Students' Perceptions of Family Involvement Behaviors: Indicators of Family
Achievement Goal Emphases, Task Values, and Confidence Beliefs in Math

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Abstract

This study examined students' perceptions of family involvement behaviors at home and at school, and the relation between perceived family involvement and perceived family emphasis on mastery and performance achievement goals, task value, and confidence in students' ability in math. Middle and high school students differentiated between types of family involvement, including perceived family capacity to provide help, home-based monitoring and assistance, and school-based involvement. Perceptions of family capacity to provide help, and home-based monitoring and assistance, positively predicted perceived family mastery and performance goal emphases, valuing of math, and family confidence in students' abilities. Perceived school-based involvement negatively predicted perceived family mastery goal emphasis, valuing of math, and confidence in student ability, but positively predicted family performance goal emphasis.

Introduction

It is well established that family involvement is a critical determinant of children's school achievement (e.g., Epstein, et al., 2002; Henderson, 1987; Henderson & Mapp, 2002; Sheldon, 2005; Walker, Hoover-Dempsey, et al., 2004). Recently, studies have begun to connect different types of involvement to students' achievement motivation (Gonzalez-DeHass, Willems, & Holbein, 2005). Studies of achievement motivation and parent or family involvement have examined parents' beliefs and practices as they relate to students' academic outcomes, including parents' expectations and attributions for children's academic outcomes (Eccles-Parsons, Adler, & Kaczala, 1982; Wigfield & Eccles, 1992), involvement in academic activities at school or at home (Hoover-Dempsey, Battaito, et al., 2005; Pomerantz, Ng, & Wang, 2006; Walker, Green, et al., 2006), and emotional support (Hokoda & Fincham, 1995; Wentzel, 1998). The majority of studies have focused on observed or parent-report behaviors and their relation to students' motivational beliefs. Yet students' perceptions of these behaviors are critical, as it is their perceptions that will ultimately shape students' understanding of the beliefs and values they represent (Grolnick & Slowiaczek, 1994).

Research regarding students' perceptions of family involvement behaviors and the beliefs and values they convey to students is a relatively new area of research (Friedel, Cortina, Turner & Midgley, 2007; Karabenick & Friedel, 2007; Hoover-Dempsey & Sandler, 2005). In the present study, we extend and inform research at the intersection of family involvement and achievement motivation by exploring students' perceptions of family involvement at home and at school, and their perceptions of the beliefs, goals and values that families emphasize. We address two general research questions. The first is whether students distinguish between different types of family involvement activities, or construe family involvement more generally as degrees or levels of involvement. Specifically, we asked students about ways their families monitored their school-related work, the different types of assistance families provided, students' judgments of their families' capacity to provide assistance, and the extent of family-teacher communication and school-based involvement. Second, we examined how perceptions of family involvement behaviors were related to achievement goal and expectancy-value determinants of student motivation. Specifically, we asked students to judge the emphases their parent and family placed on mastery and performance achievement goals, the value parents and family placed on students' academic performance, and the confidence families had in their ability.

Method

Population and Sample

Participants were students in three middle schools and one high school in an urban school district in southern California. Analyses here are based on a sub-sample of 1,700 students in grades 7 through 12, from a larger population of students (*N* approximately 14,000) involved in the NSF Math and Sciences Partnership program. Due to the emphasis within

the larger project on student motivation and achievement in mathematics, students were surveyed during math class and all items reflected family beliefs and behaviors related to students' learning in math. Students were surveyed regarding their perceptions of family goal emphases, task values, confidence in student ability, and different types of involvement at home and at school. Surveys were administered by trained research assistants in students' regular math classes during the spring of 2006.

Scale Development

Items assessing students' perceptions of family involvement and motivation-related beliefs and values were developed for this study. Items were informed by current theories of achievement motivation, including expectancy-value theory (Wigfield & Eccles, 2000) and goal orientation theory (Ames, 1992; Kaplan & Maehr, 2002, 2007; Midgley et al., 2000) as well as family involvement research (Hoover-Dempsey & Sandler, 2005; Sheldon & Epstein, 2007; Walker et al., 2004).

Principal components factor analysis suggested the coherence of items for scales assessing student perceptions of family goal emphases, task values and confidence in student ability. Four items were developed for each of the scales assessing perceived family goal emphases (e.g., mastery, "According to my family, the main goal in math is for me to learn as much as I can."; performance-approach, "My family wants me to get better grades than other students."; performance-avoid, "It's important to my family that I don't do worse than others in math."). Items for performance-approach and performance-avoid formed a single factor and were combined to form the scale assessing performance goal emphasis. Two items were administered assessing each of the four dimensions of task value (usefulness, importance, interest, cost); one cost item did not load with the rest of the scale and was dropped prior to scale formation. Family confidence in student ability ("My family tells me I am good at math.") was captured by three items which formed a single factor. Reliabilities were acceptable for each scale, and ranged from .67 for confidence to .84 for performance goal emphasis.

Items assessing student perceptions of family involvement behaviors formed three distinct factors, as anticipated, with minimal cross-loading. Additional analyses indicated that the factor structure was robust for middle and high school students. Three scales were formed assessing students' perceptions of family involvement, including family capacity for help giving (5 items; e.g., "If I needed help with my math homework, my family would know how to help me."), family monitoring and assistance (12 items; e.g., "During this school year, how often has someone in your family helped you when you didn't understand your math homework?"), and family-teacher communication and school-based involvement (8 items; e.g., "During this school year, how often has someone in your family asked your math teacher about what you are learning?"). Reliabilities were acceptable, ranging from .84 for family-teacher communication and school-based involvement to .91 for monitoring and assistance.

Results and Discussion

Correlations were computed to examine relations between student perceptions of family goal emphases, valuing of math, and confidence in student ability. Regression analyses were then used to examine whether students' perceptions of family capacity for help giving, monitoring and assistance behaviors, and family-teacher communication and involvement at school predicted perceived family goal emphases, task values, and confidence in student ability in math.

Scales assessing perceived goals, values and confidence beliefs were positively correlated (Table 1). This finding supports prior research which suggests that families may emphasize multiple goals (Friedel, 2007). The correlations between perceived family valuing of math and goal emphases further suggest that the valuing of math may not be a uniquely mastery-focused phenomenon, but may be conveyed in conjunction with either mastery or performance emphases (or both). Also consistent with prior research suggesting a positive relation between mastery goals and efficacy beliefs (Roeser, Midgley, & Urdan, 1996; Schunk, 1996), student perceptions of family confidence in their abilities were more strongly correlated with perceived mastery emphasis than with performance emphasis; however, both correlations were positive.

Correlations were also examined to determine whether students' perceptions of family beliefs or behaviors varied by grade level. Results suggest that students in higher grade levels perceive weaker emphasis on mastery and (to a lesser degree) performance goals, lower valuing of math, lower confidence in students' abilities, lower capacity of families to provide help, and less monitoring and assistance than do students in lower grade levels. The association between perceived goals or values and grade level is consistent with prior research on students' perceptions of the classroom context (Pintrich & Schunk, 2000). Nevertheless, that students at higher grade levels would perceive lower family valuing of math is cause for concern, particularly in light of the national push to increase students' interest in and valuing of career options in mathematics and the sciences. Declining parent involvement across grade levels is also of concern, given the importance of parent involvement in homework activities for sustaining student engagement and achievement, even for middle and high school students (Henderson & Mapp, 2002; Hoover-Dempsey et al., 2001). Interestingly, grade level was not related to family involvement in school-based activities. Students in higher grade levels reported similar family engagement in communication with teachers and other school-based activities, relative to students in lower grades.

Regression analyses were used to assess whether students' perceptions of family involvement behaviors predicted their perceptions of family goal emphases, valuing of math, and confidence in students' ability in math (Table 2). In addition to students' perceptions of family characteristics, analyses took into account personal need for assistance. Overall, family involvement behaviors predicted 23% to 26% of the variance in family mastery goal emphases and confidence in student ability, respectively, but only 12% of the variance in family performance goal emphasis. Perceived capacity for help giving, as well as monitoring and assistance, positively predicted each outcome, but were

more strongly related to perceived family mastery goal emphasis, value and confidence than to perceived performance emphasis. These findings again highlight the importance of family involvement in students' academic activities at home, and suggest that such behaviors promote students' awareness of the importance families place on learning and understanding math. Conversely, family-teacher communication and involvement in school-based activities *negatively* predicted perceived mastery emphasis and perceived family confidence in student ability, but positively predicted perceived performance goal emphasis. This relation between students' perceptions of family-school involvement and performance goal emphasis was surprising, given that items assessing school-based practices included asking teachers for extra assistance, additional work for the student to do, and information about what students are learning; these types of questions are not necessarily indicative of a focus on students' ability or performance relative to others. Further research is needed to better understand these relations.

Educational Implications

This study provided further evidence regarding the importance of family involvement behaviors as predictors or indicators of the motivational beliefs and values they convey to students. In particular, results suggested that family involvement in monitoring and assisting students in their studies at home is an important way in which families communicate to students the goals and values they deem important to school success, as well as their confidence in students' abilities. It is also clear that the type of parent involvement that is often considered the essence of family support for student success— family-teacher communication and involvement in school-based activities—may not be construed by students as such, or at least perceived differently than other forms of student support. This finding, especially, deserves further study.

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Table 1

Correlations Between Student Perceptions of Personal Need, Perceived Family Characteristics, and Grade in School

	1	2	3	4	5	6	7	8	9
1. Family Mastery Emphasis	–	.30	.66	.54	.38	.15	.42	.09	-.22
2. Family Performance Emphasis		–	.49	.25	.17	.03 (ns)	.25	.21	-.12
3. Family Task Value			–	.59	.44	.13	.46	.15	-.28
4. Family Confidence in Student Ability				–	.41	.03 (ns)	.41	.09	-.21
5. Personal Level of Need					–	.30	.36	.16	-.14
6. Family Capacity to Provide Help						–	.61	.24	-.31
7. Family Monitoring & Assistance							–	.44	-.34
8. Family Involvement at School								–	-.01 (ns)
9. Grade in School (7th thru 12th)									–

Note. Unless noted, all correlations are significant at $p < .001$.

Table 2

**Predictors of Perceived Family Emphasis on Achievement Goals,
Perceived Family Value of Math, and Perceived Family Confidence in Student Ability**

Predictor	Family Mastery Emphasis	Family Performance Emphasis	Family Value of Math	Family Confidence
Personal Level of Need	- .02	- .07[b]	- .06[b]	- .16[c]
Family Capacity to Provide Help	.19[d]	.06[b]	.25[d]	.27[d]
Family Monitoring and Assistance	.37[d]	.18[d]	.35[d]	.34[d]
Family Involvement at School	-.09[c]	.14[d]	-.03	- .07[b]
F(4,1666)	121.55[d]	36.69[d]	143.34[d]	132.42[d]
R-Square	.23	.08	.26	.24

[a] $p < .05$ [b] $p < .01$ [c] $p < .001$ [d] $p < .0001$