Supplement 1

Mixed-effects regression models were used to estimate individual patterns of change in Mullen raw scores, examiner rated social engagement scores, and ADOS social-communication scores from 6 to 36 months and to test the effects of diagnosis and covariates on the initial level and the rate of change in these variables. Change in these variables was assessed in the mixed-effects models with a term for age (centered at baseline 6 months). The models assume that each child's individual path of growth followed the mean path, except for child-specific random effects that caused the initial level to be higher or lower and the rate of change (linear, quadratic) to be faster or slower.

The core set of models included fixed effects for diagnosis, age (centered at baseline), and the interaction between diagnosis and age. A second set of models also included terms for the quadratic effect of age and the interaction of diagnosis with the quadratic effect of age. These interaction terms tested whether the rate of change in the variables varied across diagnosis. The most general core model included three random effects: a random intercept and random slopes for both the linear and the quadratic effect of age. These random effects (describing the between-child variation) were assumed to follow a multivariate normal distribution. We used an unstructured covariance matrix, which is the most general structure, to model the dependence between the random effects. To model within-person variation, we assumed that the observed measurements differed from the child's true trajectory by independent, identically distributed errors at each visit. Separate variances for this residual error (assessing the within-child variance) were estimated in each group and tests to assess whether the within-child variances differed across diagnosis were performed.

Table S1. Estimated trajectories (estimate, 95% CI) from the mixed-effects models predicting Mullen raw scores, examiner rated social engagement scores, and Autism Diagnostic Observation Schedule (ADOS) social-communication scores.

Age	Estimated Scores (95% Confidence Interval)			
	ASD (*n* = 51)	Non-TD (*n* = 83)	High-Risk TD (*n* = 160)	Low-Risk TD (*n* = 116)
Mullen Expressive Language				
6 months	5.9 (5.5 – 6.4)	6.5 (6.2 – 6.9)	6.6 (6.3 – 6.8)	6.2 (5.9 – 6.5)
12 months	9.8 (9.4 – 10.3)	11.3 (10.9 – 11.6)**	12.0 (11.7 – 12.2)	11.9 (11.7 – 12.2)**
18 months	13.8 (13.2 – 14.3)	16.0 (15.6 – 16.4)***	17.4 (17.1 – 17.7)	17.7 (17.3 – 18.0)***
24 months	17.7 (16.9 – 18.4)	20.8 (20.2 – 21.3)***	22.8 (22.4 – 23.3)	23.4 (22.9 – 23.9)***
36 months	25.5 (24.2 – 26.8)	30.2 (29.2 – 31.2)***	33.7 (33.0 – 34.4)	34.8 (34.0 – 35.6)***
Mullen Receptive Language				
6 months	7.5 (6.8 – 8.2)	6.7 (6.3 – 7.3)	7.2 (6.8 – 7.6)	6.7 (6.3 – 7.1)
12 months	10.4 (9.8 – 11.0)	12.2 (11.8 – 12.6)***	13.3 (13.0 – 13.6)	13.7 (13.4 – 14.1)***
18 months	13.6 (12.8 – 14.5)	17.2 (16.6 – 17.9)***	18.9 (18.5 – 19.4)	20.0 (19.5 – 20.5)***
24 months	17.2 (16.1 – 18.1)	21.8 (21.1 – 22.6)***	24.0 (23.5 – 24.6)	25.6 (24.9 – 26.2)***
36 months	25.0 (23.5 – 26.5)	29.7 (28.6 – 30.8)***	32.7 (31.9 – 33.5)	34.4 (33.4 – 35.3)***
Mullen Visual Reception				
6 months	9.9 (9.3 – 10.4)	9.5 (9.1 – 10.0)	9.6 (9.3 – 10.0)	9.5 (9.2 – 9.9)
12 months	14.7 (14.2 – 15.1)	15.2 (14.9 – 15.5)**	15.9 (15.7 – 16.2)	15.9 (15.6 – 16.1)**
18 months	19.3 (18.8 – 19.9)	20.7 (20.3 – 21.1)***	22.0 (21.7 – 22.3)	22.1 (21.7 – 22.4)***
24 months	23.8 (23.1 – 24.6)	26.1 (25.5 – 26.6)***	28.0 (27.6 – 28.4)	28.2 (27.7 – 28.7)***
36 months	32.4 (31.1 – 33.8)	36.4 (35.3 – 37.4)***	39.5 (38.7 – 40.2)	39.9 (39.0 – 40.8)***
Mullen Fine Motor				
6 months	8.9 (8.4 – 9.5)	9.1 (8.7 – 9.6)	9.4 (9.1 – 9.8)	9.3 (8.9 – 9.6)
12 months	14.6 (14.3 – 15.0)	15.1 (14.9 – 15.4)#	15.3 (15.1 – 15.5)	15.5 (15.2 – 15.7)#
18 months	19.4 (18.9 – 19.8)	20.2 (19.9 – 20.6)**	20.6 (20.4 – 20.9)	21.0 (20.7 – 21.3)**
24 months	23.1 (22.5 – 23.7)	24.5 (24.1 – 25.0)***	25.4 (25.1 – 25.7)	25.9 (25.5 – 26.3)***
36 months	27.7 (26.5 – 29.0)	30.5 (29.5 – 31.4)***	33.3 (32.7 – 33.9)	33.8 (33.1 – 34.6)***
Examiner Rated Social Engagement Composite Score				
6 months	7.6 (7.0 – 8.2)	7.5 (7.0 – 7.9)	7.6 (7.2 – 8.0)	7.9 (7.5 – 8.3)
12 months	7.2 (6.9 – 7.5)	7.8 (7.5 – 8.0)***	8.0 (7.7 – 8.2)	8.4 (8.1 – 8.6)***
18 months	6.8 (6.5 – 7.1)	7.9 (7.7 – 8.2)***	8.2 (8.0 – 8.4)	8.7 (8.5 – 8.9)***
24 months	6.5 (6.2 – 6.9)	8.0 (7.7 – 8.3)***	8.4 (8.2 – 8.7)	8.9 (8.6 – 9.0)***
36 months	6.2 (5.8 – 6.6)	7.9 (7.7 – 8.2)***	8.7 (8.5 – 8.9)	8.8 (8.6 – 9.0)***
ADOS Social-Communication Score				
18 months	10.9 (9.6 – 12.2)	4.7 (4.1 – 5.2)***	3.5 (3.1 – 3.9)	2.4 (1.9 – 2.9)***
24 months	8.7 (7.5 – 9.9)	4.2 (3.7 – 4.7)***	2.5 (2.2 – 2.8)	2.2 (1.7 – 2.6)***
36 months	13.1 (11.8 – 14.4)	5.7 (5.3 – 6.1)***	1.9 (1.6 – 2.1)	1.5 (1.2 – 1.8)***

Note: ASD = autism spectrum disorders; TD = typically developing
#*p* < .07, **p* < .05, ***p < .01, *****p < .001 (for comparing Non-TD and Low-Risk TD)