Published in final edited form as:

J Youth Adolesc. 2017 May ; 46(5): 1057–1075. doi:10.1007/s10964-016-0596-x.

When Mothers and Fathers Are Seen as Disproportionately Valuing Achievements: Implications for Adjustment Among Upper Middle Class Youth

Lucia Ciciolla [Assistant Professor],

Oklahoma State University. She received her doctorate in Clinical Psychology from Arizona State University. Her major research interests include processes of risk and resilience, psychopathology, parenting, women's mental health, infancy and early childhood, adolescence, and longitudinal methodology

Alexandria S. Curlee [doctoral student],

Clinical Psychology program at Arizona State University. Her major research interests include adolescence, peer influence, substance use, psychopathology, and processes of risk and resilience

Jason Karageorge [Psychologist], and

private practice in California. He received his doctorate in Clinical Psychology from Columbia University. His major research interests include adolescence, substance use, psychopathology, academic achievement, and affluent youth

Suniya S. Luthar [Foundation Professor of Psychology]

Arizona State University and Professor Emerita at Teachers College, Columbia University. She received her doctorate in Clinical Psychology from Yale University. Her major research interests include processes of risk and resilience, affluence, substance use, psychopathology, motherhood, parenting, and prevention

Abstract

High achievement expectations and academic pressure from parents have been implicated in rising levels of stress and reduced well-being among adolescents. In this study of affluent, middle-school youth, we examined how perceptions of parents' emphasis on achievement (relative to prosocial behavior) influenced youth's psychological adjustment and school performance, and examined perceived parental criticism as a possible moderator of this association. The data were collected

Address correspondence to: Lucia Ciciolla, Ph.D. Psychology Department, Oklahoma State University, 408 North Murray Hall, Stillwater, Oklahoma, 74078-3064, lucia.ciciolla@okstate.edu.

Authors' Contributions: LC performed the statistical analysis, participated in the interpretation of the data, and drafted the manuscript. ASC participated in the interpretation of the data, and helped to draft the manuscript. JK participated in the development of the research question, statistical analysis, and interpretation of the data. SSL conceived of the study and participated in its design and coordination and helped to draft the manuscript. All authors read and approved the final manuscript.

Conflicts of Interest: The authors report no conflict of interests.

Compliance with Ethical Standards: Ethical Approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent: Informed consent was obtained from all individual participants included in the study.

from 506 (50% female) middle school students from a predominately white, upper-middle-class community. Students reported their perceptions of parents' values by rank ordering a list of achievement- and prosocial-oriented goals based on what they believed was most valued by their mothers and fathers for them (the child) to achieve. The data also included students' reports of perceived parental criticism, internalizing symptoms, externalizing symptoms, and self-esteem, as well as school-based data on grade point average and teacher-reported classroom behavior. Person-based analyses revealed six distinct latent classes based on perceptions of both mother and father emphases on achievement. Class comparisons showed a consistent pattern of healthier child functioning, including higher school performance, higher self-esteem, and lower psychological symptoms, in association with low to neutral parental achievement emphasis, whereas poorer child functioning was associated with high parental achievement emphasis. In variable-based analyses, interaction effects showed elevated maladjustment when high maternal achievement emphasis coexisted with high (but not low) perceived parental criticism. Results of the study suggest that to foster early adolescents' well-being in affluent school settings, parents focus on prioritizing intrinsic, prosocial values that promote affiliation and community, at least as much as, or more than, they prioritize academic performance and external achievement; and strive to limit the amount of criticism and pressure they place on their children.

Keywords

Achievement; Parental values; Child adjustment; Parental criticism

Introduction

Today's young people face more competition for academic and career achievement than any previous generation, a reality that includes declining college acceptance rates (NCES, Snyder & Dillow, 2015; U.S. News & World Report, 2014) and rising rates of underemployment and unemployment for recent graduates (Abel, Dietz, & Su, 2014). Parents, all too aware of the competition and high stakes associated with college admissions, are thought to contribute to the mounting achievement pressure on children by raising academic expectations and emphasizing excellence (Garn, Matthews, & Jolly, 2010; Grolnick & Seal, 2008; Mudrak, 2011). In light of this pressure to achieve, it is not surprising that among the weightiest stressors reported by contemporary youth are: doing well in school and getting into college (American Psychological Association, 2009; Leonard, Gwadz, Ritchie, Linick, Cleland, et al., 2015).

The pressure to achieve, along with other extrinsic motivations governed by external rewards and sources of approval such as the quest for good grades, acceptance to top universities, and financial success, have been associated with elevated levels of maladjustment, chronic stress, decreased well-being, and inconsistent academic engagement (Garn & Jolly, 2014; Deci & Ryan, 2000; Leonard et al., 2015). According to Self-Determination Theory (SDT; Ryan & Deci, 2000), extrinsic motivations are generally viewed as counter to intrinsic ones, which are pursued for their own sake and oriented toward personal growth, interpersonal intimacy, and community (Deci & Ryan, 2000; Kasser, 2002). Intrinsic goals are thought to satisfy basic psychological needs of relatedness, competence, and growth, promoting overall

well-being. For example, high levels of prosocial behavior, that is, intrinsically-motivated behavior intended to benefit other people (Beutel & Johnson, 2004; Zaki & Mitchell, 2011), has been linked to lower levels of externalizing and internalizing symptoms in children (Flouri & Samardi, 2016; Flynn, Ehrenreich, Beron, & Underwood, 2015; Zimmer-Gembeck, Hunter, & Pronk, 2007), as well as to higher academic achievement and greater subjective well-being (Chen, Rubin, & Li, 1997).

By contrast, extrinsic motivations are thought to function more as a substitute or stand-in for true need satisfaction, and are often considered a means to an end (Grouzet, Kasser, Ahuvia, Dols, Kim, et al., 2005; Kasser, 2002; Lekes, Hope, Gouveia, Koestner, & Philippe, 2012). For example, the pursuit of extrinsic goals like wealth or success may not have a meaningful or lasting effect on one's level of happiness because these pursuits do not satisfy basic psychological needs, tend to foster excessive ego involvement and social comparison, and may even “crowd out” other (more intrinsic) pursuits likely to promote well-being (Dittmar, Bond, Hurst, & Kasser, 2014; Kasser, 2002). When the balance tips disproportionately to extrinsic goals relative to intrinsic ones, there is increased risk for personal maladjustment, including impairments in mental health, physical health, and social functioning (Kasser, 2002).

Balancing intrinsic and extrinsic values and goals can be especially challenging for students in high pressure environments, as high emphasis on academic achievement, for example, may come at the cost of connection to others. Studies with adults have shown that when people focus intensively on maximizing their own goals, they feel increasingly disconnected from the group around them (Myers & Diener, 1995). This effect may be particularly salient when considering that students often compete directly against their peers, and at times friends, for coveted awards and admissions to top-tier institutions. In achievement-oriented, upper middle class communities especially, academic pressure is often accompanied by a push for “resume-building,” wherein students strive to outshine their peers through stellar academic and extra-curricular accomplishments (Luthar, Barkin, & Crossman, 2013), a push clearly reflected in the rapid spread of expensive college preparation programs and professional consultants enlisted by parents to give students an edge on their college applications (see also “concerted cultivation,” Lareau, 2002; Pappano, 2015). Unfortunately, these pursuits leave little time for building social relationships with peers, and may even sabotage relationships as students become increasingly focused on besting others rather than forging close, mutually trusting friendships (Lyman & Luthar, 2014).

Notably, these pressures set in several years before college admissions actually occur. Despite recent urging by elite institutions to “bring summer back” and reduce the race for extracurricular activities (Fitzsimmons, McGrath, & Ducey, 2011), the pressure of college admissions is encroaching on the middle school years, with advisors encouraging parents to start college preparation as early as grade six (Ma, 2012; Pappano, 2015). The emphasis on extrinsic goals and pressure to achieve may be particularly important during this stage of early adolescence when youth are discovering and developing their own identities and value systems (Erikson, 1968; Meeus, van, Keijsers, Schwartz, & Branje, 2010). Values developed during this time may form the foundation of lifelong goals and could affect multiple aspects of future well-being (Bosma & Kunnen, 2001; Phinney & Goossens, 1996).

Perceptions of Parents' Values: Mothers and Fathers

As with other aspects of children's attitudes and value systems, the relative orientation toward extrinsic versus intrinsic values is shaped to large degree by what they see at home (Gniewosz & Noack, 2012). Part of the transmission of values includes children's perceptions of the importance their parents place on certain goals over others, and subsequent identification with and emulation of these (Gniewosz & Noack, 2012). For example, Heady, Muffels, and Wagner (2012) found that parental values and behaviors were transmitted to and adopted by their adult children. More than that, parental values that prioritized prosocial behavior and family relatedness over materialistic ones emphasizing wealth and career success were found to positively influence adult children's life satisfaction, even when adult children had been living outside of the family home for a number of years.

There is reason to believe that, regardless of what parents report their values to be, it is what children *perceive* and understand about their parents' values that may be most important to shaping their own values and behaviors (Dogan, Conger, Kim, & Masyn, 2007), and possibly their psychosocial well-being. For example, parents may advocate the importance of "being kind to others" to their children, but in daily practice focus their attention and expectations on high achievement and status, thus communicating to children that the latter are more highly valued than kindness or social relatedness. Further, there is evidence that well-being suffers when individuals are encouraged to engage in more extrinsic than intrinsic pursuits (Lekes et al., 2012), suggesting, again, that perceived parental values may have notable influence on children's well-being.

Parental Criticism

One parental behavior that has been implicated as important for children's well-being, as well as associated with high-pressure academic culture, is parental criticism (Luthar, Barkin, & Crossman, 2013). It is possible that when parents are perceived as overly valuing children's achievements, this may at times be communicated to, and internalized by children, as excessively high performance standards and critical performance evaluations (Frost, Marten, Lahart, & Rosenblate, 1990; Luthar & Latendresse, 2005b), and this in turn could impair functioning (Horwitz, Marceau, Narusyte, Ganiban, Spotts, et al., 2015). Notably, harsh and controlling parenting and parental expressions of negative-dominant emotions (i.e., contempt), tend to be associated with greater extrinsic orientation toward material achievement and with poorer psychosocial outcomes (Dunsmore, Bradburn, Costanzo, & Fredrickson, 2009; Ginsburg & Bronstein, 1993). In the current study, therefore, it was hypothesized that children who perceived their parents as highly achievement-oriented would also report high levels of parental criticism. Of course, it is possible for parents to emphasize and encourage achievement without being critical of children and that, without accompanying criticism, parental achievement-orientation may have little association, or could actually be beneficial, for children's functioning (Cheung & Pomerantz, 2015; Spera, 2005).

Role of Child and Parent Gender

Although parents in heteronormative, intact families may share similar family roles, each has a separate relationship with his or her children as a mother or as a father. Therefore, it is important to take into account perceptions of each parent's values individually and, additionally, consider the impact that different combinations of value emphasis might have on children's adjustment (Kerig, 1995). It is quite possible that within families, children observe differences in the degrees to which their mothers, as opposed to their fathers, value "getting ahead" versus "getting along." As mothers have long been considered children's primary socialization agents, particularly in regard to shaping values (Grusec, Chaparro, Johnston, & Sherman, 2013), there is reason to believe that perceptions of mothers' values may be more influential on children than perceptions of fathers' values (Starrels, 1994), as for example, closeness to mothers tends to have stronger associations with the adjustment profiles of upper middle class youth than closeness to fathers (see Luthar et al., 2013). Furthermore, there may be cumulative risks to children's well-being when both parents, as opposed to one, are perceived as valuing achievement over prosocial behavior.

Daughters and sons may also perceive the values of their parents differently, and in particular, daughters may respond differently when mothers are perceived to highly emphasize achievement. Today's girls, especially those from affluent communities, face steep demands for attractiveness, popularity, and "feminine" standards of kindness and politeness, in addition to academic and athletic achievements (Hinshaw & Kranz, 2009; Luthar & Goldstein, 2008). These demands may also reflect values held by their mothers – women with high expectations about their roles as mothers, wives, and often career-women, consistently striving for perfection (Slaughter, 2012), which may be more influential on daughters than sons, as seen in previous work on parental achievement emphasis (Luthar, Shoum, & Brown, 2006; Luthar et al., 2013).

Current Study

In this study, in view of the literature summarized, we examined the influence of perceived parental values, as well as perceived criticism, on children's well-being in an upper middle class, middle school sample. The current study was designed to address several gaps in the existing literature, as described more fully in the ensuing discussions. First, there is little research that reports on the intergenerational influence of extrinsic versus intrinsic parental value orientation on children's adjustment and well-being (Heady et al., 2012), and the current work demonstrates how salient *perceptions* of parental values can be on children's day-to-day functioning (Dogan et al., 2007). Second, the current study entailed a multi-method, multi-informant approach to assessing youth adjustment and well-being, to gain a better understanding of the functional domains most vulnerable to perceived achievement pressure. Third, the data analytic plan used both person-based and variable-based models that enable the unique examination of joint and independent contributions of mothers and fathers to children's adjustment. Finally, much of the extant research on children from upper middle class communities has focused on high school aged youth (Luthar et al., 2013; Luthar & Becker, 2002), when there is growing evidence that achievement pressure may already be felt by grade 6 (Ma, 2012; Pappano, 2015). Thus, the focus on early adolescence

and the transition to middle school for youth in an upper middle class community captures a developmental range important to identity formation and the establishment of a system of values that has significant implications for future adaptation (Erikson, 1968; Meeus, van, Keijsers, Schwartz, & Branje, 2010; Steinberg & Silk, 2002).

Amplifying on the first of the aforementioned issues, our primary aims were to examine associations between perceived mothers and fathers' emphases on children's achievements (relative to prosocial behaviors), in relationship to diverse child adjustment outcomes. To examine perceptions of parental value-orientation, we asked children to rank order the top three of six specific intrinsic or extrinsic goals that they believed were most important to their parents, a method commonly employed in research on values (DeCarlo & Luthar, 2000; Luthar & Becker, 2002; Rodriguez & Olswang, 2003). The resulting ranking reflects children's perceptions of parental emphasis on, or prioritization of, achievements relative to prosocial behavior (for details, please see Methods). This information on what children understand about their parents' values enables further investigation of how these perceived values may help shape children's well-being. Further, we also sought to examine whether there are additional factors, such as parental criticism, that may contribute to both children's perceptions of parental values as well as children's well-being (for review, Spera, 2005).

In regard to children's adjustment outcomes, we used broad-band measures of overall internalizing and externalizing symptoms to measure children's subjectively experienced psychological distress and disruptive behavior, in addition to measuring their self-reported self-esteem. Replication of findings across conceptually related outcomes is considered important when testing associations in heretofore little-examined research questions and hypotheses (Maner, 2014; Sheldon & Hoon, 2007; Stroebe & Strack, 2014). In addition to these self-reported assessments, we obtained reports of classroom behaviors from teachers as well as grade point average directly from school records. The use of multiple sources of data enables a broader understanding of children's functioning that may not be accurately reflected within a single domain. Moreover, functional domains may vary in their relationship to children's value orientation, and it is certainly possible that adaptation may be superior in one domain while faltering in others (Leekes et al., 2012).

Finally, in a significant extensions of prior work, we used person-based analyses to uncover discrete classes based on *both parents'* *perceived values*, with the goal (a) of first determining the range of classes (from high achievement emphasis to low among pairs of mothers and fathers), and then (b) examining how children fared across these classes on adjustment domains, as well as on overall levels of perceived parental criticism. Additionally, (c) using a variable-based approach, we examined the strength of associations between each parent's achievement emphasis with children's adjustment and perceived criticism, and (d) examined perceived parental criticism as a moderator of each parent's achievement emphasis on adjustment outcomes. Our hypotheses were that perceiving both parents as being high on achievement emphasis would be worse for children's adjustment than perceiving just one parent (regardless of which one), and that children with parents who equally emphasized achievements and prosocial behavior (neutral parents) would fare the best on adjustment outcomes, followed by children of parents with low achievement emphasis relative to prosocial behavior. With regard to the moderator effects of criticism, we

expected that the associations between each parent's achievement emphasis and maladjustment would be stronger at higher levels of criticism.

Method

Sample

This is the first empirical report on the current sample of youth, who were recruited as part of larger programmatic work in affluent communities with the aim of accruing data on students at different developmental stages and with extended measurement of potentially important subculture-specific constructs (see Luthar & Latendresse, 2005a; Luthar et al., 2013). Participants in this study included 506 sixth grade students (50% female) from three middle schools in one town, with similar demographic characteristics (i.e., no significant school differences in family income, race and ethnicity, and parental education). Across the schools, ninety percent of the children were Caucasian, 3% were Hispanic, 2% were African-American, and 5% were of other ethnic backgrounds. Graduate degrees had been attained by 51% of fathers and 29% of mothers; 90% of fathers were employed versus 64% of mothers. Based on 2004 census data, the mean annual family income in this town was \$124,000, comparable to earlier studies of youth in affluent school contexts (Luthar & Becker, 2002). Further, the three schools did not differ significantly on major study variables, including mother and father achievement emphasis, measures of well-being, or school-based variables (described under measures). Thus, data from the three different schools were combined.

Procedure

Students' inclusion in the sample was based on active consent received from parents: Consent forms were mailed to their homes with a pre-addressed, stamped envelope to return the form indicating or refusing consent for the child's participation in the study. A total of 506 students participated from an eligible pool of 690, representing a participation rate of 73%. Of the 184 sixth graders who did not participate, 181 had parents disallow participation and 3 were excused from participation by the principal or personally refused on the day of the administration. All of the measures were administered in groups, and teachers were compensated \$5 for every student they rated.

Measures

Parents' emphases on achievement—Perceived parents' emphases on achievements versus prosocial behavior were assessed by the six-item Parental Values Scale (DeCarlo & Luthar, 2000), where students were asked to rank order the top three of the following six items based on what they believe was most valued by their mothers and fathers for them (the child) to achieve: a) be respectful to others; b) attend a good college; c) try to help others in need; d) excel academically; e) be kind to others; and f) have a successful career in the future. As can be seen, three of these goals are achievement-oriented and three are oriented toward prosocial behavior, or behaving in a way that benefits others. The scores for emphasis on achievement were derived by adding the weights of items ranked, where the top ranked value contributed a score of three to its respective scale (i.e., achievement scale or prosocial scale), the second ranked value contributed a score of two, and third ranked value

contributed a score of one. This method captures a *relative* emphasis on achievement versus prosocial behavior.

To illustrate, a student endorsing an achievement item as the top ranked parental value, a prosocial item as second ranked, and another achievement item as the third ranked parental value, would receive a score of 4 ($3 + 0 + 1$) on the achievement scale (and in turn, a score of 2 on the prosocial scale). Thus, the range of achievement emphasis scores was 0-6, where a score of 6 indicated achievement was valued fully over prosocial behavior, and a score of 0 indicated prosocial behavior was valued fully over achievement. A score of 3 indicated that achievement and prosocial behavior were more or less valued equally. Each participant received an achievement emphasis score for each parent. Psychometric analyses have established the validity of the scale (DeCarlo & Luthar, 2000; Luthar & Becker, 2002; Luthar & Latendresse, 2005b).

Parental criticism—Parental criticism was assessed using the four-item, five-point subscale of the Multidimensional Perfectionism Scale (Frost et al., 1990), with items such as “I am punished for doing things less than perfectly (by my parents).” Items were summed to form the subscale, and higher scores indicated higher perceptions of parental criticism. Internal consistency coefficients (Cronbach's alpha) were .80 and .64 among girls and boys respectively.

Internalizing and externalizing symptoms—The Youth Self Report (YSR; Achenbach, Rescorla, & Maruish, 2004) is a 112-item self-report that assesses problem behaviors in children and adolescents (ages 11-17) along broadband composite scales: Internalizing and Externalizing behaviors. Behaviors are rated on a 3-point scale: 0-Not true, 1-Somewhat or sometimes true, and 2-Very true or often true, based on the preceding 6-months. Total scores are computed by summing the responses for each scale, and T-scores computed according to the manual. For the current sample, Cronbach's alpha coefficients for internalizing symptoms were .87 and .83 for girls and boys, respectively; and for externalizing symptoms, alpha coefficients were .87 for girls and .86 for boys.

Self-esteem—Students' self-esteem was assessed via the six-item, four-point Global Self-Worth subscale of the Self-Perception Profile for Adolescents (Harter, 1988). The items were summed to form a total score, with higher scores representing greater global self-worth. For the current sample, Cronbach's alphas were .85 for girls and .80 for boys.

Teacher-rated classroom competence—Teacher-rated classroom competence was assessed via the 36-item Teacher-Child Rating Scale (Hightower, 1986), completed independently by Math and English teachers for all students (i.e., each child was rated by two separate teachers). Two of the classroom problems subscales were used: *Acting Out & Learning Problems*, with higher scores reflecting greater behavior or learning problems in the classroom. For the current sample, Cronbach's alphas with combined teacher reports were .87 for girls and .86 for boys for the acting out subscale, and were .86 for girls and .84 for boys for the learning problems subscale.

School grades—School grades were obtained from school records; a cumulative grade-point average (GPA) was computed based on students' grades in social studies, science, math, and English across the previous two full quarters of the school year. The letter grades were coded such that an A+ represented a score of 13, and an F a score of 1. GPA scores ranged from 4.63 to 12.75.

Data Analysis Plan

Latent Profile Analysis (LPA) was conducted to classify participants into distinct profiles of parental achievement emphasis. LPA is a version of Latent Class Analysis (LCA) suitable for continuous indicator variables (Lazarsfeld, Henry, & Anderson, 1968). As with LCA, LPA is used to identify homogeneous subgroups within a heterogeneous population based on similarity of responses to measured variables (Lanza, Flaherty, & Collins, 2003; Nylund, Asparouhov, & Muthén, 2007). The primary advantage of LCA over alternative approaches, such as cluster analysis, is the reliance on a model-based method for estimating population characteristics derived from sample data, adjustment of estimates for measurement error, formal statistical procedures for determining the number of classes, use of probabilities as the basis for interpretation of results, and flexible treatment of variance among classes (Nylund et al., 2007). LCA provides estimates of class membership probabilities (e.g., achievement-emphasis classes) and behavioral probability estimates within class (e.g., class-specific patterns of achievement-emphasis) (Lanza et al., 2003).

An initial series of models were run separately without the covariate to determine the appropriate number of classes based on children's individual perceptions of mothers and fathers' emphases on achievement. We began with a one-class model and then tested a series of models specifying increased number of classes (e.g., two class, three class... seven class) representing different patterns of mother-father achievement orientation. Optimal model selection was based on recommended indices including low adjusted Bayesian Information Criterion and Akaike Information Criterion relative to other models, statistically significant Vuong-Lo-Mendell-Rubin likelihood ratio test (LMR LRT), statically significant Bootstrapped Likelihood Ratio Test (BLRT), and acceptable quality of classification (i.e., entropy values) (Asparouhov, & Muthén, 2012; Nylund et al., 2007). Each of these types of criteria is interpreted in different ways. Information Criterion values (AIC and BIC) are used to choose between competing statistical models. In general, lower AIC and BIC criterion values indicate a better model. Likelihood ratios test (LMR LRT and BLRT) utilize p -values to determine model fit. Finally, the entropy value ranges from 0 to 1, with 1 indicating a greater precision in membership classification; values > 0.80 indicate that the latent classes are highly discriminating (Muthén & Muthén, 2000).

In a preliminary analysis, repeated measures ANOVA was used to compare scores for mothers and fathers' achievement-emphases within child and by child sex. The results showed significant differences in scores for mothers and fathers, $F(1, 478) = 42.23, p < .001$; Wilks' Lambda = 0.92; Partial $\eta^2 = .08$. Within-child comparisons established that fathers were rated as significantly more achievement-oriented than mothers. Furthermore, there were mean level differences in ratings of mothers and fathers' achievement emphases based on children's sex (i.e., boys rated both of their parents as higher in achievement emphasis

than girls, on average; see Table 1). Thus, direct effects of child sex on the indicator variables were included in the LPA model to ensure correct model specification. Fit statistics were re-assessed with the inclusion of the covariate, and log-likelihood nested model testing was used to determine whether the addition of the covariate improved the fit of the model. It should be noted that the LPA model was initially analyzed for boys and girls separately, but that due to very small *n*'s in the classes and overall similarity in the pattern of findings for boys and girl, the decision was made to solely include gender as a covariate.

Once model selection was completed, the latent categorical variable (i.e., class) was used in the prediction of distal outcome variables measuring child-reported psychosocial functioning, child perceptions of parental behavior, and teacher-reported classroom behavior and GPA (see Table 1). The distal outcome analyses were run using the automated 3-step method in Mplus 7.11 (Asparouhov & Muthén, 2014). The three-step method ensures that the measurement of the latent class variable is not affected by the inclusion of distal outcomes by fixing the measurement parameters of the latent class variable of the model with covariates at values from the unconditional latent class model. As the name suggests, it involves three modeling steps: (1) estimating the unconditional mixture model, (2) assigning individuals to latent classes using modal class assignment, and (3) estimating a mixture model with measurement parameters that are fixed at values that account for the measurement error in the class assignment. Then, auxiliary variables (i.e., distal outcomes) are assessed using a Wald χ^2 test of statistical significance to test the equality of outcome means across the various achievement-emphasis classes, while also taking into consideration the most likely class membership and classification error rate (see Asparouhov & Muthén, 2014).

Finally, multiple regression analysis was used to examine the direct relationship between children's perceptions of their mothers and fathers' achievement emphases and parental criticism on their emotional and behavioral outcomes, as well as whether children's perceptions of parental criticism moderated the association between perceived achievement emphasis and children's emotional and behavioral outcomes. Mother and father achievement emphasis and parental criticism were group-mean centered for boys and girls, respectively, and interaction terms computed. The interaction terms between perceived mothers' achievement emphases and perceived parental criticism, and perceived fathers' achievement emphases and perceived parental criticism, were simultaneously included in each analysis. The analyses were initially run separately for boys and girls in SPSS, and subsequently examined using a multiple group model in Mplus 7.11 to determine if differences between boys and girls were statistically significant using nested model testing (Enders, 2010). Due to the large number of analyses, a *p*-value correction was used to reduce the risk for Type I errors. Coefficients were considered statistically significant at *p*-values less than .01. Statistically significant interactions were probed using simple slopes analysis (Aiken, West, & Reno, 1991) to examine the relationship between perceived mother or father achievement emphasis and child outcomes at different levels of perceived parental criticism, (i.e., low criticism, 1 *SD* below the mean; average criticism, at the mean; and high criticism, 1 *SD* above the mean).

Results

Descriptive Statistics

Means and standard deviations for all study variables are presented in Table 1 and correlations are presented in Table 2. Mean comparisons showed that girls fared more positively than boys across school variables and externalizing symptoms, and as noted earlier, boys perceived both mothers and fathers as being higher in achievement-emphasis than girls. All outcome variables were transformed into *Z*-scores for the subsequent analyses so that the variables would be on a standard scale for distal outcome comparisons.

Parallel to strategies used in prior studies of affluent youth (Luthar & Barkin, 2012; Luthar & Becker, 2002), we too examined functioning of this sixth grade sample in relationship to national norms on the Youth Self-Report. In almost all instances, the proportion of students reporting 'above average' scores ($T > 64$), as well as 'much above average' scores ($T > 70$), was at or lower than those in national normative samples. This was true for girls and boys across the Withdrawn-Depressed, Social Problems, Thought Problems, and Rule-Breaking/Aggressive subscales. The only exceptions of any note were that boys (but not girls) showed elevated vulnerability on the Anxious-Depressed and Somatic subscales. In these two domains respectively, 13% and 10% of boys reported 'above average' symptoms (versus 7% in norms); 3% and 7% reported 'much above average' symptoms (versus 2% in norms).

Latent Profile Analysis

Class enumeration—The results of successive LPA models without covariates are presented in Table 3. None of the solutions with five or fewer classes showed a minimum of the AIC, or adjusted BIC, suggesting a solution with six or more classes. In addition, the BLRT and LMR LRT did not lead to consistent results as to the number of classes to retain. BLRT was significant for each and every model comparison ($p < .001$), suggesting more than six classes. However, class solutions with seven or more classes tended to show estimation problems and were difficult to interpret, and thus were not considered. The LMR LRT resulted in a non-significant value for a five class solution, but was inconsistent in terms of showing significant differences again for six classes. The five- and the six-class models demonstrated acceptable entropy, indicating good separation among the classes.

Thus, class enumeration was determined using recommendations from Marsh and colleagues (Marsh, Lüdtke, Trautwein, & Morin, 2009). One criterion proposed is that the solution should not only reflect quantitative, but also qualitative (typological) differences between individuals in which some of the classes should differ from each other in terms of profile shape rather than just in profile elevation. The five- and six-class models revealed almost identical class structures, with the six-class model including an additional, qualitatively different class that represented approximately 7.5% of the sample (Low Mom/Neutral Dad, described below). Models with more than six classes either did not uncover any additional substantively interesting types or the additional classes were of very small size ($< 1\%$). In addition, solutions with more than six classes tended to be unstable (i.e., they were associated with warning messages that indicated problems in the estimation of standard errors or failures to converge). The average latent class probabilities for most likely latent

class membership by latent class for the six-class model ranged from .86 to .98 on the diagonal elements, indicating acceptable classification quality (Muthén & Muthén, 2000). Thus we accepted the six-class model as a meaningful, interpretable, and parsimonious solution that provided the best overall fit to the data for mother-father achievement orientation.

Subsequent analyses included child sex as a covariate assessing direct effects on the indicators. The addition of the direct effect of the covariate, constrained to be equal across classes, strengthened the fit of the six-class solution according to nested model testing, $\chi^2(1) = 16.30$, $p < .001$, and did not alter the classification quality (See Table 3). Including child sex as a predictor of class membership did not further improve the fit of the model, $\chi^2(5) = 11.06$, *n.s.*

The six latent profiles, based on the model that included child sex as a covariate of the indicators, are characterized in Table 4 using both standardized and raw scores on perceived mother and father achievement-emphasis. Three of the latent profiles, which included the majority of parents, were those in which mothers and fathers were aligned in their emphasis on achievement versus prosocial behavior: a) High-Both (with achievement emphasis standardized mean scores above 1 for each parent); (b) Neutral-Both (standardized scores near 0); and (c) Low-Both (standardized mean scores below -1). Three unique ‘dissonant’ groups also emerged, which were represented by one parent highly emphasizing achievement over prosocial behavior, or highly emphasizing prosocial behavior over achievement, with the other parent neutral. These dissonant groups were labeled (d) HighMom/NeutralDad; (e) HighDad/NeutralMom; and (f) LowMom/NeutralDad.

Distal outcome analysis—The results of the distal outcome analyses are reported in Table 4, and graphical representations of the class-specific means on child adjustment outcomes and perceived parental criticism are presented in Figure 1 and Figure 2. The overall model test indicated significant differences among the classes. Pairwise mean comparisons are indicated using subscripts, where values with the same subscripts had statistically equivalent means. The children in the Neutral-Both and Low-Both classes generally showed better functioning across outcomes in comparison with other classes, with low levels of parental criticism, low levels of internalizing symptoms, high levels of self-esteem, high GPA scores, and the lowest levels of acting out and learning problems. Still, there were a few significant differences between children in the Neutral-Both class and the Low-Both class, limited to measures of internalizing symptoms, with children in the Neutral-Both class reporting lower levels of internalizing symptoms.

The children in the LowMom/NeutralDad class had scores generally consistent with the Neutral-Both and Low-Both classes, although the pattern of scores suggested slightly more positive functioning than the latter two classes, with a significant difference noted for self-esteem.

Although not always significantly different from all of the other classes across outcomes, likely in part due to small sample sizes and low power, the pattern of scores for children in the three “high” classes – HighDad/NeutralMom, HighMom/NeutralDad, and High-Both –

indicated the poorest functioning across outcomes in comparison to the other classes. The children in these “high” classes reported higher levels of parental criticism, higher levels of internalizing symptoms and externalizing symptoms, and lower self-esteem; they also had lower GPA scores and higher levels of teacher-reported acting out and learning problems (see Figure 1 and Figure 2).

Moderation Analysis

The results of each multiple regression analysis predicting child internalizing symptoms, externalizing symptoms, self-esteem, GPA, teacher-reported acting out, and teacher-reported learning problems, are presented in Table 5. For the model predicting internalizing symptoms only, the results differed for boys and girls based on nested model testing that indicated allowing the model to be freely estimated for girls and boys fit the data better than when the paths were constrained to be equal for girls and boys, $\chi^2_{\text{diff}}(5) = 19.48, p < .001$. Main effects of perceived parental criticism were found to be significantly associated with higher externalizing symptom scores and lower GPA for both girls and boys (Table 5). With regard to interaction effects, perceived parental criticism did not moderate the association between perceived father achievement emphasis and any of the child outcomes for girls or boys. On the other hand, parental criticism did moderate the association between mother achievement emphasis and internalizing symptoms among girls, and among both girls and boys, the association between mother achievement emphasis and learning problems and self-esteem.

According to analyses of simple slopes (see Figure 3), at high levels of perceived parental criticism, girls who perceived their mothers as high in achievement emphasis reported higher levels of internalizing symptoms, $t = 4.46, p < .001$. For the combined sample of both boys and girls, the risk for learning problems was greater for children who perceived their mothers as highly achievement-oriented when they also experienced high levels of parental criticism, $t = 2.20, p < .01$. In turn, boys and girls who perceived their mothers as high in achievement emphasis reported higher levels of self-esteem at *low* levels, $t = 3.44, p < .001$, and *average* levels, $t = 2.63, p < .01$, of perceived parental criticism.

Discussion

In affluent school communities, there are many risks associated with high achievement pressures and intense competition, including potential for elevated psychopathology, chronic stress, inconsistent academic engagement, and low well-being (see Deci & Ryan, 2000; Leonard et al., 2015). Parents have been implicated as a major source of achievement pressure and stress, in part as a reflection of their value orientations regarding the motivations and goals they emphasize to their children (Garn et al., 2010; Grolnick & Seal, 2008; Mudrak, 2011). Addressing gaps in the literature associated with the limited research on perceptions of parental value orientation and children's adjustment, and the limitations of prior analytic and methodological designs, we examined how perceptions of mothers and fathers' emphases on achievement, relative to prosocial emphases, influenced youth adjustment and well-being. Additionally, the focus of our study was on youth entering middle school given the developmental importance of early adolescence to the formation of

identity and a value system (Erikson, 1968; Meeus, van, Keijsers, Schwartz, & Branje, 2010) as well as evidence for the rise in pressure for high academic achievement beginning as early as grade 6 (Ma, 2012; Pappano, 2015). The current study contributes to our understanding of the conditions under which parental achievement orientation may be harmful to children and has implications for possible interventions to prevent maladjustment and improve youth well-being.

Most importantly, in this study of middle-school youth from an affluent community, we uniquely explored possible differences between perceptions of mothers and fathers' values, as well as the role of perceived parental criticism as moderating the association between perceived parental emphasis on achievement and children's adjustment. Findings indicated that as early as 6th grade, both parental value priorities, as perceived by children, were associated with children's behavioral and psychological functioning. Person-based analyses revealed six distinct latent profile classes based on perceptions of mothers' and fathers' emphasis on achievement, and class comparisons showed a consistent pattern of healthier child functioning in association with low to neutral achievement emphasis, and poorer child functioning when children perceived their parents as disproportionately prioritizing achievement over kindness to others. Further, children's reports of parental criticism varied by class, with "High" achievement-emphasis classes corresponding to higher perceived parental criticism. Variable-based findings suggested increased risk to children's psychosocial adjustment in association with perceptions of high mother achievement emphasis, conditional on the extent to which children also perceived parents as critical.

Mothers and Fathers' Perceived Values: Family Subtypes and Children's Adjustment

Comparisons across the classes suggested that there were risks associated with overemphasizing personal achievements relative to prosocial behavior. Specifically, findings showed that the children who fared the best were those who perceived their parents as equally valuing achievement and prosociality (i.e., *Neutral-both*) and those whose parents were perceived to prioritize prosociality over achievement (*Low-Both*). These findings are consistent with arguments that it is critical for upper middle class parents to shield their children from the resounding "achieve more" message in school and the community (Luthar et al., 2013). In affluent settings, the premium on children's academic accomplishments is ubiquitous, pervading the school climate, peer group, and community. It can therefore be protective for children to perceive their home environments as insulated from the reverberating cultural messages of achievement to reach pinnacles of excellence. Just as inner-city parents seek to protect youth from the context-specific risks of violence and gangs (Romich, 2009), there are significant benefits for children if upper middle class parents can offset or counterbalance, in the home, the resounding emphasis on "do more, get ahead at all costs" in the school and community (Luthar et al., 2013).

Importantly, results of this study reaffirmed that children's actual academic performance does not suffer when parents ease up on pressure. As in Luthar and Becker (2002), perceptions that parents were low on achievement emphasis by no means implied worse academic performance among the children; in fact, in this study, their grades and teacher ratings were *better* than those children with even one parent who disproportionately

emphasized achievement. Again, the lack of vulnerability associated with perceiving parents as relatively low in valuing achievement may reflect a counterbalancing, “protective” effect. It should be emphasized, furthermore, that our measure of achievement emphasis was not absolute but relative, such that even for children in the “Low-Both” class, achievement was likely still valued, but its valuation was perceived to be low in comparison to the emphasis on decency and kindness to others. That said, these parents may provide children the space, permission, and support to pursue fulfilling experiences that promote affiliation and well-being, rather than limit children largely to the attainment of externally-dictated successes (Dittmar et al., 2014).

Extending the findings of Luthar and Becker (2002), our data suggest that high emphasis on achievement is not just unhelpful for children's functioning, but may be harmful. When children received the message from parents, intentional or not, that academic success and career gains took much priority over kindness to others, this was associated with relatively poor functioning both personally and academically (also see Dittmar et al., 2014).

Parental Value Alignment and Gender Differences

In terms of variations by gender, results of the study suggested that by early adolescence, children tended to perceive their fathers as more achievement-oriented than their mothers. At the same time, the majority of mothers and fathers were seen as aligned in their relative emphasis on achievements. The three “both” groups (high, neutral, and low) collectively represented over 70% of the sample, suggesting that children generally perceived their parents as presenting a “united front” in regard to the communication of values (Gneiwoz & Noack, 2012).

Overall, little statistical difference in child functioning was found among the three “High” classes, which is thought to be due in part to small class sizes and reduced power. However, the pattern of results among these “High” classes suggests some differences worth considering. First, children in the “High-both” class may have more school-based problems than the classes with only one parent high on achievement emphasis (scores on acting out, learning problems, and GPA were respectively .27, .38, and -.24 SDs from the mean). These findings could reflect children's school problems in response to parents' united achievement pressure and the minimization of prosocial behavior, but as likely, could reflect parents' heightened concern with achievements when their children were performing poorly in school (Fan & Chen, 2001; Pomerantz & Eaton, 2001). These cross-sectional data only show that there is a concurrent association between perceiving both parents as high on achievement emphasis and school-based problems, but do not allow for conclusions to be made about whether high achievement emphasis came before, or in response to, problems at school.

Second, there was some indication that the mismatch between mothers and fathers' perceived values was itself problematic for children's subjective psychological adjustment. In particular, children in the dissonant classes generally reported lower levels of self-esteem than children in “Both” classes, which may reflect inconsistent messages from parents that leave children feeling uncertain about how to meet parental expectations and how to perceive their own performances (Block, Block, & Morrison, 1981; Lindsey & Mize, 2001).

Further, of the families that made up the dissonant classes, the least common grouping was the one in which the mother was perceived to be high on achievement emphasis while the father was neutral.

The “atypicality” of the latter combination was seen not just in the small size of the class, but also in the notably lower self-esteem and higher internalizing symptoms of children in this group, as well as the higher levels of perceived parental criticism, with all three values at approximately half a standard deviation from the respective sample means (with externalizing symptoms at about a third of a standard deviation). Thus, from the perspective of children's subjectively experienced distress, it did not seem to be the case that they were necessarily “protected” from impairment if just one parent was relatively balanced (i.e., Neutral) in their valuation of achievement (Lewin, Mitchell, Waters, Hodgkinson, Southammakosane, & Gilmore, 2015). Rather, more in line with the theory that intrinsic and extrinsic values are antagonistic, opposing forces (Grouzet et al., 2005), the push toward achievement, even from one parent – especially when it is only the mother – may occur at the expense of more intrinsic pursuits and undermine the associated satisfaction of basic psychological needs, including relatedness (Dittmar et al., 2014).

The relatively high maladjustment of the HighMom/NeutralDad group may also possibly reflect social gender norms that generally prescribe women as nurturers rather than competitors or individualists in regard to assertions of power (Maroda, 2004). Mothers are typically the primary caregivers of children, even in two career white-collar, professional families (Luthar et al., 2013), and they are also expected to be central in the nurturing role (McHale, Crouter, & Whiteman, 2003). Thus, in this study, having a mother disproportionately high in achievement emphasis – especially when she contrasted with a non-competitive father – might well have conflicted with traditional gender norms, exacerbating children's distress at perceiving their mothers as not particularly exhorting, or personally exemplifying, compassion, respect, and kindness in close relationships (Cuddy, Fiske, & Glick, 2004; Heilman & Okimoto, 2007).

Parental Criticism as a Moderator

In a process reflecting additive vulnerability, children who perceived their mothers as high on achievement emphasis and also experienced high levels of parental criticism had higher levels of internalizing symptoms (girls only) and teacher-reported learning problems. Interestingly, when reports of parental criticism were *lower* than average, children who perceived their mothers to be high on achievement emphasis actually reported relatively high levels of self-esteem. Thus, the perception of high maternal achievement emphasis was apparently not in itself the primary ingredient that increased risk for maladjustment. Rather, consistent with prior research, parental criticism consistently emerged as a key factor for children's adjustment across domains (Madjar, Voltsis, & Weinstock, 2015; Rice & Dellwo, 2002; Rice, Lopez, & Vergara, 2005), and the risks for children's maladjustment were magnified when mothers' high achievement emphases coincided with harsh and critical parenting. When children see themselves as falling short of parents' expectations of them, this may engender negative self-evaluations as well as anxiety about their performance (Dunsmore et al. 2009). Fears of failing or “not being good enough” can be crippling,

disruptive of both daily functioning and overall well-being (Conroy, 2003; Luthar et al., 2013; Sagar, Lavallee, & Spray, 2009).

The slightly different pattern found for self-esteem suggests that when children do not feel criticized, perceptions of mothers emphasizing achievement may actually boost children's sense of competency and motivation. Having a mother supportively encourage achievement may convey to children that their mothers believe in their abilities to succeed (Juang & Silbereisen, 2002; Masud, Ahmad, Jan, & Jamil, 2016; Turner, Chandler, & Heffer, 2009). By contrast, perceptions of fathers emphasizing achievement had the opposite influence on self-esteem. It is possible that, when they are perceived to emphasize achievement, fathers may also appear to express greater disapproval about children's levels of achievement (Sagar & Lavallee, 2010).

Notably, child gender differences emerged for internalizing symptoms, such that girls' adjustment in particular was influenced by the interaction of high maternal achievement emphasis and parental criticism. This finding is consistent with prior research on gender differences in several ways. First, gender differences in the prevalence of internalizing disorders emerges early in adolescence, with girls more likely to experience depression and anxiety (Hankin & Abramson, 2001; Martel, 2013). Second, a few studies have suggested that the association between negative well-being and extrinsic values are stronger for girls, and that girls may be more sensitive to the combination of parental criticism and high achievement orientation (Dittmar et al., 2014; Luthar et al., 2006). This may be due in part to gender-related differences in socialization and identity formation, where the social expectation is that girls place greater importance on prosocial values than boys (see Beutel & Johnson, 2004). When there is a violation to that social expectation, such as when girls feel pushed toward high achievement, over being prosocial, psychological distress may emerge as girls attempt to reconcile the conflicting expectations (Swann Jr, Langlois, & Gilbert, 1999), as well as to navigate the social penalties associated with achievement-orientation for females (see Caleo & Heilman, 2013; Rudman & Fairchild, 2004; Sheppard & Aquino, 2014).

Coexisting with parental criticism, maternal achievement emphasis was also specifically implicated in learning problems for both girls and boys, which may reflect the notion that mothers are more influential than fathers for children's learning. Alternatively, it is more likely that mothers, more so than fathers, become increasingly involved in children's schooling in response to poor performance (Laflamme, Pomerleau, & Malcuit, 2002; McWayne, Campos, & Owsianik, 2008). As noted earlier, there is evidence that mothers continue to hold the primary responsibilities for childrearing (McHale et al., 2003), and tend to be the parent tasked with interfacing with the schools and making sure children keep up with their lessons (Laflamme, Pomerleau, & Malcuit, 2002; Luthar et al., 2013; McWayne et al., 2008). Thus, it often falls to mothers to set and enforce academic expectations for children, which, when children are struggling, may exacerbate perceptions of parental criticism (Pomerantz, Moorman, & Litwack, 2007).

Limitations and Strengths

There are several limitations of this study that should be noted. The cross-sectional nature of this work precludes any conclusions about causality or direction of influence, and it is quite possible that third variables could underlie significant associations. Moreover, the data on parental values and psychological functioning were limited to children's self-report. Although we believe children's perceptions of parental values to be a strength of the study, it is quite possible that children who struggle psychosocially may misinterpret parental input and perceive it more negatively than others (Oliver, Raftery, Reeb, & Delaney, 1993). Furthermore, children did not provide reports of their own values, limiting a comparison of children's values with those of their parents' as reported in prior research (Gniewosz & Noack, 2012). Finally, these data were limited to 6th graders from a single affluent U.S. community. Future studies should assess latent classes based on both parents' values with samples from varying backgrounds and single-mother/father households, as well as examine how these latent classes compare separately for girls and boys. Also needed are longitudinal designs to examine specific parenting practices as possible mechanisms through which children adopt values and make lifestyle choices (Lekes et al., 2010; Prioste, Narciso, Goncalves, & Pereira, 2015), and the inclusion of other covariates salient to parenting and adjustment outcomes, such as children's temperament (Dittmar et al., 2014; Lengua & Kovacs, 2005).

The limitations of this study are offset by several strengths. First, the data were taken from an independent sample of middle school children from an upper middle class community, which will provide an important comparison point in relationship to prior research (Luthar et al., 2013; Luthar & Latendresse, 2005a). Second, by measuring children's perceptions of their parents' values, rather than parent-reported values, we learn about the messages that children are actually taking away from their parents, regardless of parents' intentions (Dogan et al., 2007). Third, in addition to self-reports, school data were collected from academic records and ratings by two independent teachers for more objective measures of children's functioning. Of note is the remarkable consistency in the school and child report outcome data in relationship to perceived parental emphasis on achievement, confirming both the broad importance of value orientation to multiple aspects of well-being (Kasser, 2002) as well as providing a check on the replicability of the associations (Stroebe & Strack, 2014). Finally, the current study extended prior research on parental value orientation through the use of sophisticated person-based and variable-based analyses, which provided a unique examination of both the individual and joint influence of perceived parental value orientation on children's adjustment, as well as the opportunity to examine the influence of perceived parental criticism on children's adjustment.

Conclusions

If one were to pose the question, "What do you hope for your children?", parents invariably respond that they want the very best for their children, often meaning some combination of success and happiness. In order to foster well-being and academic success in early adolescents, our findings suggest that in upper middle class communities, parents focus on prioritizing intrinsic, prosocial values that promote affiliation and community at least as

much (or more than) they prioritize academic performance and external achievement. Parenting practices that directly or indirectly (i.e., modeling) encourage intrinsic versus extrinsic pursuits, and contribute to the satisfaction of children's needs for autonomy, competence, and relatedness, may help children adopt life goals that foster happiness and well-being (Dittmar et al., 2014; Lokes, Gingras, Philippe, Koestner, & Fang, 2010). Notably, our data suggest that perceptions of parental values are very salient and influential for early adolescents entering middle school, a developmental period that has been identified as tumultuous for both children and parents (Luthar & Ciciolla, 2016; Steinberg & Silk, 2002), as well as important for youth identity formation (Erikson, 1968). Our findings suggest that the entry into middle school may be a time to help parents understand the empirically demonstrated risks of disproportionately emphasizing achievement, and to promote the protective influence of prosocial values through modeling (in addition to parenting dimensions that are usually emphasized including warm, authoritative parenting, and appropriate limit-setting; Padilla-Walker, Carlo, Christensen, & Yorgason, 2012). With regard to implications for future interventions, relevant also is evidence on the potential malleability of parents' and children's value orientations (see Kasser, 2002). Value orientation can change over time as a function of changing life events (Sheldon & Krieger, 2004; Verkasalo, Goodwin, & Bezmenova, 2006) as well as in response to targeted interventions that promote the pursuit of intrinsic goals, including kindness and authentic connections with other in their communities (Lokes et al., 2012; Luthar, 2015). In addition, parenting interventions have increasingly begun to incorporate autonomy-supportive parenting techniques that are thought to promote intrinsic value orientation (Coatsworth, Duncan, Nix, Greenberg, Gayles, et al., 2015; Joussemet, Mageau, & Koestner, 2014). In future work, it will be important to assess how these parenting interventions, particularly those targeting parents of early adolescents, might influence value orientations in both parents and children, and determine whether changes in parents' values could affect the long-term well-being of children in school contexts that are highly achieving, but at the same time, highly pressured for too many of today's youth.

Acknowledgments

We gratefully acknowledge the contributions of Masters and Doctoral students in Luthar's prior lab at Teachers College, Columbia University, and funding by the National Institutes of Health (R01DA014385; R13MH082592). Sincere thanks also to all the participants in this study.

Funding: This research was supported with funding by the National Institutes of Health (R01DA014385; R13MH082592).

References

- Abel JR, Deitz R, Su Y. Are recent college graduates finding good jobs? Current Issues in Economics and Finance, Federal Reserve Bank of New York. 2014; 20(1) Retrieved from http://www.newyorkfed.org/research/current_issues/ci20-1.pdf.
- Achenbach, TM., Rescorla, LA., Maruish, ME. The Achenbach system of empirically based assessment (ASEBA) for ages 1.5 to 18 years. In: Maruish, ME., editor. The Use of Psychological Testing for Treatment Planning and Outcomes Assessment, Volume 2: Instruments for children and adolescents. 3rd. Mahwah, NJ: Erlbaum; 2004. p. 179-213.
- Aiken, LS., West, SG., Reno, RR. Multiple regression: Testing and interpreting interactions. Newberry Park, CA: Sage; 1991.

- American Psychological Association. Stress in America. 2009. Retrieved from <https://www.apa.org/news/press/releases/stress/2009/stress-exec-summary.pdf>
- Asparouhov, T., Muthén, B. Using Mplus TECH11 and TECH14 to test the number of latent classes. Mplus Web Notes: No 14. 2012. Retrieved from <http://www.statmodel.com/examples/webnotes/webnote14.pdf>
- Asparouhov T, Muthén B. Auxiliary variables in mixture modeling: Three-step approaches using Mplus. *Structural Equation Modeling: A Multidisciplinary Journal*. 2014; 21(3):329–341. DOI: 10.1080/10705511.2014.915181
- Beutel AM, Johnson MK. Gender and prosocial values during adolescence: A research note. *The Sociological Quarterly*. 2004; 45(2):379–393. DOI: 10.1111/j.1533-8525.2004.tb00017.x
- Block JH, Block J, Morrison A. Parental agreement-disagreement on child-rearing orientations and gender-related personality correlates in children. *Child Development*. 1981; 52:965–974. DOI: 10.1111/016502548901200107
- Bosma HA, Kunnen ES. Determinants and mechanisms in ego identity development: A review and synthesis. *Developmental Review*. 2001; 21(1):39–66. DOI: 10.1006/drev.2000.0514
- Caleo, S., Heilman, ME. Gender stereotypes and their implications for women's career progress. In: Vinnicombe, S.Burke, RJ.Blake-Beard, S., Moore, LL., editors. *Handbook of Research on Promoting*. Massachussets, MA: Edward Elgar Publishing; 2013. p. 143-161.
- Chen X, Rubin KH, Li D. Relation between academic achievement and social adjustment: Evidence from Chinese children. *Developmental Psychology*. 1997; 33(3):518. [PubMed: 9149930]
- Cheung CS, Pomerantz EM. Value development underlies the benefits of parents' involvement in children's learning: A longitudinal investigation in the united states and china. *Journal of Educational Psychology*. 2015; 107(1):309–320. DOI: 10.1037/a0037458 [PubMed: 25937669]
- Coatsworth JD, Duncan LG, Nix RL, Greenberg MT, Gayles JG, Bamberger KT, et al. Demi MA. Integrating mindfulness with parent training: Effects of the mindfulness-enhanced strengthening families program. *Developmental Psychology*. 2015; 51(1):26–35. DOI: 10.1037/a0038212 [PubMed: 25365122]
- Conroy DE. Representational models associated with fear of failure in adolescents and young adults. *Journal of Personality*. 2003; 71:557–783. DOI: 10.1111/1467-6494.7105003 [PubMed: 12901431]
- Cuddy AJC, Fiske ST, Glick P. When professionals become mothers, warmth doesn't cut the ice. *Journal of Social Issues*. 2004; 60(4):701–718. DOI: 10.1111/j.0022-4537.2004.00381.x
- DeCarlo LT, Luthar SS. Analysis and class validation of a measure of parental values perceived by early adolescents: An application of a latent class model for rankings. *Educational and Psychological Measurement*. 2000; 60(4):578–591. doi:0.1177/00131640021970736. [PubMed: 23293379]
- Deci EL, Ryan RM. The “ what” and “ why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*. 2000; 11(4):227–268. DOI: 10.1207/S15327965PLI1104_01
- Dittmar H, Bond R, Hurst M, Kasser T. The relationship between materialism and personal well-being: A meta-analysis. *Journal of Personality and Social Psychology*. 2014; 107(5):879–924. DOI: 10.1037/a0037409 [PubMed: 25347131]
- Dogan SJ, Conger RD, Kim KJ, Masyn KE. Cognitive and parenting pathways in the transmission of antisocial behavior from parents to adolescents. *Child Development*. 2007; 78(1):335–349. DOI: 10.1111/j.1467-8624.2007.01001.x [PubMed: 17328709]
- Dunsmore JC, Bradburn IS, Costanzo PR, Fredrickson BL. Mothers' expressive style and emotional responses to children's behavior predict children's prosocial and achievement-related self-ratings. *International Journal of Behavioral Development*. 2009; 33(3):253–264. DOI: 10.1177/0165025408098025
- Enders, CK. *Applied missing data analysis*. New York, NY: Guilford Press; 2010.
- Erikson, EH. *Identity*. New York, NY: Norton; 1968.
- Fan X, Chen M. Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review*. 2001; 13(1):1–22. DOI: 10.1023/A:1009048817385

- Fitzsimmons, W., McGrath, ME., Ducey, C. Time out or burn out for the next generation. Harvard College Admissions & Financial Aid. 2011. Retrieved from <https://college.harvard.edu/admissions/preparing-college/should-i-take-time>
- Flouri E, Sarmadi Z. Prosocial behavior and childhood trajectories of internalizing and externalizing problems: The role of neighborhood and school contexts. *Developmental Psychology*. 2016; 52(2): 253.doi: 10.1037/dev0000076 [PubMed: 26619321]
- Flynn E, Ehrenreich SE, Beron KJ, Underwood MK. Prosocial behavior: Long-term trajectories and psychosocial outcomes. *Social Development*. 2015; 24(3):462–482. DOI: 10.1111/sode.12100 [PubMed: 26236108]
- Frost RO, Marten P, Lahart C, Rosenblate R. The dimensions of perfectionism. *Cognitive Therapy and Research*. 1990; 14(5):449–468. DOI: 10.1007/BF01172967
- Garn AC, Matthews MS, Jolly JL. Parental influences on the academic motivation of gifted students: A self-determination theory perspective. *Gifted Child Quarterly*. 2010; 54(4):263–272. DOI: 10.1177/0016986210377657
- Garn AC, Jolly JL. High ability students' voice on learning motivation. *Journal of Advanced Academics*. 2014; 25(1):7–24. DOI: 10.1177/1932202X13513262
- Ginsburg GS, Bronstein P. Family factors related to children's intrinsic/extrinsic motivational orientation and academic performance. *Child Development*. 1993; 64(5):1461–1474. DOI: 10.1111/j.1467-8624.1993.tb02964.x [PubMed: 8222884]
- Gniewosz B, Noack P. The role of between-parent values agreement in parent-to-child transmission of academic values. *Journal of Adolescence*. 2012; 35(4):809–821. DOI: 10.1016/j.adolescence.2011.11.007 [PubMed: 22192446]
- Grolnick, WS., Seal, K. Pressured parents, stressed-out kids: Dealing with competition while raising a successful child. Amherst, NY: Prometheus Books; 2008.
- Grouzet FME, Kasser T, Ahuvia A, Dols JMF, Kim Y, Lau S, et al. Sheldon KM. The structure of goal contents across 15 cultures. *Journal of Personality and Social Psychology*. 2005; 89(5):800–816. DOI: 10.1037/0022-3514.89.5.800 [PubMed: 16351369]
- Grusec, JE., Chaparro, MP., Johnston, M., Sherman, A. The development of moral behavior and conscience from a socialization perspective. In: Killen, M., Smetana, J., editors. *Handbook of Moral Development*. 2nd. New York, NY: Psychology Press; 2013. p. 113-134.
- Hankin BL, Abramson LY. Development of gender differences in depression: An elaborated cognitive vulnerability–transactional stress theory. *Psychological Bulletin*. 2001; 127(6):773–796. DOI: 10.1037/0033-2909.127.6.773 [PubMed: 11726071]
- Harter, S. Manual for the self-perception profile for adolescents. University of Denver; 1988.
- Heady B, Muffels R, Wagner G. Choices which change life satisfaction: Similar results for Australia, Britain, and Germany. *Social Indicators Research*. 2012; 112(3):725–748. DOI: 10.1007/s11205-012-0079-8
- Heilman ME, Okimoto TG. Why are women penalized for success at male tasks? The implied communality deficit. *Journal of Applied Psychology*. 2007; 92(1):81–92. DOI: 10.1037/0021-9010.92.1.81 [PubMed: 17227153]
- Hightower AD. The Teacher–Child Rating Scale: A brief objective measure of elementary children's school problem behaviors and competencies. *School Psychology Review*. 1986; 15:393–409. DOI: 10.1177/073428299100900103
- Hinshaw, S., Kranz, R. The triple bind: Saving our teenage girls from today's pressures. New York, NY: Ballantine Books; 2009.
- Horwitz BN, Marceau K, Narusyte J, Ganiban J, Spotts EL, Reiss D, et al. Neiderhiser JM. Parental criticism is an environmental influence on adolescent somatic symptoms. *Journal of Family Psychology*. 2015; 29(2):283–289. DOI: 10.1037/fam00000 [PubMed: 25844495]
- Joussemet M, Mageau GA, Koestner R. Promoting optimal parenting and children's mental health: A preliminary evaluation of the How-to Parenting Program. *Journal of Child and Family Studies*. 2014; 23(6):949–964. DOI: 10.1007/s10826-013-9751-0
- Juang LP, Silbereisen RK. The relationship between adolescent academic capability beliefs, parenting and school grades. *Journal of Adolescence*. 2002; 25(1):3–18. DOI: 10.1006/jado.2001.0445 [PubMed: 12009746]

- Kasser, T. The high price of materialism. Cambridge, MA: MIT Press; 2002.
- Kasser T, Ryan RM. Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin*. 1996; 22(3):280–287. DOI: 10.1177/0146167296223006
- Kerig PK. Triangles in the family circle: Effects of family structure on marriage, parenting, and child adjustment. *Journal of Family Psychology*. 1995; 9(1):28–43. DOI: 10.1037/0893-3200.9.1.28
- Laflamme D, Pomerleau A, Malcuit G. A comparison of fathers' and mothers' involvement in childcare and stimulation behaviors during free-play with their infants at 9 and 15 months. *Sex Roles*. 2002; 47:507–518. DOI: 10.1023/A:1022069720776
- Lanza, ST., Flaherty, BP., Collins, LM. Latent class and latent transition analysis. Hoboken, NJ: John Wiley & Sons Inc; 2003.
- Lareau A. Invisible inequality: Social class and childrearing in black families and white families. *American Sociological Review*. 2002; :747–776. DOI: 10.2307/3088916
- Lazarsfeld, PF., Henry, NW., Anderson, TW. Latent structure analysis. Boston, MA: Houghton Mifflin; 1968.
- Lekes N, Gingras I, Philippe FL, Koestner R, Fang J. Parental autonomy-support, intrinsic life goals, and well-being among adolescents in China and North America. *Journal of Youth and Adolescence*. 2010; 39(8):858–869. DOI: 10.1007/s10964-009-9451-7 [PubMed: 19771500]
- Lekes N, Hope NH, Gouveia L, Koestner R, Philippe FL. Influencing value priorities and increasing well-being: The effects of reflecting on intrinsic values. *The Journal of Positive Psychology*. 2012; 7(3):249–261. DOI: 10.1080/17439760.2012.677468
- Lengua LJ, Kovacs EA. Bidirectional associations between temperament and parenting and the prediction of adjustment problems in middle childhood. *Journal of Applied Developmental Psychology*. 2005; 26(1):21–38. DOI: 10.1016/j.appdev.2004.10.001
- Leonard NR, Gwadz MV, Ritchie A, Linick JL, Cleland CM, Elliott L, Grethel M. A multi-method exploratory study of stress, coping, and substance use among high school youth in private schools. *Frontiers in Psychology*. 2015; 6:1028. <http://doi.org/10.3389/fpsyg.2015.01028>. [PubMed: 26257685]
- Lewin A, Mitchell SJ, Waters D, Hodgkinson S, Southammakosane C, Gilmore J. The protective effects of father involvement for infants of teen mothers with depressive symptoms. *Maternal and Child Health Journal*. 2015; 19(5):1016–1023. DOI: 10.1007/s10995-014-1600-2 [PubMed: 25102809]
- Lindsey EW, Mize J. Interparental agreement, parent-child responsiveness, and children's peer competence. *Family Relations*. 2001; 50(4):348–354. DOI: 10.1111/j.1741-3729.2005.00322.x
- Luthar SS. Mothering mothers. *Research in Human Development*. 2015; 12:295–303. DOI: 10.1080/15427609.2015.1068045 [PubMed: 27087796]
- Luthar SS, Barkin SH. Are affluent youth truly “at risk”? Vulnerability and resilience across three diverse samples. *Development and Psychopathology*. 2012; 24(2):429–449. DOI: 10.1017/S0954579412000089 [PubMed: 22559123]
- Luthar SS, Barkin SH, Crossman EJ. “I can, therefore I must”: Fragility in the upper-middle classes. *Development and Psychopathology*. 2013; 25(4):1529–1549. DOI: 10.1017/S0954579413000758 [PubMed: 24342854]
- Luthar SS, Becker BE. Privileged but pressured? A study of affluent youth. *Child Development*. 2002; 73(5):1593–1610. DOI: 10.1111/1467-8624.00492 [PubMed: 12361321]
- Luthar SS, Ciciolla L. What it feels like to be a mother: Variations by children's developmental stages. *Developmental Psychology*. 2016; 52(1):143. doi: 10.1037/dev0000062 [PubMed: 26501727]
- Luthar SS, Latendresse SJ. Children of the affluent: Challenges to well-being. *Current Directions in Psychological Science*. 2005a; 14(1):49–53. DOI: 10.1111/j.0963-7214.2005.00333.x [PubMed: 17710193]
- Luthar SS, Latendresse SJ. Comparable “risks” at the socioeconomic status extremes: Preadolescents' perceptions of parenting. *Development and Psychopathology*. 2005b; 17(01):207–230. DOI: 10.1017/S095457940505011X [PubMed: 15971767]

- Luthar SS, Shoum KA, Brown PJ. Extracurricular involvement among affluent youth: A scapegoat for “ubiquitous achievement pressures”? *Developmental Psychology*. 2006; 42(3):583–597. DOI: 10.1037/0012-1649.42.3.583 [PubMed: 16756447]
- Lyman EL, Luthar SS. Further evidence on the “costs of privilege”: Perfectionism in high-achieving youth at socioeconomic extremes. *Psychology in the Schools*. 2014; 51(9):913–930. DOI: 10.1002/pits.21791 [PubMed: 26345229]
- Ma, J. Why to start preparing for college in sixth grade. *Forbes*. 2012 Apr 1. retrieved from <http://www.forbes.com/sites/jasonma/2012/04/01/why-to-start-preparing-for-college-in-sixth-grade/#2bf5b511c8a2>
- Madjar N, Voltsis M, Weinstock MP. The roles of perceived parental expectation and criticism in adolescents' multidimensional perfectionism and achievement goals. *Educational Psychology*. 2015; 35(6):765–778. DOI: 10.1080/01443410.2013.864756
- Maner JK. Let's put our money where our mouth is if authors are to change their ways, reviewers (and editors) must change with them. *Perspectives on Psychological Science*. 2014; 9(3):343–351. DOI: 10.1177/1745691614528215 [PubMed: 26173269]
- Maroda KJ. A relational perspective on women and power. *Psychoanalytic Psychology*. 2004; 21(3): 428–435. DOI: 10.1037/0736-9735.21.3.428
- Marsh HW, Lüdtke O, Trautwein U, Morin AJ. Classical latent profile analysis of academic self-concept dimensions: Synergy of person-and variable-centered approaches to theoretical models of self-concept. *Structural Equation Modeling*. 2009; 16(2):191–225. DOI: 10.1080/10705510902751010
- Martel MM. Sexual selection and sex differences in the prevalence of childhood externalizing and adolescent internalizing disorders. *Psychological Bulletin*. 2013; 139(6):1221–1259. DOI: 10.1037/a0032247 [PubMed: 23627633]
- Masud H, Ahmad MS, Jan FA, Jamil A. Relationship between parenting styles and academic performance of adolescents: Mediating role of self-efficacy. *Asia Pacific Education Review*. 2016; 17(1):121–131. DOI: 10.1007/s12564-015-9413-6
- McHale SM, Crouter AC, Whiteman SD. The family contexts of gender development in childhood and adolescence. *Social Development*. 2003; 12(1):125–148. DOI: 10.1111/1467-9507.00225
- McWayne C, Campos R, Owsianik M. A multidimensional, multilevel examination of mother and father involvement among culturally diverse Head Start families. *Journal of School Psychology*. 2008; 46(5):551–573. DOI: 10.1016/j.jsp.2008.06.001 [PubMed: 19083372]
- Meeus W, van d S, Keijsers L, Schwartz SJ, Branje S. On the progression and stability of adolescent identity formation: A five-wave longitudinal study in early-to-middle and middle-to-late adolescence. *Child Development*. 2010; 81(5):1565–1581. DOI: 10.1111/j.1467-8624.2010.01492.x [PubMed: 20840241]
- Mudrak J. ‘He was born that way’: Parental constructions of giftedness. *High Ability Studies*. 2011; 22(2):199–217. DOI: 10.1080/13598139.2011.622941
- Muthén B, Muthén LK. Integrating person-centered and variable-centered analyses: Growth mixture modeling with latent trajectory classes. *Alcoholism: Clinical and Experimental Research*. 2000; 24(6):882–891. DOI: 10.1111/j.1530-0277.2000.tb02070.x
- Myers DG, Diener E. Who is happy? *Psychological Science*. 1995; 6(1):10–19. DOI: 10.1111/j.1467-9280.1995.tb00298.x
- Nylund KL, Asparouhov T, Muthén BO. Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling*. 2007; 14(4):535–569. DOI: 10.1080/10705510701575396
- Oliver JM, Raftery M, Reeb A, Delaney P. Perceptions of parent-offspring relationships as functions of depression in offspring: “Affectionless control,” “negative bias,” and “depressive realism. *Journal of Social Behavior & Personality*. 1993; 8(3):405–424. DOI: 10.1016/S0272-7358(96)00040-2
- Padilla-Walker LM, Carlo G, Christensen KJ, Yorgason JB. Bidirectional relations between authoritative parenting and adolescents' prosocial behaviors. *Journal of Research on Adolescence*. 2012; 22(3):400–408. DOI: 10.1111/j.1532-7795.2012.00807.x

- Pappano, L. Is your first grader college ready?. Education Life, The New York Times. 2015. Retrieved from http://www.nytimes.com/2015/02/08/education/edlife/is-your-first-grader-college-ready.html?_r=0
- Phinney JS, Goossens L. Introduction identity development in context. Journal of Adolescence. 1996; 19:401–403. DOI: 10.1007/s10964-009-9401-4 [PubMed: 9245293]
- Pomerantz EM, Eaton MM. Maternal intrusive support in the academic context: Transactional socialization processes. Developmental Psychology. 2001; 37:174–186. DOI: 10.1037//0012-1649.37.2.174 [PubMed: 11269386]
- Pomerantz EM, Moorman EA, Litwack SD. The how, whom, and why of parents' involvement in children's academic lives: More is not always better. Review of Educational Research. 2007; 77(3): 373–410. DOI: 10.3102/003465430305567
- Prioste A, Narciso I, Gonçalves MM, Pereira CR. Family relationships and parenting practices: A pathway to adolescents' collectivist and individualist values? Journal of Child and Family Studies. 2015; 24:3258–3267. DOI: 10.1007/s10826-015-0129-3
- Rice KG, Dellwo JP. Perfectionism and Self-Development: Implications for College Adjustment. Journal of Counseling & Development. 2002; 80(2):188–196. DOI: 10.1002/j.1556-6678.2002.tb00182.x
- Rice KG, Lopez FG, Vergara D. Parental/social influences on perfectionism and adult attachment orientations. Journal of Social and Clinical Psychology. 2005; 24:580–605. DOI: 10.1521/jscp.2005.24.4.580
- Rodriguez BL, Olswang LB. Mexican-American and Anglo-American mothers' beliefs and values about child rearing, education, and language impairment. American Journal of Speech-Language Pathology. 2003; 12(4):452–462. DOI: 10.1044/1058-0360(2003/091 [PubMed: 14658997]
- Romich J. Trying to keep children out of trouble: Child characteristics, neighborhood quality, and within-household resource allocation. Children and Youth Services Review. 2009; 31:338–345. DOI: 10.1016/j.childyouth.2008.08.002 [PubMed: 20161470]
- Rudman LA, Fairchild K. Reactions to counterstereotypic behavior: The role of backlash in cultural stereotype maintenance. Journal of Personality and Social Psychology. 2004; 87(2):157–176. DOI: 10.1037/0022-3514.87.2.157 [PubMed: 15301625]
- Ryan RM, Deci EL. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist. 2000; 55:68–78. DOI: 10.1037//0003066X.55.1.68 [PubMed: 11392867]
- Sagar SS, Lavalley D. The developmental origins of fear of failure in adolescent athletes: Examining parental practices. Psychology of Sport and Exercise. 2010; 11(3):177–187. DOI: 10.1016/j.psychsport.2010.01.004
- Sagar SS, Lavalley D, Spray CM. Coping with the effects of fear of failure: a preliminary investigation of young elite athletes. Journal of Clinical Sport Psychology. 2009; 1:1–27. DOI: 10.1080/10413201003664962
- Sheldon KM, Krieger LS. Does legal education have undermining effects on law students? Evaluating changes in motivation, values, and well-being. Behavioral Sciences & the Law. 2004; 22(2):261–286. DOI: 10.1002/bsl.582 [PubMed: 15048864]
- Sheldon KM, Hoon TH. The multiple determination of well-being: Independent effects of positive traits, needs, goals, selves, social supports, and cultural contexts. Journal of Happiness Studies. 2007; 8(4):565–592. DOI: 10.1007/s10902-006-9031-4
- Sheppard LD, Aquino K. Sisters at arms: A theory of female same-sex conflict and its problematization in organizations. Journal of Management. 2014; published online. doi: 10.1177/0149206314539348
- Slaughter, AM. Why women still can't have it all. The Atlantic. 2012 Jul-Aug. retrieved from <http://www.theatlantic.com/magazine/archive/2012/07/why-women-still-cant-have-it-all/309020/>
- Snyder, TD., Dillow, SA. Digest of Education Statistics 2013 (NCES 2015-011). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education; Washington, DC: 2015. Retrieved from <http://nces.ed.gov/pubs2015/2015011.pdf>

- Spera C. A review of the relationship among parenting practices, parenting styles, and adolescent school achievement. *Educational Psychology Review*. 2005; 17:125–146. DOI: 10.1007/s10648-005-3950-1
- Starrels ME. Gender differences in parent-child relations. *Journal of Family Issues*. 1994; 15(1):148–165. DOI: 10.1177/019251394015001007
- Steinberg, LD., Silk, JS. Parenting adolescents. In: Bornstein, M., editor. *Handbook of parenting*. 2nd. Vol. 1. Mahwah, NJ: Erlbaum; 2002. p. 103-134.
- Stroebe W, Strack F. The alleged crisis and the illusion of exact replication. *Perspectives on Psychological Science*. 2014; 9(1):59–71. DOI: 10.1177/1745691613514450 [PubMed: 26173241]
- Swann, WB., Jr, Langlois, JH., Gilbert, LAE. Sexism and stereotypes in modern society: The gender science of Janet Taylor Spence. Washington, DC: American Psychological Association; 1999.
- Turner EA, Chandler M, Heffer RW. The influence of parenting styles, achievement motivation, and self-efficacy on academic performance in college students. *Journal of College Student Development*. 2009; 50(3):337–346. DOI: 10.5901/ajis.2013.v2n3p123
- US News and World Report. Best Colleges. 2014. retrieved from <http://colleges.usnews.rankingsandreviews.com/>
- Verkasalo M, Goodwin R, Bezmenova I. Values following a major terrorist incident: Finnish adolescent and student values before and after September 11, 2001. *Journal of Applied Social Psychology*. 2006; 36(1):144–160. DOI: 10.1111/j.0021-9029.2006.00007.x
- Zaki J, Mitchell JP. Equitable decision making is associated with neural markers of intrinsic value. *Proceedings of the National Academy of Sciences*. 2011; 108(49):19761–19766. DOI: 10.1073/pnas
- Zimmer-Gembeck MJ, Hunter TA, Pronk R. A model of behaviors, peer relations and depression: Perceived social acceptance as a mediator and the divergence of perceptions. *Journal of Social and Clinical Psychology*. 2007; 26(3):273–302. DOI: 10.1521/jscp.2007.26.3.273

Figure 1.

Class-specific means for child-reported adjustment outcomes and perceived parental criticism. ParCriticism=Perceived parental criticism.

Figure 2.

Class-specific means for school-based adjustment outcomes. GPA = Grade Point Average; Teach-ActOut = Teacher-reported Acting Out; TeachLearnProbs = Teacher-reported Learning Problems.

Figure 3.

Moderation with simple slopes analyses demonstrating the association between perceived maternal achievement emphasis and children's (a) self-reported internalizing symptoms (girls); (b) teacher-reported learning problems; and (c) self-reported global self-esteem, at different levels of perceived parental criticism (1SD below the mean; at the mean; and 1SD above the mean).

Table 1

Descriptive Data on All Variables, Separately by Girls and Boys

	Girls (<i>n</i> =251)		Boys (<i>n</i> =244)		<i>T</i> -test
	Mean	<i>SD</i>	Mean	<i>SD</i>	
<u>Parent variables</u>					
Dad Achievement Emphasis	2.76	2.02	3.27	1.97	-2.80*
Mom Achievement Emphasis	2.23	1.86	2.90	1.91	-3.98*
Parental Criticism	7.45	3.36	7.94	3.18	-1.68
<u>Child variables</u>					
Internalizing (YSR <i>T</i> score)	8.15 (47)	7.89	7.81 (51)	7.46	0.48
Externalizing (YSR <i>T</i> score)	5.91 (46)	6.21	7.80 (49)	6.63	-3.25*
Self-esteem	3.32	0.65	3.36	0.56	-0.73
<u>School variables</u>					
Grade Point Average	10.10	1.44	9.30	1.64	5.77*
Teacher-rated Learning Problems	1.42	0.65	1.91	0.89	-7.06*
Teacher-rated Acting Out	1.19	0.39	1.55	0.66	-7.30*

Note. Mom and Dad Achievement Emphasis variables were based on children's reported perceptions of parental values.

* $p < .001$.

Table 2

Correlations Among Study Variables by Child Sex

	1	2	3	4	5	6	7	8	9
1. Dad Achievement Emphasis	-	.66**	.30**	.18**	.20**	-.20**	-.01	.01	.07
2. Mom Achievement Emphasis	.70**	-	.26**	.25**	.25**	-.13*	-.14*	.09	.13*
3. Parental Criticism	.21**	.24**	-	.42**	.37**	-.50**	-.20**	.22**	.14*
4. Internalizing	.13	.03	.17**	-	.73**	-.59**	-.12	.27**	.24**
5. Externalizing	.16*	.11	.33**	.58**	-	-.48**	-.15*	.27**	.28**
6. Self-esteem	-.12	-.01	-.29**	-.49**	-.41**	-	.25**	-.30**	-.28**
7. GPA	-.16*	-.09	-.26**	-.10	-.24**	.33**	-	-.71**	-.52**
8. Teacher-rated Learning Problems	.15*	.12	.17**	.02	.19**	-.24**	-.77**	-	.70**
9. Teacher-rated Acting Out	.09	.03	.13	.03	.24**	-.16*	-.46**	.69**	-

Note. Correlations for boys are presented below the diagonal and correlations for girls are presented above the diagonal; GPA = Grade Point Average.

* $p < .05$;

** $p < .01$.

Table 3**Fit Statistics for Successive Latent Class Models**

Model	AIC	Adjusted BIC	BIC	BLRT <i>p</i> value	LMR LRT <i>p</i> value	Entropy	Error Message
Without Covariate							
One Class	2769.95	2774.06	2786.76	-	-	-	no
Two Class	2443.51	2450.71	2472.92	<.001	<.001	0.78	no
Three Class	2306.83	2317.11	2348.85	<.001	<.001	0.90	no
Four Class	2291.95	2395.32	2346.58	<.001	<.01	0.84	no
Five Class	2275.31	2291.76	2342.55	<.001	0.44	0.84	no
Six Class	2212.11	2231.65	2291.96	<.001	<.001	0.88	no
Seven Class	-41.47	-18.84	50.99	<.001	.91	0.99	yes
With Covariate							
Five Class	2244.06	2263.60	2323.90	<.001	0.23	0.85	no
Six Class	2185.30	2207.93	2277.76	<.001	<.05	0.87	no
Seven Class	2165.64	2191.35	2270.70	<.001	0.10	0.88	yes

Note. AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion; BLRT = Bootstrapped Likelihood Ratio Test; LMR LRT = Lo-Mendell-Rubin Likelihood Ratio Test. Child sex was subsequently included as a covariate with direct effects on the indicators, i.e., Perceived Mom and Dad Achievement Emphases, improving the overall fit of the model.

Table 4
Description of Latent Classes and Distal Outcomes Analyses

Achievement Emphases Latent Classes	Low-Both <i>n</i> =149	Low Mom/ Neutral Dad <i>n</i> =36	Neutral-Both <i>n</i> =119	High Dad/ Neutral Mom <i>n</i> =71	High Mom/ Neutral Dad <i>n</i> =26	High-Both <i>n</i> =93	Overall Model $\chi^2(5)$ Test
<i>Dad Achievement emphasis</i>	-1.11 (0.78) ^a	0.34 (3.68)	-0.22 (2.57)	1.07 (5.16)	-0.51 (1.97)	1.05 (5.11)	-
<i>Mom Achievement emphasis</i>	-1.08 (0.48)	-0.98 (0.68)	0.07 (2.68)	0.13 (2.80)	1.25 (4.94)	1.37 (5.17)	-
Parental Criticism	-0.30 _b	-0.10 _{bc}	-0.29 _b	0.31 _a	0.53 _{ac}	0.28 _{bc}	34.72 [*]
Internalizing symptoms	-0.12 _a	0.06 _a	-0.32 _b	0.13 _a	0.48 _{ab}	0.17 _a	24.62 [*]
Externalizing symptoms	-0.21 _b	-0.10 _{ab}	-0.20 _b	0.18 _a	0.29 _{ab}	0.27 _a	20.27 [*]
Self-esteem	0.22 _{bc}	-0.37 _a	0.42 _b	-0.28 _a	-0.54 _{ac}	-0.02 _{ac}	39.97 [*]
Cumulative GPA	0.25 _{bc}	-0.20 _{ac}	0.41 _b	-0.13 _a	-0.67 _a	-0.24 _a	25.06 [*]
Teacher-rated Acting Out	-0.08 _a	-0.12 _a	-0.10 _a	0.04 _{ab}	0.05 _{ab}	0.27 _b	15.11 [*]
Teacher-rated Learning Problems	-0.08 _a	-0.10 _a	-0.22 _a	-0.07 _a	0.21 _{ab}	0.38 _b	15.03 [*]

Note. Latent class membership was based on the model with child sex included as a direct covariate on the indicator variables, i.e., Mom and Dad achievement emphases. Mom and Dad Achievement Emphases variables were based on children's reports on each individual parent's values. All variables included in the model were *z*-scores, and values here represent standardized scores.

^aValues in parentheses represent the raw scores for Mom and Dad Achievement emphases in each of the latent classes.

Pairwise mean comparisons are indicated using subscripts, where values with the same subscripts had statistically equivalent means.

^{*} *p*<.01.

Table 5
Multiple Regression Analyses Predicting Child Outcome Variables From Mother and Father Achievement Emphases and Parental Criticism

Individual Paths	Girls (<i>n</i> = 244)				Boys (<i>n</i> = 233)			
	<i>b</i>	<i>SE (b)</i>	β	<i>R</i> ²	<i>b</i>	<i>SE (b)</i>	β	<i>R</i> ²
Internalizing Symptoms								
Mom Achievement	0.63	0.33	0.15	0.29*	-0.54	0.35	-0.14	0.07 [†]
Dad Achievement	-0.09	0.31	-0.02		0.71	0.34	0.19 [†]	
Parental Criticism	0.84	0.14	0.36*		0.30	0.16	0.13	
[Mom Achievement * Criticism]	0.43	0.09	0.34*		0.21	0.11	0.19 [†]	
[Dad Achievement * Criticism]	-0.13	0.09	-0.11		-0.05	0.11	-0.04	
Externalizing Symptoms								
Mom Achievement	0.19	0.19	0.06	0.17*	0.19	0.19	0.06	0.14*
Dad Achievement	0.20	0.20	0.07		0.20	0.20	0.07	
Parental Criticism	0.61	0.09	0.33*		0.61	0.09	0.33*	
[Mom Achievement * Criticism]	0.09	0.06	0.09		0.09	0.06	0.09	
[Dad Achievement * Criticism]	0.04	0.06	0.04		0.04	0.06	0.04	
Self-esteem								
Mom Achievement	0.05	0.02	0.15*	0.18*	0.05	0.02	0.15*	0.19*
Dad Achievement	-0.05	0.02	-0.17*		-0.05	0.02	-0.17*	
Parental Criticism	-0.07	0.01	-0.35*		-0.07	0.01	-0.35*	
[Mom Achievement * Criticism]	-0.01	0.01	-0.12*		-0.01	0.01	-0.12*	
[Dad Achievement * Criticism]	-0.00	0.01	-0.02		-0.00	0.01	-0.02	
GPA								
Mom Achievement	-0.05	0.05	-0.05	0.06 [†]	-0.05	0.05	-0.05	0.05 [†]
Dad Achievement	0.01	0.05	0.02		0.01	0.05	0.02	
Parental Criticism	-0.10	0.02	-0.21*		-0.10	0.02	-0.21*	
[Mom Achievement * Criticism]	-0.03	0.01	-0.11		-0.03	0.01	-0.11	
[Dad Achievement * Criticism]	0.02	0.01	0.10		0.02	0.01	0.10	

Individual Paths	Girls (<i>n</i> = 244)				Boys (<i>n</i> = 233)			
	<i>b</i>	<i>SE (b)</i>	β	<i>R</i> ²	<i>b</i>	<i>SE (b)</i>	β	<i>R</i> ²
Acting Out				0.05 [†]				0.02 [†]
Mom Achievement	0.02	0.01	0.08		0.02	0.01	0.08	
Dad Achievement	-0.00	0.01	-0.01		-0.00	0.01	-0.01	
Parental Criticism	0.02	0.01	0.13 [†]		0.02	0.01	0.13 [†]	
[Mom Achievement * Criticism]	0.01	0.00	0.13 [†]		0.01	0.00	0.13 [†]	
[Dad Achievement * Criticism]	-0.00	0.00	-0.02		-0.00	0.00	-0.02	
Learning Problems				0.08 [*]				0.04
Mom Achievement	0.02	0.02	0.06		0.02	0.02	0.06	
Dad Achievement	-0.01	0.02	-0.02		-0.01	0.02	-0.02	
Parental Criticism	0.04	0.01	0.20 [*]		0.04	0.01	0.20 [*]	
[Mom Achievement * Criticism]	0.02	0.01	0.21 [*]		0.02	0.01	0.21 [*]	
[Dad Achievement * Criticism]	-0.01	0.01	-0.13		-0.01	0.01	-0.13	

Note. Mom and Dad Achievement Emphases variables were based on children's reports on each individual parent's values.

[†] $p < .05$;

^{*} $p < .01$