

Appendix A

In supplementary analyses shown in Appendix Table A.4, we interact the indicator for ADHD diagnosis with each of the ADHD behavior scores in OLS regressions of achievement among children in the less severe ADHD-related behaviors group, net of other controls. We do so in order to identify whether there is a gradient in the diagnosis-achievement relationship even among children with less severe ADHD. As expected, for children with less severe ADHD-related behaviors who are diagnosed with ADHD, the main effects of diagnosis remain large and negative (-0.61 for reading and -0.75 for math) but are no longer statistically significant after including interactions between diagnosis and each behavior score. None of the interactions between diagnosis and behavior score are statistically significant for either reading or math except that on the relationship between teacher reported inattentive behaviors and reading achievement among diagnosed children. For them, each unit increase in teacher-rated inattentive behaviors is associated with -0.17 (main effect on teacher reported inattention) $+ 0.38$ (interaction of diagnosis * teacher reported inattention) = 0.21 SD higher reading achievement. This suggests that the association between an ADHD diagnosis and both reading and math achievement do not vary statistically significantly by severity of ADHD-related behaviors among children with less severe ADHD. The exception is for teacher reported inattentive symptoms, for which higher levels of inattention are associated with a less pronounced negative labeling effect, holding all other factors constant.

Appendix Table A.1: OLS Estimates of the Relationship Between an Early Elementary School ADHD Diagnosis and Eighth Grade Reading or Math Achievement, by Severity of Externalizing Behaviors and Approaches to Learning (Reverse-Coded)

	Less Severe ADHD-Related Behaviors				More Severe ADHD-Related Behaviors			
	(1)		(2)		(3)		(4)	
	Reading		Math		Reading		Math	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
ADD/ADHD Diagnosis	-0.28**	(0.09)	-0.21*	(0.08)	-0.12*	(0.06)	-0.12*	(0.06)
ADHD-Related Behaviors								
Externalizing Behaviors Score (Parent)	-0.00	(0.02)	0.02	(0.02)	-0.10**	(0.03)	-0.07**	(0.03)
Externalizing Behaviors Score (Teacher)	0.01	(0.03)	0.01	(0.03)	-0.04	(0.03)	-0.01	(0.03)
Approaches to Learning Behaviors Score (Parent)	-0.07**	(0.02)	-0.08***	(0.02)	-0.18***	(0.04)	-0.14**	(0.04)
Approaches to Learning Behaviors Score (Teacher)	-0.22***	(0.02)	-0.24***	(0.02)	-0.18***	(0.04)	-0.27***	(0.04)
Internalizing Behaviors Score	0.01	(0.02)	-0.01	(0.02)	0.02	(0.03)	0.03	(0.03)
Baseline Achievement								
Kindergarten Reading Achievement Score (std.)	0.11***	(0.02)	0.06***	(0.02)	0.12***	(0.03)	0.06	(0.03)
Kindergarten Math Achievement Score in (std.)	0.26***	(0.02)	0.36***	(0.02)	0.24***	(0.03)	0.36***	(0.03)
Child Controls								
Male	-0.09***	(0.02)	0.22***	(0.02)	-0.03	(0.04)	0.22***	(0.04)
Black	-0.38***	(0.04)	-0.43***	(0.04)	-0.50***	(0.05)	-0.42***	(0.05)
Hispanic	-0.10**	(0.03)	-0.02	(0.03)	-0.16**	(0.05)	0.01	(0.05)
Lives in Midwest in Kindergarten/First Wave Available	0.07*	(0.03)	0.02	(0.04)	0.05	(0.05)	0.01	(0.05)
Lives in West Near in Kindergarten/First Wave Available	0.02	(0.04)	0.00	(0.04)	0.04	(0.06)	-0.05	(0.06)
Lives in Northeast in Kindergarten/First Wave Available	0.08*	(0.03)	0.03	(0.04)	0.10	(0.05)	0.03	(0.05)
Child Born Weighing Less than 5.5 lbs (LBW)	-0.03	(0.04)	-0.08*	(0.04)	0.16*	(0.07)	0.11	(0.06)
Child Not Covered by Insurance	0.01	(0.03)	0.01	(0.03)	0.02	(0.05)	0.03	(0.05)
HH Income Below Federal Poverty Line	-0.15***	(0.04)	-0.04	(0.04)	-0.16***	(0.05)	-0.14**	(0.04)
Number of Other Children in HH	-0.02	(0.01)	0.01	(0.01)	-0.03	(0.02)	0.01	(0.02)
Child Been in Childcare Outside Home	-0.05**	(0.02)	-0.05*	(0.02)	0.01	(0.04)	0.02	(0.04)
Mother Controls								
Mother Has HS Education	0.19***	(0.05)	0.11*	(0.05)	0.13*	(0.05)	0.11	(0.06)
Mother Has Completed Some College	0.28***	(0.05)	0.23***	(0.05)	0.21***	(0.06)	0.23***	(0.07)
Mother Has Completed Four Year College Degree	0.54***	(0.05)	0.42***	(0.05)	0.50***	(0.07)	0.47***	(0.07)
Current Mother Age at Kindergarten Round	0.01***	(0.00)	0.00*	(0.00)	0.01*	(0.00)	-0.00	(0.00)
Mother Has Clinically Depressive Symptoms at Kindergarten	-0.08**	(0.03)	-0.07**	(0.03)	-0.04	(0.04)	0.00	(0.04)
Constant	0.15	(0.12)	0.15	(0.11)	0.61**	(0.21)	0.61**	(0.22)
N	5800		5800		2020		2020	
R Squared	0.37		0.39		0.37		0.40	

*p<0.05, **p<0.01, ***p<0.001. Standard errors in parentheses.

Data Source : Early Childhood Longitudinal Study, Kindergarten Cohort of 1998-1999 (ECLS-K).

Notes : Our working sample consists of the children eligible for the kindergarten, first, third, fifth, and eighth grade survey rounds with non-missing information on ADHD diagnosis between kindergarten and third grade and 8th grade reading and math scores. Sample sizes are rounded to the nearest 10 in accordance with NCES restricted data requirements. Multiple imputation was used to handle item-missingness on all other predictors.

Appendix Table A.2: OLS Estimates of Relationship Between an Early Elementary School ADHD Diagnosis and Eighth Grade Reading or Math Achievement, by Severity of ADHD-Related Behaviors, Excluding Children Diagnosed in Kindergarten

	Less Severe ADHD-Related Behaviors				More Severe ADHD-Related Behaviors			
	(1)		(2)		(3)		(4)	
	Reading		Math		Reading		Math	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
ADD/ADHD Diagnosis	-0.28**	(0.09)	-0.23*	(0.09)	-0.14*	(0.06)	-0.10	(0.06)
ADHD-Related Behaviors								
Inattentive Behaviors Score (Parent)	-0.05**	(0.02)	-0.09***	(0.02)	-0.04	(0.03)	-0.11***	(0.03)
Hyperactivity Behaviors Score (Parent)	-0.03	(0.02)	0.00	(0.02)	-0.05	(0.03)	-0.05	(0.03)
ODD/CD Behaviors Score (Parent)	0.03	(0.03)	0.02	(0.02)	-0.03	(0.04)	-0.02	(0.04)
Inattentive Behaviors Score (Teacher)	-0.16***	(0.02)	-0.18***	(0.02)	-0.14***	(0.03)	-0.20***	(0.03)
Hyperactivity Behaviors Score (Teacher)	0.03	(0.03)	-0.01	(0.03)	0.01	(0.03)	0.01	(0.03)
ODD/CD Behaviors Score (Teacher)	-0.02	(0.02)	0.02	(0.03)	0.02	(0.05)	-0.04	(0.05)
Internalizing Behaviors Score	-0.01	(0.02)	-0.04	(0.02)	-0.03	(0.04)	-0.02	(0.03)
Baseline Achievement/Early Cognitive Development								
Kindergarten Reading Achievement Score (std.)	0.11***	(0.02)	0.06***	(0.02)	0.14***	(0.03)	0.04	(0.03)
Kindergarten Math Achievement Score in (std.)	0.26***	(0.02)	0.35***	(0.02)	0.24***	(0.03)	0.40***	(0.03)
Child Controls								
Male	-0.09***	(0.02)	0.22***	(0.02)	-0.03	(0.04)	0.18***	(0.04)
Black	-0.38***	(0.04)	-0.41***	(0.04)	-0.49***	(0.05)	-0.45***	(0.05)
Hispanic	-0.11***	(0.03)	-0.03	(0.03)	-0.12*	(0.05)	0.03	(0.06)
Lives in Midwest in Kindergarten/First Wave Available	0.05	(0.03)	0.01	(0.04)	0.06	(0.05)	0.02	(0.05)
Lives in West Near in Kindergarten/First Wave Available	0.01	(0.04)	-0.01	(0.04)	0.04	(0.06)	-0.05	(0.06)
Lives in Northeast in Kindergarten/First Wave Available	0.07*	(0.03)	0.01	(0.04)	0.13*	(0.05)	0.08	(0.05)
Child Born Weighing Less than 5.5 lbs (LBW)	-0.02	(0.04)	-0.06	(0.04)	0.14*	(0.07)	0.06	(0.06)
Child Not Covered by Insurance	0.01	(0.03)	-0.00	(0.03)	0.00	(0.05)	0.05	(0.05)
HH Income Below Federal Poverty Line	-0.15***	(0.04)	-0.06	(0.03)	-0.17***	(0.05)	-0.13**	(0.05)
Number of Other Children in HH	-0.01	(0.01)	0.02	(0.01)	-0.01	(0.02)	0.01	(0.02)
Child Been in Childcare Outside Home	-0.05*	(0.02)	-0.04*	(0.02)	-0.03	(0.04)	-0.01	(0.04)
Mother Controls								
Mother Has HS Education	0.21***	(0.05)	0.15**	(0.05)	0.14*	(0.06)	0.12*	(0.06)
Mother Has Completed Some College	0.30***	(0.05)	0.27***	(0.05)	0.24***	(0.06)	0.22***	(0.07)
Mother Has Completed Four Year College Degree	0.56***	(0.05)	0.46***	(0.05)	0.54***	(0.07)	0.47***	(0.07)
Current Mother Age at Kindergarten Round	0.01**	(0.00)	0.00*	(0.00)	0.00	(0.00)	-0.00	(0.00)
Mother Has Clinically Depressive Symptoms at Kindergarten	-0.12***	(0.03)	-0.09**	(0.03)	0.01	(0.04)	0.05	(0.04)
Constant	0.09	(0.11)	0.07	(0.11)	0.16	(0.24)	0.60*	(0.24)
N	5780		5780		2000		2000	
R Squared	0.36		0.39		0.38		0.42	

*p<0.05, **p<0.01, ***p<0.001. Standard errors in parentheses.

Data Source: Early Childhood Longitudinal Study, Kindergarten Cohort of 1998-1999 (ECLS-K).

Notes: Our working sample consists of the children eligible for the kindergarten, first, third, fifth, and eighth grade survey rounds with non-missing information on ADHD diagnosis between kindergarten and third grade and 8th grade reading and math scores. Children diagnosed with ADHD in kindergarten are dropped from the sample. Sample sizes are rounded to the nearest 10 in accordance with NCES restricted data requirements. Multiple imputation was used to handle item-missingness on all other predictors.

Appendix Table A.3: OLS Estimates of the Relationship Between an Early Elementary School ADHD Diagnosis and Eighth Grade Reading or Math Achievement, by Severity of ADHD-Related Behaviors (Based on Listwise Deletion)

	Less Severe ADHD-Related Behaviors				More Severe ADHD-Related Behaviors			
	(1)		(2)		(3)		(4)	
	Reading		Math		Reading		Math	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
ADD/ADHD Diagnosis	-0.29*	(0.11)	-0.21*	(0.10)	-0.14	(0.08)	-0.13	(0.07)
ADHD-Related Behaviors								
Inattentive Behaviors Score (Parent)	-0.04	(0.02)	-0.08***	(0.02)	-0.08*	(0.04)	-0.16***	(0.04)
Hyperactivity Behaviors Score (Parent)	-0.04	(0.02)	-0.01	(0.02)	-0.07	(0.04)	-0.04	(0.03)
ODD/CD Behaviors Score (Parent)	-0.00	(0.03)	-0.01	(0.03)	-0.04	(0.06)	0.00	(0.05)
Inattentive Behaviors Score (Teacher)	-0.14***	(0.02)	-0.15***	(0.02)	-0.11**	(0.04)	-0.17***	(0.04)
Hyperactivity Behaviors Score (Teacher)	0.01	(0.04)	-0.01	(0.04)	-0.04	(0.04)	-0.01	(0.04)
ODD/CD Behaviors Score (Teacher)	-0.01	(0.03)	0.01	(0.03)	0.09	(0.07)	-0.03	(0.06)
Internalizing Behaviors Score	0.02	(0.01)	-0.02	(0.01)	-0.02	(0.02)	0.01	(0.02)
Baseline Achievement/Early Cognitive Development								
Kindergarten Reading Achievement Score (std.)	0.13***	(0.02)	0.06**	(0.02)	0.14***	(0.04)	0.02	(0.04)
Kindergarten Math Achievement Score in (std.)	0.28***	(0.02)	0.40***	(0.02)	0.27***	(0.04)	0.44***	(0.04)
Child Controls								
Male	-0.09***	(0.03)	0.18***	(0.03)	-0.04	(0.05)	0.17***	(0.05)
Black	-0.34***	(0.05)	-0.38***	(0.05)	-0.50***	(0.08)	-0.47***	(0.07)
Hispanic	-0.03	(0.04)	-0.00	(0.04)	-0.16*	(0.07)	0.03	(0.08)
Lives in Midwest in Kindergarten/First Wave Available	0.10**	(0.04)	0.01	(0.04)	0.05	(0.06)	0.01	(0.07)
Lives in West Near in Kindergarten/First Wave Available	0.09*	(0.04)	0.06	(0.05)	-0.00	(0.09)	-0.07	(0.09)
Lives in Northeast in Kindergarten/First Wave Available	0.12**	(0.04)	0.01	(0.05)	0.11	(0.07)	0.07	(0.07)
Child Born Weighing Less than 5.5 lbs (LBW)	0.00	(0.05)	-0.07	(0.05)	0.10	(0.08)	0.11	(0.07)
Child Not Covered by Insurance	-0.01	(0.04)	0.05	(0.04)	-0.02	(0.07)	-0.02	(0.06)
HH Income Below Federal Poverty Line	-0.19***	(0.05)	-0.11*	(0.05)	-0.05	(0.07)	-0.05	(0.07)
Number of Other Children in HH	-0.01	(0.01)	0.02	(0.01)	0.01	(0.02)	0.03	(0.02)
Child Been in Childcare Outside Home	-0.06*	(0.03)	-0.05*	(0.02)	-0.03	(0.05)	0.01	(0.05)
Mother Controls								
Mother Has HS Education	0.17*	(0.07)	0.19*	(0.07)	0.06	(0.09)	0.15	(0.09)
Mother Has Completed Some College	0.23**	(0.07)	0.30***	(0.07)	0.20*	(0.09)	0.27**	(0.10)
Mother Has Completed Four Year College Degree	0.48***	(0.08)	0.46***	(0.07)	0.58***	(0.11)	0.58***	(0.10)
Current Mother Age at Kindergarten Round	0.01**	(0.00)	0.00	(0.00)	0.01	(0.00)	0.00	(0.00)
Mother Has Clinically Depressive Symptoms at Kindergarten	-0.10*	(0.04)	-0.02	(0.04)	0.08	(0.05)	0.11*	(0.05)
Constant	0.04	(0.15)	0.07	(0.14)	0.11	(0.35)	0.45	(0.30)
N	3550		3570		1030		1040	
R Squared	0.36		0.39		0.39		0.46	

*p<0.05, **p<0.01, ***p<0.001. Standard errors in parentheses.

Data Source: Early Childhood Longitudinal Study, Kindergarten Cohort of 1998-1999 (ECLS-K).

Notes: Our working sample consists of the children eligible for the kindergarten, first, third, fifth, and eighth grade survey rounds with non-missing information on ADHD diagnosis between kindergarten and third grade and 8th grade reading and math scores. Sample sizes are rounded to the nearest 10 in accordance with NCES restricted data requirements.

Appendix Table A.4: OLS Estimates of the Relationship Between an Early Elementary School ADHD Diagnosis and Eighth Grade Reading or Math Achievement, by Severity of ADHD-Related Behaviors and Interactions of Behavior with Diagnosis

	Less Severe ADHD-Related Behaviors			
	(1)		(2)	
	Reading		Math	
	Coef.	SE	Coef.	SE
ADD/ADHD Diagnosis (Main Effect)	-0.61	(0.91)	-0.75	(0.96)
ADHD-Related Behaviors (Main Effects)				
Inattentive Behaviors Score (Parent)	-0.05*	(0.02)	-0.08***	(0.02)
Hyperactivity Behaviors Score (Parent)	-0.03	(0.02)	0.00	(0.02)
ODD/CD Behaviors Score (Parent)	0.02	(0.03)	0.02	(0.02)
Inattentive Behaviors Score (Teacher)	-0.17***	(0.02)	-0.18***	(0.02)
Hyperactivity Behaviors Score (Teacher)	0.03	(0.03)	-0.01	(0.03)
ODD/CD Behaviors Score (Teacher)	-0.01	(0.02)	0.03	(0.03)
Internalizing Behaviors Score	-0.01	(0.02)	-0.04	(0.02)
Diagnosis * ADHD-Related Behaviors (Interactions)				
Inattentive Behaviors Score (Parent)	-0.21	(0.13)	-0.20	(0.12)
Hyperactivity Behaviors Score (Parent)	0.21	(0.13)	0.22	(0.13)
ODD/CD Behaviors Score (Parent)	0.10	(0.20)	0.30	(0.22)
Inattentive Behaviors Score (Teacher)	0.38*	(0.15)	0.27	(0.16)
Hyperactivity Behaviors Score (Teacher)	-0.29	(0.22)	-0.11	(0.22)
ODD/CD Behaviors Score (Teacher)	0.10	(0.20)	-0.29	(0.18)
Internalizing Behaviors Score	0.11	(0.16)	0.09	(0.19)
Baseline Achievement/Early Cognitive Development				
Kindergarten Reading Achievement Score (std.)	0.11***	(0.02)	0.06***	(0.02)
Kindergarten Math Achievement Score in (std.)	0.26***	(0.02)	0.35***	(0.02)
Child Controls				
Male	-0.09***	(0.02)	0.22***	(0.02)
Black	-0.38***	(0.04)	-0.41***	(0.04)
Hispanic	-0.10**	(0.03)	-0.03	(0.03)
Lives in Midwest in Kindergarten/First Wave Available	0.06	(0.03)	0.01	(0.04)
Lives in West Near in Kindergarten/First Wave Available	0.01	(0.04)	-0.00	(0.04)
Lives in Northeast in Kindergarten/First Wave Available	0.07*	(0.03)	0.01	(0.04)
Child Born Weighing Less than 5.5 lbs (LBW)	-0.01	(0.04)	-0.05	(0.04)
Child Not Covered by Insurance	0.01	(0.03)	0.01	(0.03)
HH Income Below Federal Poverty Line	-0.16***	(0.04)	-0.07*	(0.04)
Number of Other Children in HH	-0.02	(0.01)	0.02	(0.01)
Child Been in Childcare Outside Home	-0.05*	(0.02)	-0.04*	(0.02)
Mother Controls				
Mother Has HS Education	0.22***	(0.05)	0.15**	(0.05)
Mother Has Completed Some College	0.30***	(0.05)	0.27***	(0.05)
Mother Has Completed Four Year College Degree	0.56***	(0.05)	0.47***	(0.05)
Current Mother Age at Kindergarten Round	0.01**	(0.00)	0.00	(0.00)
Mother Has Clinically Depressive Symptoms at Kindergarten	-0.12***	(0.03)	-0.08**	(0.03)
Constant	0.11	(0.11)	0.09	(0.11)
N	5890		5890	
R Squared	0.37		0.39	

*p<0.05, **p<0.01, ***p<0.001. Standard errors in parentheses.

Data Source: Early Childhood Longitudinal Study, Kindergarten Cohort of 1998-1999 (ECLS-K).

Notes: Our working sample consists of the children eligible for the kindergarten, first, third, fifth, and eighth grade survey rounds with non-missing information on ADHD diagnosis between kindergarten and third grade and 8th grade reading and math scores. Sample sizes are rounded to the nearest 10 in accordance with NCES restricted data requirements. Multiple imputation was used to handle item-missingness on all other predictors. We estimated the interaction between diagnosis and early achievement measures, but they were non statistically significant so are not shown here.

Appendix Table A.5: Linear Probability Model (LPM) Predicting Medication Receipt in Fifth or Eighth Grades, Including Interactions between ADHD-Related Behaviors Scores/Baseline Achievement * Indicator for Less Severe ADHD-Related Behaviors

	Full Sample (1)	
	Child Receives Behavioral Medication in 5th or 8th Grade	
	Coef.	SE
Less Severe ADHD-Related Behaviors	0.38***	(0.11)
ADD/ADHD Diagnosis	0.63***	(0.03)
ADHD-Related Behaviors		
Inattentive Behaviors Score (Parent)	0.03**	(0.01)
Hyperactivity Behaviors Score (Parent)	0.03**	(0.01)
ODD/CD Behaviors Score (Parent)	0.02	(0.02)
Inattentive Behaviors Score (Teacher)	0.03**	(0.01)
Hyperactivity Behaviors Score (Teacher)	0.01	(0.01)
ODD/CD Behaviors Score (Teacher)	-0.00	(0.02)
Internalizing Behaviors Score	0.03*	(0.02)
Baseline Achievement/Early Cognitive Development		
Kindergarten Reading Achievement Score (std.)	0.01	(0.01)
Kindergarten Math Achievement Score in (std.)	-0.01	(0.01)
Less Severe Group * ADD/ADHD Diagnosis (Interaction)	0.03	(0.06)
Less Severe Group * ADHD-Related Behaviors (Interactions)		
Inattentive Behaviors Score (Parent)	-0.03*	(0.01)
Hyperactivity Behaviors Score (Parent)	-0.03*	(0.01)
ODD/CD Behaviors Score (Parent)	-0.02	(0.02)
Inattentive Behaviors Score (Teacher)	-0.02	(0.01)
Hyperactivity Behaviors Score (Teacher)	0.00	(0.01)
ODD/CD Behaviors Score (Teacher)	0.00	(0.02)
Internalizing Behaviors Score	-0.03*	(0.01)
Less Severe Group * Baseline Achievement/Early Cognitive Development (Interactions)		
Kindergarten Reading Achievement Score (std.)	-0.01	(0.01)
Kindergarten Math Achievement Score in (std.)	-0.00	(0.01)
Constant	-0.42***	(0.11)
N		7830
R Squared		0.42

*p<0.05, **p<0.01, ***p<0.001. Standard errors in parentheses.

Data Source: Early Childhood Longitudinal Study, Kindergarten Cohort of 1998-1999 (ECLS-K).

Notes: Our working sample consists of the children eligible for the kindergarten, first, third, fifth, and eighth grade survey rounds with non-missing information on ADHD diagnosis between kindergarten and third grade and 8th grade reading and math scores. Sample sizes are rounded to the nearest 10 in accordance with NCES restricted data requirements. Multiple imputation was used to handle item-missingness on all other predictors. All child and mother controls are included in these models but not shown here.

Appendix Table A.6: Full Model Results Corresponding Table 3: OLS Estimates of Relationship Between an Early Elementary School ADHD Diagnosis and Eighth Grade Reading or Math Achievement, Controlling for Treatments to Help Control Behaviors, by Severity of ADHD-Related Behaviors

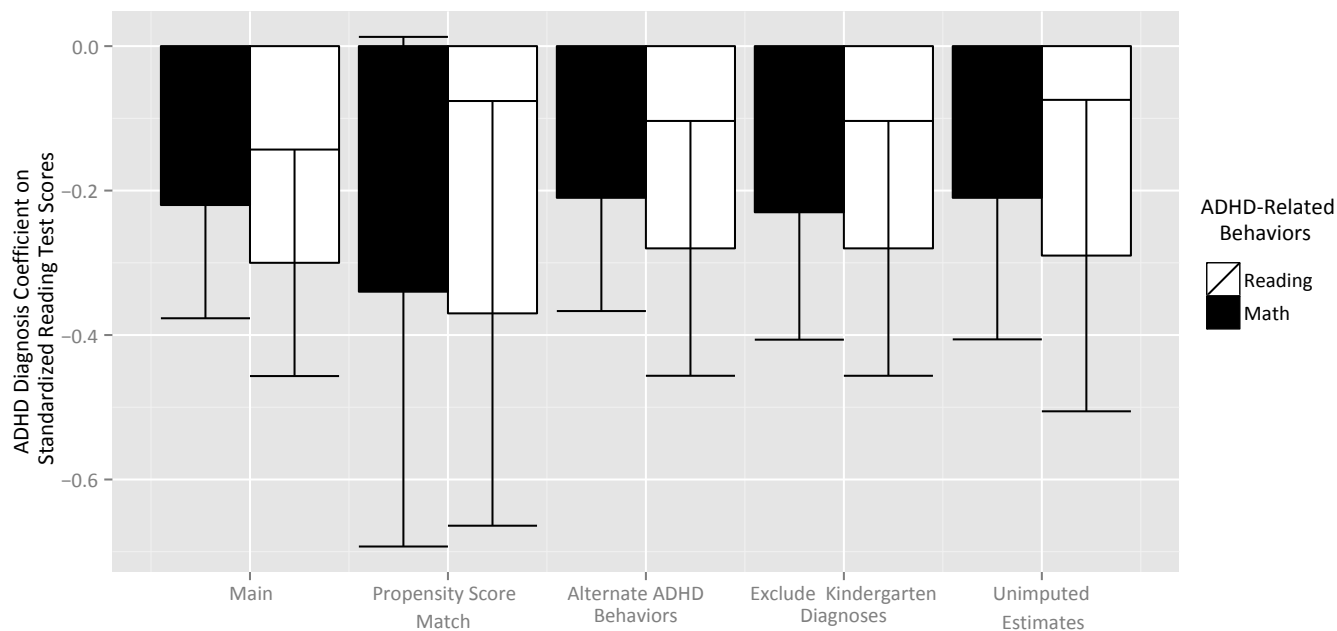
	Less Severe ADHD-Related Behaviors								More Severe ADHD-Related Behaviors							
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	
	Reading	Math	Reading	Math	Reading	Math	Reading	Math	Reading	Math	Reading	Math	Reading	Math	Reading	Math
Diagnosed with ADHD, Taking Behavioral Medication in 5th or 8th Grade	-0.31**	(0.11)	-0.29**	(0.10)	-0.23*	(0.11)	-0.22*	(0.10)	-0.13	(0.07)	-0.09	(0.07)	-0.05	(0.07)	-0.03	(0.07)
Diagnosed with ADHD, Not Taking Behavioral Medication in 5th or 8th Grade	-0.32*	(0.13)	-0.08	(0.16)	-0.27*	(0.13)	-0.04	(0.16)	-0.26*	(0.11)	-0.26**	(0.10)	-0.20	(0.11)	-0.20*	(0.10)
Not Diagnosed with ADHD, Taking Behavioral Medication in 5th or 8th Grade	-0.26**	(0.08)	-0.29**	(0.09)	-0.17	(0.09)	-0.20*	(0.09)	-0.26**	(0.08)	-0.18*	(0.07)	-0.19*	(0.08)	-0.13	(0.07)
Not Diagnosed with ADHD, Not Taking Behavioral Medication in 5th or 8th Grade																
Other Behavioral Treatments and Services (Main Effects)																
Child in Counseling 5th or 8th Grade					-0.20	(0.11)	-0.17	(0.13)					-0.01	(0.09)	-0.00	(0.10)
Child in Special Education 5th or 8th Grade					-0.25***	(0.05)	-0.24***	(0.05)					-0.33***	(0.05)	-0.28***	(0.06)
ADHD-Related Behaviors																
Inattentive Behaviors Score (Parent)	-0.05**	(0.02)	-0.08***	(0.02)	-0.05**	(0.02)	-0.08***	(0.02)	-0.06	(0.03)	-0.11***	(0.03)	-0.05	(0.03)	-0.11***	(0.03)
Hyperactivity Behaviors Score (Parent)	-0.02	(0.02)	0.00	(0.02)	-0.02	(0.02)	0.01	(0.02)	-0.06	(0.03)	-0.05	(0.03)	-0.04	(0.03)	-0.04	(0.03)
ODD/CD Behaviors Score (Parent)	0.02	(0.03)	0.02	(0.02)	0.03	(0.03)	0.02	(0.02)	-0.02	(0.04)	-0.01	(0.04)	-0.01	(0.04)	-0.00	(0.04)
Inattentive Behaviors Score (Teacher)	-0.16***	(0.02)	-0.18***	(0.02)	-0.15***	(0.02)	-0.17***	(0.02)	-0.12***	(0.03)	-0.19***	(0.03)	-0.11***	(0.03)	-0.18***	(0.03)
Hyperactivity Behaviors Score (Teacher)	0.03	(0.03)	-0.01	(0.03)	0.02	(0.03)	-0.01	(0.03)	0.01	(0.03)	0.02	(0.03)	0.01	(0.03)	0.02	(0.03)
ODD/CD Behaviors Score (Teacher)	-0.02	(0.02)	0.02	(0.03)	-0.02	(0.02)	0.02	(0.03)	0.01	(0.05)	-0.06	(0.05)	0.01	(0.05)	-0.06	(0.05)
Internalizing Behaviors Score	-0.01	(0.02)	-0.03	(0.02)	0.00	(0.02)	-0.02	(0.02)	-0.03	(0.04)	-0.02	(0.03)	-0.01	(0.03)	-0.00	(0.03)
Baseline Achievement																
Kindergarten Reading Achievement Score (std.)	0.12***	(0.02)	0.06***	(0.02)	0.11***	(0.02)	0.06***	(0.02)	0.13***	(0.03)	0.04	(0.03)	0.13***	(0.03)	0.05	(0.03)
Kindergarten Math Achievement Score in (std.)	0.26***	(0.02)	0.35***	(0.02)	0.25***	(0.02)	0.34***	(0.02)	0.25***	(0.03)	0.39***	(0.03)	0.23***	(0.03)	0.38***	(0.03)
Child Controls																
Male	-0.09***	(-0.02)	0.22***	(0.02)	-0.08***	(-0.02)	0.23***	(0.02)	-0.02	(0.04)	0.20***	(0.04)	-0.01	(0.04)	0.21***	(0.04)
Black	-0.38***	(0.04)	-0.41***	(0.04)	-0.39***	(0.04)	-0.42***	(0.04)	-0.51***	(0.05)	-0.46***	(0.05)	-0.54***	(0.05)	-0.48***	(0.05)
Hispanic	-0.11***	(0.03)	-0.03	(0.03)	-0.11***	(0.03)	-0.04	(0.03)	-0.17**	(0.05)	0.01	(0.06)	-0.19***	(0.05)	-0.02	(0.06)
Lives in Midwest in Kindergarten/First Wave Available	0.05	(0.03)	0.01	(0.04)	0.05	(0.03)	0.01	(0.04)	0.07	(0.05)	0.03	(0.05)	0.07	(0.05)	0.03	(0.05)
Lives in West Near in Kindergarten/First Wave Available	0.01	(0.04)	-0.01	(0.04)	0.01	(0.04)	-0.01	(0.04)	0.04	(0.06)	-0.06	(0.07)	0.04	(0.06)	-0.06	(0.06)
Lives in Northeast in Kindergarten/First Wave Available	0.07*	(0.03)	0.01	(0.04)	0.08*	(0.03)	0.02	(0.04)	0.14*	(0.05)	0.09	(0.05)	0.17**	(0.05)	0.11*	(0.05)
Child Born Weighing Less than 5.5 lbs (LBW)	-0.01	(0.04)	-0.05	(0.04)	-0.01	(0.04)	-0.04	(0.04)	0.15*	(0.07)	0.06	(0.06)	0.16*	(0.07)	0.07	(0.06)
Child Not Covered by Insurance	0.01	(0.03)	0.01	(0.03)	0.00	(0.03)	0.00	(0.03)	0.00	(0.05)	0.02	(0.05)	-0.01	(0.05)	0.01	(0.05)
HH Income Below Federal Poverty Line	-0.16***	(0.04)	-0.07*	(0.03)	-0.16***	(0.04)	-0.07*	(0.03)	-0.14**	(0.05)	-0.11*	(0.05)	-0.13**	(0.05)	-0.11*	(0.05)
Number of Other Children in HH	-0.02	(0.01)	0.02	(0.01)	-0.01	(0.01)	0.02	(0.01)	-0.01	(0.02)	0.01	(0.02)	-0.01	(0.02)	0.01	(0.02)
Child Been in Childcare Outside Home	-0.05*	(0.02)	-0.04*	(0.02)	-0.05*	(0.02)	-0.04*	(0.02)	-0.03	(0.04)	-0.01	(0.04)	-0.04	(0.04)	-0.02	(0.04)
Mother Controls																
Mother Has HS Education	0.22***	(0.05)	0.16**	(0.05)	0.22***	(0.04)	0.16**	(0.05)	0.12*	(0.06)	0.10	(0.06)	0.12*	(0.06)	0.10	(0.06)
Mother Has Completed Some College	0.30***	(0.05)	0.28***	(0.05)	0.30***	(0.05)	0.28***	(0.05)	0.26***	(0.06)	0.23***	(0.07)	0.25***	(0.06)	0.22**	(0.06)
Mother Has Completed Four Year College Degree	0.57***	(0.05)	0.47***	(0.05)	0.57***	(0.05)	0.48***	(0.05)	0.54***	(0.07)	0.45***	(0.07)	0.53***	(0.07)	0.44***	(0.07)
Current Mother Age at Kindergarten Round	0.01**	(0.00)	0.00	(0.00)	0.01**	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.01	(0.00)	0.00	(0.00)
Mother Has Clinically Depressive Symptoms at Kindergarten	-0.12***	(0.03)	-0.08**	(0.03)	-0.11***	(0.03)	-0.08**	(0.03)	0.00	(0.04)	0.04	(0.04)	0.01	(0.04)	0.05	(0.04)
Constant	0.09	(0.11)	0.07	(0.11)	0.07	(0.11)	0.05	(0.11)	0.16	(0.25)	0.61*	(0.24)	0.02	(0.25)	0.49*	(0.24)
N	5890		5890		5890		5890		1930		1930		1930		1930	
R Squared	0.37		0.39		0.37		0.39		0.38		0.42		0.39		0.43	

p<0.05, **p<0.01, ***p<0.001. Standard errors in parentheses.

Data Source: Early Childhood Longitudinal Study, Kindergarten Cohort of 1998-1999 (ECLS-K).

Notes: Our working sample consists of the children eligible for the kindergarten, first, third, fifth, and eighth grade survey rounds with non-missing information on ADHD diagnosis between kindergarten and third grade and 8th grade reading and math scores. Sample sizes are rounded to the nearest 10 in accordance with NCES restricted data requirements. Multiple imputation was used to handle item-missingness on all other predictors.

Appendix Figure A.1: OLS and Propensity Score Estimates of the Association between an Early Elementary School ADHD Diagnosis and Eighth Grade Reading and Math Achievement among Children with Less Severe ADHD-Related Behaviors



Sample size not shown in figure because number of cases varies across estimation strategies. *Data Source:* Early Childhood Longitudinal Study, Kindergarten Cohort of 1998-1999 (ECLS-K).

Notes: Our working sample consists of the children eligible for the kindergarten, first, third, fifth, and eighth grade survey rounds with non-missing information on ADHD diagnosis between kindergarten and third grade. Sample sizes are rounded to the nearest 10 in accordance with NCES restricted data requirements.