

# Motivational Dynamics of Children's Academic Help-Seeking and Concealment

Gwen Marchand and Ellen A. Skinner  
Portland State University

Models of self-regulated learning and of children's coping both consider help-seeking an adaptive response to academic problems, yet students do not always seek help when it is needed, and help-seeking generally declines across early adolescence. A study of 765 children in elementary and middle school (Grades 3–6) during fall and spring of the same school year investigated whether motivational resources predicted help-seeking and whether losses in motivational supports across the middle school transition mirrored age declines. As predicted, 3 motivational self-perceptions were tightly correlated with coping in fall and spring; relatedness was the primary predictor of increases in help-seeking, whereas a sense of incompetence predicted increases in concealment. Teacher reports of motivational support also predicted changes in student coping and were mediated by children's self-perceptions. Analyses of reciprocal effects of students' help-seeking and concealment on changes in teacher support corroborated hypothesized cycles in which motivationally "rich" children, by constructively seeking help, become "richer," whereas motivationally "poor" children, by concealing their difficulties, become "poorer." Age differences in children's motivational resources across the transition to middle school paralleled age differences in help-seeking and concealment.

*Keywords:* help-seeking, help avoidance, self-regulated learning, motivation, coping

Over the many decades of its study, help-seeking has been conceptualized from a variety of perspectives. Early conceptualizations viewed help-seeking as a potentially maladaptive form of dependency on others, likely to interfere with the development of self-reliance and competence (Baltes, 1997). However, beginning in the mid-80s, two new perspectives on help-seeking emerged, one within models of self-regulated learning and one within work on children's coping. Self-regulated learning refers to "self-generated thoughts, feelings, and actions that are planned and systematically adapted as needed to affect one's learning and motivation" (Schunk & Ertmer, 2000, p. 631). From this perspec-

tive, help-seeking is a potentially adaptive strategy children can use when they encounter problems too difficult for them to solve by themselves (Karabenick, 1998; Nelson-Le Gall, 1981, 1985; Nelson-Le Gall, Gumerman, & Scott-Jones, 1983; Newman, 1991, 1994; A. M. Ryan & Pintrich, 1998). A second perspective, emerging from the adoption of adult models of coping to children, focused on help-seeking as a family of coping (Compas, 1987; Garnezy & Rutter, 1983; Murphy & Moriarty, 1976; Wolchik & Sandler, 1997). From this viewpoint, going to others for help, advice, and support can be adaptive when demands outweigh personal resources; in fact, help-seeking is one of the most common ways of coping used by both children and adults (for reviews, see Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Skinner, Edge, Altman, & Sherwood, 2003; Skinner & Zimmer-Gembeck, 2007).

Despite arising from independent traditions, these two perspectives have much in common. They both conceptualize help-seeking in children as a legitimate strategy for dealing with challenges and demands. Both models highlight help-seeking as part of a larger profile of responses during stressful encounters: only one strategy of self-regulation among others (Schunk & Ertmer, 2000) or only one family of coping among others (Skinner et al., 2003). Both also emphasize the role of children's personal resources or competencies in determining when they want or need help. Both perspectives also recognize the centrality of social partners and motivational factors in shaping whether children will actually seek help when it is needed. Consensus has also emerged that the opposite of help-seeking, that is, children's decisions to avoid seeking help or to conceal that help is needed, must also be explicitly conceptualized and studied (Newman & Goldin, 1990; A. M. Ryan, Patrick, & Shim, 2005; A. M. Ryan, Pintrich, & Midgley, 2001; Skinner & Wellborn, 1994).

---

Gwen Marchand and Ellen A. Skinner, Psychology Department, Portland State University.

Gwen Marchand is now at the Clark County School District in Nevada.

This study was supported by the W. T. Grant Foundation, by Research Grant HD19914 from the National Institute of Child Health and Human Development, and by Training Grant 527594 from the National Institute of Mental Health.

We thank the Motivation Research Group, especially James Connell, Edward Deci, Thomas Kindermann, and Richard Ryan. We especially appreciate James Wellborn for his earlier work on conceptualization and measures of coping. In terms of the research project, we thank the Brockport School District and its superintendent, principals, teachers, students, and parents for their generous participation. The hard work and good spirits of the research team members, including Jeff Altman, Michael Belmont, Helen Dorsett, Jennifer Herman, Marianne Miserandino, Brian Patrick, Cara Regan, Hayley Sherwood, and Peter Usinger, are gratefully acknowledged.

Correspondence concerning this article should be addressed to Ellen A. Skinner, Psychology Department, Portland State University, P.O. Box 751, Portland, OR 97221. E-mail: skinnere@pdx.edu

Researchers who study self-regulated learning and coping also face similar challenges in studying academic help-seeking. Two are addressed in the present study. The first is to explain cumulated findings that, despite the obvious value of help-seeking as a tool for learning, many children do not seek help in the classroom, even when it is needed and available (A. M. Ryan et al., 2001). As stated by Newman, “Despite awareness of academic problems they may have and despite availability of assistance, many school children tend to give up prematurely, sit passively, or persist unsuccessfully on their own without ever asking for help” (2000, p. 350). The second challenge is to account for findings that, as children reach middle school and high school, just as they are developing the cognitive and metacognitive competencies that should allow them to deploy help-seeking more effectively than when they were younger (Keating, 1990; Myers & Paris, 1978; Nelson-Le Gall, 1981, 1985; Newman, 1991, 1994; Paris & Newman, 1990), they actually show increases in their help avoidance in the classroom (A. M. Ryan et al., 2001).

Theoretical accounts of both self-regulated learning and coping contend that explanations of the help-seeking (or help avoidance) most often seen in classrooms benefit from the explicit consideration of motivational issues (Nelson-Le Gall, 1985; Newman, 1990, 1991, 2000; Pintrich, 2003; A. M. Ryan & Pintrich, 1997; A. M. Ryan et al., 2001; Skinner & Wellborn, 1994, 1997). Motivational factors may help explain children’s failure to seek help when it is needed (Nelson-Le Gall, 1985; A. M. Ryan et al., 2001), and losses of motivational resources across the transition to middle school may explain declines in help-seeking during early adolescence (Wigfield, Eccles, Schiefele, Roeser, & Davis-Kean, 2006).

**Self-System Model of Motivational Development**

Hence, the self-system model of motivational development (SSMMD), depicted in Figure 1 (see also Connell, 1990; Connell & Wellborn, 1991; Deci & Ryan, 1985; Skinner & Edge, 2002;

Skinner & Wellborn, 1994, 1997), was used as the basis for the current study. According to this model, children’s engagement, defined as their active enthusiastic participation in academic activities in the classroom, is the key motivational state that drives their learning and school success. Its opposite, disaffection, which refers to a motivational state in which children are uninterested, apathetic, passive, or bored, is a critical risk factor for academic difficulties and eventual school dropout (see Fredricks, Blumenfeld, & Paris, 2004, for a review of school engagement).

*Self-System Processes*

Consistent with many theories of intrinsic motivation, the SSMMD is based on the assumption that children’s engagement and disaffection is shaped by the extent to which their interactions with the social context fulfill three fundamental psychological needs: (a) relatedness or belongingness, which follows from the tenets of the attachment perspective (Ainsworth, 1979; Bowlby, 1969/1973) and refers to the need to be loved, appreciated, and connected with important others (Baumeister & Leary, 1995); (b) competence or efficacy, which follows from theories of effectance or mastery motivation (Harter, 1978; White, 1959) and refers to the need to experience oneself as effective in interactions with the environment; and (c) autonomy, which follows from the principles of self-determination theory (Deci, Koestner, & Ryan, 1999; Deci & Ryan, 1985, 2000; Deci, Vallerand, Pelletier, & Ryan, 1991) and refers to the need to experience oneself as the authentic source of one’s own actions. Hence, children’s self-perceptions (referred to as self-system processes or SSPs) of relatedness, competence, and autonomy are hypothesized (and have been found) to be key predictors of their engagement and disaffection in school (e.g., Furrer & Skinner, 2003; Patrick, Skinner, & Connell, 1993; Skinner, Zimmer-Gembeck, & Connell, 1998).

*Social Context*

The SSMMD also holds that social partners, especially teachers, play a key role in providing motivational support. First, through

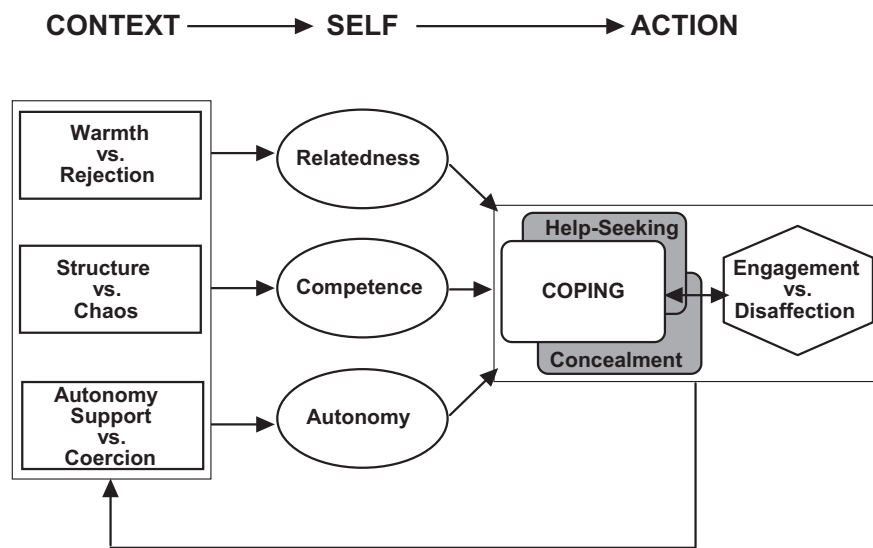


Figure 1. A motivational model of help-seeking and concealment derived from the self-system model of motivational development.

their warmth and involvement, teachers can communicate a sense of relatedness to children. Second, through their provision of structure and explanations of contingencies, teachers can show children how to be effective in academic tasks. Third, by allowing children to make choices and to follow their own interests, teachers can support student autonomy. At the same time, teachers can also undermine children's self-system processes and their motivation. To the extent that teachers are hostile and unfriendly, they can communicate to students that they are not welcome in school. When teachers are chaotic and unpredictable, they can confuse students about the contingencies in the classroom. When teachers are coercive and controlling, they undermine students' sense of autonomy. Hence, teacher warmth, structure, and autonomy support constitute motivational supports that have been shown to promote student's academic self-system processes and engagement, whereas teacher rejection, chaos, and coercion describe unsupportive actions that have been shown to undermine student self-perceptions and foster disaffection (Birch & Ladd, 1997; Connell & Wellborn, 1991; Deci, Schwartz, Sheinman, & Ryan, 1981; Dweck, 1999; Pianta, 1997; Pintrich & Blumenfeld, 1985; Reeve, Bolt, & Cai, 1999; Roeser, Midgley, & Urdan, 1996; R. M. Ryan & Grolnick, 1986; R. M. Ryan & Powelson, 1991; Skinner, Wellborn, & Connell, 1990; Skinner et al., 1998; Stipek, Feiler, Daniels, & Milburn, 1995; Wentzel, 1997, 1998).

### *Motivational Dynamics*

A key feature of the SSMMMD is its attempt to explain trajectories of children's increasing engagement and disaffection with school, based on the expectation that children's social contexts, self-perceptions, and actions are part of cycles of motivational dynamics that amplify their effects over time (Finn, 1989). Part of that cycle is captured by the connections between context, self, and action, in which teacher support in the classroom has been found to be a key determinant of children's academic self-system processes, implying that one pathway through which teachers can shape children's engagement is through their effects on children's self-perceptions.

A less studied but equally critical part of the dynamic is the feedback loop from student action to subsequent teacher support (Finn, 1989). For example, research examining the effects of children's engagement on changes in subsequent teacher support has found that students who are more behaviorally engaged elicit more involvement, structure, and autonomy support from teachers, whereas children who are more disaffected elicit more teacher neglect, chaos, and coercion (Connell, Spencer, & Aber, 1994; Skinner & Belmont, 1993). Taken together, these connections suggest a dynamic in which children who are motivationally "rich" become richer over time, whereas children who are motivationally "poor" become even poorer. These motivational cycles have been directly investigated, for example, in intraindividual studies of perceived control (Schmitz & Skinner, 1993) and in research on their long-term developmental trajectories (Skinner et al., 1998).

### *Present Study*

The SSMMMD, chosen to frame this investigation of academic help-seeking, also has implications for conceptualizations of help avoidance, for the self-system predictors of help-seeking, for its

social contextual antecedents, and for the potentially reciprocal effects of help-seeking on social partners. Most important, the model focuses the current study on the examination of whether help-seeking can be considered a part of the unfolding motivational dynamics described by the model. Because the study included information about elementary and middle school children (Grades 3 through 6) at two time points during the school year, hypotheses about each step in the process model (e.g., from ways of coping to engagement or from self-systems to ways of coping) could be examined not only for whether the connections were evident in concurrent associations among constructs, but also for whether each of the putative causal factors could predict changes in its target outcome over the school year. If help-seeking is, as predicted, a part of these motivational dynamics and so is shaped by social and personal motivational resources, it follows that the loss of such resources over the transition to middle school could be one reason for lower levels of help-seeking in early adolescence. Although predictions and measures were derived from previous work on coping, many of them could also have been derived from current theorizing and research on self-regulated learning (e.g., Newman, 2002; A. M. Ryan et al., 2001). Hence, they can be seen as reflecting an integration of both coping and self-regulated learning perspectives on help-seeking. The five sets of hypotheses guiding this study are summarized in Table 1.

### *Help-Seeking and Concealment*

Consistent with models of help-seeking as self-regulated learning and the SSMMMD, we view help-seeking as adaptive because it allows students to constructively re-engage in academic activities when they run into difficulties. Hence, it is expected to be closely related to the quality of children's engagement in the classroom. Highly motivated children are more likely to seek help, and children who seek help are likely to become increasingly engaged in challenging learning tasks.

Motivational accounts add to conceptualizations of help-seeking by positing that its opposite is more than the absence of help-seeking (Nelson-Le Gall, 1985). The SSMMMD holds that when individuals are threatened by obstacles and difficulties, they can respond, not only by avoiding help (e.g., A. M. Ryan & Pintrich, 1997; A. M. Ryan et al., 2001, 2005), but also by actively seeking to conceal their difficulties and to isolate themselves from others (Ainsworth, 1979; Bowlby, 1969/1973; Skinner et al., 2003). From this perspective, concealment is a motivated way of coping and so is expected to be closely tied to engagement versus disaffection. Children who are disaffected from school are more likely to conceal their difficulties, and concealment, because it cuts children off from help that might allow them to continue working, is likely to erode engagement with learning activities over time.

The pattern of emotions underlying help-seeking and concealment may be particularly revealing as to their motivational bases. If, as predicted, help-seeking is tied to enthusiasm and interest, it can be seen as an action propelled by the desire to participate in learning activities. In contrast, if help-seeking is motivated by anxiety, this underlying impetus may interfere with subsequent participation and learning. Following this logic, if concealment is motivated by anxiety, it may reflect a desire to shield one's shortcomings from public display (A. M. Ryan et al., 2001). However, concealment could also be motivated by boredom, re-

Table 1  
*Summary of Hypotheses About Motivational Dynamics*

Hypothesis	Description
Help-seeking, concealment, and engagement	
1a	Children who seek help will also show more engagement, whereas children who report more concealment will also show more disaffection.
1b	Help-seeking in the fall should predict <i>increases</i> in children's engagement over the school year, whereas concealment should predict <i>decreases</i> in engagement over the same time period.
1c	Exploration of the connections between help-seeking and concealment and specific emotions should reveal information about their motivational underpinnings.
Effects of self-systems on help-seeking and concealment	
2a	Relatedness, competence, and autonomy should be positively related to help-seeking and negatively related to concealment.
2b	Each self-system should be a unique predictor of each way of coping.
2c	Each self-system should predict changes in help-seeking and concealment over the school year.
Effects of teacher support on children's help-seeking and concealment	
3a	Teacher support and each of its facets should be positively related to help-seeking and negatively related to concealment.
3b	Teacher support should predict changes in help-seeking and concealment over the school year.
3c	The effects of teacher support on help-seeking and concealment should be mediated by children's self-system processes.
Reciprocal effects of children's coping on teacher support	
4a	Help-seeking and concealment should be unique predictors of teacher support.
4b	Help-seeking should predict <i>increases</i> , and concealment should predict <i>decreases</i> in teacher support over the school year.
Age differences in help-seeking and concealment	
5a	Compared with fifth graders, sixth graders should show lower levels of help-seeking and higher levels of concealment.
5b	Compared with fifth graders, sixth graders should show lower levels of teacher support and self-system processes.
5c	If the levels of teacher support and self-systems were controlled, the difference between fifth and sixth graders in help-seeking and concealment should disappear.
5d	If children with high versus low levels of motivational support were distinguished in each grade, no grade differences in help-seeking or concealment within level of resources should be found.

flecting a desire to simply disengage from the task by avoiding the kind of help that would necessitate further involvement.

Therefore, the first goal of the current study was to examine the process links between the two ways of coping and engagement. Children who seek help should show more engagement, whereas children who report more concealment should show more disaffection. Moreover, in keeping with the expectation of causal influence, help-seeking in the fall should predict *increases* in children's engagement over the school year, and concealment, because it cuts children off from help that might allow them to continue working, should predict *decreases* in engagement over the same time period. Exploration of the connections between help-seeking and concealment and specific emotions should reveal information about their motivational underpinnings (Schutz & Lanehart, 2002).

### *Self-System Predictors of Help-Seeking and Concealment*

Consistent with self-regulated learning and coping models of help-seeking, we hypothesize that children's self-perceptions can promote or undermine children's help-seeking in the classroom. Research suggests that children who perceive themselves as competent are more likely to show adaptive help-seeking and less avoidance of help (Butler & Neuman, 1995; Newman, 1990; Newman & Goldin, 1990; A. M. Ryan, Gheen, & Midgley, 1998; A. M. Ryan et al., 2005; A. M. Ryan & Pintrich, 1997). Autonomy concerns, sometimes addressed in theories of goal orientations, are an important theme in work on help-seeking and avoidance (Butler, 1998; Butler & Neuman, 1995; Newman, 1990, 1998; A. M. Ryan et al., 2001); relatedness is also mentioned occasionally (e.g., Newman, 2002; A. M. Ryan et al., 2001).

Because this is the first empirical examination of concealment, its self-system predictors were of special interest. All three seemed likely candidates: Theories of attachment would predict that children who feel insecure in their relationships with teachers are more likely to conceal their problems and stay away from others; theories of efficacy and control would predict that feelings of incompetence might motivate children to conceal academic difficulties; and theories of self-determination would predict that the sense of external or internal performance pressures characteristic of low autonomy might lead children to disguise their shortcomings and failures. (See A. M. Ryan et al., 2001, for a similar discussion of help avoidance.)

Therefore, the second goal of this study was to examine self-systems as predictors of help-seeking and concealment. We hypothesized that relatedness, competence, and autonomy would be positively related to help-seeking and negatively related to concealment, and each self-system should be a unique predictor of each way of coping. Moreover, in keeping with the proposed causal dynamics, we expected that each self-system would predict changes in help-seeking and concealment over the school year.

#### *Teacher Motivational Supports as Antecedents of Help-Seeking and Concealment*

Theories of self-regulated learning and of children's academic coping hold that teachers play a key role in shaping children's actions. The SSMMMD suggests three avenues by which teachers can provide motivational support. Teacher warmth, structure, and autonomy support would be expected to promote children's help-seeking in the classroom, just as teacher rejection, chaos, and coercion would be expected to result in higher levels of student concealment of academic difficulties. Given the motivational dynamics described previously, it was considered likely that one pathway through which teacher support might shape children's help-seeking would be through its effects on their self-system processes. Therefore, a third aim was to empirically examine the connections between teacher motivational supports and children's help-seeking and concealment, both concurrently and across the school year, and to examine a mediational model in which teacher supportiveness shapes coping primarily through its effects on children's self-system processes.

#### *Feedback Loops From Children's Coping to Teacher Support*

Our fourth set of hypotheses depicted reciprocal effects, namely, that children's coping could exert an effect on teachers' subsequent provisions of support. We reasoned that teachers would view help-seeking from students as a positive indicator of their motivation and interest in school work, and so it would elicit teacher support (Connell et al., 1994; Pelletier & Vallerand, 1996; Skinner & Belmont, 1993). Such reciprocal effects have been found in research on parenting and coping: Children's help-seeking and concealment has been found to predict changes in parent support over the course of a school year (Skinner & Edge, 2002). Hence, we expected that help-seeking and concealment would each be unique predictors of teacher support and that students who cope by seeking help would elicit more motivational support from their teachers over the school year, whereas children who conceal their

problems would experience withdrawal of teacher support over the same time period.

#### *Developmental Trends*

Motivational accounts supply a relatively straightforward explanation of normative decreases in help-seeking during middle school. The transition to middle school is accompanied by declines in children's sense of relatedness, competence, and autonomy as well as by losses in teacher support (as reported by both students and teachers; for a review, see Wigfield et al., 2006). If these self-systems and social relationships are motivational resources, and they deteriorate during middle school and high school, then this should result in declines in engagement and constructive coping over time, including help-seeking. Likewise, these losses should be accompanied by increases in disaffection and maladaptive ways of coping, including concealment.

Therefore, the fifth goal of this study was to further explore age-related differences in children's help-seeking and concealment and their relations to potential motivational antecedents. We expected that grade differences in help-seeking and concealment over the transition to middle school (between fifth and sixth grades) would be mirrored by corresponding differences in children's self-system processes and the supports they receive from teachers. Furthermore, we reasoned that if motivational resources are responsible for grade differences, when the levels of teacher support and self-systems were controlled, then the differences between fifth and sixth graders in help-seeking and concealment should disappear.<sup>1</sup>

#### *Summary*

Informed by the SSMMMD and theories of self-regulated learning, we conducted an investigation that was designed to contribute to motivational accounts of help-seeking and concealment, including their ties to engagement versus disaffection, key self-system predictors, and the motivational supports provided by teachers. The study included children in elementary and middle school (Grades 3 through 6) at two time points during the school year. Hence, measurements in fall and spring allowed us to examine whether, in keeping with expectations of causal influence, putative antecedents predicted changes in outcomes over the school year. Inclusion of children across the transition to middle school allowed us to examine whether, in keeping with developmental hypotheses, children's motivational resources and help-seeking behaviors showed the predicted pattern of age differences. The primary goal was to determine whether patterns of individual differences in changes across the school year were consistent with a model of

<sup>1</sup> Although previous research has investigated gender effects, no clear pattern of differences in the predictors, frequency, or outcomes of help-seeking has emerged. Some studies found no significant gender effects (Butler & Neuman, 1995; Newman, 1990; Newman & Schwager, 1995), whereas others indicate that there may be some differences between boys and girls at various ages and skill levels (Nelson-Le Gall & Gumerman, 1984; Nelson-Le Gall, Kratzer, Jones, & DeCooke, 1990). Although the SSMMMD makes no specific hypotheses regarding gender, in keeping with previous help-seeking research, gender main effects and interactions were also examined.

motivational dynamics in the classroom. Research questions about the antecedents and consequences of help-seeking and concealment were examined to determine whether students who start off motivationally "rich," through their adaptive reactions to difficulties and obstacles, become motivationally "richer," whereas children who start off motivationally disadvantaged, through their attempts to conceal their academic difficulties, lose motivational support over time.

## Method

### Participants

Data from a 4-year longitudinal study on children's motivation and coping in school were used for this study (for a complete description, see Skinner et al., 1998). Participants were 1,600 students in Grades 3 through 7 and 53 of their teachers. The students, who attended public elementary and middle schools in a rural-suburban school district located in upstate New York, were predominantly Caucasian, with approximately 5% of the students identifying themselves as non-White. The sample was almost equally divided by gender. Students' socioeconomic status (as determined by parents' level of education and occupation) ranged from working to middle class.

A subset of these children (total  $n = 1,004$ ) from year 3 of the study (measurement points 5 and 6) was available for the current study. Following an analysis of missing data patterns, we excluded students who were missing more than two complete student-report scales ( $n = 169$ ) or more than 50% of the items from teacher-report scales ( $n = 239$ ). (All children who met exclusion criteria for the student-report scales also met exclusion criteria for the teacher-report scales.) On the basis of Schafer and Graham's (2002) recommendation, we imputed missing data for the remainder of the sample with SPSS 11.5 using maximum-likelihood estimation with an estimation maximization algorithm. The final data set included 765 students (375 boys and 390 girls) who were in Grades 3 through 6 during the two time points used for these analyses. The final sample contained 110 third-grade students, 279 fourth graders, 92 fifth graders, and 284 sixth graders; each grade was almost exactly evenly divided by gender.

### Procedures

Trained interviewers administered self-report questionnaires to students in their classrooms in three 45-min sessions. In each session, one interviewer read the questions aloud while students marked their answers on the questionnaire. A second interviewer was present to monitor question comprehension and answer questions. During these sessions, teachers were not present in the classroom. Instead, most teachers spent their time filling out their questionnaires during student assessment periods. Data were collected in October and May.

Students reported on their ways of coping with academic problems, self-systems, and engagement versus disaffection in the classroom. Student report of self-systems included reports of relatedness to their teacher, perceptions of control in the academic domain, and perceptions of autonomy in school. Teachers reported on the level of involvement, structure, and autonomy support they provided to each child. Each student was assessed by the teacher

who felt he or she knew the student best. Respondents used 4-point Likert-type scales to indicate whether each item was *not at all true* (1), *not very true* (2), *sort of true* (3), or *very true* (4). Negatively worded items were reverse coded, and items in each scale were averaged to calculate a composite score. Hence, scale scores could range from 1 to 4, with higher scores indicating more of the respective construct.

### Measures: Student-Report Scales

*Help-seeking and concealment.* A measure of help-seeking was supplemented by an assessment of children's concealment, which focused on attempts to avoid others and prevent them from finding out that one is experiencing difficulties. Items tapped responses to academic challenges [e.g., "When I have trouble with a subject in school" or "When something bad happens to me in school (like not doing well on a test or not being able to answer an important question)"]. The help-seeking scale, consisting of five items (e.g., "I ask for some help with understanding the material" and "I ask the teacher to explain what I didn't understand"), showed satisfactory internal consistencies ( $\alpha = .72$  in fall;  $\alpha = .79$  in spring). The concealment scale, consisting of nine items (e.g., "I don't let anyone know about it" and "I make sure nobody finds out"), also showed satisfactory internal consistencies ( $\alpha = .82$  in fall;  $\alpha = .86$  in spring). The complete item set appears in the Appendix.

As expected, help-seeking and concealment were negatively correlated ( $r = -.32$  and  $-.38$  in the fall and spring, respectively). To determine whether these two scales tapped different ways of coping, we used structural equation modeling with data from the fall to directly compare a one-factor bipolar model (help-seeking vs. concealment) with a two-factor model (help-seeking and concealment). The two-factor model was a significantly better fit to the data than the model of one bipolar factor,  $\chi^2(1, N = 765) = 461.99, p < .001$ . Moreover, the two-factor model met or approached satisfactory values for most of the goodness-of-fit indices, whereas the one-factor model did not. For the two-factor model,  $\chi^2(76, N = 765) = 326.18, p < .001$ ; GFI = .94; AGFI = .92; CMIN/DF = 4.30; RMSEA = .07; NFI = .88; RFI = .85; and IFI = .90. Factor loadings and squared multiple correlations (which reflect the proportion of variance in each measured variable accounted for by the latent construct) calculated for both the fall and spring measurement points indicated a good fit between the items and the latent variables. Factor loadings, which should meet or exceed .50, ranged from .46 to .71 for the Help-Seeking factor (average = .62), and from .49 to .72 for the Concealment factor (average = .61). The squared multiple correlations, which should meet or exceed .10, ranged from .21 to .50 for help-seeking (average = .39) and from .24 to .52 for concealment (average = .38). On the basis of this pattern of findings, we decided to use help-seeking and concealment as two separate scales.

*Relatedness to teachers.* Students completed four items regarding their sense of belonging or connectedness to teachers (Furrer & Skinner, 2003). For each item, the stem was "When I'm with my teacher." Example responses are "I feel accepted" and "I feel ignored" (reverse coded). Internal consistencies were satisfactory ( $\alpha = .80$  in fall;  $\alpha = .93$  in spring).

*Perceived control and competence.* Students' expectancies about the extent to which they can achieve school success and

avoid failure were assessed using the six-item Control Beliefs subscale of the Student Perceptions of Control Questionnaire (Skinner, Chapman, & Baltes, 1988; Skinner et al., 1990). This measure captures student's generalized beliefs about the extent to which they can produce positive and prevent negative outcomes in the academic domain. Example items include "I can get good grades in school" and "I can't do well in school, even if I want to" (reverse coded). Internal consistencies were adequate ( $\alpha = .63$  in fall;  $\alpha = .70$  in spring).

*Autonomy orientation.* The measure of academic autonomy was composed of 17 items that tap whether children engage in activities because they feel coerced or because they desire understanding and enjoy the task (R. M. Ryan & Connell, 1989). The measure consists of four subscales: (a) External Self-Regulation, which refers to doing work because of rules or fear of punishment ("Why do I do my homework? Because I'll get in trouble if I don't"); (b) Introjected Self-Regulation, which refers to doing work because one "should" and to avoid negative emotions ("Why do I try to do well in school? Because I'll feel really bad about myself if I don't do well"); (c) Identified Self-Regulation, which refers to reasons for working related to desire for understanding and learning ("Why do I work on my classwork? Because I think classwork is important for my learning"); and (d) Intrinsic Self-Regulation, which refers to doing work because it is enjoyable ("Why do I work on my classwork? Because it's fun"). The four subscales are weighted and averaged to form a summary score called the relative autonomy index (Patrick, et al., 1993; R. M. Ryan & Connell, 1989). Internal consistencies for the aggregated scale were satisfactory ( $\alpha = .78$  in fall;  $\alpha = .81$  in spring).

*Engagement versus disaffection.* Each student responded to 25 items tapping his or her behavioral and emotional engagement versus disaffection in the classroom (Skinner et al., 1998; Wellborn, 1991). Ten items assessed students' behavioral engagement versus disaffection, that is, their effort, attention, and persistence when initiating and executing learning activities. Example items include "The first time my teacher talks about a new topic, I listen very carefully" and "In class, I try to do just enough to get by" (reverse coded). Internal consistencies were satisfactory ( $\alpha = .76$  in fall;  $\alpha = .84$  in spring).

Fifteen items tapped students' emotional engagement versus disaffection during academic activities. Six items tapped engaged emotions, and nine tapped disaffected emotions (anxiety, boredom, and generally negative emotions such as "bad" or "terrible"). Item examples include "When I'm working on my classwork, I feel happy" and "When I'm doing my work in class, I feel bored" (reverse coded). Internal consistencies were satisfactory ( $\alpha = .86$  in fall;  $\alpha = .89$  in spring). Because the emotions (positive, anxious, bored, and generally negative) may reflect different motivational bases for help-seeking or concealment, we also created four disaggregated scores: one each for positive emotions (six items,  $\alpha = .78$  in fall and  $\alpha = .83$  in spring), anxiety (three items,  $\alpha = .69$  in fall and  $\alpha = .75$  in spring), boredom (two items,  $r = .54$  in fall and  $r = .57$  in spring), and negative emotions (four items,  $\alpha = .75$  in fall and  $\alpha = .79$  in spring). Because of the small number of items, analyses with these subscales were considered exploratory.

A composite scale of student engagement versus disaffection was created by averaging the emotional and behavioral engagement subscales, which were highly correlated with each other ( $r = .64$  in fall and  $r = .71$  in spring,  $ps < .01$ ). Internal consistencies

for the aggregated scale were satisfactory ( $\alpha = .89$  in fall;  $\alpha = .92$  in spring). In most analyses, we included behavioral, emotional, and total engagement scores, in keeping with recent literature suggesting that engagement be treated as a multidimensional construct (Fredricks et al., 2004).

### *Measures: Teacher Report of Social Context*

*Teacher warmth versus neglect.* Teachers reported on the level of involvement they provided to each child (Skinner & Belmont, 1993). Fourteen items tapped warmth and affection, dedication of resources, knowledge about the student and his or her needs, and dependability versus hostility and neglect (reverse coded). Example items include "This student is easy to like" and "Teaching this student is not enjoyable" (reverse coded). Internal consistencies were satisfactory ( $\alpha = .89$  in fall;  $\alpha = .90$  in spring).

*Teacher structure versus chaos.* Five items measured the kind and amount of structure, including clarity of expectations and contingency, versus chaos (reverse coded) provided to each student (Skinner & Belmont, 1993). Example items are "I try to be clear with this student about what I expect of him/her in class" and "I find it hard to be consistent with this student" (reverse coded). Internal consistencies were adequate ( $\alpha = .63$  in fall;  $\alpha = .71$  in spring).

*Teacher autonomy support versus coercion.* Autonomy support provided by the teacher was measured with a 12-item scale tapping teacher provision of choice, relevance, and respect versus controlling behavior (reverse coded; Skinner & Belmont, 1993). Example items are "I let this student make a lot of his/her own decisions regarding schoolwork," and "When it comes to assignments, I'm always having to tell this student what to do" (reverse coded). Internal consistencies were satisfactory ( $\alpha = .93$  in fall;  $\alpha = .94$  in spring). The three scales were also averaged to form an aggregate teacher supportive versus unsupportive context scale. Internal consistencies for the aggregated scale were satisfactory ( $\alpha = .94$  in fall;  $\alpha = .95$  in spring).

## Results

### *Descriptive Analyses*

Table 2 presents the means, standard deviations, and cross-time correlations for all variables. As can be seen, in general students tended to positively endorse the scales; for example, the average score for help-seeking in the fall was 3.19, which is above the scale midpoint of 2.5. Students also felt connected and highly competent, as well as behaviorally and emotionally engaged while at school. Teachers perceived themselves to be supportive in all areas, particularly in providing structure. *T* tests comparing mean level changes across the school year showed that student autonomy declined slightly. However, teacher involvement and autonomy support increased slightly as teachers and students got to know each other. Both ways of coping also decreased somewhat, perhaps reflecting students' greater familiarity with school demands. At the same time, correlations from fall to spring revealed a relatively high level of stability over the school year (average  $r = .67$ ).

### *Gender Differences*

Analyses of mean levels as a function of gender revealed significant differences for all variables except teacher provision of

Table 2  
*Descriptive Statistics for Variables in Fall and Spring and Stability Correlations*

Scale	Fall <i>M</i> ( <i>SD</i> )	Spring <i>M</i> ( <i>SD</i> )	Fall to spring <i>r</i>
Ways of coping			
Help-seeking	3.19 (0.59)	3.13 (0.63)	.56**
Concealment	2.03 (0.63)	1.92 (0.64)	.66**
Self-system processes			
Relatedness	3.06 <sub>a</sub> (0.75)	3.08 <sub>a</sub> (0.77)	.49**
Competence	3.44 <sub>b</sub> (0.50)	3.46 <sub>b</sub> (0.52)	.67**
Autonomy	2.61 (0.50)	2.57 (0.52)	.55**
Engagement			
Behavioral	3.25 <sub>c</sub> (0.49)	3.24 <sub>c</sub> (0.54)	.67**
Emotional	3.11 <sub>d</sub> (0.53)	3.08 <sub>d</sub> (0.58)	.71**
Total	3.18 <sub>e</sub> (0.46)	3.16 <sub>e</sub> (0.52)	.74**
Teacher support			
Involvement	3.06 (0.43)	3.11 (0.48)	.74**
Structure	3.52 <sub>f</sub> (0.44)	3.51 <sub>f</sub> (0.49)	.69**
Autonomy support	3.02 (0.63)	3.06 (0.63)	.80**
Total	3.20 (0.41)	3.23 (0.47)	.78**

Note. *N* = 765. Scales could range from 1 to 4. Subscripts a–e: *T* tests showed all mean levels from fall to spring were significantly different at least at  $p < .01$  except for means marked by the same letter.  
 \*\*  $p < .01$ .

structure in the fall and spring and student autonomy in the spring. As is typical, girls were motivationally somewhat “better off” than boys (Wigfield et al., 2006), although the differences were not very large, ranging from .01 to .24 on a 4-point scale (average difference = .14). Cross-year stability coefficients were high for both genders, although they were significantly higher for girls’ help-seeking and relatedness compared with those of boys.’

#### *Relationship of Help-Seeking and Concealment to Engagement*

The first goal of this study was to test the hypothesis that help-seeking allows students to remain constructively engaged when they encounter academic challenges, whereas concealment undermines engagement. As can be seen in Table 3, correlations between ways of coping and types of engagement were consistent with this hypothesis: In both fall and spring, help-seeking and

engagement showed a relatively strong positive relationship, whereas student reports of concealment and both types of engagement were strongly negatively related.

*Unique effects of help-seeking and concealment on engagement.* Regressions were used to determine whether help-seeking and concealment each made unique contributions to student engagement at concurrent measurement points. All overall models and all individual coefficients were significant at  $p < .001$ . Both ways of coping were significant and unique predictors of behavioral engagement in fall ( $\beta = .27$  and  $-.48$  for help-seeking and concealment, respectively,  $R^2 = .39$ ) and in spring ( $\beta = .39$  and  $-.38$  for help-seeking and concealment, respectively,  $R^2 = .41$ ) as well as of emotional engagement in fall ( $\beta = .30$  and  $-.47$  for help-seeking and concealment, respectively,  $R^2 = .39$ ) and in spring ( $\beta = .36$  and  $-.45$  for help-seeking and concealment, respectively,  $R^2 = .46$ ). The consistent pattern of unique effects indicates that,

Table 3  
*Intercorrelations Among Ways of Coping, Self-System Processes, and Engagement in Fall and Spring*

Scale	Help-seeking	Concealment	Relatedness	Competence	Autonomy	Engagement		
						Behavioral	Emotional	Total
Ways of coping								
Help-seeking	—	-.32	.42	.37	.29	.42	.45	.48
Concealment	-.38	—	-.40	-.52	-.48	-.57	-.56	-.62
Self-system processes								
Relatedness	.50	-.38	—	.42	.40	.45	.57	.57
Competence	.38	-.47	.37	—	.30	.60	.52	.62
Autonomy	.33	-.37	.37	.22	—	.48	.62	.61
Engagement								
Behavioral	.54	-.53	.52	.62	.45	—	.64	(.90)
Emotional	.53	-.59	.58	.53	.61	.71	—	(.91)
Total	.56	-.60	.60	.62	.57	(.92)	(.93)	—

Note. *N* = 765. Correlations for fall are above the diagonal. Correlations for spring are below the diagonal. Correlations in parentheses are correlations of subscales with total scale scores. All correlations were significant at least at  $p < .01$ .



in terms of its contribution to engagement, concealment is more than the absence of help-seeking.

*Disaggregated emotional engagement and disaffection.* Correlations between help-seeking and concealment and disaggregated emotional engagement and disaffection revealed that in general, help-seeking was positively correlated with positive emotions ( $r = .49$  and  $.58$ , in fall and spring, respectively) and, to a lesser extent, negatively correlated with anxiety ( $r = -.16$  and  $-.18$ , in fall and spring, respectively), boredom ( $r = -.27$  and  $-.36$ , in fall and spring, respectively), and general negative emotions ( $r = -.28$  and  $-.37$ , in fall and spring, respectively), all  $ps < .001$ . At the same time, concealment was correlated negatively with positive emotions ( $r = -.37$  and  $-.41$ , in fall and spring, respectively) and positively with anxiety ( $r = .57$  and  $.62$ , in fall and spring, respectively), boredom ( $r = .44$  and  $.43$ , in fall and spring respectively), and general negative emotions ( $r = .50$  and  $.58$ , in fall and spring, respectively), all  $ps < .001$ . In terms of unique effects of help-seeking and concealment on the disaggregated emotions, both ways of coping showed significant unique effects on each disaggregated emotion at both time points, with one exception. Help-seeking did not show a unique effect on anxiety in the fall and showed only a weak unique effect in the spring ( $\beta = .06$ ,  $p < .05$ ), compared with, for example, the unique effect of concealment ( $\beta = .64$ ,  $p < .001$ ).

*Changes in engagement from fall to spring.* A series of regressions examined whether coping in fall predicted changes in engagement across the school year. Despite the high stability of student reports of engagement (average  $r = .71$ ), help-seeking in the fall significantly and uniquely predicted ( $\beta = .10$ ,  $p < .001$ ) increases in behavioral engagement over the school year ( $R^2 = .46$ ,  $F(2, 762) = 319.27$ ,  $p < .001$ ). Although help-seeking did not significantly predict increases in emotional or total engagement, follow-up analyses examining the different types of emotions separately revealed that help-seeking was a significant, although modest, predictor of changes in each: positive emotions ( $\beta = .07$ ,  $p < .05$ ,  $R^2 = .43$ ), anxiety ( $\beta = -.07$ ,  $p < .05$ ,  $R^2 = .37$ ), boredom, ( $\beta = -.13$ ,  $p < .001$ ,  $R^2 = .31$ ), and general negative emotions ( $\beta = -.11$ ,  $p < .001$ ,  $R^2 = .32$ ).

The pattern for concealment was more consistent. Concealment in the fall uniquely predicted decreases over the school year in all indicators of student-reported engagement: behavioral engagement ( $\beta = -.15$ ,  $p < .001$ ,  $R^2 = .46$ ),  $F(2, 762) = 327.05$ ,  $p < .001$ ; emotional engagement ( $\beta = -.16$ ,  $p < .001$ ,  $R^2 = .52$ ),  $F(2, 762) = 419.74$ ,  $p < .001$ ; and total engagement ( $\beta = -.12$ ,  $p < .001$ ,  $R^2 = .56$ ),  $F(2, 762) = 478.44$ ,  $p < .001$ .

### *Self-System Predictors of Help-Seeking and Concealment*

The second goal of the study was to examine the effects of self-system predictors on help-seeking and concealment. Because research has focused on children's perceptions of competence and their goal orientations as key predictors of their help-seeking, a special focus was on whether more social self-system processes, such as relatedness, would make a unique contribution to both types of coping, beyond the strong effects of competence and autonomy orientations. The correlations between each self-system process and the ways of coping at both time points, found in Table 3, revealed that all three self-systems were moderately related to

help-seeking (average  $r = .38$ , range =  $.29$  to  $.50$ ) and to concealment (average  $r = -.43$ , range =  $-.37$  to  $-.52$ ).

*Unique effects of self-systems.* The previous analyses provide support for the hypothesis that all three self-systems are important predictors of help-seeking and concealment ways of coping. However, the question remained whether each was a unique predictor of coping. To test this hypothesis, we performed two sets of concurrent regressions using help-seeking and concealment as dependent variables. All regressions were significant at  $p < .001$ . All three self-system processes were unique predictors of coping at both time points. For help-seeking,  $\beta = .28$  for relatedness,  $\beta = .22$  for competence, and  $\beta = .11$ ,  $p < .01$ , for autonomy in the fall (all  $ps < .001$  except as indicated,  $R^2 = .23$ ); and  $\beta = .36$  for relatedness,  $\beta = .22$  for competence, and  $\beta = .15$  for autonomy in the spring (all  $ps < .001$ ,  $R^2 = .31$ ). For concealment,  $\beta = -.11$  for relatedness,  $\beta = -.37$  for competence, and  $\beta = -.33$  for autonomy in the fall (all  $ps < .001$ ,  $R^2 = .39$ ); and  $\beta = -.17$  for relatedness,  $\beta = -.35$  for competence, and  $\beta = -.23$  for autonomy in the spring (all  $ps < .001$ ,  $R^2 = .32$ ).

*Changes in coping from fall to spring.* Regression analyses examined whether, despite high stability in student reports of coping from fall to spring (average  $r = .61$ ), each self-system could predict changes in coping over the school year. As depicted in Figure 2, each self-system did predict increases in student help-seeking. Students who felt a sense of belonging in the classroom, felt effective in their efforts, or felt they had some choice in their scholastic activities became increasingly likely to using help-seeking as a way of coping. Changes in concealment were generally harder to predict. Low perceived competence in the fall predicted increases in concealment, as did low perceived autonomy (although weakly so). It is interesting that despite significant negative correlations between relatedness and concealment at both time points, students' perceptions of relatedness did not predict changes in concealment from fall to spring.

### *Teacher Support and Children's Help-Seeking and Concealment*

The third aim of this study was to investigate how teacher support contributed to children's coping. We expected that children whose teachers provide more involvement, structure, and autonomy support would increase in their use of help-seeking, whereas children whose teachers evince higher levels of rejection, chaos, and coercion would escalate their concealment. We also examined a mediational model in which teacher supportiveness shapes coping primarily through its effects on children's self-system processes. Table 4 presents the correlations between the three facets of teacher-reported support and student coping. Although low, all correlations were significant and in the expected direction. Note that because these are correlations between teacher-report measures of teacher support and student-report measures of coping, they share no common method variance.

*Changes in coping from fall to spring.* Figure 2 also displays the results of regressions examining whether teacher support predicted changes in student coping across the school year. As can be seen, teacher support did predict increases in help-seeking, suggesting that children whose teachers provided higher initial levels of support increased in their use of help-seeking. Contrary to our predictions, however, the aggregate measure of teacher support did

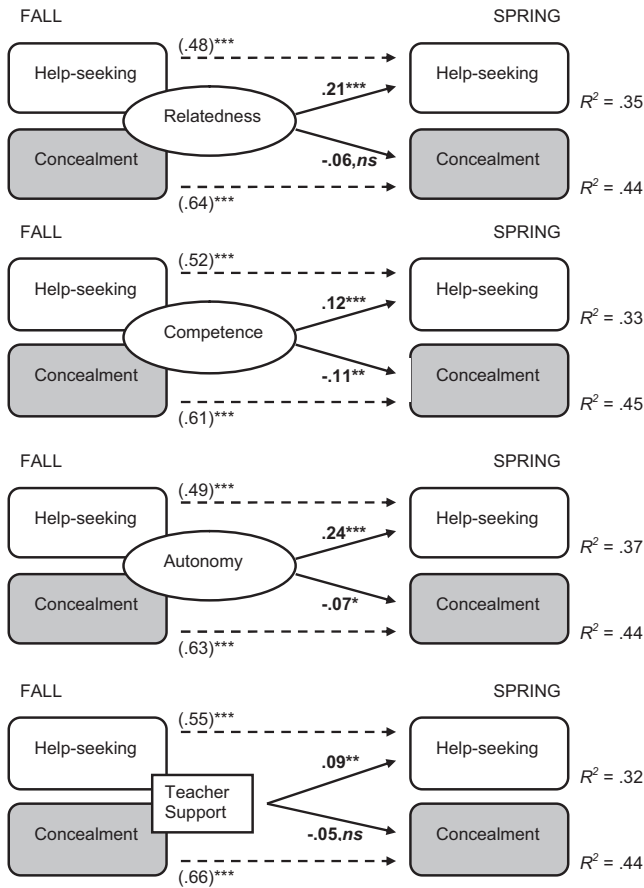


Figure 2. Children’s self-system processes and teacher support as predictors of changes in their help-seeking and concealment across the school year. Standardized regression coefficients are shown. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

not significantly predict changes in concealment. To explore whether certain kinds of teacher support might influence concealment, we analyzed the effects of the three types of teacher support individually. Neither teacher report of involvement nor of structure reached significance. Only low autonomy support in the fall pre-

dicted increases in concealment over time ( $\beta = -.07, p < .05, R^2 = .44$ ).

*Mediating effects of the self-system processes.* To test the hypothesis that teacher supportiveness shapes students’ coping primarily through its influence on their self-perceptions, we tested six mediational models, using each self-system process (assessed in fall) as a mediator between teacher support (in fall) and each way of coping (in spring). We followed the four-step procedure outlined by Baron and Kenny (1986) in which, after it is established that the antecedent (in this case, teacher support in fall) is correlated with both (a) the outcome (i.e., coping in the spring) and (b) the proposed mediator (i.e., a self-system process in fall) and that (c) the proposed mediator is correlated with the outcome, the step of most interest is (d) whether in a regression using both the antecedent and the mediator as independent variables to predict the outcome, the unique effect of the mediator remains significant, whereas the unique effect of the antecedent is significantly reduced (indicating partial mediation) or no longer reaches significance (indicating full mediation).

As can be seen in Figure 3 (for help-seeking) and Figure 4 (for concealment), students’ perceptions of competence fully mediated the relationship between teacher support in the fall and both help-seeking and concealment in the spring. However, for the models examining relatedness and autonomy as potential mediators, teacher support also showed a direct effect on both ways of coping, indicating that these self-systems only partially mediated the effects of teacher support. Mediational models that included all three SSPs in the same step (depicted in the bottoms of Figures 3 and 4) revealed that, in combination, the SSPs in fall fully mediated the effects of teacher support in fall on both ways of coping in spring. Taken together, these models suggest that one pathway through which teacher support shapes students’ help-seeking and concealment is by influencing students’ perceptions of their relatedness, competence, and autonomy.

*Feedback Loops From Children’s Coping to Teacher Support*

The fourth goal of this study was to examine whether children’s coping in the classroom could exert an effect on their teachers’ subsequent levels of support. Specifically, we expected that students who coped by seeking help would elicit more motivational support from their teachers over the school year, whereas children

Table 4  
Intercorrelations Among Teacher Support and Ways of Coping in Fall and Spring

Scale	Help-seeking	Concealment	Involvement	Structure	Autonomy support	Teacher support total
Ways of coping						
Help-seeking	—	-.32**	.10**	.11**	.13**	.14**
Concealment	-.38**	—	-.13**	-.07**	-.18**	-.16**
Teacher support						
Involvement	.19**	-.17**	—	.47**	.61**	(.86**)
Structure	.10**	-.19**	.47**	—	.45**	(.75**)
Autonomy support	.20**	-.21**	.71**	.49**	—	(.91**)
Total	.20**	-.21**	(.83**)	(.75**)	(.88**)	—

Note.  $N = 765$ . Correlations for fall are above the diagonal. Correlations for spring are below the diagonal. Correlations in parentheses are correlations of subscales with the total scale scores. \*\* $p < .01$ .

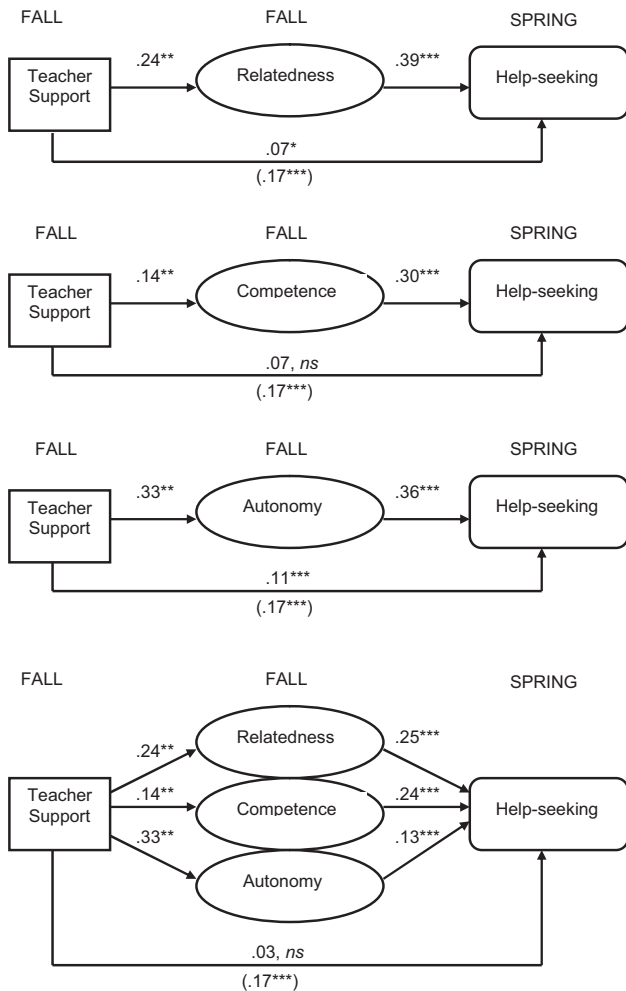


Figure 3. The indirect effects of teacher support on help-seeking as mediated by student self-perceptions. Standardized regression coefficients are shown. In parentheses are the effects of teacher support on help-seeking without the mediator in the model. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

who initially concealed their problems would experience withdrawal of teacher support over the same time period.

*Unique effects of help-seeking and concealment on teacher support.* Regressions were used to determine whether help-seeking and concealment both made unique contributions to teacher support at concurrent measurement points. All overall models were significant at least at  $p < .01$ . The coefficients indicated that both ways of coping were significant and unique predictors of overall teacher support in fall ( $\beta = .10$  for help-seeking,  $p < .01$ , and  $\beta = -.13$  for concealment,  $p < .01$ ,  $R^2 = .04$ ) and in spring ( $\beta = .14$  for help-seeking,  $p < .001$ , and  $\beta = -.15$  for concealment,  $p < .001$ ,  $R^2 = .06$ ).

*Effects of coping on changes in teacher support from fall to spring.* Regressions were used to determine whether help-seeking and concealment each predicted changes in teacher support from the beginning to the end of the school year. As expected, despite high stability in teacher supportiveness over the school year (average  $r = .75$ ), both help-seeking and concealment in the fall accounted for significant variance in changes in teacher sup-

port from fall to spring ( $\beta = .05$  for help-seeking,  $p < .05$ ,  $R^2 = .63$ ; and  $\beta = -.07$  for concealment,  $p < .001$ ,  $R^2 = .64$ ). Students who coped by seeking help at the beginning of the year elicited more subsequent motivational support from their teachers, whereas students who initially used concealment as a way of coping with problems were more likely to find that their teachers withdrew their support as the year progressed.

*Effects of coping on changes in disaggregated teacher support.* To explore whether students' coping influenced different facets of teacher responses, we disaggregated the teacher support variable into involvement, provision of structure, and autonomy support. Student coping was used as a predictor of changes from fall to spring in the three types of support (see Figure 5). Help-seeking significantly predicted increases in teacher involvement and autonomy support across the school year, but not teacher provision of structure. At the same time, concealment significantly predicted declines in all three facets of teacher support.

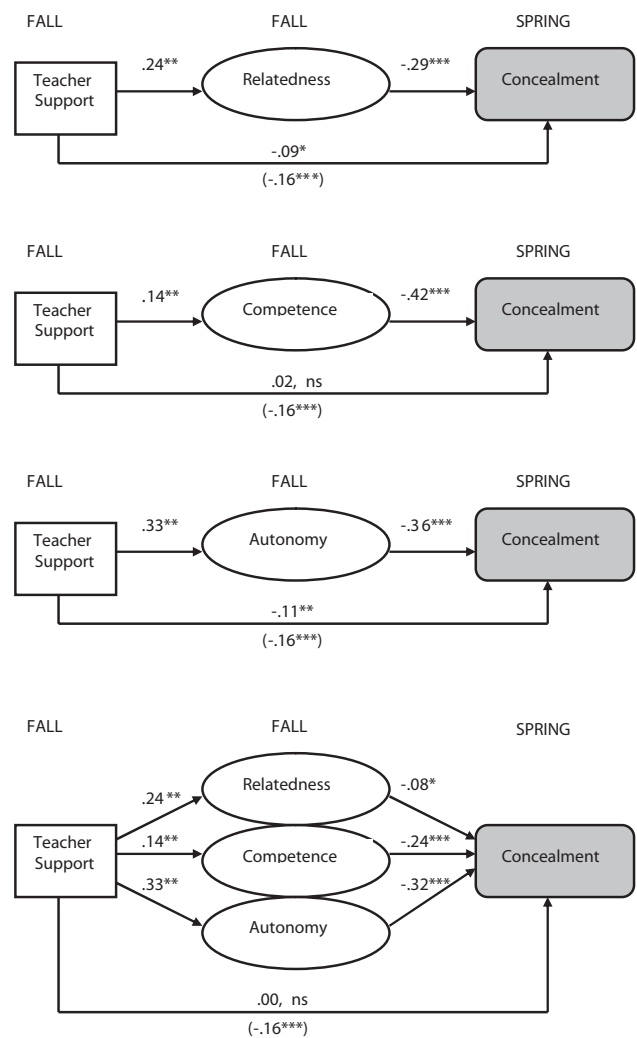


Figure 4. The indirect effects of teacher support on concealment as mediated by student self-perceptions. Standardized regression coefficients are shown. In parentheses are the effects of teacher support on concealment without the mediator in the model. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

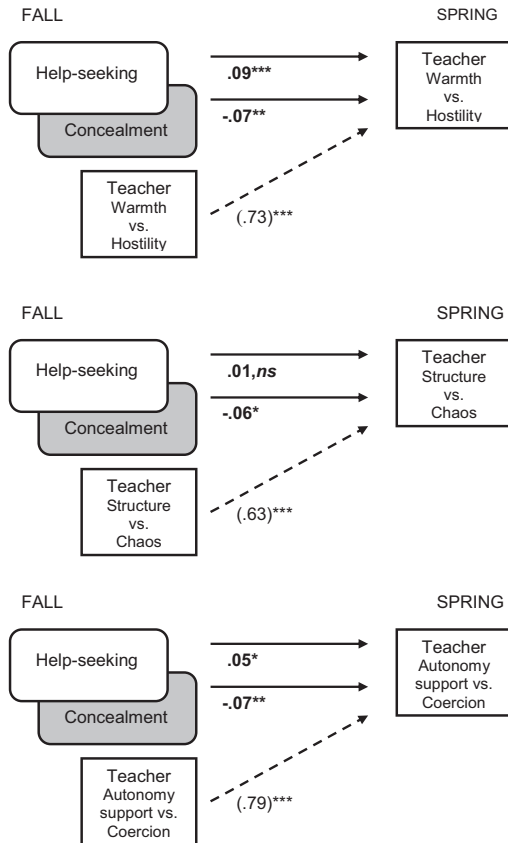


Figure 5. Students' help-seeking and concealment as predictors of changes in teachers' motivational supports across the school year. Standardized regression coefficients are shown. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

### Age Differences in Help-Seeking and Concealment

The final goal was to test the hypothesis that drops in motivational resources over the transition to middle school were one reason for declines in children's help-seeking and increases in their concealment. To examine whether age-related differences in children's ways of coping were accompanied by corresponding dif-

ferences in personal and social motivational resources, we created a subsample of students containing roughly the same number of students from each grade by randomly selecting students from the 765 children in the working data set (Grade 5,  $n = 92$ ; all others  $n = 100$ ) for a total sample size of 392. Table 5 contains descriptive statistics for students' coping, self-system processes, and teacher support (averaged across the school year to form a composite measure of each construct, representing the general level of motivational resources and coping behavior for a given year).

A multivariate analysis of variance including all the dependent variables revealed a main effect for grade,  $F(18, 1084) = 7.60$ ,  $p < .001$ . The univariate analyses of variance for each dependent variable individually were all significant at least at the  $p < .05$  level (see Table 5). In general, there seemed to be a pattern of age differences between Grades 3 through 5 suggesting higher levels of adaptive coping, accompanied by more positive self-perceptions and higher levels of teacher support as a function of grade. Starting in Grade 6, however, students reported higher levels of maladaptive coping accompanied by lower levels of self-perceptions and teacher support. Post hoc comparisons focusing on differences between fifth and sixth grade (see Figure 6) indicated significant differences in the predicted directions for all motivational supports (lower in sixth than in fifth grade), for help-seeking (lower in sixth than in fifth grade), and for concealment (higher in sixth than in fifth grade).

Two additional sets of analyses were conducted to determine whether the age differences in coping could be attributed to age differences in motivational resources. First, we repeated the post hoc analyses of differences between Grades 5 and 6 in help-seeking and concealment, but this time we controlled for the levels of all motivational resources. If the differences between fifth and sixth graders in coping were due to differing levels of teacher support and self-systems, then when these were controlled, the difference between fifth and sixth graders in help-seeking and concealment should disappear. They did so. For help-seeking, the grade main effect was  $F(1, 186) = 2.76$ ,  $ns$ . For concealment, the grade main effect was  $F(1, 186) = 0.17$ ,  $ns$ .

To see if we could identify which of the motivational resources was responsible for the grade differences, we then repeated the analyses of covariance, controlling for one motivational resource at a time (first teacher support, then relatedness, etc.). The grade difference was not significant when either teacher support or

Table 5  
Descriptive Statistics for Grades 3–6 Averaged Across the School Year

Scale	Grade 3 ( $n = 100$ ) $M$ ( $SD$ )	Grade 4 ( $n = 100$ ) $M$ ( $SD$ )	Grade 5 ( $n = 92$ ) $M$ ( $SD$ )	Grade 6 ( $n = 100$ ) $M$ ( $SD$ )
Ways of coping				
Help-seeking	3.14 <sub>a,b</sub> (0.54)	3.13 <sub>a,b</sub> (0.57)	3.31 <sub>a</sub> (0.50)	3.05 <sub>b</sub> (0.54)
Concealment	2.02 <sub>c,d</sub> (0.62)	1.90 <sub>c,d</sub> (0.58)	1.82 <sub>c</sub> (0.59)	2.04 <sub>d</sub> (0.52)
Self-system processes				
Relatedness	3.04 <sub>e</sub> (0.71)	3.03 <sub>e</sub> (0.72)	3.33 (0.62)	3.05 <sub>e</sub> (0.57)
Competence	3.44 <sub>f,g</sub> (0.43)	3.44 <sub>f,g</sub> (0.42)	3.56 <sub>f</sub> (0.41)	3.38 <sub>g</sub> (0.50)
Autonomy	2.80 <sub>h</sub> (0.45)	2.66 <sub>h</sub> (0.46)	2.79 <sub>h</sub> (0.48)	2.36 (0.38)
Teacher support				
Total	3.23 <sub>i</sub> (0.41)	3.24 <sub>i</sub> (0.39)	3.50 (0.31)	3.11 <sub>i</sub> (0.41)

Note.  $N = 392$ . Subscripts a–i: Mean levels were significantly different across grade at least at  $p < .05$  as determined by Bonferroni post hoc comparisons for all variables, except for means marked by the same letter.

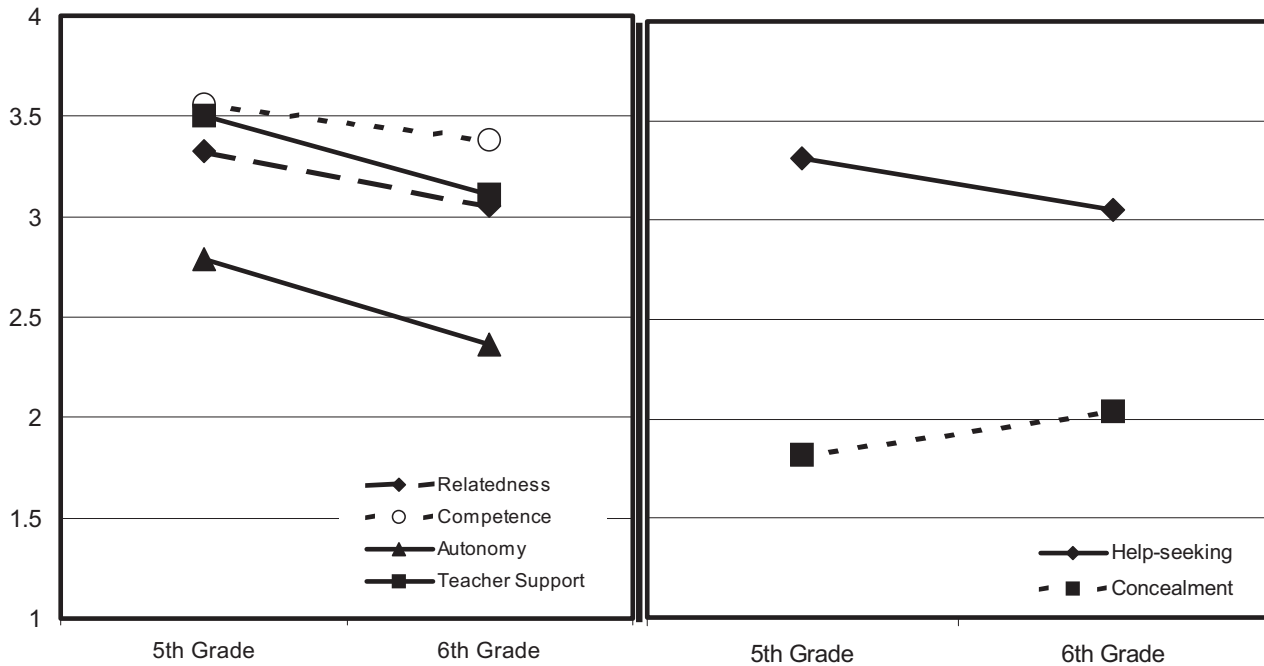


Figure 6. Differences in mean levels of motivational resources (self-system processes and teacher support) and of help-seeking and concealment between fifth and sixth grades.

autonomy were controlled: Controlling for teacher support, the grade main effect for help-seeking was  $F(1, 186) = 3.07$ , *ns*, and for concealment was  $F(1, 186) = 1.28$ , *ns*. Controlling for autonomy, the grade main effect for help-seeking was  $F(1, 186) = 2.12$ , *ns*, and for concealment was  $F(1, 186) = 0.04$ , *ns*. The grade main effects remained significant when controlling for relatedness or for competence.

In the second set of analyses, we identified children who were high (top third) and low (bottom third) in total motivational resources and conducted an analysis of variance with two independent variables: Grade (5 vs. 6) and motivational resources (high vs. low). We reasoned that if children with high versus low levels of motivational support were distinguished in each grade, no grade differences in help-seeking and concealment between them should be found. This was the case for help-seeking as well as for concealment: For help-seeking, the motivational resource main effect was  $F(1, 124) = 54.42$ ,  $p < .001$ , whereas the grade main effect was  $F(1, 124) = 1.77$ , *ns*; for concealment, the motivational resource main effect was  $F(1, 124) = 80.33$ ,  $p < .001$ , whereas the grade main effect was  $F(1, 124) = 0.11$ , *ns*.

#### Interactions With Grade

It should be noted that every analysis (correlations, cross-year stabilities, regressions, etc.) was also conducted including interactions with grade. None were found. This suggests that although children at different grade levels differed in the motivational resources available to them as well as in their use of help-seeking and concealment, the motivational dynamics connecting these processes did not differ by grade across the age range examined in this study.<sup>2</sup>

## Discussion

This study was designed to contribute to an account of the motivational dynamics of help-seeking and concealment that include self-perceptions, social relationships, and engagement in the classroom. Evidence was found for each step in the SSMD (see Figure 1), not just concurrently but also over time. For the most part, these links did not differ across the late elementary and early middle school years, nor did they differ by gender. However, several unexpected details about the processes were revealed.

#### Engagement and Disaffection

Consistent with predictions, help-seeking and concealment were closely related to children's engagement and disaffection at both time points as well as across the school year. Students who initially showed higher levels of help-seeking became even more engaged as the year progressed, whereas children who relied more heavily on concealment in the fall became even more disaffected over the school year. Analyses targeting behavioral and emotional facets separately revealed that concealment was a strong predictor of decreases in both kinds of engagement over time, and especially

<sup>2</sup> Although every analysis also examined interactions with gender, only two were found: the connections between concealment and behavioral engagement in spring and between relatedness and help-seeking in spring. Neither of these interactions was replicated in the fall, and neither qualified its main effects. In both cases, strong correlations were found for both genders, but the connection was significantly higher for boys than for girls. In general, it seemed that the same motivational processes played out for boys and for girls, although they took place at different mean levels.

emotional engagement. In contrast, help-seeking, although a strong predictor of increases in behavioral engagement, was not as consistently related to changes in emotional engagement, suggesting that even though seeking help with difficult tasks can augment behavioral engagement, this kind of re-engagement with tough material may not necessarily enhance fun or enjoyment of academic activities.

*Self-system processes.* As predicted, children's self-system processes are closely connected to their ways of coping. Relatedness, perceived control or competence, and autonomy all showed strong positive correlations with help-seeking and negative correlations with concealment in both fall and spring, as well as unique effects at both time points. Moreover, analyses of patterns of change over time revealed that each of the self-systems predicted changes in both ways of coping from fall to spring, with one exception: Relatedness in the fall was not a significant predictor of changes in concealment. A similar pattern was found for the self-systems as mediators. Taken together, the three self-perceptions fully mediated the effects of teacher support on both ways of coping. However, when the self-systems were considered individually, the effects of teacher support on coping were partially mediated by relatedness and autonomy, whereas they were fully mediated by perceived competence.

*Teacher support.* All features of teacher support showed significant connections to both ways of coping in both fall and spring. However, analyses of change over time suggest that teachers may have a somewhat stronger feed-forward effect on help-seeking, whereas concealment may have a slightly stronger feedback effect on teachers. In terms of feed-forward effects, all features of teacher support in the fall predicted changes in help-seeking from fall to spring, whereas for concealment, only teacher autonomy support predicted changes. In terms of feedback effects, both ways of coping predicted changes in teacher support from fall to spring, but help-seeking predicted increases in only teacher involvement and autonomy support, whereas concealment predicted decrements in all three features of teacher support.

*Developmental differences.* Consistent with motivational explanations for why help-seeking decreases as children make the transition to middle school, findings showed that lower levels of personal and social motivational resources in sixth (compared to fifth) grade were mirrored by lower levels of help-seeking and higher levels of concealment between the same periods. Follow-up analyses suggested that the grade differences could be attributed to differences in levels of motivational resources: In analyses that controlled for levels of motivational resources or that directly compared children with high and low levels of resources, the differences between grades were no longer significant. Exploratory analyses that controlled for the motivational resources one at a time suggested that grade differences in teacher support or in autonomy could explain grade differences in ways of coping; teacher support and autonomy were also the two motivational resources that differed most between Grades 5 and 6.

*Motivational dynamics.* Taken together, the findings provide support for a motivational account of the dynamics of help-seeking and concealment, in which motivational support provided by teachers, through its effects on children's self-system processes, shapes student help-seeking and concealment in the classroom. These ways of coping, in turn, have an impact on children's engagement and disaffection over the school year and even play a

small role in shaping changes in the kinds of support subsequently provided by teachers.

At the same time, the specific patterns of change over time found for help-seeking versus concealment suggest similar functions but slightly different mechanisms of effects. Help-seeking may be shaped more by teacher support and by self-system processes, such as relatedness, that reflect the quality of these supports (and to a lesser degree by the other self-perceptions) and may in turn have its motivational effects primarily through its impact on behavioral engagement (effort, persistence, attention) and by eliciting more teacher involvement and autonomy support. In contrast, concealment may be shaped over time primarily by perceptions of competence (and to a lesser degree by autonomy) and by teacher support for autonomy, but it may exert a broader impact by feeding both behavioral and emotional disaffection and by leading teachers to generally withdraw their motivational support over time.

### *Limitations of the Present Study*

The findings from the present study should be interpreted within the context of its limitations. The primary limitation, of course, is that many findings await replication, especially those involving concealment. Additional limitations involve the measures, design, and constructs used in the study. Although it can be considered a strength that the study constructs, measures, and hypotheses were derived from a clear theoretical model of motivation, this also creates limitations, in that the study did not draw on constructs and methods used by other potentially complementary perspectives.

*Measures.* Although in general, the assessments showed satisfactory measurement properties, two scales (student-report perceptions of competence and teacher reports of structure) had internal consistencies in the fall that were barely adequate, although they improved by spring. The low internal consistencies could have attenuated associations with these variables. This does not seem to have been the case for perceived competence, because correlations in fall and spring were comparable, and competence in the fall was a robust predictor of changes in both ways of coping from fall to spring. However, the effects of teacher structure may have been underestimated—structure did not predict changes in concealment, and changes in teacher structure were not predicted by help-seeking. Hence, the lack of significant effects with teacher structure should be interpreted with caution.

The primary drawback with assessments was that the majority relied on student report. With certain constructs, self-reports are the appropriate source—students are the best reporters of their self-system processes and their engaged and disaffected emotions, and concealment, if successful, is by its very nature impossible to observe. However, teachers seem to be good reporters of student's behavioral engagement versus disaffection (Skinner et al., 1998) and help-seeking (e.g., A. M. Ryan et al., 2005). Supplemental methods of observing behavioral engagement or student-teacher interactions would have added to the ecological validity of this study. Most important, the high correlations among children's self-systems, coping, and engagement must be interpreted with caution because of shared-reporter variance. For example, the role of children's self-systems as mediators of the effects of teacher support on coping may have been overestimated, as teacher support was reported by teachers whereas both coping and self-systems were reported by students.

*Design.* A strength of the present study was that it included two points of measurement across the same school year. However, the two points were not selected to reflect anything about the timing of the processes that are hypothesized to influence each other within the motivational system. A design using multiple time points starting in the early fall might be more likely to capture the emergence of the dynamics that shape subsequent motivation and coping across the school year.

*Comparisons with other research.* The present study is one of the first to use the SSMMD to study help-seeking and concealment (Skinner & Edge, 2002), and although the model seems easily integrated into the larger area of academic help-seeking (Karabennick, 1998; Nelson-Le Gall, 1981, 1985; Newman, 2002; A. M. Ryan & Pintrich, 1998), it is also important, in considering the current study's contributions, to be clear about both overlaps and differences among constructs each tradition entails. For example, the constructs of perceived competence, efficacy, and control used in traditional help-seeking research and the SSMMD are similar enough (Skinner, 1996) to allow findings to inform each other, and the recent incorporation of constructs of engagement in research on help-seeking (e.g., A. M. Ryan et al., 2005) actually borrows from the SSMMD (Miserandino, 1996).

However, other constructs that have conceptual similarities should remain distinct until research can establish their empirical connections. Specifically, concealment likely taps a different alternative to help-seeking than does help avoidance (A. M. Ryan et al., 2005; A. M. Ryan & Pintrich, 1998). It is possible that concealment is further along the continuum toward maladaptive responses to academic difficulties than reluctance or avoidance of help; this may explain why concealment was found to be closely related to disaffection, despite the fact that help avoidance does not seem to be (A. M. Ryan et al., 2005). And autonomy orientations may not be identical to their counterpart in traditional help-seeking research, namely, goal orientations (R. M. Ryan & Deci, 1989). Moreover, conceptualizations and measures of teacher support vary widely. The fact that models of help-seeking as a strategy of self-regulation and the motivational model of help-seeking and concealment come from independent traditions and lines of research makes their integration potentially advantageous to both. However, it is important to proceed with care in discovering their conceptual and empirical overlaps and differences (Newman, 2002).

### Future Research

A focus on motivational dynamics in research on help-seeking suggests several new avenues of research on the topic. Future studies could follow up on the role of student-teacher relationships and the more social self-system processes in shaping the use of help-seeking, and they could investigate whether close relationships with teachers would be a pathway toward help-seeking and out of concealment for students with a low sense of competence (A. M. Ryan et al., 2001). These studies would likely include multiple time points during the beginning of the school year.

Perhaps most important, future studies could tie these motivational dynamics to the general decline in student motivation found across the entire span of school years (Wigfield et al., 2006), examining whether these iterative cycles can lead to differential developmental pathways over a child's academic career. Research

on perceived control has established it as a critical point of leverage in children's motivational development (e.g., Schmitz & Skinner, 1993; Skinner et al., 1998), and there is no reason why studies cannot pursue the same questions with help-seeking. The study of school transitions (e.g., to academic curricula or to middle school or to high school) would likely provide informative windows during which ways of coping (or strategies of self-regulation) might be particularly powerful in shaping the course of children's scholastic development. Studies that longitudinally trace the loss of motivational resources and examine their direct links to declines in help-seeking and the rise of concealment would be particularly useful (e.g., Harter, Whitesell, & Kowalski, 1992). Such individual differences research will be superimposed on cumulative findings about age-graded contextual and individual changes and underlying normative developments in cognitive, emotional, and social functioning (Wigfield et al., 2006).

Research on help-seeking has established it as an adaptive way for children to react when they encounter academic obstacles and setbacks. A careful consideration of the maladaptive alternatives, including help avoidance, concealment, dependent help-seeking (A. M. Ryan et al., 2001, 2005), or the coping family of "delegation" (Skinner et al., 2003), would provide a useful next step in broadening this perspective. Moreover, research that examines help-seeking in the context of other adaptive ways of coping (or strategies of self-regulation) would begin to fulfill the promise implied by conceptualizations of profiles of potential responses to adversity. The study of how help-seeking becomes integrated into the repertoires of children and adolescents as they develop (Newman, 2000, 2002; Paris & Newman, 1990; Skinner & Zimmer-Gembeck, 2007) would help to bridge the traditions of self-regulated learning and academic coping. Both perspectives, which have much in common, will be needed if we are to understand how children and adolescents come to adaptively (or maladaptively) manage their emotions, goals, behavior, motivation, and cognition when they encounter challenges and difficulties in school.

### References

- Ainsworth, M. D. S. (1979). Infant-mother attachment. *American Psychologist, 34*, 932-937.
- Baltes, M. M. (1997). *The many faces of dependency*. New York: Cambridge University Press.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529.
- Birch, S. H., & Ladd, G. W. (1997). The teacher-child relationship and children's early school adjustment. *Journal of School Psychology, 35*, 61-79.
- Bowlby, J. (1969/1973). *Attachment and loss* (Vols. 1-2). New York: Basic Books.
- Butler, R. (1998). Determinants of help seeking: Relations between perceived reasons for classroom help-avoidance and help-seeking behaviors in an experimental context. *Journal of Educational Psychology, 90*, 630-643.
- Butler, R., & Neuman, O. (1995). Effects of task and ego achievement goals on help-seeking behaviors and attitudes. *Journal of Educational Psychology, 87*, 261-271.

- Compas, B. E. (1987). Coping with stress during childhood and adolescence. *Psychological Bulletin*, *101*, 393–403.
- Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, *127*, 87–127.
- Connell, J. P. (1990). Context, self, and action: A motivational analysis of self-system processes across the lifespan. In D. Cicchetti (Ed.), *The self in transition: From infancy to childhood* (pp. 61–97). Chicago: University of Chicago Press.
- 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 in development: Minnesota symposium on child psychology* (Vol. 23, pp. 43–77). Hillsdale, NJ: Erlbaum.
- Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, *125*, 627–668.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*, 227–268.
- Deci, E. L., Schwartz, A. J., Sheinman, L., & Ryan, R. (1981). An instrument to assess adults' orientations toward control versus autonomy with children: Reactions on intrinsic motivation and perceived competence. *Journal of Educational Psychology*, *73*, 642–650.
- Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist*, *26*, 642–650.
- Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality, and development*. Philadelphia: Psychology Press.
- Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research*, *59*, 117–142.
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, *74*, 59–109.
- Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology*, *95*, 148–162.
- Garnezy, N., & Rutter, M. (Eds.). (1983). *Stress, coping, and development in children*. Baltimore: Johns Hopkins University Press.
- Harter, S. (1978). Effectance motivation reconsidered: Toward a developmental model. *Human Development*, *21*, 36–64.
- Harter, S., Whitesell, N. R., & Kowalski, P. (1992). Individual differences in the effects of educational transitions on young adolescents' perceptions of competence and motivational orientation. *American Educational Research Journal*, *29*, 809–835.
- Karabenick, S. A. (Ed.). (1998). *Strategic help-seeking: Implications for learning and teaching*. Mahwah, NJ: Erlbaum.
- Keating, D. P. (1990). Adolescent thinking. In S. S. Feldman & G. R. Elliot (Eds.), *At threshold: The developing adolescent* (pp. 54–89). Cambridge, MA: Harvard University Press.
- Miserandino, M. (1996). Children who do well in school: Individual differences in perceived competence and autonomy in above-average children. *Journal of Educational Psychology*, *88*, 203–214.
- Murphy, L., & Moriarty, A. (1976). *Vulnerability, coping, and growth: From infancy to adolescence*. New Haven, CT: Yale University Press.
- Myers, M., & Paris, S. G. (1978). Children's metacognitive knowledge about reading. *Journal of Educational Psychology*, *70*, 680–690.
- Nelson-Le Gall, S. (1981). Help-seeking: An understudied problem-solving skill in children. *Developmental Review*, *1*, 224–226.
- Nelson-Le Gall, S. (1985). Help-seeking behavior in learning. In E. W. Gordon (Ed.), *Review of Research in Education* (Vol. 12, pp. 55–90). Washington, DC: American Educational Research Association.
- Nelson-Le Gall, S., & Gumerman, R. (1984). Children's perceptions of helpers and helper motivation. *Journal of Applied Developmental Psychology*, *5*, 1–12.
- Nelson-Le Gall, S., Gumerman, R. A., & Scott-Jones, D. (1983). Instrumental help-seeking and everyday problem-solving: A developmental perspective. In B. DePaulo, A. Nadler, & J. Fisher (Eds.), *New directions in helping: Help-seeking* (Vol. 2, pp. 265–284). New York: Academic Press.
- Nelson-Le Gall, S., Kratzer, L., Jones, E., & DeCooke, P. (1990). Children's self-assessment of performance and task-related help seeking. *Journal of Experimental Child Psychology*, *49*, 245–263.
- Newman, R. S. (1990). Children's help-seeking in the classroom: The role of motivational factors and attitudes. *Journal of Educational Psychology*, *82*, 71–80.
- Newman, R. S. (1991). Goals and self-regulated learning: What motivates children to seek academic help? In P. R. Pintrich & M. L. Maehr (Eds.), *Advances in motivation and achievement: Goals and self-regulatory processes* (Vol. 7, pp. 151–183). Greenwich, CT: JAI Press.
- Newman, R. S. (1994). Adaptive help seeking: A strategy of self-regulated learning. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 283–301). Hillsdale, NJ: Erlbaum.
- Newman, R. S. (1998). Students' help seeking during problem solving: Influences of personal and contextual achievement goals. *Journal of Educational Psychology*, *90*, 644–658.
- Newman, R. S. (2000). Social influences on the development of children's adaptive help seeking: The role of parents, teachers, and peers. *Developmental Review*, *20*, 350–404.
- Newman, R. S. (2002). What do I need to do to succeed... When I don't understand what I'm doing!?: Developmental influences on students' adaptive help seeking. In A. Wigfield & J. S. Eccles (Eds.), *Development of achievement motivation* (pp. 285–306). San Diego, CA: Academic Press.
- Newman, R. S., & Goldin, L. (1990). Children's reluctance to seek help with schoolwork. *Journal of Educational Psychology*, *82*, 92–100.
- Newman, R. S., & Schwager, M. T. (1995). Student's help seeking during problem solving: Effects of grade, goal, and prior achievement. *American Educational Research Journal*, *32*, 352–376.
- Paris, S. G., & Newman, R. S. (1990). Developmental aspects of self-regulated learning. *Educational Psychologist*, *25*, 87–102.
- Patrick, B. C., Skinner, E. A., & Connell, J. P. (1993). What motivates children's behavior and emotions? The joint effects of perceived control and autonomy in the academic domain. *Journal of Personality and Social Psychology*, *65*, 781–791.
- Pelletier, L. G., & Vallerand, R. J. (1996). Supervisors' beliefs and subordinates' intrinsic motivation: A behavioral confirmation analysis. *Journal of Personality and Social Psychology*, *71*, 331–340.
- Pianta, R. C. (1997). Adult-child relationship processes and early schooling. *Early Education and Development*, *8*, 11–26.
- Pintrich, P. R. (2003). A motivational science perspective of the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology*, *95*, 667–686.
- Pintrich, P. R., & Blumenfeld, P. C. (1985). Classroom experience and children's self-perceptions of ability, effort, and conduct. *Journal of Educational Psychology*, *77*, 646–657.
- Reeve, J., Bolt, E., & Cai, Y. (1999). Autonomy supportive teachers: How they teach and motivate students. *Journal of Educational Psychology*, *91*, 537–548.
- Roeser, R. W., Midgley, C., & Urdan, T. C. (1996). Perceptions of the school psychological environment and early adolescents' psychological



- and behavioral functioning in school: The mediating role of goals and belonging. *Journal of Educational Psychology*, 88, 408–422.
- Ryan, A. M., Gheen, M., & Midgley, C. (1998). Why do some students avoid asking for help? An examination of the interplay among students' academic efficacy, teacher socio-emotional role, and the classroom goal structure. *Journal of Educational Psychology*, 90, 528–535.
- Ryan, A. M., Patrick, H., & Shim, S. (2005). Differential profiles of students identified by their teacher as having avoidant, appropriate, or dependent help-seeking tendencies in the classroom. *Journal of Educational Psychology*, 97, 275–285.
- Ryan, A. M., & Pintrich, P. R. (1997). "Should I ask for help?" The role of motivation and attitudes in adolescents' help seeking in math class. *Journal of Educational Psychology*, 89, 329–341.
- Ryan, A. M., & Pintrich, P. R. (1998). Achievement and social motivational influences on help seeking in the classroom. In S. Karabenick (Ed.), *Strategic help seeking: Implications for learning and teaching* (pp. 117–139). Mahwah, NJ: Erlbaum.
- Ryan, R. M., & Deci, E. L. (1989). Bridging the research traditions of task/ego involvement and intrinsic/extrinsic motivation: A commentary on Butler (1987). *Journal of Educational Psychology*, 81, 265–268.
- Ryan, R. M., & Grolnick, W. S. (1986). Origins and pawns in the classroom: Self-report and projective assessments of individual differences in children's perception. *Journal of Personality and Social Psychology*, 50, 550–558.
- Ryan, R. M., & Powelson, C. L. (1991). Autonomy and relatedness as fundamental to motivation and education. *Journal of Experimental Education*, 60, 49–66.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7, 147–177.
- Schmitz, B., & Skinner, E. (1993). Perceived control, effort, and academic performance: Interindividual, intraindividual, and time series analyses. *Journal of Personality and Social Psychology*, 64, 1010–1028.
- Schunk, D. H., & Ertmer, P. A. (2000). Self-regulation and academic learning: Self-efficacy enhancing interventions. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 631–649). San Diego: Academic Press.
- Schutz, P. A., & Lanehart, S. L. (2002). Introduction: Emotions in education. *Educational Psychologist*, 37, 67–68.
- Skinner, E. A. (1996). A guide to constructs of control. *Journal of Personality and Social Psychology*, 71, 549–570.
- Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology*, 85, 571–581.
- Skinner, E. A., Chapman, M., & Baltes, P. B. (1988). Control, means-ends, and agency beliefs: A new conceptualization and its measurement during childhood. *Journal of Personality and Social Psychology*, 54, 117–133.
- Skinner, E. A., & Edge, K. (2002). Parenting, motivation, and the development of coping. In L. J. Crockett (Ed.), *The Nebraska Symposium on Motivation: Motivation, agency, and the life course* (pp. 77–143). Lincoln, NB: University of Nebraska Press.
- Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, 129, 216–269.
- Skinner, E. A., & Wellborn, J. G. (1994). Coping during childhood and adolescence: A motivational perspective. In D. Featherman, R. Lerner, & M. Perlmutter (Eds.), *Life-span development and behavior* (Vol. 12, pp. 91–133). Hillsdale, NJ: Erlbaum.
- Skinner, E. A., & Wellborn, J. G. (1997). Children's coping in the academic domain. In S. A. Wolchik & I. N. Sandler (Eds.), *Handbook of children's coping with common stressors: Linking theory and intervention* (pp. 387–422). New York: Plenum Press.
- Skinner, E. A., Wellborn, J. G., & Connell, J. P. (1990). What it takes to do well in school and whether I've got it: The role of perceived control in children's engagement and school achievement. *Journal of Educational Psychology*, 82, 22–32.
- Skinner, E. A., & Zimmer-Gembeck, M. J. (2007). The development of coping. *Annual Review of Psychology*, 58, 119–144.
- Skinner, E. A., Zimmer-Gembeck, M. J., & Connell, J. P. (1998). Individual differences and the development of perceived control. *Monographs of the Society for Research in Child Development*, 63(Serial Nos. 2–3), 1–220.
- Stipek, D. J., Feiler, R., Daniels, D., & Milburn, S. (1995). Effects of different instructional approaches on young children's achievement and motivation. *Child Development*, 66, 209–223.
- Wellborn, J. G. (1991). *Engaged and disaffected action: The conceptualization and measurement of motivation in the academic domain*. Unpublished doctoral dissertation, University of Rochester, New York.
- 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. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology*, 90, 202–209.
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, 66, 297–333.
- Wigfield, A., Eccles, J. S., Schiefele, U., Roeser, R., & Davis-Kean, P. (2006). Development of achievement motivation. In W. Damon (Series Ed.) & N. Eisenberg (Vol. Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (6th ed., pp. 933–1002). New York: Wiley.
- Wolchik, S. A., & Sandler, I. N. (Eds.). (1997). *Handbook of children's coping: Linking theory and intervention*. New York: Plenum Press.

(Appendix follows)

## Appendix

## Help-Seeking and Concealment Items

## Help-Seeking Items

When I have trouble with a subject in school . . .

1. I ask for help understanding the material.
2. I get some help to understand the material better.
3. I ask the teacher to go over it with me.
4. I ask the teacher to explain what I didn't understand.
5. I get some help on the parts I didn't understand.

## Concealment Items

When something bad happens to me in school (such as not doing well on a test or not being able to answer an important question) . . .

6. I stay away from people.
7. I don't want to see anyone.
8. I don't want to talk to anyone about it.
9. I don't want to talk about it.
10. I try to keep people from finding out.
11. I make sure nobody finds out.
12. I try to hide it.
13. I don't tell anyone about it.
14. I don't let anybody know about it.

Received August 22, 2005

Revision received September 13, 2006

Accepted September 15, 2006 ■