



# The Relation Between Parental Involvement, Children's Symptoms of Inattention and Hyperactivity, and Academic Achievement

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## Introduction

- Evidence indicates that 33-66% of children with clinically elevated ADHD symptoms experience academic impairment (Barry, Lyman, & Klinger, 2002), and up to 75% show impairments at both home and school (Willcutt, 2012).
- Parental involvement in school is a key factor in addressing academic and behavioral issues faced by families of children with ADHD (Rogers, Wiener, Marton, & Tannock, 2009).
- Examining specific parental involvement factors associated with child academic performance is critical given that success in school is an important developmental outcome, and predicts later educational attainment, adult socioeconomic status, and academic motivation (Ritchie & Bates, 2013).

## Research Questions

- To what extent are five components of parental involvement related to academic achievement and symptoms of inattention and hyperactivity/impulsivity in school-aged children?
  - We predicted that higher levels of parental involvement will be related to lower levels of inattention and hyperactivity/impulsivity and better academic achievement.
- When considered in a model with inattention and hyperactivity/impulsivity symptoms, which types of parental involvement are the best predictors of academic achievement?
  - We predicted that parental sense of competence and the quality of parent-teacher relationships will be the best predictors of academic achievement.

## Methods

### Participants

- 348 parents or caregivers of children (57.5% male) aged 8-12 years ( $M=9.7$ ;  $SD=1.3$ ).
- Parents were recruited through Amazon's Mechanical Turk, and completed the measures through a Qualtrics survey.

### Measures: Parent-Report

- ADHD Rating Scale-IV: Home Version (DuPaul, Power, Anastopoulos, and Reid, 1998)
  - 18 items (9 inattention, 9 hyperactivity/impulsivity)
- Parent Involvement Project-Parent Questionnaire (PIP-PQ; Hoover-Dempsey, Sandler, 1997)
  - Parent's Perceptions of Self-Efficacy For Helping Child Succeed in School (11 items)
  - Partnership-focused Role Construction (7 items)
  - Parent-focused Role Construction (8 items)
  - School-focused Role Construction (8 items)
  - Parent's Perceptions of General Invitations for Involvement from the School (11 items).
- Child Academic Achievement
  - Reported overall grades on a scale from all As (10) to mostly Fs (1)

## Results

### Research Question 1

- Correlational results indicated that parents of children with more inattention and hyperactivity/impulsivity problems felt less competent in their parenting, and were more likely to report strong parent-teacher relationships (Table 1).

	SES	Inattention	Hyperactivity	Sense of Competence	Parent-teacher relation	Parent-focused role	School-focused role	Invitations from school
Socioeconomic status (SES)	1							
Inattention	-.052	1						
Hyperactivity	-.043	.846**	1					
Sense of competence	-.040	-.474**	-.448**	1				
Parent-teacher relation	.070	.121*	.159**	-.002	1			
Parent-focused role	.061	-.144**	-.135*	.522**	.382**	1		
School-focused role	-.007	.098	.121*	-.183**	.250**	.043	1	
Invitations from school	.090	-.299**	-.314**	.500**	.224**	.556**	.012	1
Academic achievement	.125**	-.479**	-.400**	.501**	-.047	.210**	-.083	.225**

\* $p < .05$ . \*\* $p < .01$ .

### Research Question 2

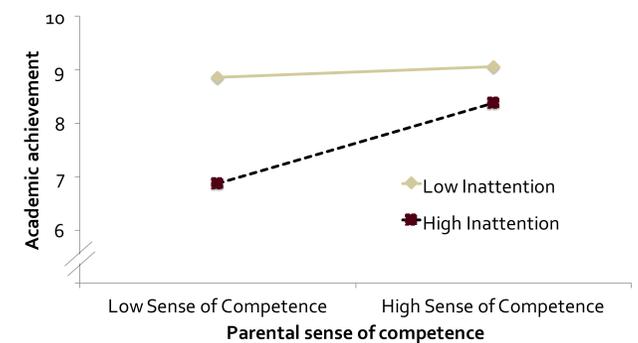
- Regressions were analyzed with academic achievement as the outcome, and inattention, hyperactivity/impulsivity, the five parental involvement variables, as well as some interactions as predictors (Table 2).
- Socioeconomic status, child inattention, and the interaction between parental sense of competence and child inattention were significant predictors of academic achievement.
- All of the predictors accounted for 34.9% of the variance in academic achievement.

	b	SE	$\beta$
Socioeconomic status	.111*	.040	.125
Inattention	-2.035*	.878	-.876
Hyperactivity	.417	.295	.173
Sense of Competence	.112	.305	.051
Parent-Teacher	-.363	.263	-.184
Parent-focused role	.011	.133	.005
School-focused role	.040	.079	.023
Invitations from School	-.098	.108	-.053
Sense of Competence x Inattention	.465*	.215	.829
Sense of Competence x Hyperactivity	-.057	.194	-.153
Parent-Teacher x Inattention	-.288	.217	-.562
Parent-Teacher x Hyperactivity	.049	.197	.136

\* $p < .05$

## Results

Figure 1. Relation between parental sense of competence and child achievement at different levels of inattention



## Conclusion

- This study identified key areas of parental involvement that aid in understanding the development of child behavior and academic achievement.
- Parental sense of competence, parent-teacher relationships, parent-focused role, and invitations for involvement from school were significantly related to both child inattention and hyperactivity/impulsivity.
- Child inattention and parental sense of competence were unique predictors of academic achievement.
  - The interaction between child inattention and parental sense of competence was significant, suggesting that this variable is especially important for children with more inattention problems.
- A limitation of this study is that parental involvement was measured using a survey of parents' beliefs about their own involvement.
  - Future work should focus on examining parental involvement further by assessing children and their teachers, in addition to their parents.

## References

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