

Portraits of competence and alienation during early adolescence:  
School adjustment, psychological adjustment, and peer characteristics

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### **Abstract**

Using quality of school engagement as a central indicator of competent functioning during early adolescence, this study documents differences in the pattern of academic affect, cognitions and behaviors, psychological adjustment indicators, and peer group characteristics between groups of adolescents who evidence more or less academic engagement during their first year in middle school. Data come the first wave of a longitudinal survey study that includes 1482 seventh grade youth and their families (62% African-American, mean family income=\$45,000-\$49,999). Youth who were alienated from school, especially those who evidenced school behavioral problems, were described by themselves and their parents as having more frequent feelings of anger, aggressiveness, and depression, less positive views of the value and utility of education, their academic competence, self-worth and resourcefulness, lower school grades, and more close friends that espoused delinquent values than a group of non-alienated peers. Conversely, highly academically engaged youth showed a positive pattern of adjustment across the school, psychological, and social adjustment measures. Person-centered analyses revealed significant co-occurrence of problems of adjustment across these domains of functioning. Implications for later developmental outcomes and service delivery are discussed.

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Once believed to be a time of normative emotional turmoil, research conducted over the last two decades has largely dispelled this view of adolescence (Powers, Hauser, & Kilner, 1989; Rutter, 1995). Ironically, increased knowledge concerning normative adolescent development has also given rise to the perception that there is much to be concerned about in terms of today's youth. It is estimated that approximately 1 in 4 adolescents by age 15 will engage in high risk lifestyles that include school failure, truancy, drug use, and unprotected intercourse (Carnegie, 1990; Dryfoos, 1994). Furthermore, it is estimated that approximately 1 in 8 adolescents will not graduate from high school by the age of 21 (Office of Educational Research & Improvement, 1993), and about 1 in 8 will experience moderate to serious emotional/behavioral difficulties before reaching early adulthood (Institute of Medicine, 1994; Verhulst & Koot, 1992). The multiple risks facing today's adolescents raise many important questions concerning etiology, co-morbidity, and the sequencing of different risk behaviors. Increased knowledge of each of these issues is essential for maximizing the efficiency and effectiveness of primary prevention and intervention efforts aimed at redressing these difficulties (Dryfoos, 1990; Institute of Medicine, 1994; Millstein, Petersen, & Nightengale, 1994).

The purpose of this cross-sectional study is to address one of these issues, namely, the inter-relationships and co-occurrence of different indicators of adjustment during the early adolescent period. Specifically, the relations among early adolescents' school motivation and behavior, indicators of psychological well-being and distress, and characteristics of their close friends were examined in an effort to understand broad patterns of functioning across multiple domains. What is unique about this study is that these three sets of indicators are examined simultaneously in a large, predominantly middle class sample of African-American early adolescents. In the past, studies have usually focused on only one or two of these particular types of outcomes at a time, thus rendering efforts to understand the inter-relations between different

aspects of functioning during adolescence difficult (Dryfoos, 1990; Eccles, Lord, & Roeser, 1995; Jessor, 1993). For instance, educational psychologists interested in academic motivation and achievement have not given much attention to how school outcomes are related to adolescents' broader social-emotional functioning (see Eccles & Midgley, 1989; Meyers, 1989), and developmental researchers have often relegated school experience and school engagement to the periphery (see Rutter, 1980; Maughan, 1988). Furthermore, until the advent of the field of developmental psychopathology, child-clinical approaches often relied solely upon clinical samples to understand broad patterns of adjustment during adolescence (e.g., Blos, 1961; Erikson, 1968; Freud, 1936). Finally, in much of the research on adolescent development, little is known about patterns of adjustment in black adolescents who come from predominantly middle class backgrounds (Graham, 1992).

#### Delineating at risk youth

We focused on the early adolescent period (ages 10-14) because youth experience many simultaneous life changes during this time, including puberty, the transition to middle school, and evolving social roles with peers, parents, and non-parental adults. As a consequence, the adaptational challenges facing youth are formidable, and likely to make their patterns of coping and adjustment more discernible (Eccles et al., 1995; Masten & Braswell, 1991). In fact, studies have shown that the early adolescent years mark an important time in the developmental patterns of both school and general psychological adjustment, with several indicators of adjustment growing more negative at this time (Eccles & Midgley, 1989; Kazdin, 1993).

To examine early adolescents' patterns of adjustment, the 1 in 4 estimate of youth at age 15 vulnerable to school failure and high-risk lifestyles was taken as a point of departure (Carnegie, 1989). The 25% of youth in this sample who manifested the most emotional and behavioral alienation from middle school during seventh grade were designated as "at risk." These at-risk youth were then compared to both a normative and a low risk group of adolescents on a series of other academic adjustment measures, indicators of psychological adjustment, and peer group indicators. We were interested in knowing whether broad patterns of alienation on the one hand,

and competence on the other were already evident in 12 year old adolescents just after their transition into middle school.<sup>1</sup> Furthermore, we were interested assessing roughly what percentage of youth in this sample appeared to manifest primarily school problems, primarily psychological problems, or both types of difficulties at the same time. Variable and person-centered techniques described below were employed to address both of these issues.

### Competence and alienation

Adolescents' level of academic risk was expected to relate to two broad qualitative patterns of adjustment: One reflecting "competence" and the other "alienation." For purposes of this study, competence was defined not as a quantifiable resource (e.g., White, 1959), but rather as adolescents' capacity to successfully cope with current developmental tasks, and at the same time to prepare for positive future development (Erikson, 1968; Waters & Sroufe, 1983). In contrast to the competent pattern, "alienation" was used to refer to a pattern of behaviors likely to lead to negative future development.

During early adolescence, some of the salient developmental tasks confronting youth include continued development of intellectual and interpersonal skills in a new school setting, the establishment of same and opposite sex peer relationships during a time when peers become increasingly important, and the management of emotional resources amidst changes in various aspects of the self. The manner in which adolescents approach these developmental tasks potentially has important immediate and long term consequences. For instance, youth who pursue social goals at the expense of engaging with school, develop "competence" through anti-social activities, or use substances as a way to manage their emotions may eventually experience outcomes such as school failure, dropping-out, or personal injury that have obvious and devastating consequences for self and society (e.g., Elliott, 1994; Dryfoos, 1990).

We propose that a competent versus an alienated pattern of adjustment can be seen in the quality of school functioning, in selection of close peers, and in the management of emotional resources (e.g., Eccles et al., 1993; Higgins & Parsons, 1983; Masten & Braswell, 1991). Specifically, the demonstration of competence would include positive school motivation, grades,

and conduct (Eccles, 1983), affiliation with peers who provide for social needs in a way that does not compromise adolescents' safety, health, or prosocial activity involvement (Reisman, 1985), and youths' capacity to maintain self-esteem and resourcefulness in the face of many changes in aspects of themselves and their social environments (Erikson, 1968). Alienation, on the other hand, would be manifest in poor school adjustment, affiliation with negative peers, and personal distress in the form of poor esteem, depressive symptoms, anger, or aggressive acting out (Achenbach, Howell, Quay & Conners, 1991; Erikson, 1968; Jessor & Jessor, 1977).

### A focus on schooling

Youths' emotional and behavioral alienation from school were used as a way to initially define youth as "at-risk" for several reasons. First, school is the major pathway to later opportunities in this society, and to the extent adolescents become disengaged from school, their future opportunities may be seriously restricted (Fine, 1991; National Center for Education Statistics, 1995). Thus, school disengagement is an important sign that youth are not preparing or being prepared for positive future development.

Second, although the inter-relations and causal sequencing among different indices of adjustment such as school motivation and achievement, psychological functioning, and peer affiliations are complex (e.g. Hinshaw, 1992; Nolen-Hoeksema, Girgus, & Seligman, 1992; Parker & Asher, 1987), it is reasonable to suggest that school adjustment is central to patterns of adjustment during the early adolescent period. For instance, in her discussion of the co-occurrence of risk behaviors among 10 to 17 year olds, Dryfoos (1990) writes:

“...it appears that school failure begins to occur at very early ages, and that once failure occurs, other events begin to take place. Doing poorly in school and minor delinquent offenses seem to fit together, and as these high-risk children grow older, substance abuse and sexual activity enter the picture, and the major negative consequences--early childbearing, heavy substance abuse, serious delinquency, and dropping out ensue” (pp. 105).

Although the pathways towards negative outcomes are many, school disengagement, truancy, and suspension during adolescence are important markers of both previous difficulties and later problems (e.g., Cairns et al., 1989). We expect that by selecting the youth who show the most

alienation from school during early adolescence, we will include those who are most likely to display the sequence of behaviors described above by Dryfoos (1990). Thus, a focus on school disengagement allows us to document the characteristics of “at-risk” youth early in the adolescent period before the onset of “the major negative consequences” later in adolescence.

A third reason we focus upon school adjustment is the fact that early adolescence marks a time of normative decline in various indicators of achievement motivation, in-school conduct, and performance (see Eccles & Midgley, 1989; Eccles, Midgley, & Adler, 1984). Related to the point above, we suspect that negative changes in school adjustment following the transition to middle school are particularly pronounced for a subgroup of high-risk youth during these years (Eccles, Lord, Roeser, Barber, & Hernandez-Jozefowicz, in press), and that these youth are likely to be the ones who are most vulnerable to the high risk lifestyles described in the Carnegie report (1989).

Fourth, early adolescence is also a time of increased prevalence of certain problem behaviors involving school such as truancy and suspension, and in certain psychological disorders such as depression (e.g., Kazdin, 1993; Masten & Braswell, 1991). What is unclear about these distressing trends, however, is if and how difficulties across the academic and social-emotional domains of functioning are related (Elliott, Huizinga, & Menard, 1989). Although it is not necessarily the case that youth who manifest motivational or achievement problems in school are also plagued by broader patterns of psychological distress (see Durlak, 1985), not a great deal is known about this. It could be the case the academically alienated youth are more likely to show distressed patterns of adjustment, even if they do not represent clinically diagnosable conditions of distress (e.g., Achenbach et al., 1991). Youth who are alienated from school may feel angry and disenfranchised, and may seek out the company of peers who are similarly alienated (Berndt & Keefe, 1995), and who are more likely to engage in non-conventional activities to feel competent (Donovan & Jessor, 1985; Elliott et al., 1989; Erikson, 1968). Alternatively, youth who are not able to identify with school may experience a sense of disenfranchisement, and may turn these feelings inward upon themselves in the form of elevated levels depressive symptoms, isolation, or withdrawal (e.g., Fine, 1991). By focusing on school adjustment and psychological distress

using both variable and person-centered analyses, we estimate how many youth show primarily school difficulties, primarily psychological difficulties, or both types of difficulties simultaneously.

Finally, although school engagement and its relation to general competence and adaptation is important for all children and youth, it takes on increased importance when we consider traditionally disenfranchised or high risk populations. Psychological and behavioral disengagement from school, and its relations to various later negative developmental outcomes (e.g., dropping out) is more pervasive among poor and minority youth (Dryfoos, 1990; National Research Council, 1993). In 1991, for example, African-American youth were approximately one and a half times more likely to drop-out of school than their Caucasian counterparts (Office of Educational Research & Improvement, 1993). Unfortunately, there is little work that has examined the processes underlying African-American adolescents' reasons for either engaging or becoming alienated from school. Of the studies that have been done, processes such as perceptions of job ceilings and the utility of education in terms of securing later jobs (Mickelson, 1990; Taylor, Casten, Flickinger, & Roberts, 1994), affiliation with peers who espouse non-mainstream values concerning education (e.g., Ogbu, 1978), and the adoption of identities that are antithetical to school achievement (Comer, 1988; Fordham & Ogbu, 1986) have been proposed as important. Few studies on achievement motivation among minority youth have been done with samples that do not come from relatively poor backgrounds, however (Fordham, 1988), and many studies that have included African-Americans have failed to explicitly address the confluence of race/ethnicity and socio-economic status in the determination of outcomes (see Graham, 1992).

Although the importance of understanding the processes associated with school disengagement in poor minority youth cannot be underestimated, few studies have addressed the fact that not all African-American adolescents live in high-risk settings, and by extension, that the relations among school engagement and other indicators of adjustment might be different for middle class black youth (see Graham, 1992). For instance, data show that drop-out rates are greater among European-American than among African-American youth when SES is controlled (Rumberger, 1983). It is also unclear whether levels of school alienation, perceptions of the



relative lack of utility of education for later advancement, and association with peers who devalue education are characteristic of African-American adolescents who come from predominantly middle class socio-economic backgrounds. Mickelson (1990), for example, found that African-American youth of higher SES levels were more likely to believe that education would lead to later economic opportunities than working class black adolescents. The uniqueness of the present sample, consisting of 62% African-American youth, most of whom come from middle class families, allows us to begin to disentangle race and socio-economic status in addressing issues of adjustment during early adolescence.

### Summary and hypotheses

In an effort to develop these portraits of competence and alienation, we draw together data from multiple sources, including parent reports, youth self-reports, and school records. Using variable-centered analysis strategies, we compare groups of adolescents who show more or less risk associated with school on a series of additional academic adjustment measures, indicators of psychological well-being and distress, peer group characteristics, and demographic characteristics. We also examine which of these factors discriminate most between youth who appear to be more or less alienated from middle school. Lastly, we employ person-centered analysis strategies to assess the extent to which problems associated with school adjustment and psychological distress co-occur. Results of these cross-sectional portraits of competence or alienation are then used to speculate on the processes that link adjustment during the middle school years with developmental outcomes that emerge later in the adolescent period (e.g., drop-out, delinquency, etc.).

Several specific hypotheses are examined. First, based on prior research, we predict that discernible patterns of school-related affect, beliefs, and behaviors will emerge with at-risk youth showing negative school adjustment across these indicators (e.g., Eccles, 1983; Nicholls, 1984). Furthermore, based upon previous longitudinal studies, we predict that youth who are most alienated from school will show evidence of a history of school difficulties (Cairns et al., 1989). Second, we predict that the quality of early adolescents' engagement with school is a useful proxy for their more general functioning in terms of psychological adjustment and peer affiliations. In

general, we predict that success and engagement in school will be related to positive self esteem (Harter, 1985), less psychological distress (Rae-Grant, Thomas, Offord, & Boyle, 1989), and an increased probability of engaging with peers who also espouse mainly conventional values (Jessor & Jessor, 1977). On the other hand, we predict that in general, the extent to which adolescents are relatively unable or unwilling to use the opportunities of middle school due to constraining personal or contextual circumstances, they will also be likely to show a negative pattern of psychological and peer adjustment (Achenbach et al., 1991). Finally, we directly examine the question of the co-occurrence of school and psychological difficulties using person-centered analyses. Although little is known about the joint distributions of problems in these two domains of functioning, based upon the sparse research that has addressed this issue we expect between 2-7% of youth to manifest both academic and emotional difficulties as we define them in this study (Knitzer, Steinberg, & Fleisch, 1991).

## Methods

### Sample

The sample consists of 1482 families with a seventh grader. The study began as one project of the MacArthur Network on Successful Adolescent Development in High-Risk Settings (Chair, R. Jessor), and was designed to assess the contextual influences on adolescents' academic, psychological, and social development (Principal Investigator, J. Eccles). Participants were drawn from a large, ethnically diverse county on the east coast of the United States. Data were obtained from interviews and questionnaire measures collected from the target youth and their primary care givers during the youths' first year in middle school (7th grade, 1991).

Approximately ninety-two percent ( $n = 1363$ ) of the primary care-givers were mothers, with the remaining 8% consisting of stepmothers, fathers, grandparents, etc. Of the target youth, 50.9% were male, 62% were black, 26% were white, and 12% reported mixed racial and ethnic heritage. White families reported slightly but significantly higher pre-tax incomes in 1990 than the black families ( $t = 5.74, p \leq .001$ ), with the mean income for white families being between \$50-55,000, and for the black families between \$45-49,999.

## Measures

Each consenting primary care-giver and target youth was interviewed at home by a trained interviewer. Each participant also completed a self-administered questionnaire at home during the visit. The face to face interview and self-administered questionnaire for parents included measures of involvement in their child's schooling, perceptions of their child's middle school, parenting style and family management techniques, family relationships, opportunity provisions, and perceptions of the target youth's academic, social-emotional, and behavioral adjustment. Target youth reported on their perceptions of their home environment, their parents' school involvement, the environment of their school, and their personal motivational beliefs, mental health, and activity involvement. In addition to measures collected from parents and their adolescents, indices of academic behavior, including attendance, academic grade point average, and standardized achievement tests were drawn from school records at the end of the school year.

A subset of measures drawn from the target youth, their primary care-givers, and the adolescents' school records are used in the current report. These measures include: (1) socio-demographic characteristics; (2) measures of the youths' academic motivation and school behaviors collected from youth self-report, parent report, and school record sources; (3) youth and parent reports of the target youth's social-emotional well-being and distress; and (4) youth reports of characteristics of their close peers. Factor analyses were used to differentiate scales within each construct set. A full description of the resultant scales is presented in the appendix, including all items and reliabilities.

Socio-demographic measures included family socio-economic, family structure (e.g., number of two care-giver households), youths' age in years, and youths' self-identified racial/ethnic group membership. Socio-economic status was a standardized composite measure of the pre-tax household income for 1990, highest educational level of either the primary or secondary care-giver, and concurrent employment status of the head of household. Adolescents' race/ethnicity designation was based upon youths' self-descriptions of their heritage (0 = white, 1 = black). In the current study, we focus on those youth who identified themselves as either

African-American or Caucasian, excluding those who identified themselves as of mixed racial-ethnic heritage. This included 1257 youth and their primary care-givers who had complete data. Family structure was a measure of whether one or two care-givers were present in the home, and was based on the primary care-giver's reports (0 = single care-giver, 1 = married or live-in partner).<sup>2</sup>

Academic motivation indicators were drawn from established youth self-report and parent report instruments, and were assessed on 5 and 7-point Likert items. The academic self-concept of ability, importance, and utility of education measures based on youth and parent reports come from the work of Eccles and her colleagues (Eccles, 1983; Eccles, Wigfield, Harold & Blumenfeld, 1993). The school affect measures were created for purposes of this study. Full scale descriptions, including items and metrics are presented in the appendix. Factor analysis on the full set of youth self-report items of academic motivation yielded five separate factors. These included youths' self-concept of academic ability (4 items,  $\alpha=.79$ ), perception of the importance of academic subjects (2 items,  $\alpha=.81$ ), belief in the instrumental utility of education for later life opportunities (5 items,  $\alpha=.69$ ), feelings of disengagement from school (5 items,  $\alpha=.72$ ), and positive feelings towards school (3 items,  $\alpha=.74$ ).

To create an overall index of youths' psychological engagement-alienation from school, a composite, standardized average of items from the school disengagement and positive feelings towards school scales was created. These scales were correlated  $-.55$  ( $p = .001$ ). After reversing items in the positive school feelings scale, this set of items formed a reliable composite scale of "psychological alienation from school" that was internally consistent ( $\alpha = .80$ ), with higher scores indicating greater academic alienation.

For the parent reports of the youth's academic motivation, factor analysis yielded two scales. These included their perceptions of the youth's academic ability and their expectations for their child's academic success (4 items,  $\alpha=.89$ ), and perceptions of their child's beliefs about the importance of doing well in school (2 items,  $\alpha=.88$ ).<sup>3</sup>

Academic behaviors. Measures of youths' academic behaviors were drawn from self-report, parent report, and school academic record sources. Two measures of academic behavior were used to create a composite "school problems" scale. This scale served as an indicator of the extent of youths' expressed alienation from school in terms of behavior. First, a single item asked parents whether or not their youth had "failed or done very poorly in a class" in the last two years (0 = no, 1 = yes). Second, youth and parent reports were combined to create an index of whether or not the youth had ever been suspended, excluded, or expelled from school during the last two years (0 = no, 1 = yes). Together, these two scales were summed to create an index of serious "school problems" that ranged from 0 to 2 (no problems to both). A single youth self-report item also assessed whether or not the youth reported skipping school during the 7th grade (0 = no, 1 = yes), and a parent item assessed whether or not their child had ever been held back a grade in school (0 = no, 1 = yes). These measures were not included in the "school problems" scale used to group adolescents according to their level of academic engagement-alienation (described below), so they could serve as a source of validation for these groups. Finally, two indicators of youths' academic behaviors were drawn from their school record, including a composite grade point average in the core subjects of math, reading, science and social studies (1 = Failing, 5 = A), and the number of days adolescents were absent during the school year.

Youth social-emotional adjustment measures. Psychological well-being and distress were assessed by both youth self-report and parent assessment measures adapted from several established instruments, and are presented in the appendix. Factor analysis of all of the items in the youth set yielded four factors, two reflecting psychological well-being, and two related to psychological distress. The psychological well-being scales included a measure of general self-worth (Harter, 1982) and an index of personal resourcefulness. This latter measure assessed how well the adolescent adapted to and coped with life's inevitable difficulties. Youth reports of psychological distress were also assessed by two scales: the frequency of anger and depressive symptoms during the last month. Items ranged from 1 to 5 (almost never to almost always), and unit weight mean scales were constructed for each measure. All scales were reliable ( $\alpha \geq .74$ ).

The self-esteem scale was adapted from Harter's (1982) self-worth scales, and items were converted from the forced-choice format into five-point Likert items. The resourcefulness, anger, and depressive symptoms measures were adapted from items on the Symptoms Checklist Revised (SCL-90-R; Derogatis, 1983). For purposes of a multi-problem analysis described below, a higher-order composite scale of psychological distress was also formed from the anger and depressive symptoms scales. Factor analysis revealed that 79% of the variance was accounted for by this higher order "psychological distress" scale. A unit weight mean scale of the anger and depressive symptoms measures was created, and was internally consistent ( $\alpha = .72$ ).

A comparable, slightly expanded set of items was asked of the youth's primary care-giver, and factor analysis yielded a five-factor solution. Parent assessments of the target youth's mental health included one measure of psychological well-being (resourcefulness), and four distress measures (anger, depressed/anxious affect, attentional problems, and aggressive/anti-social behavior). Items were also adapted from the SCL-90-R, and assessed on 5-point Likert scales how often parents' reported that their child manifested resourcefulness or different symptoms of distress (1 = almost never, 5 = almost always). The resourcefulness scale (4 items) was identical to youth scale. Parents' perceptions of how often their child seemed angry (3 items), depressed or anxious (6 items), distracted (4 items), and overly aggressive or cruel to others (3 items) were assessed as indicators of different manifestations of psychological distress. All scales were reliable ( $\alpha \geq .74$ ). A higher order, unit weight psychological distress scale that accounted for 65% of the variance in the four constituent scales, including the anger, depressed/anxious, distractible (attention difficulties), and aggressive/anti-social scales was also formed. This higher-order scale was internally consistent ( $\alpha = .82$ ).<sup>4</sup>

Peer group characteristics. Two youth self-report scales were constructed that assessed the number of close friends whom they reported as espousing conventional or delinquent values. The items were drawn from Eccles' Michigan Study of Adolescent Life Transitions (see Eccles et al., 1993). Both the conventional peer value orientation (8 items,  $\alpha = .74$ ) and the delinquent peer value orientation (9 items,  $\alpha = .74$ ) scales were reliable. Items were assessed on a 5-point Likert

scale that indicated the number of their close peers who espoused different values (1 = none of them to 5 = all of them). Additionally, a four-item, standardized youth self-report scale assessed how many of their friends their parents knew personally, approved of, and liked ( $\alpha = .77$ ).

### Creating risk groups

To differentiate groups of early adolescents' who manifested different levels of risk associated with school during the 7th grade, we used measures of psychological alienation from school and indicators of school problem behaviors. First, adolescents were divided into groups representing those in approximately the upper, lower, and middle two quartiles of the school psychological alienation scale. We used the upper and lower quartiles as our cut-points based upon recent estimates of the number of youth at-risk for academic failure and school disengagement, which fall in the range of 25% to 30% of all school-aged children (Dryfoos, 1990; 1994; U.S. GAO, 1993). Within the high psychological alienation group (upper quartile), we then differentiated a group of adolescents who showed not only psychological alienation from school, but who also showed serious school problems. Specifically, these youth had been suspended/expelled, and had failed or done very poorly in a class in the last two years. These strategies yielded four groups, including a "highly engaged" group who showed few school problems ( $n = 267$ , 21%), a normative group comprised of the middle 50% of the school psychological alienation scale who also experienced few school difficulties ( $n = 563$ , 53%), a psychologically alienated group with some school problems ("moderate risk,"  $n = 284$ , 23%), and a psychologically and behaviorally alienated group ("high risk,"  $n = 43$ , 3%).

### Creating additional risk status indicators

To examine the co-occurrence of problems of adjustment related to the academic and psychological domains of functioning using a person-centered analytic strategy, three dichotomous measures were constructed. First, those youth in the upper quartile of the school alienation scale just described were designated as having school troubles not specifically defined by academic achievement marks (26%;  $n = 327$ ). Second, a dichotomous achievement risk scale was created

from the academic GPA measure. Adolescents with an academic grade point average of C- or lower were characterized as manifesting risk specifically associated with school achievement (14.1%;  $n = 197$ ). Third, using the higher order scales of distress formed from the youth and parent reports, we differentiated those youth who showed symptoms of distress “sometimes” (the scale mid-point) or more frequently in the prior month as manifesting risk associated with psychological functioning. Two dichotomous scales were constructed, one from the youth and one from the parent reports. For the youth self-reports of distress, this procedure differentiated 12.4% ( $n = 158$ ). Although we conceptualize this measure as a general indicator of distress rather than a clinical index, this figure is very close to current prevalence estimates of psychological problems in youth of this age (Institute of Medicine, 1994; Verhulst & Koot, 1992). For the parent reports of their adolescents’ psychological distress, this strategy differentiated far fewer youth who manifested symptoms “sometimes” (2.8%;  $n = 35$ ).

#### Methods of analysis

Three types of analyses are employed in this study. To examine between group differences on the demographic, academic, social-emotional, and peer group indicators, omnibus multivariate analysis of variance tests (MANOVAs) were conducted on each of the major sets of constructs by informant (e.g., youth or parent). Wilks’ lambdas for the main effect by academic group were examined, and where significant overall between group effects emerged, subsequent ANOVAs and a priori comparisons were used to test the precise nature of the group differences on individual measures within a construct set (Bray & Maxwell, 1985). Because few interactions between academic group, race/ethnicity, and gender were found in these analyses, main effect academic group differences are presented in Tables 1 - 5. Any significant interactions are noted in the text. Due to missing data, *ns* differed slightly across analyses, and are noted in the tables.

Four specific “Bonferroni *t*” a priori group contrasts of each of the measures were tested based upon our hypotheses. First, we examined differences between the normative group and the highly engaged youth. Next, we examined contrasts between the normative group and both the moderate and high risk groups. Finally, we compared the moderate and high risk groups to one



another. These last comparisons were designed to see if youth who were psychologically alienated from school differed from those youth who manifested this sense of school alienation both psychologically and behaviorally. That is, the focus was upon elucidating those factors that seemed to differentiate an extremely high risk group of adolescents. The familywise alpha level for these four comparisons was set at .05, thus requiring each of the individual comparisons to attain significance at the conservative  $\alpha = .0125$  level (Howell, 1987).

Discriminant analyses were used to assess the overall effectiveness of our demographic and adjustment indicators in differentiating between the groups of engaged and alienated youth, as well as the relative predictive power of the specific indicators. Discriminant analyses use linear combinations of predictor variables as a basis for classifying participants into groups (Klecka, 1980). Stepwise discriminant analyses were used to assess the overall predictive utility and pattern of the most powerful personal indicators that distinguished between (1) the highly engaged versus the normative groups of youth; and (2) the normative versus the two at-risk groups of adolescents (moderate, high risk) who were combined for this analysis.

To assess the co-occurrence of problems of adjustment in the academic and psychological domains during early adolescence using a person-centered analysis, a series of chi-square analyses were employed using the four dichotomous risk measures, including non-achievement-based school risk, academic grade-based risk, youth reported distress symptoms, and parent reported distress symptoms. Chi-square analyses were used to determine if youth who manifested either non-achievement or achievement-based academic risk were more likely also to manifest risk associated with psychological distress. Finally, a simple cross-tab was computed to assess the percentages of youth who manifested either individual or multiple problems related to school and psychological adjustment.

## Results

### Creation and description of groups

Table 1 displays the group comparisons on the constituent school psychological and behavioral measures used to create the different risk groups. As expected, given that these

variables were used to create the groups, the overall Wilks' lambda by risk group across the criterion measures was significant [MANOVA  $F(12, 3256) = 2226.91, p < .001$ ]. Differences in group means confirm the criteria used to create the four groups. In addition, recall that by definition adolescents in the high risk group all had been suspended or expelled, and had also done poorly or failed a class in the last two years. But the fact that youth in the moderate risk group were also more likely to have failed or done poorly in a class than the normative group adds validity to their designation as manifesting risk associated with poor school adjustment. No significant interactions of academic group by race/ethnicity or gender were found on these measures.

### Demographic measures

Table 2 presents the demographic characteristics of the youth who comprised each of the groups. The overall MANOVA for the main effect by academic risk group on the demographic set of measures, including youths' gender, age, race, family socio-economic status, and family structure was significant [ $F(15, 3346) = 3.83, p < .001$ ]. Univariate F-tests showed that academic group main effects for each of the individual demographic measures was significant, with the exception of family structure. Approximately three-quarters of the youth in this sample, regardless of level of academic engagement-alienation, came from households where two caregivers were present. For SES, one group difference emerged: Youth in the moderate risk group came from families who had a significantly higher socio-economic status than those in the high risk group. No other differences on the SES variable were noted across groups. Chi-square analyses revealed that the significant age and gender differences were due to the composition of the high-risk group. Compared to the other groups, high risk adolescents were more likely be males and slightly older than their same-grade peers. Chi-square analyses also revealed the source of the significant race main effect across groups: Black youth were slightly over-represented in the highly engaged group (72%), whereas whites were slightly over represented in the moderate risk group (42%).

To explore the possibility of higher-order interactions involving race and gender, a three-way group x gender x race/ethnicity chi-square analysis was run. First, among the males, the chi-square value for academic group membership x race/ethnicity was significant [ $\chi^2(3, 615) = 14.00$ ;  $p = .003$ ]. White males were slightly over-represented in the moderate risk group (42%), and under-represented in the highly engaged group (22%) compared to their black male counterparts. The interaction of group membership by race/ethnicity was not significant among the females in this sample. Examining this interaction controlling for race/ethnicity, one effect was significant. Among the white youth, the gender x group membership effect was significant [ $\chi^2(3, 443) = 21.93$ ;  $p < .001$ ]. White males were over-represented in the high risk group (94%), and under-represented in the highly engaged group (33%) compared to white females. No such differences were found among the black males and females. Thus, white males stand out from the other three gender by ethnic groups in terms of alienation from school.

#### Group differences: Academic motivation and school behavior

MANOVAs yielded significant overall main effects by academic risk group for both youth [ $F(9, 3001) = 31.31$ ,  $p < .001$ ] and parent reports [ $F(6, 2454) = 8.47$ ,  $p < .001$ ] of the youth's academic motivation, and for achievement behaviors [ $F(12, 3051) = 9.56$ ,  $p < .001$ ]. Univariate F-tests and planned comparisons for the academic motivation and achievement measures are presented in Table 3.

For the youth self-report measures, three scales, including youths' self-perceptions of academic competence, their view of math and other school subjects as important, and their perception of the instrumental value and utility of getting an education were examined. Planned comparisons revealed a similar, predictable pattern of group differences for all three measures. Youth in the two risk groups reported significantly less positive feelings of academic competence, academic importance, and the instrumental utility of education than the normative group, but were not statistically different from one another. In contrast, the highly engaged youth reported more positive feelings on each of these measures than the normative group. No significant interactions on these measures were found.

Parent reports of their child's academic motivation yielded a slightly different pattern of results. Whereas youth in the moderate and high risk groups reported similarly negative motivational beliefs, parent reports of their child's academic motivation differentiated the high risk youth from adolescents in both the moderate risk and normative groups. High risk youth were characterized by their parents as less academically competent, and valuing education less than reports by parents of the moderate risk youth. For both of these groups, parents rated their child's achievement motivation beliefs as less positive than parents of the normative adolescents. Youth in the highly engaged group were perceived by their parents as having more positive academic values, but not greater feelings of competence than parents of the normative youth. No significant interactions were noted on these variables.

Table 3 also displays the results for differences on grade point average in the core academic subjects, school absences, youth reports of skipping school, and parent reports of the youth's being held back a grade at some point in their life. Both the moderate and high risk adolescents had lower GPA's and were more likely to report skipping school than the normative group of adolescents. Additionally, the high risk group was absent significantly more days than the normative group, and were more likely to have a history of grade retention than any of the other groups. Among the 43 high risk adolescents, 16 of them (37%) had been retained at some time in their school career. This fact accounts for the heightened mean age of the high risk group. There were no differences between the normative and highly engaged groups on these academic behaviors, despite the fact that these two groups differed significantly on several qualitative indicators of engagement with school.

A significant interaction between academic group and gender was found for skipping school. Although the percentage of females and males reporting skipping school was roughly the same within the highly engaged, normative, and moderate risk groups, 7 of the 9 females (75%) in the high risk group reported skipping school, whereas only 32% of the males in this group did so (roughly 11 of 34 males). This resulted in a significant interaction on this measure [ $F(3, 1156) = 2.62, p < .05$ ].

### Group differences: Psychological adjustment indicators

The next series of analyses compared groups on both adolescent self-report and parent reports of the youth's psychological well-being and distress. MANOVAs revealed significant omnibus main effects by academic group on the full set of adolescent self-report [ $F(12, 3236) = 15.62, p < .001$ ] and parent reports of their youth's psychological functioning [ $F(15, 3363) = 3.43, p < .001$ ]. Significant two-way interactions were also found for youth self-reports of anger, and parents' reports of attentional problems. Interactions are discussed below, and the univariate F-tests and planned comparisons are presented in Table 4.

The results for the adolescent self-reports of their psychological adjustment showed significant group differences on each of the four measures, including self-esteem, resourcefulness, anger, and depressive symptoms. For the psychological well-being measures, the moderate risk youth reported significantly lower self-esteem and personal resourcefulness than the normative group, whereas youth in the highly engaged group had significantly more positive self-esteem and personal resourcefulness than the normative group. Although the moderate and high risk youth looked similar on these measures (i.e., less positive than the normative group), results of planned contrasts revealed that the high risk youth were not significantly different than the normative group at the .05 familywise alpha level for the self-esteem ( $p = .033$ ) and resourcefulness measures ( $p = .028$ ). These differences were significant at the  $\alpha = .05$  comparison-wise alpha level, however.

The psychological distress measures revealed the opposite pattern: Youth in the two risk groups reported significantly greater feelings of anger and depressive symptoms compared to the normative group; and the highly engaged youth reported significantly less of these two types of feelings of distress. Youth in the high risk reported significantly more frequent feelings of anger than those in the moderate risk group. A significant interaction of race/ethnicity by academic group emerged for the anger measure [ $F(3, 1241) = 3.59, p < .013$ ]. This was a result of the fact that the 27 African-Americans adolescents in the high risk group reported higher levels of anger than anyone else, including their highly alienated white peers ( $M_{\text{Blacks}} = 3.31, M_{\text{Whites}} = 2.75, t = 2.06, p = .046$ ).

Parent reports (see Table 4) corroborated the adolescent self-report data. Interestingly, however, unlike the youth self-reports, the parent reports of youths' psychological functioning mainly distinguished the two risk groups from the normative group. In contrast, parents of the normative and highly engaged youth viewed their children's mental health similarly. The moderate and high risk youth were rated as less resourceful and more depressed/anxious, angry, aggressive/anti-social, and distractible (attentional difficulties) than the normative group of adolescents. Furthermore, the high risk adolescents were rated more negatively on each of these measures by their parents than their moderate risk peers. In contrast, parents of highly engaged youth reported their children as less angry and distractible than parents of the normative adolescents, but perceived them as no different in terms of resourcefulness, depressive symptoms, or aggressive/anti-social behavior.

One significant interaction emerged on these measures: a significant gender by group interaction on the attentional problems scale [ $F(3, 1225) = 10.67, p < .001$ ]. Although males in general were perceived by their parents as having greater attention problems than females, this difference was most pronounced among the high risk youth ( $M_{\text{Males}} = 2.55, M_{\text{Females}} = 1.84, t = -2.27, p = .029$ ).

#### Group differences: Peer characteristics

The full MANOVA on the three peer measures, including peer conventional values, peer delinquent values, and parents' acquaintance and approval of youths' friends revealed a significant main effect by academic group [ $F(9, 2940) = 13.04, p < .001$ ]. Results are presented in Table 5. Compared to the normative adolescents, moderate and high risk youth reported that more of their close friends espoused negative values such as cheating at school, substance use, stealing, etc., and fewer of their close friends espoused positive and conventional values such as engagement with school and athletic activities, aspirations to go to college, or attendance at church on a regular basis. In contrast, the highly engaged youth showed the opposite pattern of results, having more friends who espoused conventional values such as doing well in school. It is interesting to note that the high risk youth are particularly unlikely to have friends that their parents know and approve

of, suggesting that these adolescents have the greatest social distance between their circle of friends and their parents.

### Discriminant function results

To determine the most powerful predictors of group membership, a series of discriminant analyses were performed. All of the demographic, youth, and parent measures from Tables 2 - 5 were entered into two sets of discriminant analyses: (1) a discriminant analyses of the highly engaged versus the normative adolescents, and (2) a discriminant analyses of the normative versus the moderate and high risk adolescents, who were combined together into a single group for this analysis.

Table 6 contains the results for the first analysis. The function significantly discriminated between the two groups [Wilks'  $\lambda = .82$ ,  $p < .001$ ], and accurately classified 69% of the youth. Only five predictors emerged as significant in the final step of the stepwise analysis. Adolescents who were highly engaged in school had more friends who shared their values in terms of school and prosocial activities, and had more positive feelings concerning their academic competence, the importance of math and reading, their general self-worth, and the instrumental value of getting a good education than the normative group of adolescents. It is interesting to note that these motivational and peer indicators were more powerful discriminant predictors than the mental health, the family demographic, and the academic achievement indices.

The second discriminant analyses (normative vs. moderate and high risk youth combined) presented in Table 7 also yielded a significant function [Wilks'  $\lambda = .79$ ,  $p < .001$ ] that correctly classified 72% of the youth. The at-risk youth were assessed by their parents as attaching less importance to school and having more aggressive/anti-social tendencies, and self-reported skipping school more often during the seventh grade, greater levels of anger, less positive feelings concerning their academic competence, less favorable views about both the importance and utility of education, and fewer close friends with conventional values. Again, it is interesting to note that these motivational, behavioral, and mental health indices were more powerful discriminators than either the socio-demographic or the academic achievement measures.

### Assessing multi-problem outcomes in early adolescence

Chi-square analyses were used to assess whether or not pairs of risk conditions associated with school alienation, poor achievement, and symptoms of psychological distress were more likely to co-occur than predicted by chance alone. These analyses revealed that for all pairs of school and psychological difficulties, a greater number of adolescents than expected by chance are characterized as simultaneously manifesting two risks. For instance, adolescents whose grade point averages are C- or lower are also more likely to be classified as “alienated from school” [ $\chi^2(1, 1180) = 25.38; p < .001$ ], and to be rated by themselves [ $\chi^2(1, 1180) = 6.06; p = .013$ ] and their parents [ $\chi^2(1, 1180) = 15.61; p < .001$ ] as experiencing some symptoms of psychological distress. Similarly, youth who are alienated from school are more likely to be described by themselves [ $\chi^2(1, 1180) = 44.75; p < .001$ ] and their parents [ $\chi^2(1, 1180) = 4.05; p = .044$ ] as experiencing symptoms of psychological distress.

These results indicate that difficulties in both the academic and social-emotional domains co-occur within a significant number of individuals. But it is also important to acknowledge that this need not always be the case. To get a better idea of how often these types of problems co-occur, we examined the percentages of youth who manifested only psychological symptoms of distress, only school alienation, and both. Because our risk indicator based upon youth self-reports of psychological distress was more consistent with prevalence rates found in other studies than our parent-based measure (see Institute of Medicine, 1994; Verhulst & Koot, 1992), we used the self-report in these analyses. Results are presented in Figure 1. Based on the criteria used to create the risk categories in this study, approximately 68% of the youth showed neither problem. The pattern for youth reporting psychological symptoms is most interesting: Among the original 12.4% of youth who reported psychological symptoms “sometimes” in the prior month, half also reported being alienated from school. In contrast, the results for youth alienated from school are less dramatic, in that only approximately one quarter (23.4%) of those youth who showed alienation from school also report experiencing frequent symptoms of psychological distress.



## Discussion

Although many young people negotiate the early adolescent years and the transition to secondary school with little disruption in their academic or personal lives, a substantial number begin a downward spiral 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; Eccles et al., in press; Elliott et al., 1989; Roderick, 1994; Rutter, 1995). The current study focuses on the possible roots of different developmental trajectories adolescents' lives take by describing patterns of early adolescent functioning that are likely to predict the course of development. Similar to research conducted with older adolescents (e.g., Donovan & Jessor, 1985; Elliott et al., 1989), results of both the variable and person-centered analyses suggest that broad patterns of functioning across the academic, emotional, and peer domains can be found that are indicative of general competence on the one hand, and alienation on the other. Similar to Dryfoos' (1990) description of youth who are vulnerable to "high-risk" lifestyles, the results of this paper suggest that the psychological and behavioral characteristics associated with poor school adjustment and later maladaptive outcomes are already in place during early adolescence.

### Findings related to school adjustment

The central hypothesis of this study was that youth who manifest different patterns of school-related adjustment following the transition into middle school are also likely to show concomitant patterns of broader functioning in terms of psychological adjustment and peer affiliations. To examine this hypothesis, we first examined whether early adolescents could be described by constellations of school-related affect, values, self-beliefs, and behavior that reflect a more or less coherent pattern of adjustment to school following the transition into 7th grade (e.g., Eccles et al., 1993). We then examined whether or not these patterns of school engagement were related to adolescents' emotional well-being and peer affiliations. In both cases, we compared those adolescents showing either very high levels of school engagement, or two different levels of

school alienation with a normative group of adolescents who were doing reasonable well following the transition to middle school. Consistent with other studies, our indicators of school-related affect, cognition, and behavior clustered together (e.g., Ames, 1992; Eccles, 1983; Nicholls, 1984). Compared to at-risk adolescents, those in the normative and highly engaged groups were described by themselves and their parents as having positive beliefs about both the importance and utility of school, and their academic ability. These youth also had higher grades, and lower rates of absenteeism, academic failure, suspensions, and truancy. In sum, the characteristics of the normative and highly engaged groups are consistent with a pattern of school motivation and achievement that has been found to predict subsequent academic engagement and academic and occupational aspirations (e.g., Eccles, 1983; 1994), and to protect youth from later psychological and behavioral difficulties (Dryfoos, 1990; Eccles et al., in press; Rae-grant et al., 1989).

In contrast, the moderate and high risk youth, by definition, felt significantly more negatively about school. These youth said they were very bored at school, thought school was a waste of time, and did not look forward to going to school each day. In examining other indicators of academic motivation among these adolescents, it is not difficult to understand why they showed such a negative emotional orientation towards school. According to both their own and their parents' reports, these adolescents were less likely to feel that they could be successful in school, did not understand the importance of the subjects they were learning, and were less likely to perceive that doing well in school was a pathway towards later life opportunities than the normative group of adolescents. They were also more likely to have failed or done very poorly in a class, to skip or be absent from school, and to have poor grades. Although we could not address the causal relations among these indicators, it seems likely given evidence in other studies that a history of poor grades and failure eventuates in negative beliefs concerning the value of school and one's ability to be successful (Covington, 1992; Eccles et al., 1984). This, in turn, is likely to lead to a desire to avoid the school environment where failure is experienced more or less constantly (Covington, 1992). Perhaps the most disturbing aspect of these results is the fact that many of these psychological and behavioral characteristics are identical to those found in research on older

adolescents who drop-out of school, engage in serious delinquent activity, become pregnant, or abuse various substances (e.g., Dryfoos, 1990; Hawkins, Catalano, & Miller, 1992; Roderick, 1994; Wehlage & Rutter, 1986). This was especially true of the high risk youth, whose overage status, and elevated rates of retention, suspension/expulsion, truancy, and academic failure all suggest that they are moving along a trajectory towards school drop-out (Cairns et al., 1989; Roderick, 1994).

#### Findings related to psychological adjustment

Support was also found for the hypothesis that the quality of early adolescents' psychological and behavioral orientation towards school relates to their psychological adjustment and peer affiliations. Adolescents in the highly engaged group displayed more positive signs of psychological-well being than both the normative and academically at-risk youth (e.g., higher self-esteem and a greater capacity to deal with difficulties and problems). On the other hand, both the moderate and high risk youth showed more signs of psychological distress than the normative and highly engaged adolescents. According to themselves and their parents, the at-risk youth were significantly more depressed and angry than the normative group, and their parents also reported that they were less resilient in the face of difficulties, more likely to show aggression towards peers, teachers or the parents themselves, and more likely to have difficulties concentrating. Each of these symptoms of psychological distress, with the exception of depressive symptoms, were greatest among the high risk youth.

These results suggest the possibility that positive school motivation and achievement are protective factors related to good mental health, and risk factors for psychological distress (e.g., Achenbach et al., 1991; Rae-Grant et al., 1989). However, the causal direction in these relations cannot be determined with these data. Other studies find support for both causal directions. For example, studies show that school success is an important source of esteem, and that self-esteem predicts school success (Harter, 1985; Owens, 1994). Similarly, diminished feelings of academic competence may contribute to depressive symptoms, anxiety, and poor self-esteem (Cole, 1991), or depressive symptoms may limit youths' ability to concentrate on learning and thus develop their

academic competence (Puig-Antich, 1985). Anger, aggressiveness, and distractibility could be reactions of youth who experience threats to their self-esteem in school settings where they are afforded few opportunities for success (e.g., Covington, 1992; Gold & Mann, 1985), or could reflect an underlying deficit, such as reading difficulties or hyperactivity that predicts both academic and externalizing behavior (e.g., Hinshaw, 1992; Loeber, 1991). This latter possibility seems particularly relevant for the males in the high risk group who had a long history of school problems. Finally, research on “drop-outs” suggest that youth who feel no connection between school and later life opportunities are likely to manifest either depression (e.g., Fine, 1991) or anger in response to their sense of disenfranchisement (e.g., Erikson, 1968). The question of causal direction of influence among these indicators aside, these findings corroborate other work that has found linkages between these domains of functioning during early adolescence (Achenbach et al., 1991; Nolen-Hoeksema et al., 1992), and indicate that school experience and personal well-being share important concurrent relations at this time.<sup>5</sup>

#### Findings related to peer affiliations

As predicted, the highly engaged group of youth reported more friends who espoused positive and conventional values such as doing well in school, attending church, and participating in prosocial activities such as organized sports than all three of the other groups. The moderate and high risk youth, on the other hand, reported that they had more close friends who espoused delinquent values such as stealing, truancy, sexual experimentation, etc., and less close friends who espoused conventional values than the normative group. At-risk youth were also more likely to report that their parents did not know or approve of their friends than the other two groups. Given the work that has documented important linkages between the peer group, motivation to achieve in school, and engagement in either delinquent or prosocial activities (Jessor & Jessor, 1977; Berndt & Keefe, 1995), it seems likely that the peer group will increasingly be self-selected by adolescents in a manner that reinforces their pattern of adjustment, be it either the competent or alienated pattern, as they grow older. For the moderate and high risk youth, the potential serious consequences of this is highlighted by the fact that they are already most likely to affiliate with

peers who espouse delinquent and anti-school values. To the extent that the alienated youth turn to the peer group for support, belonging, and competence, the chances of serious negative outcomes such as legal problems, personal injury, and school drop-out are greatly increased (Cairns et al., 1989; Elliott et al., 1989).

### The role of demographic factors

Several interesting findings emerged related to socio-economic status, race, and gender. First, consistent with other work, youth from families with lower SES were more likely to manifest higher levels of school alienation (National Research Council, 1993). Second, in this economically representative sample, black and female youth were less likely to manifest school alienation and the concomitant negative pattern of functioning than their white and males peers, respectively (see Rumberger, 1983; Dryfoos, 1990).

Sandra Graham (1992) has noted that empirical studies of African-Americans to date have often been “insensitive to the complexities of race and social class in this society” (pp. 634). Several studies have begun to investigate the interaction of race and social class in adolescents’ school adjustment. For example, Mickelson (1990) finds differences on black adolescents’ academic motivational beliefs varying by social class, with higher SES youth having more positive views of education than their lower SES black peers. However, in her study, whites were found to have more positive beliefs than blacks within each SES group. Dryfoos (1990) notes that a greater percentage of minority children are behind in school, but attributes this to the fact that more minority youth live in impoverished settings. Studies of school drop-out suggest that once SES is taken into account, differences in the rate of school drop-out between blacks and whites disappear (Rumberger, 1983; National Center for Educational Statistics, 1995). Finally, some have argued for the existence of an oppositional identity among some African-American youth concerning education. Fordham & Ogbu (1986) found evidence for such a belief system in one small sample of African-American youth from a relatively poor area, whereas other research has not supported such a belief system among African-American youth (Fraser, 1995; Steinberg, Dornbusch, &

Brown, 1992). These findings highlight the complex nature of race, social class, and cultural factors in determining school adjustment.

Our results are unique in that the white youth in this sample, particularly the white male youth, are more likely to be disengaged from school than black youth. Both economic and cultural factors could explain these findings (e.g., Ogbu, 1985). Focusing first on the results for black youth, it could be that the press for achievement within the middle class African-American families in this county, which has a long history of African-American upward mobility and economic opportunities is very strong. This press for achievement might be more powerful than such an emphasis on achievement in the white families because the African-Americans in this county have more recently experienced upward socio-economic mobility. This press might, in turn, translate into more positive motivational beliefs among the African-American youth. These findings raise some interesting questions concerning how oppositional identity beliefs that are antithetical to education described by Fordham & Ogbu (1986) interact with socio-economic factors. We found no evidence of a value system in opposition to education among youth of color in this sample who live in a county in which many black families live in relative financial security. Oppositional beliefs systems related to education may be more prevalent among “caste-like minorities” (Ogbu, 1978) in circumstances of concentrated poverty where perceived discrimination and job ceilings are more salient, and send a strong message that “education does not matter for one’s future here” (e.g. Taylor et al., 1994). That is to say, issues of race and perceived opportunities and discrimination may have a different quality when not accompanied by poverty status.

It is also interesting to note that the white youth, mainly white males who were over-represented in the moderate risk group, were also the ones who came from wealthier families. These findings suggest a sense of school alienation borne from a different set of cultural-historical and socio-economic circumstances, ones that we do not fully understand yet. What is it about the social experiences of these white male youth that make them feel so disengaged from school and self? It could be that there is undue pressure to perform in these youths’ families, which are

characterized by higher educational levels and income than the other groups, and this pressure undermines adolescents' motivation and achievement (Erikson, 1968; Pittman, 1985).

Certainly, understanding family processes that relate to both of these sets of findings will be important in the future. For now, it is clear that careful, simultaneous analyses of race/ethnicity and socio-economic status need to be done when trying to understanding the processes associated with adolescent adjustment outcomes, and that the examination of only one or the other of these factors is insufficient (Graham, 1992).

Finally, we also found that males were more likely to be alienated from school than females. This corroborates other work suggesting that males are more at risk for problems associated with school disengagement and withdrawal, delinquency, and substance abuse, and girls are more at-risk for problematic outcomes associated with psychological adjustment and pregnancy (Dryfoos, 1990; Kazdin, 1993).

### Co-morbidity

In addition to the MANOVA results discussed above, we used discriminant analysis and person-oriented chi-square analyses to assess the extent of co-morbidity between clusters of our academic and psychological adjustment indicators. Consistent with the perspective laid out in the introduction, both sets of analyses suggest a substantial degree of inter-connectedness between these domains of functioning.

Discriminant analyses. Three important findings emerged from the discriminant analyses. First, the most significant markers of the highly engaged and at-risk youth were neither the youths' demographic characteristics, nor their academic achievement, but rather their values concerning school, their personal sense of academic competence, and the number of their close friends espousing conventional values. Second, highly engaged youth were distinguished from the normative youth by their academic motivation and their peer groups' conventional attitudes, but not by their psychological adjustment measures. This makes sense insofar as this analysis distinguished between two levels of positive school engagement. On the other hand, youth who were alienated from school were distinguished from the normative youth by low academic

motivation, fewer friends with positive or conventional values, and externalizing behaviors. These results are consistent with other work linking the quality of adolescents' "bonding with school" and the nature of their peer affiliations both to anti-social behavior and school-drop out (e.g., Donovan & Jessor, 1985; O'Donnell, Hawkins, & Abbott, 1995; Wehlage & Rutter, 1986), and academic achievement and educational choice (Jessor & Jessor, 1977; Eccles, 1983).

Person-centered analyses. Although little is known currently about the joint distributions of problems in the academic and social-emotional domains of functioning, it is reasonable to suggest that current prevalence rates of academic problems (e.g., Dryfoos, 1994), as well as social-emotional difficulties (Institute of Medicine, 1994; Verhulst & Koot, 1992) include children and youth who manifest both types of difficulties simultaneously. Similar to other studies, using both motivation and achievement measures to assess school risk, we found both academic alienation and low academic achievement to significantly co-occur with social-emotional problems within the same individuals in a significant number of cases (e.g., Achenbach et al., 1991; Dryfoos, 1990). More concretely, of the 12.4% of youth in this sample reporting frequent symptoms of psychological distress, 50% were also having school problems associated with poor motivation, achievement, and behavior. This compares to a base rate in the population at large of a 25% rate of school alienation (Dryfoos, 1994). Is this also true among the approximately 12% of the nation's children and youth who have moderate to serious psychological difficulties (Institute of Medicine, 1994; Verhulst & Koot, 1992)? Certainly this question deserves more attention, and would have significant implications for prevention and intervention approaches targeted at the adolescent population in both school or clinical settings (e.g., Dryfoos, 1994).

Looking at these results from an educational perspective, of the estimated 26% of the sample manifesting moderate to serious school alienation, about one quarter also reported symptoms of psychological distress. Are these youth being served by special education settings such that both academic and social-emotional issues are being addressed concurrently? Similarly, what about the youth who manifest rather extreme psychological alienation from school, but who



are neither acting out at school nor failing academically? Are these relatively “silent” but alienated youth receiving any special attention or interventions?

Just how the estimates of co-occurring problems in the domains studied here compare to estimates from other epidemiological studies is unclear given the little work that has addressed these issues (Knitzer et al., 1991). It is clear, however, that research on the “co-morbidity” of academic and social-emotional problems during adolescence, and the implications of such co-morbidity for policy and service provision are important areas of future exploration (Bond & Compas, 1989; Dryfoos, 1994).

### Limitations

Several limitations to the present study are important to acknowledge. First, the cross-sectional nature of the findings preclude careful analyses of specific directional hypotheses. We are following these youth over time, and will be able to conduct such analyses in the future. For the time being, we cannot ascertain whether psychological problems, school problems, or negative peer influences are antecedent to the patterns of alienation we document, and any discussion of implications of these findings for developmental trajectories or service delivery need to be understood in the context of this caution.

Second, although the mean differences on the academic measures were fairly large, the differences in most of the psychological distress and well-being measures were modest in magnitude. Furthermore, given the nature of this study, we did not attempt to assess specific clinical diagnostic categories in order to determine the prevalence of diagnosable learning disabilities or psychological conditions. Thus, it is unclear how precisely the results reported here relate to those in studies using standard clinical instruments (see Verhulst & Koot, 1992). Nonetheless, the ecological validity of our assessments of school functioning, in terms of grades and other behaviors, the convergent validity among adolescents and their parents on the academic and mental health measures, and the entire constellation of significant differences on the school, psychological, and peer measures bolster our confidence in the validity of these findings as reflecting important general patterns of adjustment.

Finally, and perhaps most importantly, we did not include issues related to context in this paper. More often than not, studies on adolescents who evidence increased risk for problematic outcomes such as academic failure and disengagement have focused upon personal characteristics of the youth, rather than on the debilitating social conditions that lead to alienation in youth (see Fine, 1991; Wehlage & Rutter, 1986; National Research Council, 1993; Sameroff, Seifer, Baldwin, & Baldwin, 1993). Yet as Erikson (1968) noted long ago, there exists a mutual complementation of what he referred to as “ethos and ego,” and both personal competence and alienation are likely to reflect, at least in part, the social circumstances in which adolescents live. For example, we know that schools and families that do not change in developmentally appropriate ways during the adolescent period can cause distress in adolescents (Eccles et al., 1993). Similarly, it is quite clear that debilitating conditions in the home and neighborhood are having a devastating impact on a large number of youth today (National Research Council, 1993). Understanding the ecological correlates of the quality of early adolescents’ adjustment is a major priority in our on-going investigations of these youths’ lives. Our preliminary results do suggest that the “alienated” youth we examined in this report also inhabit schools and families that are quite “alienating” (Roeser, Lord, & Eccles, 1994).

### Implications

With the limitations of this study in mind, we believe our results have several implications. Recently, there have been widespread calls for multi-disciplinary approaches to the study of child and adolescent development; ones that drawn upon theory and constructs from a wide variety of disciplines, and that begin to deal with the complexity of interpersonal and intra-psychic factors associated with successful development (e.g., Achenbach, 1990; Cicchetti, 1984; Eccles & Midgley, 1989; Jessor, 1993; Sameroff, 1983; Sroufe & Rutter, 1984). Our results provide support for such a multidisciplinary approach insofar as we find broad coherence across several areas of functioning that are usually studied separately (e.g., academic motivation and achievement, peer affiliations, and emotional health and distress). To the extent that we come to understand how outcomes across multiple areas of functioning are related during this

developmental period, the discovery of antecedent risk factors that contribute to multi-problem outcomes is facilitated, with obvious utility for prevention efforts (Institute of Medicine, 1994). Our results certainly suggest that problems associated with academic motivation and achievement during early adolescence may be one such risk factor that portends the later emergence of multiple types of outcomes such as drop-out, teen pregnancy, delinquency, and psychological distress (see also Cairns et al., 1989; Donovan & Jessor, 1985; Dryfoos, 1990; Eccles et al., in press).

Research approaches that adopt an integrated view of adolescent development might also yield new knowledge concerning the most effective and efficient forms of, and appropriate locations for interventions. For example, if youth are experiencing both educational and psychological problems, then school-based, system-level prevention and promotion efforts could be targeted to impact both educational and mental health outcomes simultaneously (Bond & Compas, 1989). Similarly, readily accessible services where both school and mental health professionals could be involved in individual interventions may be advantageous (Dryfoos, 1994). Given that prevalence estimates of the difficulties facing youth seem to far exceed the number of youth actually receiving services (e.g., Costello, Burns, Angold, & Leaf, 1993; Schwenn, Rotatori, & Fox, 1991), documentation of the co-occurrence of academic and psychological difficulties may provide important information for policy decisions concerning the well-being of children and youth (U.S. Department of Education, 1995; Dryfoos, 1994). One wonders if the currently fragmented approach to the study of adolescent development is in any way related to the fragmentary nature of the services currently available to young people (e.g., Dryfoos, 1994; Elliott, 1994; Millstein et al., 1994), and if a more integrative approach may help to remedy this situation.

### Summary

In summary, results of this study suggest that youth who have trouble adjusting to the demands of early adolescence are likely to manifest these difficulties across multiple domains of adjustment. In contrast, youth who appear to be adjusting well in one domain seem to generally be doing well across all of the domains studied in this paper (academic, psychological, peers).

On the one hand, we predict that youth in the moderate and high risk groups are vulnerable to further alienation in terms of poor school achievement and motivation, and both mental health and behavioral problems precisely because they are already manifesting such extreme alienation from self and traditional institutions such as school. On the other hand, we do not believe that these trajectories towards negative outcomes are imminent. With appropriate remediation and intervention, these youth might be able to return to a pathway with a more positive future (e.g., Dryfoos, 1990; Gold & Mann, 1985). Without such intervention, however, these alienated youth are likely to progress towards greater alienation, internalized and externalized problems, and other concomitant negative outcomes for themselves and society.

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### Footnotes

<sup>1</sup> In the county from which participants were drawn, all youth make the transition into middle school during 7th grade.

<sup>2</sup> This simple dichotomous measure was used because chi-square analyses revealed no significant differences across groups using a more elaborate measure of the primary care-giver's current relationship status. Specifically, there were no differences across groups on the number of primary care-givers who were married, widowed, separated, divorced, never married, or living with a partner to whom they were not married. The total percentage of the sample who were married was 57%, and the total number of families where the primary care-giver was either married or had a live-in partner was 65%.

<sup>3</sup> The bivariate relations between the youth self-report and parent report measures of children's academic motivation were comparable to those found in other studies by Eccles and her colleagues. The correlation was .44 ( $n = 1255$ ,  $p \leq .001$ ) for the academic self-concept measures, and .18 ( $n = 1264$ ,  $p \leq .001$ ) for the academic importance scales.

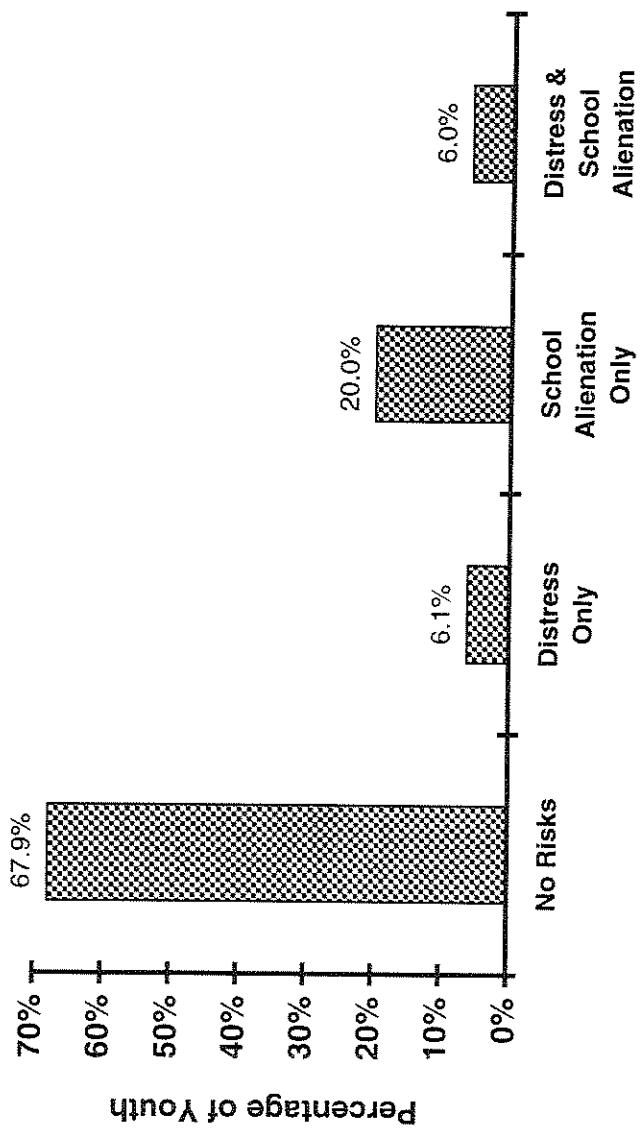
<sup>4</sup> The bivariate relations between the higher-order youth self-report and parent report measures of psychological distress measures fell in the range found in most other studies (e.g., Achenbach, McConaughy, & Howell, 1987). The correlation was .21 ( $n = 1261$ ,  $p \leq .001$ ) for the higher order scales. For youth and parent subscales of depressed symptomatology and anger, correlations were .19 ( $n = 1251$ ,  $p \leq .001$ ), and .17 ( $n = 1260$ ,  $p \leq .001$ ), respectively. For the personal resourcefulness measure, the correlation between youth and their primary care-giver was .22 ( $n = 1254$ ,  $p \leq .001$ ).

<sup>5</sup> It is important to note that these findings are based upon the use of motivational indicators of school engagement, rather than achievement marks per se. Different results concerning the direction of the relations between academic and psychological functioning might be found in studies that use high academic achievement as the criteria of youth who are at very low risk of school disengagement, particularly if other measures of psychological adjustment were included. For example, very highly achieving youth may be at risk for a different set of concurrent and future emotional and behavioral difficulties, including feelings of pressure to perform, anxiety and self-consciousness, substance abuse, and perhaps even attempted suicide (e.g., Covington, 1992; Eccles et al., in press; Phelan, Yu, & Davidson, 1994). However, it is important that in addressing adjustment simultaneously in the academic and social-emotional domains, measures of positive motivational beliefs, school-related affect, and positive achievement and behavior are all used, because this combination of characteristics likely reflect a qualitatively more adaptive orientation than indicators of high achievement alone.

## List of Figures

Figure 1. Percentages of Youth Manifesting Single and Multiple Risks

Figure 1. Percentages of Youth Manifesting Single And Multiple Risks: Youth reports\*



\* N = 1255

**Table 1.**

Means, standard deviations, and group comparisons of academic affective and behavioral indicators used to create academic risk groups

Variables	Academic Groups				F-Value
	Competent Pattern		Alienated Pattern		
	Normative Group (N=663)	High Engaged Group (N=267)	Moderate Risk Group (N=284)	High Risk Group (N=43)	
School disengagement	2.49 (0.42)	1.67a (0.38)	3.38a (0.56)	3.52a (0.52)	F(3,1253)=736.90***
Positive school attitude	3.80 (0.40)	4.47a (0.35)	2.90a (0.55)	2.81a (0.42)	F(3,1253)=687.86***
Percent suspended or expelled	0.13 (0.34)	0.13 (0.33)	0.14b (0.35)	1.00ab (0.00)	F(3,1253)=92.22***
Percent doing poorly or failing a class in past 2 years	0.18 (0.39)	0.13 (0.33)	0.29ab (0.45)	1.00ab (0.00)	F(3,1253)=67.96***

N =1257; \* p ≤ .05, \*\* p ≤ .01, \*\*\* p ≤ .001; n's vary across measures due to missing data.

Standard deviations are presented in parentheses

a A priori comparisons indicate mean is significantly different from normative group at familywise  $\alpha = .05$

b A priori comparisons indicate mean of alienated groups are significantly different from one another at familywise  $\alpha = .05$



Table 2.

Means, standard deviations, and group comparisons of demographic characteristics by academic risk group

Variables	Academic Groups				Significance
	Competent Pattern		Alienated Pattern		
	Normative Group	High Engaged Group	Moderate Risk Group	High Risk Group	
Gender					
% Boys	0.48	0.43	0.52 <sup>b</sup>	0.79 <sup>ab</sup>	$\chi^2(3,1257)=20.33^{***}$
% Girls	0.52	0.57	0.48	0.21	
Race/Ethnicity					
% Blacks	0.65	0.72	0.58	0.63	$\chi^2(3,1257)=10.98^*$
% Whites	0.35	0.28	0.42	0.37	
Family Structure					
% Living in two care-giver homes	0.75	0.73	0.71	0.74	$\chi^2(3,1222)=1.57$
Family SES	0.02 (0.79)	-0.05 (0.88)	0.08 <sup>b</sup> (0.78)	-0.27 <sup>b</sup> (0.81)	$F(3,1254)=2.92^*$
Age of youth (years)	12.26 (0.55)	12.21 (0.53)	12.26 <sup>b</sup> (0.51)	12.53 <sup>ab</sup> (0.55)	$F(3,1252)=4.71^{**}$

\*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$ ; n's vary across measures due to missing data.

Standard deviations are presented in parentheses

<sup>a</sup> A priori comparisons indicate mean is significantly different from normative group at familywise  $\alpha = .05$

<sup>b</sup> A priori comparisons indicate mean of alienated groups are significantly different from one another at familywise  $\alpha = .05$

**Table 3.**

Means, standard deviations, and group comparisons of academic motivational and behavioral indicators by academic risk groups: Youth and parent reports

Variables	Academic Groups				F-Value
	Competent Pattern		Alienated Pattern		
	Normative Group	High Engaged Group	Moderate Risk Group	High Risk Group	
<b>Youth Self-Report of Motivation</b>					
Academic self-concept	5.43 (0.98)	5.90a (0.84)	4.84a (1.16)	4.60a (0.82)	F(3,1247)=60.83***
Academic important	5.54 (1.13)	6.22a (0.88)	4.80a (1.38)	4.41a (1.33)	F(3,1253)=82.40***
Instrumental utility of education	4.55 (0.53)	4.22a (0.59)	3.96a (0.63)	3.90a (0.61)	F(3,1255)=51.10***
<b>Parent Report of Youth's Motivation</b>					
Academic self-concept	5.77 (1.00)	5.93 (0.94)	5.50ab (1.05)	4.52ab (1.20)	F(3,1240)=29.20***
Academic important	6.06 (1.14)	6.27a (1.02)	5.63ab (1.21)	4.79ab (1.78)	F(3,1243)=32.35***
<b>Achievement Behaviors</b>					
Academic grade point average	3.75 (0.86)	3.88 (0.74)	3.51ab (0.84)	2.66ab (0.75)	F(3,1190)=30.58***
Number of school absences (year)	9.26 (8.83)	8.53 (7.47)	11.33ab (1.21)	17.01ab (10.27)	F(3,1191)=13.36***
Percent skipping school	0.06 (0.23)	0.03 (0.16)	0.16ab (0.36)	0.40ab (0.49)	F(3,1236)=32.86***
Percent heldback in school	0.13 (0.33)	0.12 (0.33)	0.14b (0.35)	0.37ab (0.49)	F(3,1255)=7.14***

\* p ≤ .05, \*\* p ≤ .01, \*\*\* p ≤ .001; n's vary across measures due to missing data.

Standard deviations are presented in parentheses

a A priori comparisons indicate mean is significantly different from normative group at familywise  $\alpha = .05$

b A priori comparisons indicate mean of alienated groups are significantly different from one another at familywise  $\alpha = .05$

**Table 4.**

Means, standard deviations, and group comparisons of psychological adjustment indicators by academic risk groups: Youth and parent reports

Variables	Academic Groups				F-Value
	Competent Pattern		Alienated Pattern		
	Normative Group	High Engaged Group	Moderate Risk Group	High Risk Group	
<b>Youth Self-Report of Mental Health</b>					
Self-esteem	3.67 (0.75)	4.03 <sup>a</sup> (0.77)	3.41 <sup>a</sup> (0.79)	3.42 (0.80)	F(3,1249)=33.52***
Resourcefulness	3.61 (0.76)	3.92 <sup>a</sup> (0.76)	3.28 <sup>a</sup> (0.75)	3.35 (0.77)	F(3,1247)=33.89***
Depression	1.82 (0.67)	1.68 <sup>a</sup> (0.61)	2.03 <sup>a</sup> (0.77)	2.14 <sup>a</sup> (0.76)	F(3,1248)=14.95***
Anger	2.28 (0.82)	1.97 <sup>a</sup> (0.76)	2.64 <sup>ab</sup> (0.95)	3.01 <sup>ab</sup> (0.90)	F(3,1250)=42.66***
<b>Parent Report of Youth's Mental Health</b>					
Resourcefulness	3.66 (0.73)	3.75 (0.70)	3.51 <sup>ab</sup> (0.69)	2.98 <sup>ab</sup> (0.71)	F(3,1239)=17.20***
Depression	1.75 (0.62)	1.74 (0.62)	1.90 <sup>a</sup> (0.67)	2.05 <sup>a</sup> (0.59)	F(3,1239)=7.62***
Anger	1.52 (0.56)	1.46 <sup>a</sup> (0.56)	1.67 <sup>ab</sup> (0.64)	1.94 <sup>ab</sup> (0.67)	F(3,1243)=13.36***
Aggressive - anti-social tendencies	1.33 (0.51)	1.30 (0.51)	1.51 <sup>ab</sup> (0.66)	1.95 <sup>ab</sup> (0.74)	F(3,1242)=23.77***
Attention problems	1.68 (0.70)	1.56 <sup>a</sup> (0.61)	1.85 <sup>ab</sup> (0.75)	2.40 <sup>ab</sup> (0.87)	F(3,1241)=22.15***

\* p ≤ .05, \*\* p ≤ .01, \*\*\* p ≤ .001; n's vary across measures due to missing data.

Standard deviations are presented in parentheses

<sup>a</sup> A priori comparisons indicate mean is significantly different from normative group at familywise  $\alpha = .05$

<sup>b</sup> A priori comparisons indicate mean of alienated groups are significantly different from one another at familywise  $\alpha = .05$

Table 5.

Means, standard deviations, and group comparisons of peer characteristics: Youth reports

Variables	Academic Groups				F-Value
	Competent Pattern		Alienated Pattern		
	Normative Group	High Engaged Group	Moderate Risk Group	High Risk Group	
Number of friends with conventional values	3.57 (0.59)	3.87 <sup>a</sup> (0.60)	3.36 <sup>ab</sup> (0.56)	3.15 <sup>ab</sup> (0.76)	F(3,1249)=41.96***
Number of friends with delinquent values	1.35 (0.27)	1.26 <sup>a</sup> (0.21)	1.44 <sup>ab</sup> (0.37)	1.62 <sup>ab</sup> (0.32)	F(3,1243)=29.28***
Parents' approval of friends	0.04 (0.74)	0.17 (0.77)	-0.07 <sup>b</sup> (0.79)	-0.45 <sup>ab</sup> (0.85)	F(3,1241)=10.25***

\* p ≤ .05, \*\* p ≤ .01, \*\*\* p ≤ .001; n's vary across measures due to missing data.

Standard deviations are presented in parentheses

<sup>a</sup> A priori comparisons indicate mean is significantly different from normative group at familywise  $\alpha = .05$

<sup>b</sup> A priori comparisons indicate mean of alienated groups are significantly different from one another at familywise  $\alpha = .05$

Table 6.

Results of stepwise discriminant function analysis:  
Personal characteristics predicting normative versus highly engaged group.

Predictor	Standardized Discriminant Function	Structure Coefficient
Youth report of academic importance	.40	.64
Youth report of educational utility	.46	.62
Youth report of academic self-concept	.28	.55
Youth report of friends with conventional values	.41	.49
Youth report of self esteem	.22	.47

Notes:  $n = 819$ .

The percentages that were correctly predicted by the discriminant function were normative (67%) and very low risk youth (75%).  
A total of 69% of the participants were correctly classified.

Wilks'  $\lambda = .82$  ( $p < .001$ ), canonical correlation = .42

Table 7.

Results of stepwise discriminant function analysis:  
Personal characteristics predicting normative versus at-risk groups<sup>†</sup>.

Predictor	Standardized Discriminant Function	Structure Coefficients
Youth report of academic importance	-.35	-.59
Youth report of academic self-concept	-.25	-.56
Youth report of educational utility	-.26	-.51
Parent report of youth academic importance	-.22	-.44
Youth report of friends with conventional values	-.21	-.41
Youth report of anger	.29	.47
Parent + youth report of skipping classes	.31	.41
Parent report of youth aggression/social problems	.18	.39

Notes:  $n = 871$ .

<sup>†</sup> This analysis compared youth in the normative group to those in both the moderate risk and high risk groups, which were combined for this analysis.

The percentages that were correctly predicted by the discriminant function were normative youth (75%) and at-risk youth (67%).  
A total of 72% of the participants were correctly classified.

Wilks'  $\lambda = .79$  ( $p < .001$ ), canonical correlation = .46