Supplementary Material

Missing values and assumption checks. Inspection revealed missing values were minimal and random in nature. Given pairwise and listwise exclusions would further reduce power for analyses thereby increasing the risk of Type II errors (Newman, 2014), missing values were replaced with the series mean, allowing subsequent analyses to maintain power (Pallant, 2013; Tabachnick & Fidell, 2013).

Statistical assumptions for correlational and regression analyses (normality, multivariate normality, linearity, homoscedasticity, multicollinearity and singularity) were checked before analyses were conducted. Visual inspection of scatter plots revealed no violations to linearity or homoscedasticity and no influential outliers were identified. Violations to normality were identified for ADOS-2 Comparison Score (CS) and HSQ frequency. The ADOS-2 CS was left untransformed given transformation of standard scores can hinder interpretation of results (Tabachnick & Fidell, 2013).

Given the presence of non-normal variables (ADOS-2 CS) and the small sample size, non-parametric statistics (i.e., Spearman's rank order correlations and bootstrapping regressions) were applied to sequential analyses. Bootstrapping is a non-parametric method robust against violations of non-normality and recommended for smaller sample sizes (Field, 2009).

Selection Bias and Confounds

Independent samples *t*-tests were run to examine whether those who were included in the current study (n = 26) differed to those who did not participate (n = 15) on age, autism severity (ADOS-2 CS), developmental level (Mullen ELC), and temperament (ECBQ). As can be seen in Supplementary Table 1, no significant differences were identified between the broader cohort and the sub-sample on any of the aforementioned variables.

Supplementary Table 1

T-Tests between Follow-Up Cohort (*n* = 26) and Original Cohort that Did Not Participate in the Follow-Up (*n* = 16) on Age, ADOS-2 CS, Mullen ELC, and ECBQ

	Follow-Up Cohort		Original Cohort			
	M	*SD*	*M*	*SD*	*t*	*p*
Age	39.65	8.19	42.81	10.08	-.557	.58
ADOS-2 CS	7.27	2.30	7.00	2.68	.345	.73
Mullen ELC	77.46	26.23	72.56	23.10	.614	.54
ECBQ						
Effortful control	4.13	.656	3.76	.712	1.505	.14
Negative affectivity	3.63	.765	3.51	.794	.975	.34

Note. ADOS-2 CS: Autism Diagnostic Observation Schedule, second edition, Comparison Score. Mullen ELC: Mullen Early Learning Composite. ECBQ: Early Childhood Behavior Questionnaire.

Number of Therapies and Challenging Behavior Outcomes at Follow-up

Given that behavioral therapies and interventions (e.g., Applied Behavioral Analysis, Speech Therapy, Psychology, etc.) may have impacted challenging behavior at follow-up, information regarding the number of therapies children engaged in was analyzed with challenging behavior outcomes (HSQ frequency and HSQ severity). At follow-up all children were engaged in a minimum of two therapies. Information regarding the kinds of therapies children engaged in is provided in the main manuscript (see Table 1). A one-way ANOVA was conducted in order to examine whether the number of interventions a child engaged in influenced the frequency or severity of challenging behavior at follow-up. Children were first

categorized into groups based on the amount of therapies they had engaged in over the course of the follow-up: Low (<2 therapies), Moderate (>3), Frequent (>4). Mean scores obtained for HSQ severity and HSQ frequency were compared across each group in the one-way ANOVA. As seen in Supplementary Table 2, there were no significant differences between scores for each of the three groups for HSQ severity, $p > .05$, and HSQ frequency, $p > .05$, thus the frequency and severity of challenging behavior at follow-up was found to be unrelated to the amount of therapy children were engaged in.

Supplementary Table 2

One-Way ANOVA on Number of Therapies and Challenging Behavior at Follow-Up

HSQ	*F*	*Eta-squared*	*p*
Severity	.968	.07	.39
Frequency	.437	.03	.65

Note. HSQ: Home Situations Questionnaire, frequency and severity of challenging behavior. Therapies were grouped 1= < 2, 2= < 3, 3= > 4

References

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Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate Statistics*. Boston, MA: Pearson/Allyn & Bacon.

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