Social Relationships and Motivation in Middle School: The Role of Parents, Teachers, and Peers

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Adolescents' supportive relationships with parents, teachers, and peers were examined in relation to motivation at school (school- and class-related interest, academic goal orientations, and social goal pursuit). On the basis of 167 sixth-grade students, relations of perceived support from parents, teachers, and peers to student motivation differed depending on the source of support and motivational outcome: Peer support was a positive predictor of prosocial goal pursuit, teacher support was a positive predictor of both types of interest and of social responsibility goal pursuit, and parent support was a positive predictor of school-related interest and goal orientations. Perceived support from parents and peers also was related to interest in school indirectly by way of negative relations with emotional distress. Pursuit of social responsibility goals and school- and class-related interest in 6th grade partly explained positive relations between social support in 6th grade and classroom grades 1 year later. Continued research on the social origins of classroom motivation in early adolescence is needed.

For most students, early adolescence is a time of change and transition. With respect to interpersonal relationships and social adjustment, these changes reflect a growing psychological and emotional independence from adults and a corresponding dependence on peer relationships to establish and maintain positive perceptions of the self (Steinberg, 1990; Youniss & Smollar, 1985). Often confounding these general developmental challenges is a transition to a new school environment, which tends to be marked by adolescents' perceptions that teachers no longer care about them, and decreased opportunities to establish meaningful relationships with peers (Eccles & Midgley, 1989). Therefore, young adolescents often must negotiate and establish relationships with adults and peers under less than optimal conditions. A particular concern is that young adolescents who do not enjoy positive, supportive relationships with adults and peers are often at risk for academic problems (e.g., Goodenow, 1993; Midgley, Feldlaufer, & Eccles, 1989; Phelan, Davidson, & Cao, 1991). In the present study, I examined specific ways in which supportive relationships with parents, teachers, and peers are related to young adolescents' motivation at school and to academic performance.

School Motivation

Two aspects of school motivation were the focus of the present study: the social and academic goals that students try to achieve at school and their interest in academic activities. In general, goals direct behavior toward outcomes that individuals would like to achieve (Ford, 1992; Pervin,

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1983). Interest in activities tends to increase the likelihood that individuals formulate goals relating to that activity and invest time and effort to achieve them (Bandura, 1986; Renninger, Hidi, & Krapp, 1992). Although other motivational processes also are important for understanding school success, goals and interest are central to understanding the underlying reasons for why students behave as they do.

Students' Goals

There is increasing recognition among scholars that children's overall adjustment and success at school requires a willingness as well as an ability to meet social as well as academic challenges (Hinshaw, 1992; Ladd, 1989; Wentzel, 1991b). The goals for education held by teachers, school administrators, and society at large reflect desires for children to develop social and moral competencies as well as intellectual skills. Moreover, students who are academically successful report trying to achieve socially appropriate as well as academic goals at school (e.g., Ford, 1982; Wentzel, 1989, 1991b, 1993b).

In this research, I studied academic goals with respect to mastery and performance goal orientations. Goal orientations represent reasons why students try to achieve academically (Ames, 1992; Dweck & Leggett, 1988; Nicholls, 1984). Mastery goal orientations represent desires to achieve outcomes derived from the actual process of learning, such as feelings of satisfaction and competence or actual intellectual development. Performance goal orientations represent desires to achieve outcomes derived from personal expectations or values associated with the consequences of task engagement; these outcomes can take the form of gaining positive judgments or avoiding negative judgments of the self. Goal orientations have been related to levels of persistence and strategy use when difficulties arise (see

Dweck & Leggett, 1988; Meece, Blumenfeld, & Hoyle, 1988; Nicholls, 1984; Stipek & Gralinski, 1996).

Social goals were defined as self-reported efforts to behave in prosocial and socially responsible ways. Unlike academic goal orientations that reflect reasons why students try to achieve academically, these goals reflect desires to achieve a particular social outcome. Student reports of prosocial and responsibility goal pursuit have been related to pursuit of academic goals to learn and to get good grades (Wentzel, 1993b), desirable forms of classroom behavior (Wentzel, 1991a, 1993a), and academic performance (Wentzel, 1993b). Pursuit of prosocial and social responsibility goals also explains, in part, significant links between peer acceptance and academic achievement (Wentzel, 1991a).

Student Interest

Interest in school has been identified as a powerful motivational construct related to the formation and regulation of goal-directed behavior (see Renninger et al., 1992). Studies of intrinsic motivation have related high levels of interest to valuing, engaging in, and persisting at a specific task (Csikszentmihalyi & Nakamura, 1989; Deci, 1992; Lepper & Hodell, 1989). Of particular relevance for the present research is Deci's suggestion that interpersonal relationships that provide students with a sense of belongingness can be powerful motivators of children's interest in school. In the present study, I examined interest at two levels of specificity. First, I assessed students' general interest in school. Previous work has documented significant relations between school-related interest and classroom grades and test scores (Wentzel, Weinberger, Ford, & Feldman, 1990). Second, I examined the degree to which students actually persist and engage in classroom activities as a classroom-level index of interest. Classroom-specific effort and engagement have been related significantly to academic performance (e.g., Connell & Wellborn, 1991).

Social Relationships and School Motivation

There are many aspects of interpersonal relationships that have the potential to influence academic motivation (see Juvonen & Wentzel, 1996). In the present study, I focused on one specific aspect of social influence: students' perceptions of support from interpersonal relationships. Research on elementary and middle school students has documented significant relations of students' perceptions of support and caring from parents, teachers, and peers to positive aspects of motivation. With respect to parents, perceived social and emotional support (Cauce, Felner, & Primavera, 1982; Connell, Spencer, & Aber, 1994), and family cohesion (Felner, Aber, Primavera, & Cauce, 1985) have been related positively to perceived competence, a sense of relatedness to peers, and academic effort and interest in school. Similarly, perceived social and emotional support from peers have been associated with motivational outcomes such as the pursuit of academic and prosocial goals, intrinsic value, and self-concept (DuBois, Felner, Brand, Adan, & Evans, 1992; Felner et al., 1985; Harter, 1996; Wentzel, 1994). Perceived

support from teachers has been related to student reports of pursuit of goals to behave prosocially and responsibly, educational aspirations and values, intrinsic values, and self-concept (Felner et al., 1985; Goodenow, 1993; Harter, 1996; Marjoribanks, 1985; Midgley et al., 1989; Wentzel, 1994).

Remaining Issues

Although significant relations between positive motivational outcomes and supportive social relationships are well documented in the literature reviewed above, several issues remain unresolved. First, researchers have rarely examined perceived support from parents, teachers, and peers in a single study. Therefore, I examined students' motivation in relation to the perceived quality of their relationships with parents, teachers, and peers, including the interactive or compensatory effects of multiple relationships on goals and academic interests.

In addition, the processes that explain links between social relationships and motivational outcomes are not well understood. Therefore, in the present study, I examined two possible pathways. First, social relationships might be related to adjustment because their supportive nature serves to alleviate or at least to lessen the negative effects of stressful events on general levels of functioning (Cohen & Wills, 1985). With respect to social relationships and motivation, this pathway of influence is illustrated in Figure 1. Although links between perceived support from teachers and student motivation cannot be attributed to psychological distress (Wentzel, 1997), relations among perceived support from parents and peers, distress, and motivation have not been examined. A second possibility is that socially supportive relationships directly promote motivation and subsequent engagement in classroom activities (Deci, 1992). A sense of social belongingness and support is believed to lead to the adoption of socially valued goals and objectives (Connell & Wellborn, 1991; Ford, 1992). If so, this should translate into motivation to succeed academically, as well as to behave in socially appropriate ways at school. This direct relation between supportive social relationships and classroom motivation also is shown in Figure 1.

A final issue examined in this study concerns the role of motivation in explaining links between social relationships and academic achievement. Having supportive relationships with parents, teachers, and peers has been associated with academic success (e.g., Hess & Holloway, 1984; Parker & Asher, 1987; Wentzel & Asher, 1995). On the one hand, supportive relationships might be related directly to academic achievement independent of their relations to motivational outcomes. For instance, supportive adults and peers
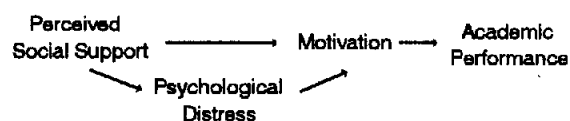

Figure 1. Hypothesized relations between supportive relationships, distress, motivation, and academic performace.

might provide children with instructional opportunities that lead directly to learning and academic achievement. On the other hand, links between supportive relationships and academic performance might simply reflect the positive influence of social support on student motivation. Few studies have examined these associations between social relationships, student motivation, and academic performance. Therefore, I examined these pathways, also illustrated in Figure 1, in this study.

Method

Sample

The participants in this study were 167 sixth-grade students from a sixth- through eighth-grade middle school in a suburban, predominantly middle class community. Approximately one half of the students were girls ($n = 82$) and 92% of the students were White ($n = 154$), with the remaining students being Black ($n = 2$), Hispanic ($n = 3$), Asian American ($n = 4$), and of other ethnic status ($n = 3$). These students constituted approximately one half of the entire sixth-grade class. Participating classrooms were chosen by the school principal to represent a wide range of student abilities. All students in these classrooms participated unless parental permission was denied ($n = 2$).

Procedure

Data were gathered from sixth-grade students in late spring, with the exception of achievement data, which were obtained from student files at the end of the students' seventh-grade year. Questionnaires were administered during regular class sessions. Students were told that all of their answers would be confidential and that they did not have to answer any of the questions. Teachers remained in the classrooms and responded to questionnaires concerning their students.

Measures

Perceived support from peers. This construct was measured by the Peer Social Support and Academic Support subscales of the Classroom Life Measure (Johnson, Johnson, Buckman, & Richards, 1985). The five-item Peer Social Support scale (Cronbach's $\alpha = .84$) asks about social support from peers, such as "My classmates care about my feelings." The 4-item Peer Academic Support scale (Cronbach's $\alpha = .79$) assesses perceived peer concern for learning; a sample item is "My classmates care about how much I learn." A perceived peer acceptance score was derived by averaging the peer social and academic support scores ($r = .66$, $p < .001$). The mean was 6.70 with a standard deviation of 1.63.

Perceived support from teachers. This construct was measured by the Teacher Social Support and Academic Support subscales of the Classroom Life Measure (Johnson et al., 1985). Items for the teacher subscales correspond closely to the peer support items. The four-item Teacher Social Support scale (Cronbach's $\alpha = .81$) assesses perceived social support and concern from teachers; a sample item is "My teacher really cares about me" ($1 = never$, $5 = always$). The 4-item Teacher Academic Support scale (Cronbach's $\alpha = .84$) asks about perceived support for learning, such as "My teachers like to help me learn." A teacher perceived acceptance score was derived by averaging the teacher social and academic support scores ($r = .68$, $p < .001$). The mean was 8.50 with a standard deviation of 1.52.

Family cohesion. Supportive relationships with parents were assessed with the Family Cohesion subscale of the Family Environment Scale (Moos & Moos, 1981). The scale consists of 10 items (e.g., "Family members really help and support each other," "Family members really back each other up") that are responded to as "false" (scored as "1") or "true" (scored as "2"). Internal consistency of the scale (Cronbach's alpha) was .73 for the present sample ($M = 17.47$, $SD = 2.33$). Moos and Moos (1981) reported a test–retest reliability of .86 over an 8-week period.

Psychological distress. Distress was measured with the Weinberger Adjustment Inventory, Short-Form (Weinberger, Feldman, Ford, & Chastain, 1987). This scale contains 12 items that tap anxiety (e.g., "I worry too much about things that aren't important"), depression (e.g., "I often feel sad or unhappy"), low self-esteem (e.g., "I'm not sure of myself"), and low well-being (e.g., "I'm the kind of person who has a lot of fun"; reverse scored). Responses are made on 5-point scales ($1 = false$ to $5 = true$) and are averaged to yield a distress score. Weinberger et al. (1987) reported that the items have an internal consistency of .87 and a 1-week test–retest reliability of .83. In the present study, the mean was 9.87 with a standard deviation of 3.36.

Interest in school. This construct was assessed with the 10-item School Motivation Scale (Ford & Tisak, 1982). Sample items are "I usually enjoy being at school," "For the most part, school is a waste of time" (reverse coded), and "I have discovered some new interests in school this year." Responses were made on 5-point scales ($1 = false$ to $5 = true$). The mean was 36.65 with a standard deviation of 8.60; internal consistency (Cronbach's alpha) was .84.

Performance and mastery goal orientations. These constructs were assessed with scales developed by Nicholls and his colleagues (e.g., Nicholls, Cobb, Yackel, Wood, & Wheatley, 1990). The four-item Performance Goal Orientation scale contains statements such as, "I feel really pleased when I know more than others." The six-item Mastery Goal Orientation scale contains statements such as: "I feel really pleased when something I learn makes me want to find out more." Responses were made on 5-point scales, where $1 = yes$ and $5 = no$, and the midway response was represented by the "?" symbol. All of the mastery-goal items were reverse coded to reflect their positive orientation toward learning. Cronbach's alphas were .78 and .77 for the Performance and Mastery Goal scales, respectively. The mean for the Performance Goal scale was 3.61, with a standard deviation of 1.01. The mean for the Mastery Goal scale was 4.20 with a standard deviation of 0.66.

Social goal pursuit. Students were asked to respond to seven items derived from Wentzel's (1993b) social goal scale. Three prosocial goal items ask students about their efforts to share and to help peers with academic problems: For example, "How often do you try to help your classmates solve a problem once you've figured it out?" The four social responsibility goal items reflect compliance to classroom norms: For example, "How often do you try to do what your teacher asks you to?" Responses were made on a 5-point scale ($1 = rarely$ to $5 = always$). The mean for the prosocial goal pursuit score was 3.55 with a standard deviation of 0.75 and the internal consistency of the scale (Cronbach's alpha) was .79. The mean for the social responsibility score was 3.87 with a standard deviation of 0.81, and the internal consistency of the scale (Cronbach's alpha) was .77.

Interest in class. This construct was assessed with teachers' ratings of students' interest in class and with students' self-reported effort and attention in class. Students were asked to rate their class effort and attention for each academic subject (English, science, social studies, and mathematics): For example, "How hard do you really *try* in English class?" ($0 = not at all$ to $4 = really hard$) and "How often do you really *pay attention* in English class?" ($0 = not at all$ to $4 = really hard$). Responses were averaged to form

composite scores for effort (M = 3.21, SD = 0.68) and attention (M = 3.19, SD = 0.63). Teachers were asked to rate each of their students (1 = *rarely* to 5 = *always*), "How often does this student show an interest in schoolwork?" (M = 3.77, SD = 1.09). The three scores were significantly correlated, r for effort and attention = .45, p < .001, r for effort and interest = .35, p < .001, and r for attention and interest = .33, p < .001. Consequently, the three scores were averaged to form a composite interest in class score (M = 3.40, SD = 0.61).

Academic achievement. End-of-year cumulative grade-point average (GPA), based on final grades in English, science, social studies, and mathematics, was used as the index of achievement. Grades were obtained from student files at the end of the seventh-grade academic year to avoid having classroom grades and class interest scores assigned by the same teacher. Grades were coded such that a failing grade equaled 0 and an A equaled 4. The mean was 2.67 with a standard deviation of 0.86.

Results

Intercorrelations among variables are described first, followed by descriptions of relations between supportive relationships, psychological distress, and motivation outcomes. Pathways between social relationship variables and student grades are described last.

Intercorrelations Among Variables

Correlations among the predictor and outcome variables are displayed in Table 1. Family cohesion was related significantly to each motivational outcome except prosocial goal pursuit and interest in class; perceived support from teachers was related to all of the motivation outcomes except performance goal orientations; and perceived support from peers was related to interest in school and pursuit of prosocial and social responsibility goals.

Distress was related significantly and negatively to classroom- and school-related interest and to each type of perceived social support. These significant correlations provided initial evidence in support of a model relating supportive relationships to aspects of motivation indirectly by way of distress. Finally, sex was related significantly to all of the variables except family cohesion and distress and therefore included in further analyses.

Predictors of Motivation

Multiple regressions were conducted to examine direct and indirect relations among variables. The analysis strategy was first to identify direct predictors of motivation outcomes. Toward this end, a series of stepwise multiple regression analyses was conducted to examine relations among supportive relationships, distress, and motivational outcomes. For each outcome, the social relationship variables and distress were entered first; social relationship interaction terms (Parent × Peer, Teacher × Peer, Parent × Teacher) and Sex × Social Relationship interaction terms were entered at the second and third steps, respectively. Then, if distress was a direct predictor of motivation over and above the social support variables, follow-up regressions were conducted to identify indirect paths by regressing distress on the

Table 1
Intercorrelations Among Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Family cohesion	—											
2. Perceived teacher support	.24***	—										
3. Perceived peer support	.15*	.31***	—									
4. Distress	-.42***	-.25***	-.37***	—								
5. School-related interest	.32***	.39***	.23**	-.34***	—							
6. Mastery goal orientations	.26***	.18**	.11	-.07	.39***	—						
7. Performance goal orientations	-.18**	-.10	-.09	.10	-.30***	.05	—					
8. Prosocial goal pursuit	.03	.17**	.33***	-.05	.22**	.28***	-.04	—				
9. Responsibility goal pursuit	.13*	.23**	.15*	-.10	.38***	.36***	-.10	.34***	—			
10. Class interest	.03	.23**	.12*	-.12*	.35***	.15*	-.11	.14*	.35***	—		
11. Sex	.05	.18**	.15*	.05	.17**	.14*	-.25***	.17**	.10*	.19**	—	
12. Seventh-grade GPA	.13*	.16*	.18**	-.15*	.29***	.18**	-.03	.09	.26***	.24***	.46***	—

Note. Sex was coded such that 0 = *boys* and 1 = *girls*. GPA = grade point average.
*p < .05. **p < .01. ***p < .001.

Table 2
Results of Multiple Regressions on Motivation Outcomes

Predictor	Class interest	School interest	Responsibility goal pursuit	Prosocial goal pursuit	Mastery orientations	Performance orientations
Perceived peer support	.11	−.01	.07	.29***	.03	−.05
Perceived teacher support	.18*	.33***	.20*	.12	.13	−.05
Family cohesion	.13	.18*	.07	−.01	.23**	−.19**
Sex	.18*	.10	.05	.09	.04	−.18*
Distress	−.02	−.19*	−.08	.09	−.03	−.08
Total R^2	.15***	.29***	.10**	.13***	.10**	.08*

Note. Standardized beta weights are shown. Increment to R^2 explained by the interaction terms was not significant. Sex was coded such that 0 = *boys* and 1 = *girls*.
$*p < .05.$ $**p < .01.$ $***p < .001.$

remaining variables. This strategy reflects an exploratory form of path analysis as described by Asher (1983). Structural equation modeling was not used because of the limited sample size and an underspecified theoretical model for testing a priori confirmatory models (see Biddle & Marlin, 1987).

As shown in Table 2, significant predictors varied as a function of motivational outcomes.[1] However, the interaction terms did not add significant variance to the models.

Interest. Perceived support from teachers was an independent, positive predictor of interest in class, with girls reporting stronger interest than boys.

Family cohesion and perceived support from teachers were independent, positive predictors of interest in school. In addition, distress also was a significant, negative predictor of school interest. Therefore, the social support variables and sex were regressed on distress to determine if social support was related to school interest indirectly, by way of relations with distress. The model was significant, explaining 34% of the variance in distress ($p < .001$); perceived support from peers ($\beta = -.31$, $p < .001$) and family cohesion ($\beta = -.37$, $p < .001$) were significant, negative predictors of distress, with girls reporting higher levels of distress than boys ($\beta = .27$, $p < .001$).

Social goals. Perceived support from peers was an independent, positive predictor of reported prosocial goal pursuit; perceived support from teachers was an independent, positive predictor of reported social responsibility goal pursuit.

Academic goal orientations. Family cohesion was an independent, positive predictor of mastery and performance goal orientations, with boys reporting stronger performance goal orientations than girls.

Social Relationships, Motivation, and GPA

Seventh-grade GPAs were correlated significantly to each social support variable and to each motivation variable except performance goal orientations and prosocial goal pursuit (see Table 1). An additional series of stepwise regressions was conducted to explore the pathways linking perceived support to motivation and to academic performance, as depicted in Figure 1. For each model, the social relationship variables and a motivation variable were en-

tered first, relationship interaction terms entered second, and Sex × Social Relationship interaction terms entered last. Psychological distress was included in the "interest in school" model because it remained a direct predictor of school interest when social support variables were taken into account (see Table 2).

The interaction terms did not add significant variance to the models. In addition, none of the social support variables were independent predictors of seventh-grade GPA. However, school- and classroom-related interest and social responsibility goal pursuit in sixth grade were significant motivational predictors of students' grades 1 year later, as depicted in Table 3. On the basis of these findings and those reported in Table 2, I concluded that family cohesion is related to GPA by way of significant relations with students' interest in school and perceived support from teachers is related to students' grades by way of significant relations with responsibility goal pursuit and both types of interest.[2]

Discussion

Supportive relationships with parents, teachers, and peers were related to multiple aspects of school motivation in this

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[1] Although relations among social support variables and motivation were of central interest in this set of analyses, sixth-grade GPAs were available from student files. Therefore, the possibility that students' current grades explain significant variance in motivation outcomes, and perhaps account for the significant relations between the social support and motivation variables, could be explored. A series of regressions including sixth-grade GPA yielded results for social support nearly identical to those reported in Table 2. Sixth-grade GPA also was an independent, positive predictor of class interest, school interest, and pursuit of social responsibility goals but not of goal orientations or prosocial goal pursuit. For subsequent analyses, seventh-grade GPA rather than sixth-grade GPA was used as the index of academic performance, given the possible confounding of sixth-grade teacher ratings of student interest and their assignment of classroom grades.

[2] In an additional set of regression analyses that included sixth-grade GPA as a control variable, students' reported pursuit of social responsibility goals in sixth grade remained a significant positive predictor of seventh-grade GPA when sixth-grade GPA was taken into account. This was not the case for school- or classroom-related interest.

Table 3

Social Support and Motivation as Predictors of Seventh-Grade Grade Point Average

Predictor	Model 1	Model 2	Model 3	Model 4
Family cohesion	−.01	.01	.12	.10
Perceived teacher support	−.06	−.04	−.01	.04
Perceived peer support	.09	.04	.09	.12
Distress	−.05	—	—	—
Sex	.19*	.12	.19*	.20**
Motivation variables				
School interest	.24**	—	—	—
Classroom interest	—	.43***	—	—
Responsibility goal pursuit	—	—	.26**	—
Mastery goal orientations	—	—	—	.10
Total R^2	.13**	.22***	.17***	.11**

Note. Standardized betas are shown. The interaction terms did not explain significant variance in grades. Total R^2 reflects variables entered at Step 1. Distress was included in the first model because it was an independent, direct predictor of school interest (see Table 2). Sex was coded such that 0 = *boys* and 1 = *girls*.
*$p < .05$. **$p < .01$. ***$p < .001$.

study. The precise nature of these relations differed, however, depending on the type of relationship and the motivational outcome. Psychological distress explained, in part, significant relations between perceived social support and interest in school. School- and classroom-related interest and reported pursuit of social responsibility goals partly explained relations between perceived support from adults and academic performance.

Although supportive qualities of interpersonal relationships were significant predictors of academic and social aspects of motivation in the present study, interactions among the various sources of perceived social support were not significant predictors of motivational outcomes. That is, parents, peers, and teachers seem to play relatively independent roles in young adolescents' lives, and the effects of having multiple sources of support on motivational and academic outcomes are primarily additive rather than compensatory. For example, perceived support from parents was the only type of support that predicted students' academic goal orientations. These findings are consistent with recent work linking positive aspects of parenting to mastery goal orientations and less adaptive parenting characteristics to performance goal orientations (Heyman, Dweck, & Cain, 1992; Hokoda & Fincham, 1995). Moreover, they suggest that these particular aspects of motivation are subject not only to contextual influences at school (e.g., Ames, 1992) but also to socialization practices in the home.

Perceived support from teachers was unique in its relations to outcomes most proximal to classroom functioning, interest in class and pursuit of goals to adhere to classroom rules and norms. Links between perceived support from teachers and students' reported pursuit of social responsibility goals have been reported elsewhere (Wentzel, 1994, 1997). However, that student interest in academic activities might be driven by teacher characteristics that reflect social as well as curricular and instructional approaches to learning

affirms the motivational significance of teacher–student relationships in the lives of young adolescents.

Significant relations between perceived support from peers and motivation to display prosocial forms of behavior remind us of the critical, positive role that adolescents can play in their classmates' social adjustment to school. Youniss (e.g., Youniss, 1994; Youniss & Smollar, 1985) contended that the relatively egalitarian nature of peer interactions is necessary for the development of perspective-taking and empathic skills that serve as bases for prosocial interactions. This issue was not addressed directly in this study, although perceived support from peers was the only independent, positive predictor of prosocial goal pursuit. This finding is consistent with the notion that adolescents' perceptions of their relationships with peers play a fairly unique role in motivating them to help and cooperate with each other.

It could be argued that highly motivated students are simply well-adjusted individuals who also enjoy supportive relationships with their parents, teachers, and peers. The fact that relations differed as a function of the source of interpersonal support and type of motivation, however, does not support this explanation. Alternatively, it might be that perceived social support is a proxy for the existence of actual support derived from behaving in socially and academically appropriate ways. Limited evidence suggests that this is not entirely the case (see Wentzel, 1994), although additional research is needed to examine further this possibility. Longitudinal studies also would provide a stronger basis for drawing conclusions about directions of influence (see Wentzel, 1997).

With respect to the hypothesized relations depicted in Figure 1, perceived support from parents and peers was related indirectly to interest in school by way of psychological distress. Relationships with parents and peers clearly can have a potentially powerful influence on students' overall emotional well-being at school. It is not readily apparent, however, why this indirect pathway was significant for school-related interest but not for other motivational outcomes. On the one hand, interest in school represents a fairly global indicator of motivation that is likely to be related to other general levels of affective functioning (see also Wentzel et al., 1990). On the other hand, motivational theorists (Connell & Wellborn, 1991; Ford, 1992) suggest that a sense of social support and belongingness directly support the adoption of socially valued goals and objectives. The direct links between perceived support and motivational outcomes found in this study are consistent with this proposition.

The present study also provides support for the notion that motivational processes are intrapersonal outcomes that might explain links between socialization experiences and academic achievement (see also Eccles, 1993). Specifically, supportive relationships were related to GPA only indirectly, by way of school- and class-related interest and pursuit of goals to be socially responsible. Future studies are necessary to examine relations between supportive relationships and other aspects of motivation, such as values (Eccles, 1993), perceived efficacy and expectations for performance (e.g.,

Bandura, 1986; Eccles, 1993), and beliefs about autonomy and control (Connell & Wellborn, 1991; Ford, 1992).

It is worth noting that the generalizability of these results is limited to first-year middle school students. It is possible that supportive relationships have a particularly strong association with student motivation during this critical year of transition into middle school but that the relation weakens as students adjust to their new school environment. The functions of social support from parents, teachers, and peers also appear to change as children progress through elementary school into middle school (Furman & Buhrmester, 1992). Whereas children tend to value highly parental support throughout their school-aged years, peer-related support appears to play a more significant role in children's lives only as they reach adolescence.

Finally, the results of the present study are important in that much of the previous research linking adult and peer support to academic outcomes in middle school has been conducted with minority, lower-class, inner-city, or low-achieving students (e.g., Cauce et al., 1982; Felner et al., 1985; Phelan et al., 1991). The present study extends this literature by providing evidence that supportive and caring relationships are important for White, middle-class students as well. Additional research that examines aspects of community and neighborhood support (e.g., Nettles, 1991), overall levels of school climate and structure (e.g., Eccles & Midgley, 1989; McLaughlin, Talbert, Kahne, & Powell, 1990), and classroom structure (e.g., Hallinan, 1981) is also of critical importance if we are to understand fully the role of social supports in motivating young adolescents to succeed at school.

References

Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84,* 261–271.

Asher, H. B. (1983). *Causal modeling.* Beverly Hills, CA: Sage.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice-Hall.

Biddle, B. J., & Marlin, M. M. (1987). Causality, confirmation, credulity, and structural equation modeling. *Child Development, 58,* 4–17.

Cauce, A. M., Felner, R. D., & Primavera, J. (1982). Social support in high-risk adolescents: Structural components and adaptive impact. *American Journal of Community Psychology, 10,* 417–428.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98,* 310–357.

Connell, J. P., Spencer, M. B., & Aber, J. L. (1994). Educational risk and resilience in African-American youth: Context, self, action, and outcomes in school. *Child Development, 65,* 493–506.

Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. In M. R. Gunnar & L. A. Sroufe (Eds.), *Self processes and development: The Minnesota symposia on child development* (Vol. 23, pp. 43–78). Hillsdale, NJ: Erlbaum.

Csikszentmihalyi, M., & Nakamura, J. (1989). The dynamics of intrinsic motivation: A study of adolescents. In C. Ames & R. Ames (Eds.), *Research on motivation in education: Goals and cognitions* (pp. 45–71). New York: Academic Press.

Deci, E. L. (1992). The relation of interest to the motivation of behavior: A self-determination theory perspective. In K. A. Renninger, S. Hidi, & A. Krapp (Eds.), *The role of interest in learning and development* (pp. 43–70). Hillsdale, NJ: Erlbaum.

DuBois, D. L., Felner, R. D., Brand, S., Adan, A. M., & Evans, E. G. (1992). A prospective study of life stress, social support, and adaptation in early adolescence. *Child Development, 63,* 542–557.

Dweck, C. S., & Leggett, E. L. (1988). A social–cognitive approach to motivation and personality. *Psychological Review, 95,* 256–272.

Eccles, J. (1993). School and family effects on the ontogeny of children's interests, self-perceptions, and activity choices. In J. Jacobs (Ed.), *Nebraska Symposium on Motivation: Vol. 40. Developmental perspectives on motivation* (pp. 145–208). Lincoln: University of Nebraska Press.

Eccles, J., & Midgley, C. (1989). Stage–environment fit: Developmentally appropriate classrooms for young adolescents. In C. Ames & R. Ames (Eds.), *Research on motivation in education* (Vol. 3, pp. 139–186). New York: Academic Press.

Felner, R. D., Aber, M. S., Primavera, J., & Cauce, A. M. (1985). Adaptation and vulnerability in high-risk adolescents: An examination of environmental mediators. *American Journal of Community Psychology, 13,* 365–379.

Ford, M. E. (1982). Social cognition and social competence in adolescence. *Developmental Psychology, 18,* 323–340.

Ford, M. E. (1992). *Motivating humans.* Newbury Park, CA: Sage.

Ford, M. E., & Tisak, M. (1982, April). *Evaluation of an educational intervention to enhance social–cognitive skills.* Paper presented at the annual meeting of the American Educational Research Association, New York.

Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development, 63,* 103–115.

Goodenow, C. (1993). Classroom belonging among early adolescent students: Relationships to motivation and achievement. *Journal of Early Adolescence, 13,* 21–43.

Hallinan, M. T. (1981). Recent advances in sociometry. In S. R. Asher & J. M. Gottman (Eds.), *The development of children's friendships* (pp. 91–115). New York: Cambridge University Press.

Harter, S. (1996). Teacher and classmate influences on scholastic motivation, self-esteem, and level of voice in adolescents. In J. Juvonen & K. R. Wentzel (Eds.), *Social motivation: Understanding children's school adjustment* (pp. 11–42). New York: Cambridge University Press.

Hess, R. D., & Holloway, S. D. (1984). Family and school as educational institutions. In R. D. Parke (Ed.), *Review of child development research* (Vol. 7, pp. 179–222). Chicago: University of Chicago Press.

Heyman, G., Dweck, C. S., & Cain, K. M. (1992). Young children's vulnerability to self-blame and helplessness: Relationship to beliefs about goodness. *Child Development, 63,* 401–415.

Hinshaw, S. P. (1992). Externalizing behavior problems and academic underachievement in childhood and adolescence: Causal relationships and underlying mechanisms. *Psychological Bulletin, 111,* 127–155.

Hokoda, A., & Fincham, F. D. (1995). Origins of children's helpless and mastery achievement patterns in the family. *Journal of Educational Psychology, 87,* 375–385.

Johnson, D. W., Johnson, R. T., Buckman, L. A., & Richards, P. S. (1985). The effect of prolonged implementation of cooperative learning on social support within the classroom. *Journal of Psychology, 119,* 405–411.

Juvonen, J., & Wentzel, K. R. (1996). *Social motivation: Understanding children's school adjustment*. New York: Cambridge University Press.

Ladd, G. W. (1989). Children's social competence and social supports: Precursors of early school adjustment? In B. H. Schneider, G. Atilli, J. Nadel, & R. P. Weissberg (Eds.), *Social competence in developmental perspective* (pp. 277–291). Amsterdam, the Netherlands: Kluwer.

Lepper, M. R., & Hodell, M. (1989). Intrinsic motivation in the classroom. In C. Ames & R. Ames (Eds.), *Research on motivation in education: Vol. 3. Goals and cognitions* (pp. 73–106). New York: Academic Press.

Marjoribanks, K. (1985). Ecological correlates of adolescents' aspirations: Gender-related differences. *Contemporary Educational Psychology, 10,* 329–341.

McLaughlin, M. W., Talbert, J., Kahne, J., & Powell, J. (1990, November). Constructing a personalized school environment. *Phi Delta Kappan,* 230–235.

Meece, J. L., Blumenfeld, P. C., & Hoyle, R. (1988). Students' goal orientations and cognitive engagement in classroom activities. *Journal of Educational Psychology, 78,* 486–491.

Midgley, C., Feldlaufer, H., & Eccles, J. (1989). Student/teacher relations and attitudes toward mathematics before and after the transition to junior high school. *Child Development, 60,* 981–992.

Moos, R., & Moos, B. (1981). *Family Environment Scale manual.* Palo Alto, CA: Consulting Psychologists Press.

Nettles, S. M. (1991). Community involvement and disadvantaged students: A review. *Review of Educational Research, 61,* 379–406.

Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Bulletin, 91,* 328–346.

Nicholls, J. G., Cobb, P., Yackel, E., Wood, T., & Wheatley, G. (1990). Students' theories about mathematics and their mathematical knowledge: Multiple dimensions of assessment. In G. Kulin (Ed.), *Assessing higher order thinking in mathematics* (pp. 137–154). Washington, DC: American Association of the Advancement of Science.

Parker, J. G., & Asher, S. R. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin, 102,* 357–389.

Pervin, L. A. (1983). The stasis and flow of behavior: Toward a theory of goals. In M. M. Page (Ed.), *Personality—Current theory and research* (pp. 1–53). Lincoln: University of Nebraska Press.

Phelan, P., Davidson, A. L., & Cao, H. T. (1991). Students' multiple worlds: Negotiating the boundaries of family, peer, and school cultures. *Anthropology and Education Quarterly, 22,* 224–250.

Renninger, K. A., Hidi, S., & Krapp, A. (1992). *The role of interest in learning and development.* Hillsdale, NJ: Erlbaum.

Steinberg, L. (1990). Autonomy, conflict, and harmony in the family relationship. In S. S. Feldman & G. R. Elliott (Eds.), *At the threshold: The developing adolescent* (pp. 255–276). Cambridge, MA: Harvard University Press.

Stipek, D., & Gralinski, J. H. (1996). Children's beliefs about intelligence and school performance. *Journal of Educational Psychology, 88,* 397–408.

Weinberger, D. A., Feldman, S. S., Ford, M. E., & Chastain, R. L. (1987). *Construct validation of the Weinberger Adjustment Inventory.* Unpublished manuscript, Stanford University.

Wentzel, K. R. (1989). Adolescent classroom goals, standards for performance, and academic achievement: An interactionist perspective. *Journal of Educational Psychology, 81,* 131–142.

Wentzel, K. R. (1991a). Relations between social competence and academic achievement in early adolescence. *Child Development, 62,* 1066–1078.

Wentzel, K. R. (1991b). Social competence at school: Relations between social responsibility and academic achievement. *Review of Educational Research, 61,* 1–24.

Wentzel, K. R. (1993a). Does being good make the grade? Social behavior and academic competence in middle school. *Journal of Educational Psychology, 85,* 357–364.

Wentzel, K. R. (1993b). Motivation and achievement in early adolescence: The role of multiple classroom goals. *Journal of Early Adolescence, 13,* 4–20.

Wentzel, K. R. (1994). Relations of social goal pursuit to social acceptance, classroom behavior, and perceived social support. *Journal of Educational Psychology, 86,* 173–182.

Wentzel, K. R. (1997). Student motivation in middle school: The role of perceived pedagogical caring. *Journal of Educational Psychology, 89,* 411–419.

Wentzel, K. R., & Asher, S. R. (1995). Academic lives of neglected, rejected, popular, and controversial children. *Child Development, 62,* 1066–1078.

Wentzel, K. R., Weinberger, D. A., Ford, M. E., & Feldman, S. S. (1990). Academic achievement in preadolescence: The role of motivational, affective, and self-regulatory processes. *Journal of Applied Developmental Psychology, 11,* 179–193.

Youniss, J. (1994). Children's friendship and peer culture: Implications for theories of networks and support. In F. Nestmann & K. Hurrelmann (Eds.), *Social networks and social support in childhood and adolescence* (pp. 75–88). Berlin, Germany: Walter de Gruyter.

Youniss, J., & Smollar, J. (1985). *Adolescent relations with mothers, fathers, and friends.* Chicago: University of Chicago Press.