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Achievement and the Myth of the Helicopter Mom

Christina Cipriano Crowe, Northeastern University, MA

Crowe, Ph.D., is a Lecturer of Applied Developmental and Educational Psychology in the College of Science.

Abstract
The present study used longitudinal data (N=1364) to assess between and within- family increases in parental encouragement of school from first to fifth grade alongside between and within- child differences in achievement. Results suggest the possibility of an optimal level of parent encouragement of school, and that interventions targeting the least encouraging parents may demonstrate the greatest achievement benefits across middle childhood.

Introduction
Recent media attention has centered on concerns of *helicopter parenting*, the notion that some parents become overly involved (Chua, 2011; Tan & Goldberg, 2009; Taub, 2008). These concerns are not new – classical theory emphasized the potential harm of both excessively low *and* high parent involvement in children's lives**.** However, public conversations of parent involvement, as well as the risks associated with parents who 'hover,' have fostered a new urgency for practitioners and policy makers to address whether and where to target family involvement interventions.

Until recently, the literature overwhelmingly suggested that there is a positive relationship between parent involvement (PI) and student achievement (SA; Jeynes, 2007; Pomerantz, Moorman & Litwack, 2007). Previous research has found that the direct learning stimulation that happens through parental involvement, such as helping with homework or reading together, has a positive impact on student achievement (Fan & Chen, 2001; Hill & Taylor, 2004; Jeynes, 2007; Marjoribanks, 2002). Additional consensus in the field suggests that children project their parents' value for education and that this value for education is modeled through PI. Likewise, it appears that educational involvement impacts student cognitive self-regulation and social emotional processes that in turn positively affect student achievement. For example, it has been found that student achievement motivation and feelings about school are better for students whose parents are positively involved in their children's education (Eccles & Roeser, 2009). Furthermore, parent communication with their child's school has proven to be positively associated with SA. Inherent in this model is the idea that through a parent engaging in their

child's education, they are providing their child with social capital necessary for successful adaption in school and life (Parke & Buriel, 1998).

There is yet another hypothesis embedded within this relationship which suggests that children's behaviors, temperaments and actions play an active role in engaging parents to become involved in their child's education. Children can evoke their parent's involvement through essentially two types of actions, positive behaviors or successes (good grades, school awards, athletic achievements) and negative behaviors or failures (poor academic performance, behavioral issues). Recent investigations of PI have stressed the importance of acknowledging not just how parents get involved, but why they choose to do so. PI that is driven by student success or failure may look different to both the parent and the child. Parents of children who are not succeeding in school may become involved in reaction to the child's performance. Children of parents who become involved in response to their low achievement may internalize their parent's interest in their education negatively (Eccles & Roeser, 2009; Pomerantz et al., 2007). As a result, their parent's involvement can have a diminished effect on their later achievement.

Maternal education and family economic status are among the most salient family characteristics which contribute to the relationship between PI and SA. On average, children whose mothers have higher levels of education tend to be more involved in their children's education. They also are more likely to get involved early, through direct (reading to their child, helping with homework) and indirect (language stimulation and phonemic awareness through observation and communication with family members) means, and to stay involved across middle childhood more so than their less educated peers (Dearing, Kreider, Simpkins & Weiss, 2006).

Additionally, economic deprivation can constrain a family's ability to provide resources, learning stimulation and educational support in the home (Roscogno & Ainsworth-Darnell, 1999; Tan & Goldberg, 2009). Lower income families on average tend to have less flexible jobs, many with longer hours, limiting the time available to attend school related functions and assist with homework and after school activities (Dearing & Taylor, 2007; Votruba-Drzal, 2003). In particular, PI may matter most for children at exceptional risk for underachievement, namely children living in families with few socioeconomic resources (Cutright, 2008; Dearing & Taylor, 2007). In short, economic deprivation limits material and psychosocial investments in children's home learning environments. If PI promotes academic achievement, then these children have the most to gain in having their parents involved in their education and from the social and cultural capital which relationships with teachers and schools can afford (Marjoribanks, 2002; Dearing et al., 2006).

Furthermore, it is prudent to consider that just as PI looks different across family characteristics, so does it appear differently to their children. Classic developmental theory suggests the importance of interactional synchrony in parenting style (Baumrind, 1978), and that not all children will universally respond in similar ways to similar levels of involvement. Media attention surrounding the hypothetical "helicopter parent" and "tiger mom" (Chua, 2011) have painted a blank shadow across PI, where overzealous parents let their self-interest get the best of their intentions. As such, many fear that supporting too much PI can result in intrusive parenting, reflected in a decline and/or diminished SA.

Moreover, teachers are a critical component of the PI discussion. Federal and local initiatives stress the importance of school readiness, the notion that teachers need to enable classroom environments conducive to PI. The literature has demonstrated that teachers' attitudes and impressions towards parents can both promote and inhibit positive involvement, depending upon the perceived shared educational efficacy between teacher and parent (Pianta, 1999). As such, when considering trajectories of PI it is important to further identify if there are differences between parent and teacher report of involvement, respectively.

Lastly, it is noted that although traditional education structures supported PI in the early grades, more recent trends in research contend that parents should continue to be involved across their child's education. The work of Pomerantz and colleagues (2007) demonstrates that the positive effects of PI can be extended by continued involvement throughout elementary school. Toward this end, the present study begins to address the apparent tension between too little and too much parent investment in children's education. Three primary research questions were examined:

(1) Are between-family differences in parental encouragement of school associated with between-child differences in achievement from first to fifth grade?
(2) Are within-family increases in parental encouragement of school associated with within-child improvements in achievement between first and fifth grade?
(3) Do the effects of increased encouragement of school from first to fifth grade differ depending on maternal education level, family economic status, and whether parents were more or less encouraging initially (i.e., at first grade)?

Given the field's general consensus that children in more involved families achieve at greater levels than children in less involved families, it was anticipated that between-family differences in parental encouragement of schools would be significantly associated with between-child differences in achievement. Furthermore, within-family increases in parental encouragement of school was hypothesized to be significantly associated with within-child improvements in achievement, since recent evidence also indicates that increased family involvement over time is associated with improved child achievement. Lastly, it was expected that maternal education level, family economic status and involvement level at first grade would moderate the relationship between parental encouragement and achievement from first through fifth grade. All results were anticipated to be consistent across maternal and teacher report.

Methods

To answer these questions, data from the National Institute of Child Health and Human Development Study of Early Child Care and Youth Development (NICHD SECCYD) (1,364 children and families) was analyzed (NICHD ECCRN, 1993). The SECCYD is a longitudinal investigation, which began collecting data from 1,364 children residing in ten sites across the United States in 1991. Predominantly European-American (80.4%), the sample is economically and geographically diverse. The distribution of wealth was spread equally across the sample at time of the child's birth and at first and third grade, one-third of the families were below the poverty line. Families on average had 3.25 children in the household. Sample descriptive demographics at entry into the NICHD SECCYD as well as outcome statistics for primary constructs are included in Table 1.

Table 1. Descriptive Demographics at Entry into NICHD (N=1364) and Outcomes of Interest (N=899).

	%/M (SD)	
Child Characteristics		
African American	12%	
Latino/American	6%	
White/Caucasian	80.4%	
Child is a Boy	52%	
WJ Grade 1 Math/Literacy	470.99 (15.74)	452.96 (24.11)
WJ Grade 3 Math/Literacy	497.33 (13.19)	493.86 (18.73)
WJ Grade 5 Math/Literacy	509.82 (12.85)	510.12 (17.52)
Maternal Characteristics		
Partnered	64%	
Mean Years of Education	14.29 (2.51)	
Family Characteristics		
Average Income-to-Needs Score	3.68 (2.97)	
Parent Encouragement Grade 1	2.48 (0.62)	
Parent Encouragement Grade 3	3.12 (0.88)	
Parent Encouragement Grade 5	3.04 (0.88)	

Demographic variables of interest included mother's level of education and family economic status. Maternal education level was measured in years one month after the child's birth. The mean maternal educational level for the sample was 14.29 years, equating to roughly an Associate's degree.

Family economic status was assessed using household income collected at each data collection time-point. In order to capture the effects of poverty, an income-to-needs composite score was created using the ratio of family income to the appropriate U.S. Census poverty threshold, based on family size and number of children in the home. Income-to-needs scores were averaged across the entire study (at months 6, 15, 36, and 54 and grades 1, 3, and 5), creating an index of "permanent" income-to-needs (M = 3.68, SD = 2.97).

To assess PI, the Parent Teacher Involvement Questionnaire (Miller-Johnson, Maumary-Gremaud, & Conduct Disorders Research Group, 1995) was used at first, third, and fifth grade. Mothers and classroom teachers reported on three facets of PI (quality of contact, quantity of contact, and quantity of involvement) on a Likert Scale (1= not at all, 5= a great deal). At first grade both the parent and teacher form contained 21 items, and at third and fifth grade the parent form used 12 items and the teacher form used 10 items, respectively. To assess parental encouragement, this research utilized maternal report (α's ranged from .75 to .92) and teacher report (α's ranged from .75 to .92) on *quality of contact* questions. These questions are those which looked to estimate the mother's attitudes towards their child's teacher and the teacher relationship with the child's parents.

SA was measured using the *Woodcock-Johnson Psycho-educational Battery – Revised* (WJ-R, Woodcock & Johnson, 1989). The WJ-R provided standardized information about the children's academic ability at first, third, and fifth grade. In the present study, two of the subscales, *Applied Problems (mathematics achievement)* and *Letter-Word Identification (literacy achievement)*, were used. *Applied Problems* measured the child's skill at analyzing and solving practical problems in mathematics and *Letter-Word Identification* measured the child's cognitive achievement. These WJ-R subscales demonstrated excellent reliability and validity in

standardization samples and the SECCYD (α's ranged from .96-.98 across all data collection points for Applied Problems and from .94-.97. for Letter-Word). In this study, total standardized scores were used.

Results

Analyses were conducted using individual growth models (HLM 6.06 software; Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2004), with PI estimated as a time-varying predictor of SA. In addition, path analyses were estimated to explore the direction of effects between the time-varying constructs of interest.

Multilevel models were used to estimate associations between PI and SA from 1st to 5th grade. Analyses were conducted in three stages. First, between-family associations were estimated, including time-varying associations (grand-mean centered) at level-1 and associations between average encouragement and average achievement at level-2 (Table 2). Next, within-family associations were estimated by centering the level-1 time-varying encouragement predictors on their respective group means (i.e., within-family means) (Table 3). Lastly, cross-level interactions for the within-family associations were estimated. Specifically, the moderating effects of maternal education, family economic status, and level of encouragement at first grade were examined (Table 4).

Results from between-family models were not as hypothesized, and differed by mother and teacher report as well as by whether encouragement was estimated as a time-varying or time-invariant (i.e., average encouragement across the study) predictor. For maternal reports, average encouragement was positively associated with average Applied Problems and Letter-Word achievement across the study, but the time-varying associations for these two outcomes were negative in direction, significantly so for Applied Problems. This negative direction suggests an inverse relationship between PI and mathematics achievement, such that more PI predicted less achievement. For teacher reports, average PI was positively associated with average Applied Problems achievement, but negatively associated with average Letter-Word Achievement. Time-varying associations between teacher reports of PI and Letter-Word achievement were positive in direction such that more encouragement predicted higher achievement.

Table 2. Between-Family Associations for Parent Encouragement and Achievement (N=899)

	Mom Report				Teacher Report			
	Mathematics		Literacy		Mathematics		Literacy	
Level-1								
Time-varying Involvement	1.34** (0.49)		2.02** (0.75)		-.52 (0.36)		-1.37** (.50)	
Level-2	Intercept	Slope	Intercept	Slope	Intercept	Slope	Intercept	Slope
Average Involvement	-2.45** (0.92)	-0.06 (0.43)	-1.92 (1.38)	-0.35 (0.70)	2.70** (.70)	-0.09 (0.33)	5.27** (1.07)	-0.85 (.57)

**p<.000, *p<.05

Results from the within-family models also differed by mother and teacher report. For models based on maternal reports of PI, findings were as hypothesized, where increases in PI predicted increases in SA. On the other hand, when using teacher reports of PI, increases in involvement predicted significant decreases in Letter-Word achievement.

Table 3. Within-Family Associations for Parent Encouragement and Achievement (N=899)

		Maternal Report		Teacher Report	
		Mathematics	Literacy	Mathematics	Literacy
Level-1					
	Time-varying	1.34**	1.98**	-0.51	-1.38**
	Involvement	(0.49)	(0.75)	(0.36)	(0.50)

**p<.000, *p<.05

The most consistently significant cross-level interaction was evident for level of encouragement at first grade. Using maternal reports, these interactions indicated that the positive associations between increases in PI and SA were largest in size for children whose parents were least encouraging at first grade. For teacher reports, the negative association between increases in encouragement and decreases in Letter-Word achievement was largest in size for children whose parents were most encouraging at first grade. For this outcome, maternal education also moderated the association between encouragement and achievement such that the negative association was largest for children whose mothers were most educated. No significant effect was found when considering economic status.

Table 4. Variations by Economic Status, Maternal Education, and First Grade Involvement Levels (N=899)

	Maternal Report		Teacher Report	
	Mathematics	Literacy	Mathematics	Literacy
Time-varying Involvement	1.16*	1.76*	-0.57	-1.25*
(Level-2 Intercept)	(0.48)	(0.72)	(0.37)	(0.53)
Economic Status	-0.32	-0.43	-0.05	-0.12
	(0.22)	(0.37)	(0.16)	(0.26)
Maternal Ed Level	0.15	0.66	0.16	0.60*
	(0.24)	(0.43)	(0.19)	(0.29)
First Grade Involvement	-1.50*	-3.51**	-1.02*	-1.48**
	(0.79)	(1.18)	(0.40)	(0.53)

**p<.000, *p<.05

Discussion

Three important results can be drawn from this investigation. First, higher levels of PI were associated with higher literacy and mathematics achievement. This finding is consistent with the PI literature which suggests that the more involved parents are in their child's education, the more their children excel academically.

Secondly, increases in PI of school predicted improvements in achievement. The direction of effect suggests a pathway from encouragement to achievement rather than vice versa. Therefore once can conclude that although parents become involved in their child's education for a variety of reasons, when parent's increase their level of involvement across elementary school, their children's achievement benefits.

Lastly, increases in encouragement were most strongly and positively associated with improved achievement for children whose parents were initially the least encouraging. Children whose parents had low levels of involvement at first grade benefited most from their parent's increased educational involvement across elementary school.

On the other hand, for children whose parents were very encouraging at first grade, analysis of teacher report suggests that further increases in encouragement inhibited achievement growth. This result suggest that there may be an optimal level of parent encouragement of school, and that interventions targeting the least encouraging parents may demonstrate the greatest achievement benefits across middle childhood.

Conclusion

In sum, does more PI promote children's achievement? According to these analyses, the answer to this question depends on whose perspective is considered, parents or teachers. Moreover, these analyses indicate that more involvement promoted achievement for children whose parents were uninvolved near the start of elementary school, but inhibited achievement for children whose parents were highly involved at this time. Therefore, less time should be spent discussing the myth of the helicopter mom, and more attention should be paid identifying and engaging parents who are least involved in their children's early schooling.

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