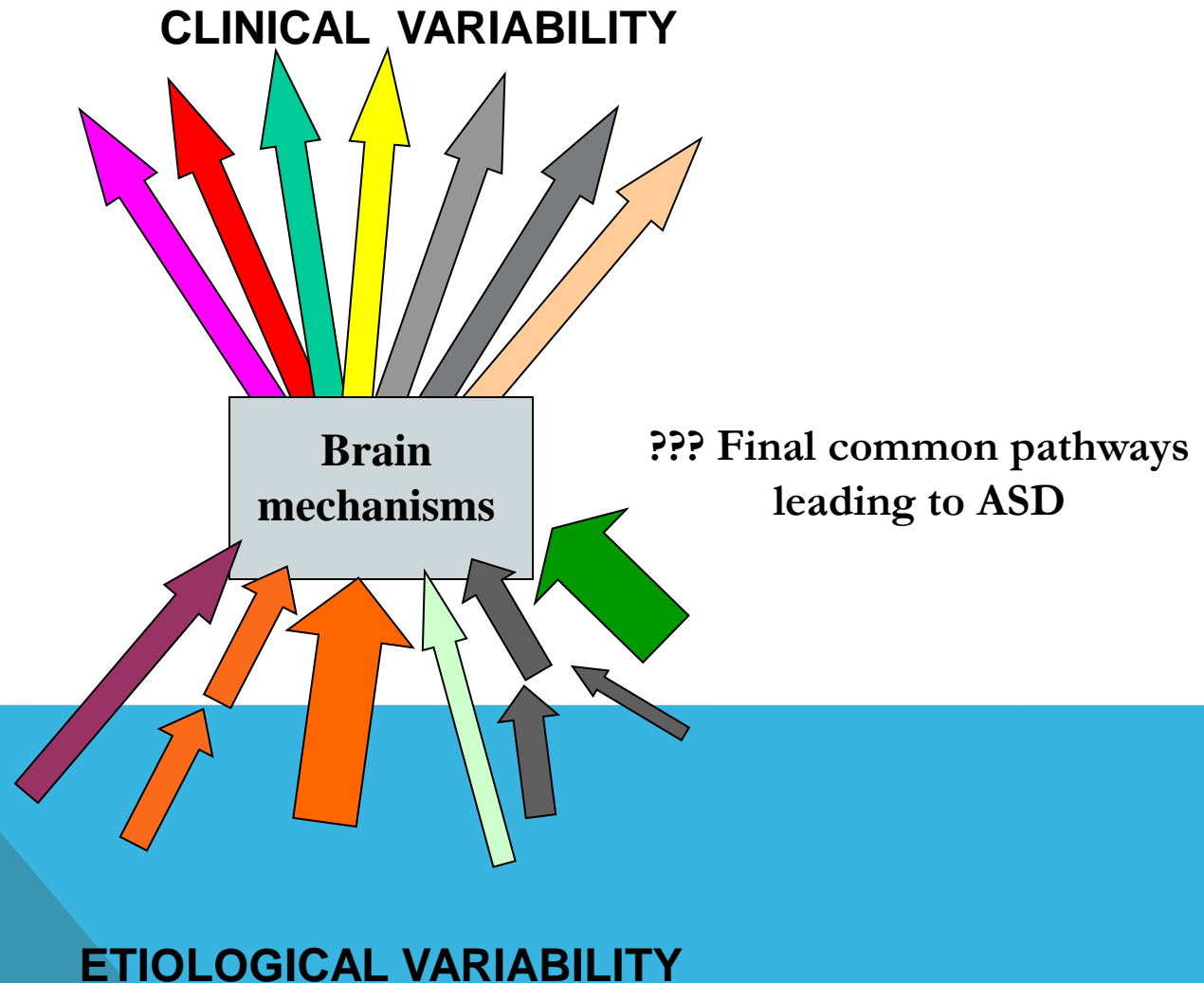
Does when in time caregivers are asked to remember their child's behavior impact how they report symptoms on the ADI-R?



PERVASIVE DEVELOPMENTAL DISORDERS



AUTISM SPECTRUM DISORDER (ASD) DIAGNOSTIC SYMPTOMS



SUMMARY

There is a **common phenomenon** in autism where a child shows decreased social initiation and spontaneity going into the second year of life.

How many skills and how dramatic the loss is **varies** across children and depends in part on how many skills the child had before the loss.

Also in play is that most children with autism are **gaining** some at the same time as they may be “losing” others.

There are specific **memory factors** that affect parents’ and involved clinicians’ recollections of regression including telescoping and basing the past on exaggerations of the present.

We need more information, particularly prospective studies accompanied by biological measurements as well as remember the effects these trajectories have on families.

Collaborators

- Pamela C. DiLavore
 - Susan Risi
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 - Christina Corsello
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 - Michael Rutter
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 - Bennett Leventhal
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