

TABLE S1. Baseline Demographics and Adjustment for Retained vs. Attrited Participants

	<u>Retained Participants</u>		<u>Attrited Participants</u>		Difference
	(N = 281)		(N = 75)		Tests
	% of original group		% of original group		χ^2
<u>Intervention vs. Control</u>					6.60*
Intervention Group	78%		22%		
Control Group	88%		12%		
<u>Child Ethnicity/Race</u>					8.27*
Ethnicity/Race: White	87%		13%		
Ethnicity/Race: Black	81%		19%		
Ethnicity/Race: Latinx	72%		28%		
<u>County</u>					3.25
County 1	88%		12%		
County 2	83%		17%		
County 3	79%		21%		
	Mean	(S.D.)	Mean	(S.D.)	df = 1, 354
Family SES	23.13	(10.10)	21.27	(9.19)	0.61
Family Risk Factors	0.32	(0.47)	0.35	(0.48)	-0.52
<u>Child Baseline Covariates</u>					
Vocabulary	35.28	(10.89)	32.32	(10.96)	1.92
Observed Self-regulation	3.30	(0.55)	3.30	(0.58)	-0.01
Aggression	2.91	(1.00)	2.86	(0.89)	0.39
Hyperactivity-inattention	1.27	(0.66)	1.21	(0.58)	0.70
Internalizing-withdrawn	1.98	(0.64)	1.95	(0.58)	0.37
Social Competence	3.57	(0.79)	3.70	(0.83)	-1.18

Note: The top rows compare attrition across categorical variables using chi-square tests; the bottom rows compare the means of continuous variables in the retained and attrited sample using t-tests. S.D. = standard deviation. Parent ratings of aggression and hyperactivity-inattention were pre-intervention covariates for teacher-rated conduct problems and hyperactivity-inattention, respectively. Parent ratings of internalizing-withdrawal and social competence were pre-intervention covariates for teacher rated emotional symptoms and peer problems, respectively.

* $p < .05$.

TABLE S2. Description of Variables Included as Baseline Covariates in Analytic Models

Source	Measure Description	Alpha
<u>Study Design Features</u>		
Design	<i>Cohort</i> : Participants were recruited over two successive years, creating two cohorts.	NA
Design	<i>County</i> : Head Start centers were in three Pennsylvanian counties including urban/suburban areas in the southeast and small towns/rural areas in central PA.	NA
<u>Child Characteristics</u>		
Parent	<i>Child sex and ethnicity/race</i> : Parents reported on child sex (male, female) and child ethnicity/race (White-non Latinx; Latinx; Black).	NA
Parent	<i>Adverse childhood experiences (ACEs)</i> : At the initial interview, parents reported on child exposure to 9 events, each scored as present/absent: 1) any form of child abuse, 2) witnessing violence, 3) a separation that involved living apart from the primary caregiver, 4) excessive family mobility (3 or more family moves); 5) parent arrest; 6) parent special education; 7) parent grade retention; 8) parent depression (CES-D Questionnaire) dichotomized at the clinical cutoff score; and 9) frequent corporal punishment (5 times or more in the last week). Items were scored as a cumulative index using IRT; the top third of the sample was designated as high ACE exposure.	$\alpha = 0.55$
Assessment	<i>Vocabulary</i> : Trained examiners administered the <i>Expressive One-Word Picture Vocabulary Test</i> (EOWPVT ¹), a standardized measure of child vocabulary. Children gave the word that best described pictures they were shown.	$\alpha = .94$
Observation	<i>Self-regulation</i> : After completing assessments, observers rated the child's task engagement, attentional focus, and persistence using an adapted 13-item version of the Leiter-R Assessor Report ² .	$\alpha = .93$
Parent	<i>Baseline aggression</i> : Parents completed the <i>Teacher Observation of Child Adaptation-Revised (TOCA – R) Authority Acceptance</i> scale ³ , rating 7 aggressive behaviors (e.g., stubborn, yells, fights) using a 6-point scale.	$\alpha = .86$
Parent	<i>Baseline hyperactivity-inattention</i> : Parents completed the ADHD Rating Scale ⁴ rating 14 items with a 4-point scale to describe attention problems, distractibility, overactivity, and impulsivity.	$\alpha = .90$
Parent	<i>Baseline emotional symptoms</i> : Parents completed a 5-item subscale ⁵ describing social withdrawal (avoids others) and internalizing problems (sad/unhappy).	$\alpha = .75$
Parent	<i>Baseline peer problems</i> : Parents completed the 13-item <i>Social Competence Scale</i> ⁶ (Conduct Problems Prevention Research Group [CPPRG], 1995) to describe prosocial behaviors and peer relations.	$\alpha = .87$

¹ Brownell, R. (2000). *Expressive One-Word Picture Vocabulary Test Manual*. Novato, CA: Academic Therapy Publications.

² Smith-Donald, R., Raver, C. C., Hayes, T., & Richardson, B. (2007). Preliminary construct and concurrent validity of the Preschool Self-Regulation Assessment (PSRA) for field-based research. *Early Childhood Research Quarterly*, 22, 173 – 187.

³ Werthamer-Larsson, L., Kellam, S., & Wheeler, L. (1991). Effect of first-grade classroom environment on shy behavior, aggressive behavior, and concentration problems. *American Journal of Community Psychology*, 19, 585-602.

⁴ DuPaul, G. (1991). Parent and teacher ratings of ADHD symptoms: Psychometric properties in a community-based sample. *Journal of Clinical Child Psychology*, 20, 245-253.

⁵ Bierman, K. L., Domitrovich, C. E., Nix, R. L., Gest, S. D., Welsh, J. A., Greenberg, M. T., Blair, C., Nelson, K. E., & Gill, S. (2008). Promoting academic and social-emotional school readiness: The Head Start REDI Program. *Child Development*, 79, 1802-1817.

⁶ Conduct Problems Prevention Research Group (1995). *Social Competence Scale Technical Report*. Available at: <http://www.fasttrackproject.org>

TABLE S3. Baseline Scores for Intervention and Control Groups on all Covariates

	<u>Control Group</u>		<u>Intervention Group</u>		<u>Difference Tests</u>
	(N = 164)		(N = 192)		χ^2
<u>Data Collection Wave</u>					0.50
Cohort 1	48%		52%		
Cohort 2	44%		56%		
<u>County Site</u>					0.09
County 1	45%		55%		
County 2	47%		53%		
County 3	46%		54%		
<u>Child Sex</u>					0.60
Female	44%		56%		
Male	48%		52%		
<u>Child Ethnicity/Race</u>					5.48
White	44%		56%		
Black	56%		44%		
Latinx	38%		62%		
<u>Adverse Child Experiences</u>					0.14
Less Exposure	47%		53%		
More Exposure	45%		55%		
	Mean	(S.D.)	Mean	(S.D.)	T-test
					df = 1, 354
Vocabulary	34.62	(10.76)	34.94	(11.10)	-0.24
Self-regulation	3.35	(0.48)	3.26	(0.61)	1.45
Baseline Aggression	2.93	(.94)	2.88	(1.02)	0.45
Baseline Hyperactivity	1.28	(0.62)	1.24	(0.67)	0.49
Baseline Internalizing/withdrawal	1.99	(0.60)	1.96	(0.65)	0.48
Baseline Social Competence	3.59	(.76)	3.60	(.84)	0.50

Note: The top rows compare baseline values across categorical variables using chi-square tests; the bottom rows compare the means of baseline continuous variables in the intervention and control samples using t-tests. S.D. = standard deviation. No differences were statistically significant.

TABLE S4. HLM Tests of Intervention Effects with Covariate Estimates Displayed

Predictors	Conduct Problems		Emotional Symptoms		Hyperactivity- Inattention		Peer Problems	
	Effect	(SE)	Effect	(SE)	Effect	(SE)	Effect	(SE)
Intercept	1.26	(1.69)	3.99*	(1.60)	1.68	(2.02)	3.19*	(1.40)
Child age	-0.17	(0.36)	-0.36	(0.34)	0.54	(0.43)	-0.15	(0.30)
Child ethnicity: Black	0.45	(0.27)	-0.64*	(0.25)	0.44	(0.32)	-0.28	(0.22)
Child ethnicity: Latinx	0.22	(0.32)	-0.15	(0.32)	0.19	(0.40)	-0.21	(0.27)
Child sex	-0.36	(0.23)	0.60**	(0.21)	-1.05**	(0.27)	-0.20	(0.18)
County 1	0.45	(0.30)	0.10	(0.27)	0.91*	(0.38)	0.13	(0.25)
County 2	0.46	(0.29)	0.24	(0.26)	1.00**	(0.33)	0.28	(0.23)
Observed self-regulation	-0.05	(0.21)	-0.31	(0.20)	-0.65*	(0.26)	-0.15	(0.18)
Adverse child experiences	0.60*	(0.24)	0.34	(0.22)	0.44	(0.30)	0.34	(0.20)
Cohort	0.13	(0.21)	0.19	(0.20)	0.11	(0.26)	0.20	(0.18)
Baseline score for outcome	0.26*	(0.11)	-0.02	(0.15)	0.68**	(0.21)	-0.14	(0.12)
Time	-0.11	(0.08)	0.12	(0.09)	-0.10	(0.09)	0.00	(0.07)
Intervention	0.43*	(0.21)	-0.53**	(0.20)	-0.44	(0.27)	-0.33	(0.18)

Note: SE = standard error. ** $p < .01$. * $p < .05$.

TABLE S5. Comparing Intervention and Control Group Youth Scoring at Clinical Risk Levels on the SDQ in Grade 7

SDQ Problem Scale	<u>SDQ Clinical Risk Category</u>					<u>Logistic Regressions</u>			
						<u>Average vs. Other</u>		<u>Very High vs. Other</u>	
						Average	Elevated	High	Very High
<u>Conduct Problems</u>						0.07	1.08	-0.51	-0.60
Control Group	%	71%	8%	8%	14%				
	(N)	(94)	(10)	(10)	(18)				
Intervention Group	%	73%	10%	8%	10%				
	(N)	(91)	(12)	(10)	(12)				
<u>Emotional Symptoms</u>						0.32	1.37	-0.38	-0.68
Control	%	77%	12%	5%	6%				
	(N)	(102)	(16)	(6)	(8)				
Intervention	%	81%	10%	5%	5%				
	(N)	(101)	(12)	(6)	(6)				
<u>Hyperactivity-Inattention</u>						.34	1.40	-0.70	-0.50
Control	%	68%	18%	5%	9%				
	(N)	(90)	(24)	(6)	(12)				
Intervention	%	74%	18%	2%	6%				
	(N)	(92)	(22)	(3)	(8)				
<u>Peer Problems</u>						-0.04	0.96	-0.91	-0.40
Control	%	69%	18%	4%	8%				
	(N)	(90)	(24)	(5)	(11)				
Intervention	%	68%	25%	3%	4%				
	(N)	(85)	(31)	(4)	(5)				

Note: Numbers of participants in each cell are indicated in parentheses below the percentage. OR = Odds Ratio. * $p < .05$ ** $p < .01$.