Academic and Psychological Adjustment During Early Adolescence:
Longitudinal Relations, Patterns, and Prediction
by Experience in Middle School

Robert W. Roeser
Stanford University

Jacquelynne S. Eccles & Arnold J. Sameroff
University of Michigan

In press: Development and Psychopathology

SECOND EDITION (FIRST REVISION)

The funding for this research is provided by grants from NICHD and the MacArthur Research Network on Successful Adolescent Development in High Risk Settings to Jacquelynne S. Eccles and Arnold J. Sameroff. The authors would like to thank the following people for their help in data collection and data processing: Elaine Belansky, Todd Bartko, Nick Butler, Diane Early, Kari Fraser, Ariel Kalil, Linda Kuhn, Sarah Lord, Karen McCarthy, Oksana Malanchuk, Steve Peck, Sherri Steele, and Cindy Winston.
ABSTRACT

Academic and Psychological Adjustment During Early Adolescence:
Longitudinal Relations, Patterns, and Prediction by Experience in Middle School

Keywords: Early adolescence, psychological distress, achievement motivation, middle school environment, context

Adopting a motivational perspective on adolescent development, these two companion studies examined the longitudinal relations between early adolescents' school motivation (competence beliefs and values), achievement, psychological distress (depressive symptoms and anger), and middle school perceptions using both variable- and person-centered analytic techniques. Data were collected from 1041 adolescents and their parents at the beginning of seventh and the end of eighth grade in middle school. Controlling for demographic factors, regression analyses in Study 1 showed reciprocal relations between school motivation and psychological distress over time. Furthermore, perceptions of the middle school learning environment (support for competence and autonomy, quality of relationships with teachers) predicted eighth grade motivation, achievement, and psychological distress after accounting for demographic and prior adjustment measures. Cluster analyses in Study 2 revealed several different patterns of school and psychological adjustment during 7th grade that were stable over two years and that were predictably related to adolescents' reports of their school environments. Discussion focuses on the developmental significance of schooling for multiple adjustment outcomes during adolescence.
Although most young people move through the many changes associated with the early adolescent years with few difficulties, up to 25% of adolescents in the USA between the ages of 10 to 14 years experience serious problems that can affect their engagement with school, their emotional well-being, and their short and long term behavioral choices (see Carnegie Council on Adolescent Development, 1989; Dryfoos, 1990; Eccles, Lord, & Roeser, 1996). Furthermore, a substantial number of early adolescents experience problems in several psychological and behavioral domains at once. Researchers have investigated the negative characteristics of the contexts within which young adolescents develop as one cause of academic and psychological problems (see Eccles et al., 1993; Jessor, 1993; National Research Council, 1993). For example, Eccles and her colleagues (1989; 1993) argue that the developmental appropriateness of contexts such as the home, school, and neighborhood is a key influence on the quality of adolescents' academic and psychological adjustment during these years. In this paper, we adopt a social-cognitive motivational perspective to address two issues related to development and context during early adolescence: (a) the relation between early adolescents' level of academic functioning and psychological adjustment both within and across time, and (b) the relation of the perceived context of middle school to changes in academic and psychological functioning over time.

The first issue we address concerns how adolescents' school motivation, achievement, and psychological adjustment are related within and across the middle school years. As Masten and her colleagues (1995) have noted, prospective longitudinal studies of both positive and negative developmental outcomes in different domains are needed to assess the "structure and course of adaptation." Research that addresses linkages between academic and psychological functioning could serve to bring the role of emotion back into the study of achievement motivation and academic performance (Weiner, 1990); inform debates about the contribution of school-linked mental health services to academic success (Dryfoos, 1994); and complement the work on middle and late adolescence that has already identified different "clusters" of adjustment difficulties (e.g., Dryfoos, 1990; Jessor & Jessor, 1977). In the companion studies presented here, we examine both the cross-time relations between early adolescents' school motivational beliefs, achievement, and psychological adjustment, as well as different patterns of adolescents' school and psychological adjustment over time.

Given the focus on context in this issue, the second concern we address is the influence of one normative context of development, school, on the development of early adolescents' school motivation, achievement, and psychological adjustment across the middle school years. Drawing upon ecological
approaches to human development in general (e.g., Sameroff, 1987) and to the development of achievement motivation in particular (Connell & Wellborn, 1991; Deci & Ryan, 1985; Eccles, 1983; Eccles & Midgley, 1989; Maehr & Midgley, 1991), we propose a conceptual model of the ecology of middle school environments. This model is then used to examine the effect of the perceived middle school environment on changes in early adolescents' academic and psychological functioning across grades 7 and 8. We examine both the predictive relations of the perceived school context to academic and psychological adjustment outcomes over time, as well as variation in school experiences associated with different patterns of academic and psychological adjustment. By focusing on the relation of schooling to both academic and non-academic outcomes, we want to demonstrate to educational psychologists the importance of considering the impact of school on social-emotional outcomes (Maughan, 1988). Furthermore, want to demonstrate to developmental researchers interested in social-emotional development the importance of considering school as a major context of development. Research on the relation of adolescents' perceptions of middle school to both academic and non-academic outcomes has the potential inform the next generation of school reform strategies and school-linked preventive and support services.

**Relations Between Academic and Psychological Functioning During Early Adolescence**

The early adolescent years are marked by important developmental changes in school motivation, academic achievement, and psychological functioning. School is viewed as increasingly less interesting, less important, and less useful; and many adolescents begin to see themselves as increasingly less academically competent (see Eccles et al., 1989; Wigfield et al., 1991). Some research indicates a decline in teacher-rated grades in early adolescence as well (see Eccles & Midgley, 1989). Research on psychological adjustment suggests that certain forms of distress such as depressive affect and anger, and certain problem behaviors such as school truancy and misconduct also become more common during the middle school years (Achenbach et al., 1991; Kazdin, 1993; Roeser & Eccles, 1997). Explorations of the processes that link academic and psychological adjustment in adolescence have been undertaken from both an educational- and a more clinically-oriented perspective.

**An Educational Perspective.** From an educational perspective, both the quality of adolescents' motivation to learn and their actual achievement are viewed as important precursors to subsequent social-emotional adjustment (Eccles et al., 1997; Roeser, 1996). Academic engagement and achievement are central
life tasks of school-aged children and youth and school is the major pathway to later opportunities in the United States (Masten et al., 1995). If adolescents become disengaged from school, the quality of their emotional health, behavioral choices, and future opportunities will be at risk (Fine, 1991; National Center for Education Statistics, 1995).

But just how is motivation to achieve in school related to psychological well-being? We propose that it is through adolescents’ beliefs about themselves as a learner and about the value they attach to education for their current and future lives. We know such beliefs are important determinants of both school achievement and continued commitment to academic pursuits (Eccles, 1983). The importance of these motivational beliefs for positive school performance and engagement also suggests their centrality in broader patterns of adaptation and functioning. Research on the self, for instance, has shown that confidence in one’s abilities in both personally relevant and societally-sanctioned domains (e.g., school, sports, romance) promotes positive feelings of self-worth and psychological well-being (Covington, 1992; Harter, 1985; Lord & Eccles, 1994). Feeling academically competent and receiving good grades can reduce the risk for emotional and behavioral difficulties as well (Achenbach et al., 1991; Blechman, McEnroe, Carella, & Audette, 1986; Cole, 1991; Rae-Grant et al., 1989).

Research on adolescents’ “social bonds” with the institution of schooling also suggests links between early adolescents’ valuing of school and their broader psychological functioning (Finn, 1989; Hawkins, Doueck, & Lishner, 1988). The belief that school is important, interesting, and instrumental for one’s future goals is indicative of a strong connection between one’s personal identity and the socially sanctioned pathways to future opportunity in the United States. Such an integration provides youth with a sense of hope, purpose, and direction, which, in turn fosters a sense of well-being and a positive outlook on the future (Erikson, 1968). Indeed, adolescents who value and are committed to school are less likely to engage in the kinds of risky activities (such as anti-social activity and substance abuse) that undermine the possibility of a hopeful and successful future (Dryfoos, 1990; Newcombe & Bentler, 1989). On the other hand, adolescents who do not value or feel connected to school are often angry and depressed (Fine, 1991) and are more likely than their peers to turn to non-conventional activities such gang involvement, anti-social activity, and substance use as a way to garner esteem and a sense of belonging (Prothrow-Stith, 1991; Rosenberg, Schooler, & Schoenbach, 1989).
A Clinical Perspective. Research on affective difficulties such as depression and test-anxiety during childhood and adolescence also highlights the importance of explicating the relations between academic and emotional functioning. Epidemiological studies show that psychological distress during adolescence can reduce future educational attainments (Kessler, Foster, Saunders, & Stang, 1995), but what are some of the processes by which this occurs? Research has focused on the impact of emotion on motivational, cognitive, and self-regulatory processes as one way to understand the relation of distress to academic attainments. In terms of motivation, there is evidence that when sufficiently intense, children's feelings of anger, hopelessness, and sadness can affect their beliefs about themselves, their future, and their interpretation of events, including how they perceive their academic competence (Cole, 1991; Nolen-Hoeksema et al., 1986). Poorer academic competence perceptions can lead to poorer performance (Eccles, 1983). In terms of cognitive processes, clinical studies of children have demonstrated that depressive symptoms can impair problem-solving capacities and academic performance during a depressive episode (Kovacs, 1989; Puig-Antich et al., 1985). Similar findings emerged in a study of normative college students. Brackney and Karabenick (1994) showed that psychological distress adversely impacted students' academic self-efficacy, use of cognitive learning strategies, and ability to effectively regulate a study environment. These factors in turn negatively impacted achievement. Studies of test anxiety have described similar disruptive effects of high anxiety. High anxiety in achievement settings can undermine students' ability to regulate their attention and the cognitive resources needed to learn thus impairing performance (see Krohne & Laux, 1982).

Summary: Relation of Academic and Psychological Adjustment. Few studies have looked at the relations of academic motivation, performance, and distress at more than one point in time and few have concentrated on these relations during early adolescence. We examine the relations between adolescents' motivation, achievement, and psychological adjustment over a two year period in middle school. Based on an educational perspective, we predict that early adolescents' positive academic competence beliefs and valuing of school will mitigate against feelings of sadness, hopelessness, and alienation both within and across the middle school years. Based on a clinical perspective, we predict that self-reported psychological distress will be negatively related to early adolescents' beliefs about their academic competence and the value of education over time. Furthermore, given the impact of distress on the motivational and cognitive underpinnings of effective learning and achievement, and the fact that many adolescents who experience emotional difficulties
do not receive help for them (Turna, 1989), we predict that distress will have a long-term negative impact on academic achievement across the middle school years.

**School as a Major Context of Adolescent Development**

The second main issue we address is how adolescents’ experiences in one context of development - school - relate to changes in their motivational beliefs, achievement, and psychological distress over a two year period. The transition from an elementary to a secondary school setting is a major normative developmental change experienced by most early adolescents in the USA. This transition usually confronts young people with new social and educational demands. For instance, compared to elementary schools, middle schools are often larger, more departmentalized, and less personal (Eccles et al., 1993; Simmons & Blyth, 1987). Many of the changes associated with the transition to middle school are at odds with the developmental needs of adolescents. For example, the goals for learning emphasized through school policies and practices become more focused on competition at a time of heightened self-consciousness, the quality of teacher-student relationships deteriorate when adolescents are in particular need of adult role models, and provisions for student autonomy decline at a time when adolescents have an increasing desire for autonomy (see Eccles & Midgley, 1989; Midgley, 1993 for reviews). Several investigators have studied the impact of such changes on adolescents’ school motivation across the school transition event itself (e.g., Eccles et al., 1993; Simmons & Blyth, 1987). In this paper, focus on the relation of early adolescents’ perceptions of their middle school environment to changes in their academic and psychological functioning as they move through middle school.

**Process Studies of Schooling:** Research on schooling has been criticized for being too atheoretical and for focusing on static resources rather than the everyday experience of students (Good & Weinstein, 1986; Rutter, 1983). Similar to Bronfenbrenner’s (1986) stress on the need to go beyond “social address” to more process-oriented models of family influence, researchers interested in school as a developmental context need to focus more on the kinds of organizational, instructional, and interpersonal processes likely to influence the quality, intensity, and direction of students’ achievement strivings and behavior (e.g., Connell & Wellborn, 1991; Deci & Ryan, 1985; Good & Weinstein, 1986; Eccles, Midgley & Adler, 1984; Eccles et al., 1993; Maehr & Midgley, 1991; Rutter, 1983).
Contemporary motivational approaches place central importance on the role of the school context in shaping development and emphasize the individual's personal construction of meaning within different learning environments as the key mediator of beliefs, affect, and behavior (Ames, 1992; Connell & Wellborn, 1991; Eccles, 1983; 1993; Maehr, 1991). This meaning-making process often occurs in relation to how well the learning environment provides opportunities for the individual to develop a positive sense of personal competence and autonomy, and positive relationships with teachers (see Connell & Wellborn, 1991; Eccles, Early, Fraser, Belansky, & McCarty, 1997). To the extent that school is experienced as supporting these needs, academic engagement, achievement, and mental health will be maximized (Eccles et al., 1993; 1996; Skinner & Belmont, 1993; Roeser, 1996).

Building on this work, we propose a model focused on adolescents' perceptions of school characteristics linked to their sense of personal competence, sense of personal autonomy, and feelings of social support from their teachers. This conceptual model is depicted in Figure 1. Note that in Figure 1 we call the collection of perceptions the “school psychological environment” to emphasize it is the meaning of these experiences to adolescents, as assessed by their perceptions, that is being considered here (Maehr, 1991).

**Support of Competence.** Several researchers have suggested that individuals' sense of academic competence is influenced quite strongly by the kinds of feedback they receive regarding their academic abilities (e.g., Bandura, 1993; Eccles, 1983; Weinstein, 1989). Grades are clearly one important source of feedback. Interpersonal feedback in the form of teachers’ expectations are another (Eccles & Wigfield, 1985; Weinstein, 1989). In addition to providing adolescents with feedback concerning their school competence, it is possible that perceptions of positive teacher expectations also provide social-emotional resources that protect against psychological distress and behavioral difficulties (Dryfoos, 1990).

The academic goals that are emphasized in classrooms and schools as a whole represent another important feature of middle school environments related to the support of students' competence. Educational researchers have suggested that the academic “goal structures” created through classroom and school policies and practices affect students' confidence in their ability to master new academic material because they influence adolescents' own definition of academic success (e.g., Ames, 1992; Maehr & Midgley, 1991; Nicholls, 1984). Researchers have examined two main learning goal structures: a “task goal structure” and an “ability goal structure.” A task goal emerges when school or classroom policies and practices emphasize task
mastery as the main goal of successful learning, recognize effort and improvement as hallmarks of competence, and challenge all students to do their best regardless of their present ability level. Recognition of academic improvement, non-competitive academic fairs, and an emphasis on project-based learning are examples of policies or practices that promote a task goal structure. In contrast, an ability goal structure is created when policies and practices encourage competition among students, emphasize getting the highest grades rather than deep task engagement as the most important goal of learning, and provide more favorable treatment to the highest achieving students. Recognition of superior relative performance in the form of public award ceremonies, special privileges or public honor rolls that recognize only high achievers, and provision of different educational opportunities for students of different ability levels (e.g. academic tracks) are examples of school level practices that promote an ability goal structure (see Maehr & Midgley, 1996).

Although experiences at both the classroom and school level are important, we use adolescent perceptions of goal structures at the school rather than the classroom level because in this paper we are interested in more general level school influence. Past research has documented that a perceived emphasis on effort, self-improvement, and task mastery at the school level is more facilitative of academic engagement and achievement than a perceived school emphasis on relative ability, competition, and social comparison (Maehr & Fyans, 1989; Roeser, Midgley, & Urdan, 1996). Eccles and Midgley (1989) suggested that a perceived ability-goal emphasis may be especially detrimental during adolescence because youth are increasingly self-conscious and sensitive to comparisons of their competencies with those of their peers. Such an emphasis is likely to render some adolescents vulnerable to feelings of incompetence or sadness because, by definition, only a few students can be the “best” in their classes or school (Elias, 1989). In contrast, because goals linked to self-improvement and full engagement with learning tasks can be achieved by all students, practices supporting an emphasis on these goals can support all adolescents’ need to feel competent (Roeser et al., 1996). Perceptions that one’s school supports a task goal structure may also buffer against feelings of psychological distress because such a school is likely to be seen as providing a safe, non-threatening environment in which youth can explore and develop their identities.

Support of Autonomy. Schools and classrooms can provide “support of autonomy” through opportunities for students to participate in meaningful decision making and to learn “relevant” material. Because such practices afford adolescents opportunities to improve their decision-making skills, regulate their
own behavior, and experience a sense of personal empowerment and meaning in school, they should promote school engagement (Connell & Wellborn, 1991; Deci & Ryan, 1985; Eccles, et al., 1997). And, in fact, policies allowing for student input into class discussions, for choice among seating arrangements and academic tasks, and for participation in school governance have been shown to positively affect students' interest in and valuing of school (Eccles et al., 1993). Similarly, curricula that provide opportunities for self-exploration and expression and that provide learning activities that are meaningful, relevant, and related to students' own interests, aspirations, and goals foster greater academic engagement and intrinsic motivation (Blumenfeld, 1992). When mathematics addresses real world problems, social studies covers material that is applied to contemporary issues, and literature representing diverse viewpoints is assigned, adolescents may have more opportunities to connect their own emerging identities with the academic content of their classes. In addition, they are more likely to feel that they are doing the work because it is interesting to them rather than because the material is required for some other purpose such as graduating from high school or getting into the college of their choice.

**Quality of Relationships with Teachers.** The quality of the social interactions adolescents have with their teachers is another important aspect of the middle school environment that we consider here (e.g., Connell & Wellborn, 1990; Eccles et al., 1997; Moos, 1991). Adolescence is a time when relationships with non-parental adults can take on increased meaning because adolescents are looking for guidance and support from adults outside of the home. Consequently, positive relationships with teachers can enhance adolescents' motivation, achievement, and feelings of well-being (Eccles et al., 1993; Roeser et al., 1996; Ryan, Stiller, & Lynch, 1994).

Although there are many dimensions to student-teacher relationships, we focus here on two: emotional support and issues of differential treatment by race or gender. Emotional support refers to the extent to which early adolescents perceive their teachers as sources of support and guidance in the face of personal or social problems encountered at school. Perceptions that teachers are an available source of support may provide a buffer against academic or emotional difficulties (Ryan et al., 1994). Differential treatment refers to adolescents' perceptions of being treated unfairly or disrespectfully by their teachers or school guidance counselors compared to the treatment of their opposite gender or different race peers. For instance, do adolescents perceive that their teachers or guidance counselors discourage them from taking certain classes
because of their race or gender? Differential treatment of adolescents by school professionals predicated upon race, gender, or ability level can adversely impact adolescents' academic motivation and performance (AAUW, 1992; Jussim, Eccles, & Madon, 1996; Lee, Croninger, Linn, & Chen, 1996). Although research has documented that subjective experiences of discrimination by race or gender are debilitating for adults (AAUW, 1992; Jackson, Brown, Williams, Torres, Sellers, & Brown, 1994), few studies have examined the effect of these experiences during early adolescence. Discrimination experiences may be particularly detrimental during these years when youth are beginning to explore in earnest different conceptions of “who they are.” As Erikson (1968) noted, an important initial task in these identity explorations is that of understanding and integrating into one's sense of self “what one is never not” (i.e., being male or female, African-American or White, etc.).

Summary: School Perceptions and Adjustment Outcomes. Our conceptual model of the school psychological environment focuses on adolescents' perceptions of school-based practices and experiences linked to their needs for competence, autonomy, and relatedness with teachers. We test several predictions using this model. Because such practices provide for early adolescents' needs in a developmentally appropriate fashion, we predict that adolescents' perceptions of an emphasis on task goals for learning, positive teacher regard, empowerment of students, meaningful curricula, and teacher emotional support in middle school will be associated with increased motivation and achievement and decreased psychological distress at the end of eighth grade. In contrast, because both an emphasis on ability goals for learning and negative (differential) treatment in school based on race or gender are antithetical to adolescents' developmental needs, we predict that perceptions of these school practices and experiences will lead to diminished motivation and achievement and increased psychological distress over time.

METHODS FOR BOTH STUDY 1 AND 2

Participants

Participants in Studies 1 and 2 are part of the Maryland Adolescent Growth in Context longitudinal study, a study designed to examine the influences of the home, school, neighborhood, and peer group on adolescents' academic, psychological, and social development. Waves of data were collected first in the Fall/Winter of 1991-1992 during the beginning of the target adolescents' seventh grade school year and again in the Spring/Summer of 1993 at the end of the adolescents' eighth grade school year. These data points are
referred to as "Time 1" and "Time 2" for purposes of this report. The 1041 African-American and White adolescents who had data for both time points are used in this paper. Of these, 66% were African-American and 51% were male. Adolescents were drawn from each of 23 middle schools that were part of a large county-wide school district in Maryland. Eighteen of the schools housed grades 7 and 8, four also included grade 6, and one included grades 5 and 6. The families of the adolescents represented a broad range of socio-economic levels normally distributed around a 1990 pre-tax family income of "between $45,000-$49,999" (Range: < $5,000 to > $75,000). In 1991, the average education level of the head of household was "some post-high school education," 86% reported being employed, and 65% reported being married or having a live-in partner.

Measures

Face-to-face interviews and self-administered questionnaires were collected from the target adolescents and their primary care-giver in the family's home. At the end of each school year achievement and attendance measures were collected from school records. We used mainly youth self-report and school record measures in this paper. Parent reports were used to describe family demographic characteristics and to validate the clusters that emerged in the person-centered analyses of Study 2. Scale construction was guided by theoretical concerns and factor analyses using principle component analyses and oblimin rotation. A full description of this process is available from the second author. The specific constructs used in this paper are described below and sample items are presented in the Appendix.

Academic Motivation. We used self-perceptions of academic competence and academic values as indicators of academic motivation. The items used 5- and 7-point Likert scales. Our Academic Competence Scale was a composite of two self-report sub-scales. The first sub-scale, self-concept of academic ability (based on scales developed by Eccles and her colleagues; Eccles, 1983; Eccles et al., 1989) assessed adolescents' beliefs about their competence in math and other school subjects (Time 1 $\alpha = .78$, Time 2 $\alpha = .82$). For instance, we asked youth "Compared to other kids your age, how well do you do in math?" A second sub-scale, self-efficacy in school, was developed by Cook and his colleagues (see Cook et al., in preparation). Items in this scale assessed adolescents' reports of their ability to meet teachers' and parents' educational expectations, complete academic work on time, participate in class activities, work in groups, etc. (Time 1 $\alpha = .80$, Time 2 $\alpha = .83$). Second-order factor analyses revealed that a single underlying dimension accounted for
71% and 74% of the variance in these sub-scales during seventh and eighth grade, respectively. Sub-scales were converted to z-scores and averaged together to form the higher-order Academic Competence Scales.

The School Values Scale included both new items and those developed by Eccles and her colleagues (see Eccles, 1983; Eccles & Wigfield, 1995; Eccles et al., 1989) and was a composite of three sub-scales: academic importance, intrinsic reasons for going to school, and perceived utility of education as a pathway to later opportunities. The academic importance sub-scale assessed how important adolescents found math and other school subjects (Time 1 $\alpha = .81$, Time 2 $\alpha = .81$). The intrinsic reasons sub-scale assessed how much adolescents liked to learn, enjoyed their classes, and came to school because they wanted to learn (Time 1 single item, Time 2 $\alpha = .75$). The perceived utility of school sub-scale assessed the extent to which adolescents believed that education was an instrumental pathway to later life opportunities (Time 1 $\alpha = .69$, Time 2 $\alpha = .69$). Second-order factor analyses confirmed a single underlying construct for these sub-scales that accounted for 54% and 57% of the variance at each time point, respectively. Again, sub-scales were converted to z-scores and averaged together to form the higher-order School Values Scales.

**Academic Achievement.** To assess academic achievement, end of year academic grade point average (GPA) was created from school record data. GPA was an average of adolescents' grades in the core academic subjects (English, math, science, health/social sciences). This measure was constructed for the adolescents’ eighth grade school year and was assessed on a five-point scale ($1 = $Failing, $2 = D's$, $3 = C's$, $4 = B's$, $5 = A's$).

**Psychological Distress.** Measures of psychological distress were drawn from youth self-reports (and from parent reports as well in Study 2). Youth self-report items were drawn from the Symptoms Checklist 90-Revised (SCL-90-R; Derogatis, Rickels, & Rock, 1976) and Kovac’s (1992) Children’s Depression Inventory (CDI). At Time 1, adolescents were asked to report how frequently in the past month they had experienced each of several symptoms of anger or depressive mood using a five-point Likert scale ($1 = $almost never, $5 = $almost always). First order-factor analyses differentiated the anger ($\alpha = .81$) and depressive symptoms ($\alpha = .82$) scales from one another. At Time 2, the same anger scale was administered ($\alpha = .77$), and the CDI was used to assess depressive affect. For both time points, a higher-order Psychological Distress Scale was formed since 79% (Time 1) and 71% (Time 2) of the variance in the two sub-scales was accounted for by a single underlying dimension. Sub-scales were converted to z-scores and averaged to form the higher-order scales.
School Perceptions and Experiences. School measures, collected at Time 2, assessed adolescents’ perceptions of instructional practices and personal experiences related to the support of competence, the support of autonomy, and the quality of teacher-student relationships. Items were assessed on 5-point Likert items (see Appendix).

Support of Competence. Two constructs assessed adolescents’ perceptions of the support for competence in their middle school: academic goal structures and perceived teacher regard. The measures of adolescents’ perceptions of school-level emphases on different goals for learning were adapted from the work of Midgley, Maehr, and their colleagues (see Midgley, Maehr, Hicks, Roeser, Urdan, & Kaplan, 1995; Maehr & Midgley, 1996; Roeser et al., 1996 for reliability and predictive validity information). The school task goal structure scale assessed adolescents’ perceptions of their school as a place where all students were challenged to do their best, effort was recognized as important, and self-improvement and task mastery were emphasized as important hallmarks of scholastic competence. The school ability goal structure scale assessed adolescents’ perceptions of their school as a place that emphasized competition, getting better grades than other students, and special treatment for the highest achieving students in the school. Factor analysis of the general context perceptions differentiated each of the hypothesized school goal structure scales and both scales were internally consistent (α ≥ .70).

Adolescents’ view of their teacher’s expectations and positive regard for them personally was assessed with a single item asking whether adolescents believed that their teachers viewed them as good students (1 = strongly disagree, 5 = strongly agree).

Support of Autonomy. Two scales were created to assess the support of autonomy dimension of the perceived school environment: a student empowerment and a curricular meaningfulness scale. Items for the student empowerment scale assessed adolescents’ reports of opportunities to (a) make decisions concerning seating and the selection of work partners in their classes, and (b) share their own ideas in classroom discussions (Eccles and Midgley, 1989). The curricular meaningfulness scale assessed the perceived relevance of the problems and material covered in science, English, social studies, and math classes to the adolescent (Blumenfeld, 1992). Both the student empowerment (α = .70) and the curricular meaningfulness (α = .82) scales were internally consistent.
School Experience and Adjustment 14

**Quality of Relationships with Teachers.** A single, 5-point Likert item tapped adolescents' perceptions of emotional support from teachers. The item asked how often adolescents felt they could depend on their teachers to help them if they had a social or personal problem at school (1 = almost never, 5 = almost always).

Although this item was part of a larger Social Support Scale in the overall study, it was singled out for purposes of this paper to look at the specific relations of perceived support within the context of school to adjustment. Items assessing adolescents' perceptions of negative, discriminatory treatment by teachers and counselors due to their race or gender were created for this study. Adolescents were asked how often they believed that their teachers had perceived them as less smart, graded or disciplined them more harshly, called on them less in class, or discouraged them from taking certain classes because of their race or gender. Factor analyses yielded a Negative Treatment by Race ($\alpha = .88$) and a Negative Treatment by Gender scale ($\alpha = .82$).

**Demographic Characteristics.** Youth reports were used to assess ethnic/racial status and gender. Primary care givers reported on their marital status, education level, occupational status, and mean 1990 pre-tax family income. Educational level was coded 1 = less than a high school diploma, 2 = high school graduate, 3 = less than a college degree, 4 = college degree or higher. Occupational status was coded using the US census category system with scores ranging from 0 - 100. Lower values on the occupational status scale were associated with lower skill and lower prestige occupations. Total 1990 pre-tax family income was assessed on a forced-choice scale ranging from 1 = Less than $5,000 to 16 = More than $75,000 with each scale value representing a $10,000 incremental range.

**OVERVIEW OF STUDY 1**

Using variable-centered analysis techniques (Magnusson & Bergmann, 1988), in Study 1 we examined the concurrent and cross-time relations between school motivation and psychological distress. Correlations were used to assess the concurrent relations at both 7th and 8th grade; hierarchical regressions were used to examine the longitudinal relations between school motivation and psychological distress, controlling for adolescents' socio-demographic backgrounds. We also examined the predictive relations of the school measures on change in motivational beliefs and psychological distress over time and on achievement at the end of eighth grade using regression techniques.
RESULTS OF STUDY 1

**Within and Cross-Time Relations Between School Motivation and Psychological Distress.**

We assessed the within-grade, bivariate relations between early adolescent' academic motivational beliefs and achievement and their self-reported psychological distress. During seventh grade, psychological distress was negatively correlated with adolescents' beliefs about their academic competence ($r (998) = -.24, p .001$), values associated with school ($r (998) = -.24, p .001$), and academic achievement ($r (998) = -.17, p .001$). The same but stronger patterns were found during eighth grade: Psychological distress was negatively correlated with adolescents' beliefs about their academic competence ($r (886) = -.45, p .001$), values associated with school ($r (886) = -.42, p .001$), and academic achievement ($r (886) = -.34, p .001$).

Next, hierarchical regression analyses were used to assess the longitudinal predictive effects of the demographic characteristics and adolescents' Time 1 motivational beliefs and psychological distress on their Time 2 outcomes. Table 1 presents the results. In general, the regression models explained moderate amounts of variance in the eighth grade outcomes (adjusted r-squares ranging from .23 to .33) and revealed a pattern of reciprocal relations between academic motivation, achievement, and psychological distress during the middle school years.

**Eighth Grade Motivational Beliefs.** Seventh grade academic competence beliefs were the strongest predictors of eighth grade competence beliefs and seventh grade academic values were the strongest predictors of eighth grade academic values. Time 1 self-reported psychological distress was also a significant negative predictor of subsequent feelings of academic competence: Adolescents with more frequent angry and depressed moods at Time 1 felt less academically competent two years later. In contrast, seventh grade psychological distress had no relation to eighth grade academic values in the regression analyses.

**Eighth Grade Achievement.** Both demographic and prior adjustment factors were significant predictors of eighth grade GPA. Of particular interest, even after accounting for the significant effects of parental education, family income, gender, race, and seventh grade feelings of academic competence, seventh grade psychological distress showed a significant negative relation to eighth grade GPA. Apparently, psychological distress early in middle school contributes to both more negative feelings of scholastic competence and poorer achievement at the end of middle school.
Eighth Grade Psychological Distress. As with academic competence and value beliefs, seventh grade psychological distress was the strongest predictor of later distress. Additionally, seventh grade perceptions of academic competence and school values were significant negative predictors of eighth grade psychological distress even after accounting for demographic variables. In this case, positive motivational beliefs about school appear to protect against increases in psychological distress over the early adolescent years.

Cross-Time Relations Between Adjustment Outcomes and Perceived Middle School Characteristics

Table 2 presents the regression analyses examining the relative predictive effects of the demographic characteristics, seventh grade academic and psychological adjustment measures, and eighth grade middle school environment perceptions on eighth grade outcomes. In general, variables associated with the support of competence in school (school goal structures and perceived teacher expectations) had the most consistent relation to both academic and psychological outcomes. Variables associated with the relationships between teachers and students (perceived support, negative treatment) had their strongest relation with school values and psychological distress.

Because the results of Table 2 are an extension of the hierarchical regression results presented in Table 1, we calculated the amount of explanatory variance that the school perception measures contributed to each outcome above and beyond the demographic and prior adjustment measures. The school context measures explained an additional 11% of the variance in adolescents' academic competence beliefs, 20% in school values, 7% in school achievement, and 19% in psychological distress at the end of eighth grade.

Eighth Grade Motivational Beliefs. The strongest predictor of eighth grade academic competence beliefs in this model was seventh grade academic competence beliefs. However, the school measures were also significant predictors. Perceived positive teacher regard and curricular meaningfulness were related to increases in adolescents' competence beliefs over time whereas perceptions of a school ability goal structure predicted decreases in adolescents' competence beliefs over time.

The school perceptions also contributed to the prediction of school values at the end of eighth grade. In addition to significant positive effects of race, prior school competence beliefs, and prior school values, adolescents' perceptions of positive teacher regard, of an emphasis on task mastery, effort and improvement (school task goal structure), of meaningful curricula, and of emotionally supportive teachers all predicted increases in school values over time. In contrast, adolescents' perceptions of an emphasis on competition and
relative ability (school ability goal structure) and negative treatment due to one's race or gender predicted declines in school values over time.

**Eighth Grade GPA.** Three of the school perception measures significantly predicted year-end eighth grade GPA after accounting for the demographic and prior adjustment measures. Perceived positive teacher regard was a positive predictor whereas both perceived school ability goal structure and differential treatment by race were negative predictors.

**Eighth Grade Psychological Distress.** A pattern of predictors similar to the one for eighth grade GPA was found for youths' self-reported psychological distress at the end of eighth grade. After controlling for demographic characteristics and prior reports of psychological distress, adolescents' perceptions of an emphasis on ability and competition (school ability goal structure), of negative treatment by gender, and of negative treatment by race predicted increased psychological distress over time. In contrast, perceptions of positive teacher regard predicted declines in distress during the middle school years.

**DISCUSSION OF STUDY 1**

Results of Study 1 corroborate findings from other studies showing a relation between poorer school functioning and concurrent symptoms of psychological distress in school-aged children and adolescents (Achenbach et al., 1991; Blechman et al., 1986; Cole, 1991; Nolen-Hoeksema et al., 1986; Puig-Antich et al., 1985). At both time points, adolescents who were less academically competent (i.e., who received lower grades in the core academic subjects and who felt less competent to achieve in school, to meet teachers' and parents' educational expectations, to learn from groups, and to complete school assignments) reported the highest levels of psychological distress. Similarly, early adolescents who valued school the least in terms of its importance, interest, and utility for their lives also reported the most frequent symptoms of anger, sadness, and hopelessness. The relation of adolescents' academic and psychological functioning was stronger during eighth grade than during seventh grade. It may be that as adolescents mature and are increasingly socialized into an achievement-oriented society, academic functioning becomes increasingly important for overall emotional well-being. Given that measures of academic and psychological functioning were not identical across the two time points, however, the substantive meaning of this increased relation remains tentative.
The longitudinal nature of our data allowed us to explore the directionality of effects between academic and psychological functioning. Results of these analyses suggested bi-directional causal influences between academic and psychological functioning. From an educational perspective, we had predicted that early motivational beliefs and academic achievement would protect against later distress. In general, the results supported these predictions. Youth who felt more academically competent and valued school at the beginning of seventh grade reported lower symptoms of psychological distress two years later, controlling for prior levels of psychological distress and demographic variables. Feelings of academic competence provide a basis for positive global feelings about oneself which in turn can protect against psychological and behavioral difficulties (Harter, 1985; Rutter, 1987). Valuing education represents a perceived link between ones' own life and the pathways to increased knowledge and opportunity. As such, these values provide a sense of belonging, opportunity, and hopefulness, which, in turn, protect against psychological or behavioral difficulties (Dryfoos, 1990; Finn, 1989). School values are also indicative of a good psychological fit between adolescents' needs and the institution of school, an institution the adolescent must live in for 6 - 8 hours per day. Such a fit has been hypothesized to lead to positive psychological outcomes (Eccles & Midgley, 1989).

In addition to educational implications, we predicted from a clinical perspective that early adolescents' psychological distress at the beginning of middle school would negatively impact their motivational beliefs and achievement at the end of middle school. We found partial support these predictions. Early psychological distress did have a negative relation to later academic competence beliefs and eighth grade academic GPA after controlling for prior motivational beliefs and demographic characteristics. Thus, not only are competence perceptions and feelings of distress concurrently related as reported in prior research (Blechman et al., 1986; Cole, 1991), in early adolescence they are related over time in reciprocal ways. Although we did not test this model here, the negative impact of adolescents' distress on their beliefs about their competence in school may have been one indirect path by which distress impacted achievement. Alternatively, although again speculative, early distress may have impacted other variables we did not assess, such as self-regulatory strategies related to learning, which in turn lead to diminished later achievement (e.g., Brackney & Karabenick, 1995). The finding that early distress impacted later competence beliefs and performance but not later school values was contrary to our hypotheses, and suggests some specificity in terms of how negative emotions can impact the motivational factors underlying successful learning.
We also examined the link between adolescents’ perceptions of middle school and their motivational beliefs, achievement, and psychological distress. As predicted, those aspects of the school environment that supported adolescents’ need for competence in a developmentally appropriate manner (i.e., task goal structure and positive teacher regard) promoted positive academic competence beliefs, values, and achievement. In contrast, but also as predicted, adolescents’ perceptions of an ability goal structure (an emphasis on competition and social comparison) were associated with diminished academic competence, values, and achievement at the end of eighth grade. Such perceptions also predicted an increase in feelings of distress in the form of anger, sadness, and hopelessness over time. Apparently, perceptions of an ability-focused academic environment are both academically and psychologically debilitating during early adolescence, a time of heightened sensitivity to social comparisons (Covington, 1992; Eccles & Midgley, 1989; Elias, 1989).

We also predicted that student empowerment in terms of choice and participation in classes as well as meaningful curricula would support adolescents’ need for autonomy and thus would positively impact on their motivation, achievement, and well-being. These predictions were partially supported. Contrary to our hypothesis, student empowerment contributed no unique explanatory power to the prediction of the eighth grade outcomes in the multivariate analyses. This may have been due to the conceptual and statistical overlap of this construct with the other aspects of an “appropriate environment” included in this study such as teacher support, emphasis on task goals, meaningful work, and positive teacher expectations (see Ames, 1992). In support of this interpretation, we found that perceived student empowerment was significantly correlated with motivation, achievement, and distress and that only in the presence of the other school measures did these relations drop to non-significance. We did find, as predicted, perceptions of meaningful curricula were associated with higher values as well as an increased sense of academic competence at the end of eighth grade (Blumenfeld, 1992).

In regard to the quality of student-teacher relationships, we predicted that students who felt they could count on their teachers in times of need would showed decreased symptoms of distress and increased valuing of school over time. Only the latter prediction was confirmed: Consistent with other work (e.g., Ryan et al., 1994), perceptions of emotionally supportive teachers were related to an increase in academic values over time. Students may have turned to other sources of support for their emotional needs or may not have actually relied on their teachers for assistance.
We also found that perceived negative treatment by teachers or guidance counselors had a debilitating effect on adolescents’ school motivation and psychological health as predicted. Perceptions of differential treatment by race and gender, though occurring infrequently according to the adolescents in this study, showed a strong relation to increases in psychological distress over time and were also predictive of declines in adolescents’ valuing of education. Such experiences, while likely to be detrimental at any age, may be particularly upsetting during early adolescence when youths’ explorations of themselves and their feelings are particularly salient. More research is needed to understand the origins, correlates, and developmental significance of such experiences.

In summary, results of Study 1 using variable-centered analyses suggested reciprocal relations between academic and psychological functioning over time. Results also showed that perceived school characteristics and experiences contributed significantly to the prediction of early adolescents’ academic and more general psychological functioning.

INTRODUCTION TO STUDY 2

To supplement the variable-centered analyses in Study 1, person-centered, cluster analytic techniques (Magnusson & Bergmann, 1988) were used in Study 2 to identify different patterns of adaptation related to school motivation and psychological distress. In using this approach, we explored the possibility that only some of the youth who manifest poor school motivation show broader patterns of psychological distress and only some of the youth experiencing psychological distress do poorly in school (Duriak, 1985). Further, we wanted to assess whether or not different patterns found during the beginning of middle school would relate to adolescents’ adjustment two years later. In addition to our interest in individual patterns of adjustment over time, we looked at how adolescents’ perceptions of middle school related to the different emergent patterns of academic and psychological adjustment. Eccles & Midgley (1989) hypothesized that the quality with which school practices support the needs of adolescents should predict the quality of their academic and psychological functioning. In Study 2 we examined this prediction using person-centered approaches.

Describing Patterns of Adjustment During Early Adolescence

Previous research on adjustment during adolescence was used as a guide in determining which emergent patterns of adjustment to retain for analysis. Because research suggests that most youth traverse the early adolescent years with few problems (Carnegie Council on Adolescent Development, 1989), we expected
that the largest group of our adolescents would have positive beliefs about both their academic competence and the value of school, and low levels of psychological distress. These adolescents should also hold positive perceptions of their school in terms of the support of competence, autonomy, and relatedness (Connell & Wellborn, 1991; Eccles et al., 1993).

Second, given declines in many adolescents’ achievement motivation around the transition into secondary school (see Eccles et al., 1984), we also expected to find a group of youth who reported relatively low motivation for school, but who still looked like they were "on track" for positive development later in adolescence in terms of their actual academic achievement and level of psychological distress. Although these adolescents might be beginning to psychologically disengage from school, we predicted they should not yet manifest other signs of broad-based difficulties. Further, we predicted that this group would have negative perceptions of their school environment (Eccles et al., 1993; Roeser, 1996).

Third, we predicted that we would find a subgroup of adolescents who remained motivated for school and achieved quite well, but who also experienced frequent feelings of sadness, hopelessness, or anger (Durlak, 1985). There is little information on whether or not early adolescents who show increased psychological difficulties are necessarily the same youth who begin to disengage from school (Knitzer, Steinberg, & Fleisch, 1991). It seems plausible that some youth will continue to function well in school despite feelings of psychological distress during early adolescence. Although speculative, we predicted that such individuals would perceive their school environment as supportive of their needs given that they remain connected with schooling despite more general feelings of emotional distress.

Fourth, we expected to find a substantial group of adolescents with multiple signs of difficulty. In her review, Dryfoos (1994) estimated that approximately 1 in 4 adolescents by age 15 engages in a high risk lifestyle characterized by poor school motivation, academic failure, truancy, depressed mood, and other risky behaviors. Based on this synthesis, we predicted that approximately 25% of our sample would show signs of such a "high risk lifestyle." Furthermore, we predicted that these youth would perceive their schools less favorably than youth who were more engaged in school (Carnegie Council on Adolescent Development, 1995; Dryfoos, 1990; Eccles et al., 1993).

Lastly, we were interested in the predictive implications of patterns identified at seventh grade for adjustment measures collected two years later. We expected some continuity in adjustment over time based on
the patterns identified at the beginning of seventh grade. We reasoned that these patterns were likely to reflect a more general capacity of adolescents to cope with the multiple changes in body, cognition, and social environments characteristic of this period. Insofar as these patterns were indicative of adolescents' general organization of strengths and vulnerabilities (i.e., their "competence"), we expected that they would continue to exert an influence on their development over time. Evidence of such continuity has emerged in other studies. For example, Eccles et al. (1997) found that patterns of adolescents' adaptation to the junior high school transition were predictive of their academic beliefs, achievement, self-esteem, and psychological distress three to five years later. Similar continuities in academic achievement, motivation, and conduct have been found from childhood to adolescence (Entwistle & Hayduk, 1988; Masten et al., 1995).

OVERVIEW OF STUDY 2

Cluster Analysis

Q-type cluster analytic techniques were employed in Study 2 to identify groups of adolescents with different patterns of academic and psychological adjustment. Q-type cluster analysis is a technique that considers the interdependence among variables within persons and thereby classifies persons into relatively homogenous groups based upon their similarity across a series of measures (Magnusson & Bergmann, 1988). The clustering was based on three 7th grade variables: academic competence beliefs, academic values, and psychological distress as reported by the youth.

Cluster Validation Measures

Several new variables from the longitudinal study were added in Study 2 to assess the validity of the cluster solution (Aldenderfer & Blashfield, 1984). These "validation measures" were indicators of academic and psychological adjustment that were not used to generate the groups. These measures were collected from adolescents, parents, and school records and included youths' reports of their self-esteem, parents' perceptions of their youth's academic and psychological functioning, and school grades from the end of seventh grade. Sample items for each of these scales are presented in the Appendix.

Self-Esteem: A six item scale tapped adolescents' self-perceptions of being happy, self-confident, and comfortable with themselves at Time 1. Items were assessed on 5-point Likert items. This Self Esteem Scale has proven reliable across diverse samples including this one (α = .80) and has shown concurrent validity in terms of predicted relations with academic achievement, self-perceptions of competence in various domains,
and psychological distress (see Eccles et al., 1997; Lord & Eccles, 1994; Roeser & Eccles, 1997). The scale was standardized for purposes of this study.

**Parent Reports of Child's Academic Functioning.** Parents were asked six questions about their child's school adjustment at Time 1. Items assessed parents' perceptions of how well their child was doing at school, their child's adjustment to middle school, the amount of trouble the child got into in school, the child's level of achievement motivation, and the future chances that their child would do well in school, skip school, or be held back a grade. Due to the fact that individual items were assessed on different metrics, items were z-scored, combined into a unit weighted scale ($\alpha = .75$), and keyed to reflect "Parental Concerns about Academic Adjustment."

**Parent Reports of School Failure.** A single yes-no item assessing parents' reports of whether or not their child had "failed or done very poorly in a class in the last two years" was also included as a validation measure. This item was assessed at Time 1.

**Parent Reports of Child's Psychological Functioning.** Parents were also asked at Time 1 how often their child manifested different symptoms of distress. Items were assessed on 5-point Likert scales (1 = almost never, 5 = almost always) and were adapted from the Symptoms Checklist 90-Revised (Derogatis et al., 1976). Initial factor analysis yielded four sub-scales: anger ($\alpha = .74$), depressed mood/anxiety ($\alpha = .78$), attentional problems ($\alpha = .80$), and aggressive/anti-social behavior ($\alpha = .73$). A higher order Psychological Distress Scale was constructed that accounted for 67% of the variance in these four sub-scales. Sub-scales were converted to z-scores and averaged to form the higher-order scale.

**School Grades.** Academic grade point average (GPA) for the adolescents' seventh grade school year was calculated based on their performance in the core academic subjects. This measure reflected achievement both during and six months after the collection of the Time 1 measures used to cluster the adolescents. GPA was standardized for purposes of this study.

**Middle School Perceptions.** The same school perception scales used in Study 1 were included in Study 2. These measures were collected at the end of adolescents' eighth grade school year (Time 2) and included perceptions of a task and ability goal structure, positive teacher regard, student empowerment, meaningful curricula, emotion support from teachers, and negative treatment in school due to race or gender.
RESULTS OF STUDY 2

Profiles of Adjustment During 7th Grade

Based on the emergent structure of our data, on our initial hypotheses concerning plausible patterns of academic and psychological adjustment, and on considerations of parsimony, a four-cluster solution was extracted using Ward’s method and Euclidean distance as the measure of similarity among seventh grade academic competence beliefs, school values, and psychological distress. These clusters were labeled a Well-Adjusted Group (N = 418, 40%), an Academic Alienation Only Group (N = 147, 14%), a Psychological Distress Only Group (N = 152, 15%), and a Multiple Risks Group (N = 324, 31%). Figure 2 depicts the group means on the clustering variables. Table 3 summarizes the statistical differences between groups on these measures at both time points. The groups differed in the predicted manner at grade seven: Youth in the Well-Adjusted and Psychological Distress Groups showed higher self-ratings of academic competence and values compared to youth in the Academic Alienation Only Group, who in turn reported higher levels of academic competence and valuing of school than youth in the Multiple Risk Group. In addition, adolescents in the Multiple Risk Group reported the greatest amount of symptoms of psychological distress in seventh grade, followed by the Psychological Distress Only Group, the Academic Alienation Only Group, and the Well-Adjusted Group, respectively.

Validating the Clusters During Seventh Grade. Table 4 summarizes cluster differences on the validation measures. Student Newman-Keuls comparisons showed that all groups differed from one another on self-esteem: The Well-Adjusted Group had the highest self-esteem, followed by the Academically Alienated, the Psychologically Distressed, and the Multiple Risk Groups, respectively. Parents’ perceptions of their children’s academic and psychological adjustment also differentiated the groups: Parents of the Multiple Risk adolescents were most worried about their child’s school functioning and reported the most symptomatology in their children; in contrast, parents of the Well-Adjusted Group were the least worried and reported the least symptoms of distress in their child. Parents of the Academic Alienation and Psychological Distress Only adolescents reported intermediate levels of worries about school and symptoms in their children and did not differ from each other on these measures. Finally, the Multiple Risk Group was significantly worse than all others on the academic performance indicators (GPA, doing poorly or failing a class) at the end of seventh grade.
**Predictive Validity Over Time.** Table 3 and Figure 3 summarize the Time 2 (end of eighth grade) differences in the academic competence, school values, and psychological distress measures. The same pattern of differences as was evidenced during seventh grade on the competence, values, and distress measures was found although these differences were smaller in magnitude.

**Relation of Middle School Perceptions to Patterns of Adjustment**

Table 5 presents group differences on the school perception measures. In general, results supported our predictions. Youth in the Well-Adjusted and Psychological Distress Only Groups (i.e., those showing relatively greater school motivation) perceived their middle school environment as more focused on task mastery, effort, and improvement (school task goal structure), found their curriculum more meaningful, perceived more opportunities for student involvement and participation in the school (student empowerment), and found teachers more available for problems (teacher emotional support) than youth in the Academic Alienation and Multiple Risk Groups.

Two other predicted patterns were noteworthy. First, the Psychological Distress Group reported relatively more instances of negative treatment due to their gender and race at school compared to the Well-Adjusted and Academic Alienation Groups. In fact, these school experiences, along with their higher levels of distress, were the only factors that differentiated these adolescents from those in the Well-Adjusted Group. Second, as mentioned above, the Multiple Risks Group in general saw their school environment less favorably than all of the other groups. These adolescents were particularly unique in that they perceived the highest levels of competition and differential treatment by ability in their school (school ability goal structure), the lowest teacher regard for themselves personally, and the most frequent negative treatment in school based upon their race.

**DISCUSSION OF STUDY 2**

Theoretically, four groups are possible when crossing high and low levels of academic and psychological adjustment (Durlak, 1985). In Study 2 these four groups of adolescents clearly emerged including those whose academic and psychological adjustment were in the same direction (i.e., both positive or both negative), and those whose academic and psychological adjustment were relatively more independent (i.e., those showing difficulties in only one domain or the other). Concurrent and predictive validity of these four patterns came from youth self-reports of their esteem, parents' perceptions of the their academic and
School Experience and Adjustment  26

psychological functioning, and the relation of these patterns to continuing differences in school motivation and psychological distress as reported by youth two years later. The groups also differed in predicted ways in terms of adolescents' perceptions of their eighth grade school environment. Those adolescents with less positive patterns of academic and psychological adjustment perceived their schools as less supportive of their needs for competence, autonomy, and relatedness.

**Well-Adjusted Youth.** The majority of adolescents respond well to the multiple challenges associated with early adolescence and move through this period with few difficulties (Carnegie Council on Adolescent Development, 1989). Consistent with this fact, 40% of our adolescents fell in the cluster with high academic competence, high values associated with school, positive achievement, and few symptoms of psychological distress at both the beginning and end of middle school. These adolescents saw their school as placing more of an emphasis on task goals for learning and less of an emphasis on competition, and as providing more meaningful instruction than their peers in the other clusters. They also felt their teachers had positive regard for them as students, were supportive, and treated them in a more respectful manner than the adolescents in the other three groups. Although causality cannot be inferred from these data, these results support the idea that a developmentally appropriate school environment is one important organized context that can assist youth in staying “on track” towards successful developmental outcomes during adolescence (Eccles et al., 1993).

**Academically Alienated Youth.** Researchers have noted normative declines in school-related competence beliefs, values, and conduct during the early adolescent period (Eccles et al., 1984, 1993; Simmons & Blyth, 1987). Results of Study 2 suggest that low valuing of school during early adolescence does not characterize all adolescents, and when it does, it may or may not be associated with broader patterns of distress and problem behaviors. We found a small group of adolescents (14%) who felt especially negative about the importance and utility of school but who also were average on our other indicators: They reported average levels of confidence in their scholastic competence, average academic achievement, and relatively little psychological distress. As predicted, these adolescents as compared to their well-adjusted peers perceived a more competitive academic environment, less supportive teachers, less meaningful curricula, poorer teacher regard, and less opportunities for autonomy. These school characteristics are all thought to undermine academic motivation, especially academic values, during the transition into and through middle school (Carnegie Council on Adolescent Development, 1989; Braddock & MacPartland, 1991; Eccles et al., 1993;
Midgley, 1993). Again, although no causal claims can be made with our data, these results complement a substantial body of research on how the context of secondary schools can influence the quality of early adolescents' school engagement (see Good & Weinstein, 1986).

Despite their relatively low valuing of school, these youth were also characterized by continued academic success, low incidence of academic failure, and relatively higher SES families. The alienation these youth felt from school appeared to be uniquely linked to their perceptions of the inappropriateness of (or poor developmental fit with) their school context. Consequently, given their other protective characteristics, these youth do not seem at risk for the onset of more serious patterns of distress and problem behavior later in adolescence (Dryfoos, 1990).

**Psychological Distressed Youth.** The third group of adolescents, constituting 15% of the sample, felt academically competent, valued school, and achieved at a slightly above-average level but reported relatively frequent feelings of psychological distress and low self esteem. It is important to note that we only assessed a count of a few symptoms of disturbance rather than a diagnosis of mental illness. Thus, it could be that these adolescents showed only moderate signs of psychological distress and thus their distress had not yet impacted on their school functioning. It is also likely that their school experiences help to explain this pattern: These adolescents reported a relatively positive school situation. They perceived their middle school as emphasizing self-improvement and task mastery, as providing meaningful course-work and chances for autonomy, and as having at least some supportive teachers. Such experiences may have supported these adolescents' continued engagement with school despite other difficulties.

Paradoxically, some of their school experiences may also have contributed to these adolescents' feelings of distress. Although there are many causes of psychological difficulties during adolescence (Kazdin, 1993), our results lead us to believe that certain critical negative experiences in school are important factors to consider in the prediction of psychological distress during these years. Such critical events can include sexual harassment, differential treatment in the form of low expectations for success, and experiences of discrimination. These experiences are more common among females and African-Americans and have been suggested as one cause of both ethnic group and sex differences in academic and mental health outcomes (AAUW, 1992; Lee et al., 1996; Pine & Hilliard, 1990; Roeser, Wong, & Eccles, 1997; Wong & Eccles, 1996). In fact it was differences in these kinds of experiences that differentiated the Psychological Distress Only
Group from the Well-Adjusted and Academic Alienation Groups. Adolescents in this group reported relatively more frequent experiences of discrimination due to their race or gender than adolescents in these other groups. Furthermore, females, especially White females, and African-American males were over-represented in this group (see footnote 3). Even if such experiences are infrequent, they can have a strong impact on how adolescents' think and feel about themselves. Consequently, they could account for the relatively higher feelings of distress evidenced by this group despite their continuing commitment to and engagement with school. In fact, their commitment to school may have made them more vulnerable to such experiences.

**Multiple Risk Youth.** Although it is true that a majority of early adolescents stay engaged with school and remain psychologically healthy, we also found support for the notion that depressive symptoms, poor school achievement, and poor motivation to learn are among the "new morbidities" affecting substantial numbers of young people (Dryfoos, 1994). Thirty percent of the adolescents in this sample showed these signs, a figure comparable to other estimates of the number of youth who are seriously at-risk for curtailed educational and economic attainments in this society (Carnegie Council on Adolescent Development, 1989). Our results also show similarities with other research on clusters of problem behaviors during middle and late adolescence, problem clusters that often eventuate in school withdrawal, drug use and abuse, delinquency, and teenage pregnancy (Cairns, Cairns, & Neckerman, 1989; Dryfoos, 1990; Jessor & Jessor, 1977; Steinberg, 1996). Similar to these studies, our multiple risk youth were more likely to have experienced school failure and poor grades, to devalue school, and to have frequent symptoms of distress. Given that this pattern was fairly stable over time, we predict that these adolescents are at high risk for the negative outcomes that occur in later adolescence such as school withdrawal, substance use and abuse, and anti-social activity.

Our contribution to understanding these multiple risk youth lies in our examination of processes associated with school that relate to this pattern of adjustment. We know that low achieving students are most at-risk for the developmentally inappropriate changes associated with the transition into secondary school environments (Eccles et al., 1993). Although we cannot ascertain causality here, it seems likely that competition, a lack of emotional support and student empowerment, meaningless curricula, and poor treatment by teachers all contribute to the pattern of risks evidenced by these adolescents. Although these adolescents are more likely to have a negative psychological set that colors their perceptions of their school (Roeser, 1996), they are also more likely to be treated less well by teachers in terms of opportunities for autonomy, expectations
for success, and affordances for meaningful work (Kagan, 1990; Oakes, Gamoran, & Page, 1992; Weinstein, 1989). Furthermore, the endemic competition in our schools should be particularly detrimental for youth who already feel incompetent and disenfranchised (Covington, 1992; Eccles & Midgley, 1989; Elias, 1989). Understanding the complex transactional processes that occur in schools that serve to create, exacerbate, or maintain the difficulties these adolescents are having represents a fruitful direction for future research.

GENERAL DISCUSSION

Although many young people negotiate the early adolescent years and the transition to secondary school with relatively little disruption in their academic or personal lives, a substantial number begin a downward spiral during these years towards school withdrawal, substance use and abuse, mental health problems, and anti-social behavior that can have profound consequences for themselves and for society (Dryfoos, 1990; Eccles et al., 1993; 1997; Rutter, 1995; Simmons & Blyth, 1987). Researchers interested in the adolescent period are only beginning to understand the role that experiences in different social contexts play in shaping patterns of adolescents' academic, social, emotional, and behavioral development. In this paper we have shown that the context of middle school, as perceived by adolescents, is related to changes in the quality of their academic motivation, achievement, and psychological functioning during the early years of adolescence. The role of school has been largely neglected as a central context of development in research on adolescence, especially with regard to social-emotional development (Eccles et al., 1996; Maughan, 1988; Rutter, 1983). As our results suggest, however, adolescents' experiences in school represent an important part of the complex array of social forces that influence their general psychological functioning, their beliefs about their own identity and the role of education in that emerging sense of identity, and the value of school as a pathway toward future opportunities.

Interweaving Lines of Development

Few normative studies within educational or developmental psychology have looked at the interweaving of lines of development associated with emotional adjustment, academic engagement, and academic performance over time during adolescence. Yet understanding how and when academic and psychological functioning covary can broaden our understanding of the links between cognition, motivation, emotion, and behavior (Brackney & Karabenick, 1995; Kovacs, 1989; Weiner, 1990).
In these companion studies, we found adolescents' beliefs about school, their actual achievement, and the amount of distress they reported were reciprocally related across the middle school years. Just as psychological distress was associated with a decline in achievement and competence beliefs, so too were positive achievement and motivation related to declines in psychological distress over time. These results support the notion that positive adjustment to school is a central component of well-being during adolescence (Eccles et al., 1996) and also that emotional well-being is central to one's readiness to learn (Dryfoos, 1994).

From an educational perspective, motivational beliefs that underlie successful school learning are thought to be central to psychological well-being. For example, adolescents' confidence in their ability to learn reflects in part a history of positive interpersonal feedback. Such feedback and its effect on self-perceptions of competence contributes to a sense of positive self-worth (Erikson, 1959; Harter, 1985). Additionally, adolescents' valuing of school confers a sense of purpose and positive direction to their development wherein they identify with the norms and goals of this dominant developmental context (Eccles, 1983). By providing a sense of competence and a directionality to development, academic competence and value beliefs can protect against distress (Finn, 1989; Hawkins et al., 1988; Rae-Grant et al., 1989) and promote positive achievement and well-being (Eccles, 1983, 1996). Including both competence and value-related constructs in future studies of school-related resilience and protective processes is important.

From a more clinical perspective, multiple processes can account for the relation of psychological distress to poorer achievement. Psychological distress can influence achievement through its impact on motivational beliefs (e.g., academic competence beliefs) and the cognitive and self-regulatory processes central to learning and achievement (Boekaerts, 1993; Brackney & Karabenick, 1994; Cole, 1991). Psychologically distressed adolescents may also use less effective coping strategies in the face of academic setbacks or may be reluctant to seek assistance with their academic work compared with their non-distressed peers thus leading to impaired achievement (Boekaerts, 1993; Ebata & Moos, 1984). It is also important to note that distressed youth, in part due to the use of ineffective coping strategies or their display of negative mood, are likely to be responded to less favorably by teachers and other students in school leading to a negative cycle of interpersonal transactions within this setting. Such a cycle, in turn, could lead to reduced achievement over time. Future research on each of these different pathways of influence between academic and psychological functioning is
important, particularly if we want to develop better therapeutic interventions and teaching programs for adolescents with both emotional and academic difficulties (Hawkins et al., 1988; Kagan, 1990).

**Person-centered Results**

Although interesting, variable-centered results tell only one part of the story concerning the association of school functioning with psychological distress. The results from the cluster analyses clarify and extend previous research and raise some interesting new issues. For instance, several researchers have argued that there are declines in academic motivation and achievement during early adolescence, especially after the transition to secondary school (Eccles et al., 1989; Simmons & Blyth, 1987; Wigfield et al., 1991). In our study, 15% of adolescents did devalue school and another 30% both devalued school and expressed low academic competence at the beginning of 7th grade after the transition into middle school. However, there were many students who did not show this pattern. Fifty-five percent of our sample showed high feelings of competence, valued school, and achieved at a high level during seventh grade. The juxtaposition of these findings highlights the need for studying individual patterns of change in school motivation and achievement across development. Combining variable- and person-centered methodologies is well-suited to this task (Cicchetti & Rogosch, 1996; Magnusson & Bergmann, 1988).

We also know that psychological difficulties increase during adolescence, especially among White females (Kazdin, 1993). What is still unclear is which individuals who experience increased psychological difficulties also disengage from school (Knitzer et al., 1991). Results of the person-centered analyses in Study 2 suggest some adolescents (e.g., females) are more likely to stay engaged with school despite emotional difficulties. Understanding the processes which allow for continued academic functioning in the face of emotional difficulties represents a fruitful direction in resilience research.

Relatedly, whereas poor academic values and commitment to school have been associated with multiple negative outcomes later in adolescence (Dryfoos, 1990; Finn, 1989), results of Study 2 suggest that this is not likely to be true for all adolescents. For some students (i.e., the Academic Alienation Only Group), low valuing of school may relate only to poor quality of engagement; in contrast, for others it may be a marker of significant broad-based difficulties (Cairns et al., 1989). Research addressing multiple domains of functioning simultaneously is needed to increase our understanding of the origins, sequencing, underlying
processes, and consequences of different patterns of risk during adolescence (Eccles et al., 1996; Elliott, Huizinga, & Menard, 1989; Jessor, 1993; Masten et al., 1995).

One final example demonstrates the utility of combining variable- and person-centered methods to study school and psychological adjustment. In Study 1, psychological distress was associated with poorer subsequent achievement. Such a finding lends support to school-based affective education programs designed to address all children's psychological well-being and achievement (e.g., California Commission on Education, 1991). However, results of Study 2 suggest that it was primarily the Multiple Risk group, a specific subset of adolescents, who accounted for this association. Such a finding lends support to a different set of recommendations focused on the need for targeted intervention programs (Durlak, 1985) and specific school-based mental health services that can assist high-risk adolescents in becoming better prepared for learning (Dryfoos, 1994).

**School As a Major Context of Development**

Given the focus on context in this issue, we set out to demonstrate that middle school represents a central context of development during adolescence, a context that has a significant impact on outcomes other than academic motivation and achievement (Eccles et al., 1996; Rutter, 1983). In the past, research on the developmental significance of schooling has been hampered by a lack of theories that adequately describe the environment of schools and a rather exclusive focus on academic outcomes, but progress on these issues is being made (Good & Weinstein, 1986; Rutter, 1983). Our approach (i.e., examining the developmental significance of schooling) is derived from research and theory on the interface of academic environments and the developmental needs of early adolescents (Ames, 1992; Connell & Wellborn, 1991; Deci & Ryan, 1985; Eccles & Midgley, 1989, Eccles et al., 1993; 1996; Maehr, 1991; Midgley, 1993). Such an approach posits that school-based instructional practices, norms and values, and social interactions that promote adolescents' developmental needs associated with competence, autonomy, and quality relationships enhance their motivation, achievement, and well-being. In contrast, aspects of school life that inhibit the fulfillment of these needs produce academic, emotional, and behavioral alienation (Deci, Vallerand, Pelletier, & Ryan, 1991; Eccles & Midgley, 1989).

One value of this approach lies in the fact that a common set of contextual features hypothesized to underlie both academic and psychological adjustment can be examined across a variety of settings (i.e., home,
school, neighborhoods) and developmental periods (Connell, 1990; Eccles et al., 1993; 1996; Eccles et al., 1997). Such an approach also allows one to look at changes in school environments through a developmental lens. As children move from elementary to middle school, for example, the environment often becomes less supportive of their needs and thus precipitates declines in motivation and achievement (Eccles et al., 1993; Simmons & Blyth, 1987). We found similar processes operating in this population of middle school students: Those adolescents who experienced more developmentally appropriate school practices, values and norms, and experiences during middle school showed enhanced motivation and improving psychological functioning across the middle school years and vice versa.

The Support of Competence in Schools. Schools can support the development of competence by having high expectations for all students, encouraging self-improvement, effort, and mastery, de-emphasizing competition and relative ability, and providing multi-dimensional tasks that allow for the expression of multiple talents and abilities (Eccles & Midgley, 1989; Maehr & Midgley, 1996; Sizer, 1984). Thus, the ways in which schools can support the development of competence are found at multiple levels of the institution of school, including the level of academic tasks (Snow, 1994), teacher-student interactions especially in relation to feedback and expectancy processes (Eccles & Midgley, 1989; Weinstein, 1989), classroom-level motivational structures and norms (Ames, 1992; Eccles & Midgley, 1989), and school-level norms, goals, and practices such as curricular differentiation and motivational structures (Oakes et al., 1992; Maehr, 1991).

At the level of teacher-student interactions, we extended previous research by showing that perceived teacher regard not only supports academic motivation and achievement but also buffers against feelings of distress (Eccles & Wigfield, 1985; Weinstein, 1989; Ryan et al., 1994). The benefits of perceiving positive teacher regard may be particularly evident during adolescence when teachers can become an important source of support and guidance outside of the family as adolescents explore their identities (Eccles et al., 1993).

School-level norms and values, sometimes engendered in emphases on qualitatively different goals for learning and definitions of academic success, also represent important organizational-level features related to the support of competence (Andersen, 1982; Maehr, 1991). Our results show that a perceived emphasis on competition, relative ability, and differential rewards for high achievers, all commonly used motivational devices in schools, is related to anger and sadness, a lack of motivation, and lower grades in students. Such an emphasis seems particularly ill-suited to the stage of early adolescence when youth are increasingly self-
consciousness and sensitive to comparisons with peers (Eccles & Midgley, 1989; Maehr & Midgley, 1991). Results of Study 2 suggested that multiple risk adolescents were those most likely to report an emphasis on ability-focused practices in their schools. It is precisely such adolescents, those who are already struggling academically and emotionally, who are most adversely affected by such practices (Covington, 1992; Eccles & Midgley, 1989; Kagan, 1990; Midgley et al., 1989). These students are probably least likely to receive rewards and praise in a system that focuses on the highest achievers and the demonstration of competence compared to others, and thus may have their journey towards school withdrawal hastened by such practices.

Many have argued that schools need to develop equitable recognition and grouping practices and engaging academic tasks if they are to enhance feelings of academic competence, performance, and increased valuing of school among all children (Carnegie Council on Adolescent Development, 1989; Eccles & Midgley, 1989; Oakes et al., 1992; Maehr & Midgley, 1991; Sizer, 1984). The creation of learning environments that focus learners on academic mastery, self-improvement, collaborative learning, and the exertion of effort as a hallmark of success all seem central to engaging a wide range of students. Task-focused learning environments engender many of these practices and represent an important alternative to competitive, comparative motivational systems. How to create a curriculum-wide, school-wide emphasis on task mastery, self-improvement, and collaboration is an ongoing challenge in schools in the United States (see Maehr & Midgley, 1996; Sizer, 1984).

The Support of Autonomy in Schools. Schools can support adolescents' needs for autonomy by providing them with opportunities to make choices, share their viewpoints, and connect their learning in meaningful ways to their unfolding sense of identity. Research at the classroom-level has shown that the support of autonomy through curricular choices and the inclusion of adolescent voices facilitates academic motivation and contributes to psychological well-being (see Eccles et al., 1993; Deci et al., 1991). General perceptions of student empowerment in school were not related to academic and psychological adjustment in the multivariate analyses of Study 1, suggesting that this construct contributed little unique variance when considered with the other school context measures examined in this study. However, results of the person-centered analyses corroborated previous research: adolescents who reported the greatest academic alienation (with or without psychological distress) also reported the fewest opportunities for choice and participation in school.
Our results also showed that meaningful curricula were important for adolescents' valuing of school. Meaningful academic content that addresses the experiences of the learner and the problems encountered in contemporary society has long been seen as the central path to engaging learners and providing conditions that nurture continued engagement, self-exploration, and well-being (Dewey, 1902/1990). It is useful to remind ourselves that, in addition to specific practices that increase autonomous functioning, the actual content of the curriculum and its attendant modes of instruction are integral to helping adolescents appreciate and uncover meaning in their learning (Eisner, 1985). Nurturing the conditions in which teachers feel empowered to empower students and in which teachers have enough freedom to design curricula that meets the educational and emotional needs of their students is another important challenge to the creation of developmentally appropriate schools for adolescents in the United States (Carnegie Council on Adolescent Development, 1989; 1995).

**Quality of Relationships with Teachers.** Teachers are important role models whose positive expectations and availability for problem solving can be an important resource for adolescents, a resource that can contribute to both their intellectual and emotional development. Results from both studies showed support for the important role teachers can play: The more positively adolescents viewed their teacher’s expectations and availability for problems, the less likely they were to experience alienation from school or psychological distress.

The powerful influence of teachers can also adversely impact adolescent development when teacher-student interactions are perceived as inequitable, inappropriate, or unfair. Adolescents who perceived that their teachers or guidance counselors treated them poorly or underestimated their abilities due to their race or gender also reported the highest levels of distress and an increase in distress over time. Person-centered analyses revealed that even if adolescents were motivated and achieving well in school, perceptions of such experiences were accompanied by higher levels of distress. Recently, issues of sexual harassment and inequitable treatment of females in U.S. schools were raised to the level of public discourse and scientific scrutiny (AAUW, 1992; Lee et al., 1996). It may be time for a similar process to occur in relation to racial discrimination in schools given the obvious negative impact of such experiences on adolescents (Fine, 1991; Pine & Hilliard, 1990; Wong & Eccles, 1996). Discrimination experiences are likely to have a potent effect during the identity explorations of adolescence when youth are increasingly self-conscious. We need to know
much more about the kinds of incidents and factors that lead to experiences of inequitable treatment on the part of adolescents of color. In addition, we need to continue to explore instructional and interpersonal strategies, workshops and programs, and multicultural curricula that can facilitate the equitable treatment of students of many backgrounds in schools.

**Differential Experiences, Critical Events, and Transactions in School**

Three additional issues deserve comment. First, it is time to refine our analyses of “school” to study how various adolescents are exposed to different school experiences within the same school setting. “School effects” likely operate at the interface between individuals and their particular configuration of classes, peers, teachers, and daily school experiences. The number of such configurations within one school are many. Explorations into how different adolescents experience school necessitate a focus on personal factors such as socio-economic background, ethnic heritage, and intellectual ability, as well as structural characteristics such as adolescents’ academic track (and its associated teachers) and peer group. Fine tuning our approach to school-based research by focusing on multiple levels of organization (tasks, one-to-one interactions, classrooms, schools as a whole), multiple informants (students, teachers, peers, principals), and specific person-environment transactions will likely increase our understanding of “school effects” broadly construed.

A second issue raised by our findings concerns transactional processes in schools (Sameroff & Chandler, 1975). We know little about how the behavior of adolescents shapes teachers’ behavior and beliefs, though the direction of influence between teachers and students is undoubtedly bi-directional (e.g., Skinner & Belmont, 1993). Understanding how different patterns of adolescent adjustment are influenced by school experiences and interactions with teachers as well as how adolescents’ adjustment in turn elicits certain responses from teachers that maintain or ameliorate difficulties is an area worthy of future research.

One final issue concerns how critical, infrequent events that occur in schools can influence adolescent development. In these studies, perceptions of even an infrequent experience of discrimination in school were significantly related to poorer academic and psychological outcomes, especially among females and African-American males. Similar findings have emerged in studies of sexual harassment in schools where infrequent incidents of harassment exert a strong impact on emotional well-being (e.g., Lee et al., 1996). Understanding how critical but infrequent school-based events impact development over time and when such events come to represent significant developmental turning points related to academic pursuits is critical to our understanding
of schooling, resilience, and development. It is important to note that such events could be of a negative nature (i.e., discrimination, harassment) or could be extremely positive (i.e., a teacher helping economically disadvantaged students apply for college) (see Hubner, 1996).

Limitations

Several limitations are important to note regarding these two studies. First, we used student perceptions of the school environment. Inferring “school effects” from such perceptions is not a straightforward process. It is important to re-emphasize that by using perceptions of the school, we focused on the psychological significance of school to adolescents (Andersen, 1982). As such, these findings need to be corroborated with other sources of information on the school context (observations, teacher and principal reports) before we can discuss “school effects” per se (Rutter, 1983). Second, we used survey and interview measures in assessing adolescent adjustment that did not address the clinical significance of academic or emotional problems. Thus, our conclusions about different patterns of adjustment are more descriptive than definitive of specific adjustment strengths or vulnerabilities and need to be viewed in such a light. Third, it could be argued that prior characteristics colored adolescents’ perceptions of their middle schools and thus accounted for the associations found in both studies. Although this limitation cannot be fully ruled out, we attempted to address it by controlling for adolescents’ demographic characteristics and prior adjustment in all analyses and also by including multiple informants of adjustment in Study 2. Finally, we only examined one context, school, in relation to the outcomes in this study. It is clear that other factors in the home, peer group, and neighborhood contribute to such outcomes. Understanding the conjoint effects of multiple contexts on aspects of academic and psychological adjustment is a major part of our on-going work (e.g., Eccles et al., 1997; Eccles & Sameroff, in preparation). Of particular interest in light of the present studies is understanding how adolescents negotiate boundaries between school and other social environments such as the home and the peer group when such environments are more or less congruent in terms of values, norms, and practices (Phelan, Yu, & Davidson, 1994). The study of such “boundary-crossing” activity on the part of adolescents is another fruitful line of inquiry into the study of resilience and its relation to schooling (Moore, 1997).

Implications

Results presented here emphasize that academic motivation and achievement are central to broad patterns of competence during adolescence and that school experiences are an important part of the portrait of
social influences associated with different patterns of adaptation. To the extent we come to understanding how aspects of academic learning environments are related to both academic and psychological adjustment outcomes, recommendations for the next series of school reform efforts may be forthcoming. As the Carnegie Council on Adolescent Development (1989) suggested:

"Many middle grade schools today fall far short of meeting the critical educational, health, and social needs of millions of young adolescents. Many youth now leave the middle grades unprepared for what lies ahead of them. A fundamental transformation of the education of young adolescents is urgently required" (pp. 36).

Inter-disciplinary approaches to the study of adolescent development, ones that drawn upon theory and constructs from a wide variety of disciplines and that examine multiple developmental outcomes simultaneously might yield new knowledge concerning the most effective forms and appropriate locations for interventions. For example, if youth are experiencing both academic and psychological difficulties, then school-based, system-level prevention and promotion efforts could be targeted to impact both educational and mental health outcomes simultaneously (Bond & Compas, 1989). School reform efforts and school-based service efforts might be fruitfully intertwined towards this end (Dryfoos, 1994). As we begin to understand more about the complex social environments that affect adolescent development, schools will continue to be seen as an important, if not central arena for health promotion, primary prevention, and intervention services for adolescents.
REFERENCES


FOOTNOTES

1 Adolescents of mixed racial-ethnic heritage were omitted due to the small number of adolescents in the different mixed ethnic groups and our lack of ability to conduct meaningful analyses with these small groups. Of the original sample of 1481, based upon youth self-reports, 67% were African-American, 21% were white, and 12% reported a mixed racial-ethnic heritage. In this study, we included 1041 adolescents who participated in both waves of data collection. This represents a 71% retention rate for the study. Analyses were conducted to determine how the sample of adolescents who participated during both times of data collection compared to those who did not participate during both time points. In general, mean comparisons indicated that the youth who did not participate in the study during Time 2 were from poorer families, were slightly older than the retained sample, and did slightly less well in school academically during Time 1. No significant differences were found for adolescents' sex, race, self esteem, anger, depressive symptoms, or the marital or employment status of the head of household during 1991 were found.

2 Another project funded by the MacArthur Network on Successful Adolescent Development in High Risk Settings was undertaken by Thomas Cook and his colleagues. This project was a population study of all students attending middle school in the district in which our project was taking place. Thus, our sample is a small but representative sub-sample of this larger study and measures were shared across projects. This study is described in a forthcoming book by Cook (in preparation) and is describe in Jessor (1993).

3 Demographic differences between the groups were examined. Chi-square analyses showed no significant differences among the clusters in terms of gender composition ($\chi^2 (3, 1041) = 5.76, p = .12$) and a significant effect of cluster membership by race ($\chi^2 (3, 976) = 17.76, p < .01$). Though not a statistically significant result, females were slightly more likely to be in the Psychological Distress Only Group, whereas males were slightly more likely to be represented in the Academic Alienation Only Group. White adolescents were over-represented in the Academic Alienation and the Multiple Risk Groups, whereas African-Americans were over-represented in the Psychological Distress Only Group. Significant three-way interactions by gender, race, and cluster membership clarified these main effects. White males were over-represented in the Academic Alienation Only Group, whereas White Females and African-American Males were over-represented in the Psychological Distress Only Group. A non-significant trend concerning marital status and cluster membership was also found ($\chi^2 (3, 1041) = 6.44, p = .09$) indicative of the fact that adolescents who lived in a two care-giver households were slightly more likely to be in the Well-Adjusted Group whereas those in single care-giver households were slightly over-represented in the Multiple Risk Group. Two final differences emerged based on Student Newman-Keuls mean comparisons: youth in the Academic Alienation Group came from families characterized by the highest levels of income
and educational attainment compared to the other groups, whereas youth in the Psychological Distress Only Group had parents characterized by the lowest level of occupational status among the groups.
List of Figures

Figure 1. Perceived Middle School Psychological Environment: Conceptualization and Measures.

Figure 2. 7th Grade Clusters: Youth Self-Reported Academic Motivation and Psychological Distress.

Figure 3. 8th Grade Clusters: Youth Self-Reported Academic Motivation and Psychological Distress.
Figure 1.
Perceived Middle School Psychological Environment: Conceptualization and Measures.

School Psychological Environment

- Support of Competence
- Support of Autonomy
- Quality of Relationships

- Teacher Expectations
- Academic Goal Structures
- Curricular Meaningfulness
- Student Empowerment
- Discrimination Experiences
- Teacher Supportiveness
Figure 2. 7th Grade Clusters:
Youth Self-Reported Academic Motivation and Psychological Distress.

- Well-Adjusted (N = 418)  
  - School Competence: 0.46  
  - School Values: -0.72

- Academic Alienation Only (N = 147)  
  - Psychological Distress Only (N = 152)  
  - Multiple Risks (N = 324)  
  - School Competence: 0.68  
  - School Values: 0.21  
  - Psychological Distress: 0.73  
  - Multiple Risks: 0.62  

- Psychological Distress: 0.86
Figure 3. 8th Grade Clusters:
Youth Self-Reported Academic Motivation and Psychological Distress.

- Well-Adjusted (N = 418)
- Academic Alienation Only (N = 147)
- Psychological Distress Only (N = 152)
- Multiple Risks (N = 324)
Table 1
Standardized Regression Coefficients for End of Eighth Grade Academic Motivation, Achievement, and Psychological Distress

<table>
<thead>
<tr>
<th>Predictors</th>
<th>End of Eighth Grade Outcomes</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>School Competence</td>
<td>School Values</td>
<td>Academic Grade</td>
<td>Psychological</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Step 1</td>
<td>Step 2</td>
<td>r</td>
<td>Step 1</td>
<td>Step 2</td>
<td>r</td>
<td>Step 1</td>
</tr>
<tr>
<td>Demographics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental Occupational Status</td>
<td>-.04</td>
<td>-.01</td>
<td>.03</td>
<td>-.04</td>
<td>.00</td>
<td>-.05</td>
<td>-.01</td>
</tr>
<tr>
<td>Parental Educational Status</td>
<td>.08*</td>
<td>.03</td>
<td>.10</td>
<td>.07</td>
<td>.05</td>
<td>.01</td>
<td>.25**</td>
</tr>
<tr>
<td>Family Income</td>
<td>.04</td>
<td>.02</td>
<td>.09</td>
<td>-.04</td>
<td>-.04</td>
<td>-.03</td>
<td>.11**</td>
</tr>
<tr>
<td>Marital Status</td>
<td>.05</td>
<td>.02</td>
<td>.08</td>
<td>.03</td>
<td>.01</td>
<td>-.01</td>
<td>.00</td>
</tr>
<tr>
<td>Race</td>
<td>.03</td>
<td>.01</td>
<td>.00</td>
<td>.14**</td>
<td>.09**</td>
<td>.13</td>
<td>-.23**</td>
</tr>
<tr>
<td>Gender</td>
<td>.01</td>
<td>.01</td>
<td>.02</td>
<td>.12**</td>
<td>.10**</td>
<td>.12</td>
<td>.27**</td>
</tr>
<tr>
<td>Beginning of 7th Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Competence</td>
<td></td>
<td>.42**</td>
<td>.51</td>
<td>.15**</td>
<td>.33</td>
<td>.25**</td>
<td>.31</td>
</tr>
<tr>
<td>School Values</td>
<td></td>
<td>.13**</td>
<td>.34</td>
<td>.36**</td>
<td>.45</td>
<td>.00</td>
<td>.08</td>
</tr>
<tr>
<td>Psychological Distress</td>
<td></td>
<td>-.08**</td>
<td>-.20</td>
<td>.00</td>
<td>-.12</td>
<td>-.06*</td>
<td>-.16</td>
</tr>
<tr>
<td>R - Square Change</td>
<td></td>
<td>.26</td>
<td>.20</td>
<td>.07</td>
<td>.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E - Change</td>
<td></td>
<td>2.32*</td>
<td>40.17**</td>
<td>6.01**</td>
<td>33.08**</td>
<td>49.81**</td>
<td>46.70**</td>
</tr>
<tr>
<td>Total Adjusted R - Square</td>
<td></td>
<td>.01</td>
<td>.27</td>
<td>.03</td>
<td>.23</td>
<td>.26</td>
<td>.33</td>
</tr>
</tbody>
</table>

*p ≤ .05; **p ≤ .01. Gender was coded 1 = Male, 2 = Female; Race was coded 1 = White, 2 = African-American; Marital Status was coded 1 = No Partner, 2 = Married/Live In Partner. "r" refers to the bivariate correlation of the predictor with the outcome measure.
Table 2
Standardized Regression Coefficients for Eighth Grade Adjustment Outcomes Regressed on Demographics, Prior Adjustment, and Perceived Middle School Environment Measures

<table>
<thead>
<tr>
<th>Predictors</th>
<th>End of Eighth Grade Adjustment</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>School Competence</td>
<td>School Values</td>
<td>Academic Grade Point Average</td>
<td>Psychological Distress</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>r</td>
<td>B</td>
<td>r</td>
<td>B</td>
<td>r</td>
</tr>
<tr>
<td>Demographics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental Occupational Status</td>
<td>-.01</td>
<td>.03</td>
<td>.00</td>
<td>-.05</td>
<td>-.01</td>
<td>.21</td>
</tr>
<tr>
<td>Parental Educational Status</td>
<td>.02</td>
<td>.10</td>
<td>.04</td>
<td>.01</td>
<td>.22**</td>
<td>.35</td>
</tr>
<tr>
<td>Family Income</td>
<td>.03</td>
<td>.09</td>
<td>-.03</td>
<td>-.03</td>
<td>.09*</td>
<td>.28</td>
</tr>
<tr>
<td>Marital Status</td>
<td>.01</td>
<td>.08</td>
<td>.00</td>
<td>-.01</td>
<td>-.02</td>
<td>.20</td>
</tr>
<tr>
<td>Race</td>
<td>.00</td>
<td>.00</td>
<td>.08**</td>
<td>.13</td>
<td>-.22**</td>
<td>-.30</td>
</tr>
<tr>
<td>Gender</td>
<td>-.04</td>
<td>.02</td>
<td>.03</td>
<td>.12</td>
<td>.21**</td>
<td>.29</td>
</tr>
<tr>
<td>Beginning of 7th Grade Adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Competence</td>
<td>.37**</td>
<td>.51</td>
<td>.09**</td>
<td>.33</td>
<td>.20**</td>
<td>.31</td>
</tr>
<tr>
<td>School Values</td>
<td>.01</td>
<td>.34</td>
<td>.22**</td>
<td>.45</td>
<td>-.05</td>
<td>.08</td>
</tr>
<tr>
<td>Psychological Distress</td>
<td>-.04</td>
<td>-.21</td>
<td>.04</td>
<td>-.12</td>
<td>-.02</td>
<td>-.16</td>
</tr>
<tr>
<td>End of 8th Grade Middle School</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Teacher Academic Regard</td>
<td>.22**</td>
<td>.42</td>
<td>.21**</td>
<td>.45</td>
<td>.21**</td>
<td>.36</td>
</tr>
<tr>
<td>School Ability Goal Structure</td>
<td>-.06*</td>
<td>-.26</td>
<td>-.09**</td>
<td>-.33</td>
<td>-.07*</td>
<td>-.23</td>
</tr>
<tr>
<td>School Task Goal Structure</td>
<td>.02</td>
<td>.25</td>
<td>.09**</td>
<td>.39</td>
<td>.02</td>
<td>.09</td>
</tr>
<tr>
<td>Curricular Meaningfulness</td>
<td>.14**</td>
<td>.30</td>
<td>.18**</td>
<td>.40</td>
<td>-.05</td>
<td>-.01</td>
</tr>
<tr>
<td>Student Empowerment</td>
<td>.03</td>
<td>.24</td>
<td>.01</td>
<td>.30</td>
<td>.02</td>
<td>.10</td>
</tr>
<tr>
<td>Differential Treatment by Race</td>
<td>-.03</td>
<td>-.24</td>
<td>-.07*</td>
<td>-.29</td>
<td>-.09*</td>
<td>-.33</td>
</tr>
<tr>
<td>Differential Treatment by Gender</td>
<td>-.01</td>
<td>-.21</td>
<td>-.08*</td>
<td>-.29</td>
<td>-.01</td>
<td>-.28</td>
</tr>
<tr>
<td>Teacher Emotional Support</td>
<td>.05</td>
<td>.21</td>
<td>.08**</td>
<td>.29</td>
<td>.00</td>
<td>.05</td>
</tr>
<tr>
<td>F - Value</td>
<td>34.13 **</td>
<td></td>
<td>40.67 **</td>
<td></td>
<td>33.01 **</td>
<td></td>
</tr>
<tr>
<td>Total Adjusted R²</td>
<td>Square</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>--------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01. "r" refers to bivariate correlation between predictor and outcome. Gender was coded
1 = Males, 2 = Females; Race was coded 1 = White, 2 = African-American; Marital Status was coded 1 = No Partner,
2 = Married/Live In Partner.
Table 3
Summary of Results from Multiple Comparisons of Cluster Groups:
7th and 8th Grade Youth Self-Reported Academic Motivation and Psychological Distress

<table>
<thead>
<tr>
<th>Adjustment Indicators</th>
<th>Significant Group Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7th Grade</td>
</tr>
<tr>
<td>School Competence</td>
<td>WA, PD &gt; AA &gt; MR</td>
</tr>
<tr>
<td>School Values</td>
<td>WA, PD &gt; AA &gt; MR</td>
</tr>
<tr>
<td>Psychological Distress</td>
<td>WA &lt; AA &lt; PD &lt; MR</td>
</tr>
</tbody>
</table>

WA = Well Adjusted Group
PD = Psychological Distress Only Group
AA = Academic Alienation Only Group
MR = Multiple Risk Group

Results are based on Newman-Keuls Tests with $p = .05$ Significance Level.
<table>
<thead>
<tr>
<th>Measures</th>
<th>Well-Adjusted Group</th>
<th>Academic Alienation Group</th>
<th>Psychological Difficulties Group</th>
<th>Multiple Risks Group</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Youth Self-Report Measure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>0.49&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.17&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-0.31&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-0.56&lt;sup&gt;d&lt;/sup&gt;</td>
<td>$F(3,1035) = 91.77$ **</td>
</tr>
<tr>
<td><strong>Parent Report Measures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concerns About Academic Adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youth's Psychological Distress</td>
<td>-0.26&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.24&lt;sup&gt;ab&lt;/sup&gt;</td>
<td>-0.03&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.31&lt;sup&gt;c&lt;/sup&gt;</td>
<td>$F(3,1031) = 24.43$ **</td>
</tr>
<tr>
<td>Youth's School Failure (% yes)</td>
<td>-0.27&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.06&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.02&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.35&lt;sup&gt;c&lt;/sup&gt;</td>
<td>$F(3,1031) = 24.39$ **</td>
</tr>
<tr>
<td><strong>School Behavioral Measures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year End Grade Point Average</td>
<td>13%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>20%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>20%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>39%&lt;sup&gt;b&lt;/sup&gt;</td>
<td>$\chi^2(3,907) = 60.93$ **</td>
</tr>
<tr>
<td></td>
<td>0.21&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.21&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.10&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.39&lt;sup&gt;b&lt;/sup&gt;</td>
<td>$F(3,994) = 26.15$ **</td>
</tr>
</tbody>
</table>

All measures except "School Failure" are standardized. Student Newman-Keuls mean comparisons were used to test between group differences on the continuous measures. Different superscripts for a particular variable across groups indicates a significant mean difference at the $p \leq .05$ level.

* $p \leq .05$; ** $p \leq .01$
Table 5
Mean Comparisons: Perceptions of Eighth Grade Middle School Psychological Environment by Cluster Membership at the Beginning of Seventh Grade.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Cluster Group</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Well-Adjusted Group</td>
<td>Academic Alienation Group</td>
</tr>
<tr>
<td>Teacher's Academic Regard</td>
<td>4.09 a</td>
<td>3.85 b</td>
</tr>
<tr>
<td>School Ability Goal Structure</td>
<td>2.36 a</td>
<td>2.63 bc</td>
</tr>
<tr>
<td>School Task Goal Structure</td>
<td>3.82 a</td>
<td>3.53 b</td>
</tr>
<tr>
<td>Curricular Meaningfulness</td>
<td>3.26 a</td>
<td>2.96 b</td>
</tr>
<tr>
<td>Student Empowerment</td>
<td>3.40 a</td>
<td>3.23 b</td>
</tr>
<tr>
<td>Differential Treatment by Race</td>
<td>1.41 a</td>
<td>1.44 ab</td>
</tr>
<tr>
<td>Differential Treatment by Gender</td>
<td>1.45 a</td>
<td>1.55 a</td>
</tr>
<tr>
<td>Teacher Emotional Support</td>
<td>2.96 a</td>
<td>2.44 b</td>
</tr>
</tbody>
</table>

Student Newman-Keuls mean comparisons were used to test between group differences.

Different superscripts for a particular variable across groups indicates a significant mean difference at the $p \leq .05$ level.

* $p \leq .05$; ** $p \leq .01$
Appendix
Sample Items

Academic Adjustment Measures

Youth Self-Perceptions of Academic Competence (14 items)
How good are you in school subjects other than math? (1=not at all good, 7=very good).
Compared to other kids your age, how well do you do in other school subjects? (1=much worse, 7=much better)
How well can you live up to what your teachers expect of you? (1 = not at all well, 5 = very well)
How well can you learn math?
How well can you work in groups?
How well can you finish homework assignments by deadlines?

Youth Valuing of School (10 items, 11 items)
Compared to other things, how important is math? (1=much less important, 7=much more important)
I go to school because I enjoy my classes. (1=not an important reason, 7=very important reason)
I go to school because I like what I am learning (1=not an important reason, 7=very important reason)
I have to do well in school if I want to be a success in life. (1=strongly disagree, 5=strongly agree)
Suppose you do get a good education, how likely is it you will end up with the kind of job you want? (1=not very likely, 5=very likely)
Getting a good education is the best way to get ahead in life for the kids in my neighborhood. (1=strongly disagree, 5=strongly agree)

Psychological Adjustment Measures

Youth Self-Reports of Anger and Depressive Mood (10 items, 27 items)
During the past month how often have you felt so angry you wanted to smash or break something?
During the past month how often have you felt so upset you wanted to hit or hurt someone?
During the past month how often have you felt very sad?
During the past month how often have you felt hopeless? (1=almost never, 5=almost always)
Appendix
Sample Items

Cluster Validation Measures

Youth Self-Reports of Self-Esteem (6 items)
How happy are you with the kind of person you are? (1=not at all happy, 5=extremely happy)
How often do you wish you were different than you are? (1=almost never, 5=almost always, reversed)
How often are you pretty sure about yourself? (1=almost never, 5=almost always)

Parent Worry About Youth’s School Adjustment (6 items)
How well is your 7th grader adjusting to junior high school? (1 = not very well, 7 = very well, reversed)
In comparison to other seventh graders, how much trouble does your 7th grader get into
(1 = much less, 7 = much more trouble)
What are the chances your 7th grader will do well in junior and senior high school?
(1 = very low, 5 = very high)

Parent Reports of Youth’s Psychological Distress (16 items)
My seventh grader has sudden changes in mood or feelings.
My seventh grader is rather high strung, tense, or nervous.
My seventh grader is unhappy, sad, or depressed.
My seventh grader has a very strong temper and loses it easily.
My seventh grader bullies or is cruel or mean to others.
My seventh grader has trouble getting along with other children.
My seventh grader has difficulty concentrating, cannot pay attention for long.
(1=almost never, 5=almost always)

Parent Reports of Youth’s Academic Failure (1 item)
Has your child failed or done very poorly in a class in the last two years? (0 = No, 1 = Yes)