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Pursuing Perfection: Distress and Interpersonal Functioning Among Adolescent Boys in Single-Sex and Co-Educational Independent Schools

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Abstract

This study extends past findings of heightened problems among affluent youth by examining adjustment patterns among boys in two academically elite, independent high schools: one for boys only and the other coeducational. Both samples manifested disproportionately high rates of internalizing and externalizing symptoms, but only the co-educational boys showed elevations in substance use. Boys in both schools showed elevations in a new outcome domain examined: exhibitionistic narcissism. Multivariate analyses of predictors showed that parent criticism -- a defining feature of youths' maladaptive perfectionism -- and perceived maternal depression emerged as major vulnerability factors for both samples in relation to symptom levels. On other parenting dimensions, boys in the single-sex school seemed to be particularly sensitive to feelings of alienation from their fathers and perceived paternal depression. Envy of peers' attractiveness was associated with adolescent distress in both samples, but appeared to be especially critical for co-educational boys. Results are discussed, focusing on the costs and benefits of boys' attendance at a single-sex versus co-educational school, along with implications for practice and future research.

Keywords

perfectionism; adolescent boys; affluence; single-sex schools; co-educational schools; depression; substance use; envy

In this study, we sought to determine whether past findings of elevated maladjustment among affluent youth (Luthar, Barkin, & Crossman, 2013) might generalize to students in an all-boys school. Advocates of single-sex education have suggested that all-boys schools foster healthy socio-emotional development by removing 'cross-gender distractions', paving the way for safer, more nurturing, and less competitive academic and social environments (International Boys School Coalition, 2013). However, prior research comparing boys' social-emotional adjustment in single-sex versus co-educational schools has produced equivocal results (Riordan et al., 2008; Mael, Alonso, Gibson, Rogers, & Smith, 2005;

Moore, Piper, & Schaefer, 1993). In a recent *Sex Roles* special issue on the efficacy of single-sex education, Bigler and Signorella (2011) addressed the sparse empirical literature on the efficacy of single-sex compared to co-educational schools, calling for researchers to investigate the consequences of single-sex versus coeducational school environments on youths' psychological development. Given this background, we sought to compare patterns of adjustment as well as their predictors among high school boys attending an elite single-sex school, as compared to a cohort of 9th-11th grade boys attending an elite, co-educational school.

In terms of adjustment domains assessed, following Luthar and Barkin (2012), we focused on outcome domains in which affluent youth are likely to be particularly vulnerable. These include internalizing (anxiety/depression) and externalizing symptoms (rule-breaking/aggressive behaviors; see Luthar & Barkin, 2012; Ansary & Luthar, 2009; Luthar & Goldstein, 2008), and substance use (Patrick, Wightman, Schoeni & Schulenberg, 2012).

We also explored here a new adjustment domain in which well-to-do adolescent boys, immersed in a culture that prioritizes accolades and status as markers of self-worth, may experience heightened vulnerability, that is, narcissistic exhibitionism (Kopletwicz, Gurian, & Williams, 2009). Individuals who strive for extrinsic rather than intrinsic goals are susceptible to developing narcissistic traits (Deci & Ryan, 2012). Narcissistic exhibitionism may be particularly problematic among high SES boys, who can be at risk for entitlement and braggadocio (Luthar et al., 2013) and may employ grandiose, attention-seeking behaviors to elicit external validation of their self-worth (Ward & Ashby, 2008; Tracy & Robins, 2003). Moreover, narcissistic individuals tend to strive for perfection, as both narcissists and perfectionists seek admiration and approval from others to help maintain their self-esteem (Trumpeter, Watson, & O'Leary, 2006; Hewitt & Flett, 1991). Research has demonstrated robust associations between narcissism and perfectionism, including the salient finding that individuals with narcissistic personality disorder report high levels of multiple dimensions of perfectionism (McCown & Carlson, 2004; Hewitt & Flett, 1991).

We also considered exhibitionistic narcissism to be a conceptually important outcome domain among these boys in light of findings that 50-75% of those diagnosed with narcissistic personality disorder are male (DSM-IV-TR, 2000); many highly successful individuals display narcissistic traits (DSM-IV-TR, 2000); and college rates of narcissism have increased significantly in the past twenty years (Twenge & Foster, 2010).

Vulnerability and Protective Factors: Achievement pressures, conflict, and support

In past research, we have referred to a subculture of affluent children as “privileged but pressured” to capture the notion that although well-to-do youth have access to exceptional material and educational resources, they also experience excessive achievement pressures from diverse adults, most notably their parents (Luthar & Becker, 2002). When parents put pressure on their children to ‘perform’ by emphasizing achievement, they communicate that they value their children for their accomplishments instead of their personal character. Children can internalize parental achievement pressures in the form of maladaptive

perfectionist strivings, i.e. overly high performance standards accompanied by critical evaluations of one's performance (Frost, Marten, Lahart, & Rosenblate, 1990). Parental criticism is considered a core dimension of maladaptive perfectionism, as perfectionists strive to fulfill unrealistic expectations and goals, often propelled by underlying fears of failure and criticism, as well as low self-esteem (Hewitt & Flett, 1991; Frost et al., 1990). Additionally, perfectionists tend to internalize their parents' excessive demands for achievement, equating mistakes with parental rejection (Frost et al., 1990), as Alice Miller (1995) eloquently described in her book, "The Drama of the Gifted Child."

More than a decade of research on affluent, high-achieving youth has shown that perceived parent criticism for failures is a consistent predictor of adjustment problems among upper middle class youth (for a review, see Luthar et al., 2013). This body of research has shown that youth who feel that their parents disparage or punish them for perceived failures are particularly vulnerable to elevations in internalizing and externalizing symptoms. These findings generalize across gender, age (middle and high school), geographical locale, and school type, i.e. independent and public schools.

Given that it is highly destructive, a major goal of this study was to gain further insights into the correlates and nature of parental criticism as a core feature of perfectionism. Prior research on perfectionism dimensions has demonstrated that other-imposed or socially prescribed types of perfectionism -- of which parental criticism is a potent exemplar -- are generally far more detrimental for personal adjustment than are self-imposed perfectionism dimensions, such as concerns about one's mistakes or doubts about failures (Shafran & Mansell, 2001; Flett, Hewitt, Blankstein, & Pickering, 1994; Hewitt & Flett, 1991). In terms of possible underlying mechanisms, frequent criticism by parents can lead youth to feel resentful of and alienated from parents, with this alienation, in turn, potentially leading to serious adjustment disturbances (e.g., non-suicidal self-injurious behaviors; Yates, Tracy, & Luthar, 2008).

In addition to perceived parental criticism, we examined several aspects of negative parent-child interactions as predictors of boys' adaptation levels in this study. Extending Baumeister and colleagues' (Baumeister, Bratslavsky, Findenauer, & Vohs, 2001, p. 323) seminal insight that "bad is stronger than good", research with affluent youth has shown that negative aspects of family relationships (such as feeling alienated from parents) have much greater impact than positive ones (such as feeling praised; see Luthar & Barkin, 2012). Given these findings, along with previously described links between parental criticism and resentment of parents (Yates et al., 2008), we included adolescents' feelings of alienation from both mothers and fathers among the predictor variables. In addition, we considered perceptions of depression in each parent, also previously linked to maladjustment (Luthar & Barkin, 2012). Lastly, we considered self-blame for conflict in the family, as this construct captures a pivotal aspect of family functioning: the degree to which youth internalize blame for discord between parents. Moreover, it is the only predictor in this study to account for relationship quality *between* parents (not just mother or father and son), as well as the effect of self-blame on youth adjustment.

In addition to these aspects of family relationships, we investigated the quality of relationships with close friends, including support as well as conflict. Positive interactions with close friends were explored as a potential protective mechanism against the more insidious aspects of affective relationships with parents noted above. Negative interactions with close friends were included, given their well-established links with poor outcomes among adolescents in general (Lee, Hankin, & Mermelstein, 2010).

Envy Of Peers

In a salient extension of past research on affluent youth, we also considered, among predictors of maladjustment, a new set of constructs that are strongly related conceptually to maladaptive perfectionism: envy of peers. Like unhealthy perfectionism, envy often reflects underlying feelings of low self-esteem (DeSteno, Valdesolo, & Bartlett, 2006). Whereas maladaptive perfectionist strivings may protect from feelings of inferiority (Lo & Abbott, 2013; Tracy & Robbins, 2003), those very same feelings and concomitant threats to self-esteem, may in fact elicit envy. Envy, which implies “I wish I had what you have, (and) I wish you did not have it” (Fiske, 2010, p. 703), is correlated with depression, as is maladaptive perfectionism (Fiske, 2010; Kawamura, Hunt, Frost, & DiBartolo, 2001).

In this study, we explored peer envy across multiple spheres that are likely to be important to this demographic of adolescents: popularity, attractiveness, and wealth (Luthar, Siegel, Sin, & Thrastardottir, 2013; Froh et al., 2011). It is well documented that individuals compare themselves to those around them and are envious of what those close to them have (Fiske, 2010; Niniraggi, 2010; Diener & Lucas, 2000). Envy of peers' looks, social ranking, and wealth may be especially prominent within the subculture of affluence that is known to value material wealth (Koplewicz, Gurian, & Williams, 2009) and extrinsic mores, such as status and looks (Gordinier, 2009).

Summary

This study seeks to extend prior work on affluent youth in multiple ways. We consider (a) if prior findings that affluent youth are “at risk” for maladjustment across multiple problem domains extends to a new sample of adolescent boys attending an elite all-boys school; (b) whether the affective quality of parent and peer relationships is differentially associated with outcomes for boys in single-sex versus co-educational schools; (c) if high parent criticism, a core feature of maladaptive perfectionism, is indeed highly destructive across samples and outcomes; and (d) whether unique associations might also obtain, in multivariate analyses, for two other constructs with strong conceptual links to maladaptive perfectionism, that is, envy of peers (among predictors), and exhibitionistic narcissism (among outcomes).

Method

Sample

Our analyses are based on 9th – 11th graders from (a) an all-boys suburban independent school outside a large East Coast city and (b) a co-ed independent school in a large East

Coast city. In the interest of brevity, we refer to the samples henceforth as “all-boys” and “co-ed boys”.

Characteristics of samples are shown in Table 1. Most students are from Caucasian families (~75%) with married parents. Median composite SAT scores for recent high-school graduates, as reported by both schools, rank in the 98th percentile compared to national norms (research.collegeboard.com, 2012).

Students' participation in this study was based on passive consent procedures with data collected as part of school-based initiatives on positive youth development. School administrators sent letters to all homes via U.S. mail before each wave of data collection to ensure that parents were well-informed regarding their children's involvement. Students were informed that their participation was voluntary and that results would be kept confidential. On completion of data collection, questionnaires were stored with subject numbers as identifiers.

Procedure

Both samples were assessed during the spring of 2006. All measures were administered to individual students in groups; no student incentives were provided as per the administrators' request in both schools.

Measures

Unless otherwise indicated, all measures have been used in our past research on affluent adolescents (Luthar & Barkin, 2012) with good reliability and validity. In this study, alpha coefficients of the various subscales were generally similar across schools; in the interest of brevity, we provide average values for boys across both schools, noting these values in parentheses for each subscale below.

Substance Use—We used the Monitoring the Future Study Survey (Johnston, O'Malley, & Bachman, 1984), which has well-documented reliability and validity. As in previous studies (Luthar & Barkin, 2012), we created a composite substance use variable by adding scores for cigarettes, alcohol, and marijuana during the past year (α value, .74).

Symptoms—The Youth Self-Report contains 112 items encompassing internalizing and externalizing domains (Achenback & Rescorla, 2011). The internalizing scale is composed of three subscales, i.e. Anxious-Depressed, Withdrawn-Depressed, and Somatic (α values of .81, .81, and .68). The externalizing scale is made up of two subscales, Rule-breaking and Aggressive behaviors, with α values of .75 and .80, respectively.

Narcissistic Exhibitionism—We used one component subscale of the Narcissism Personality Inventory (NPI-2) to measure teens' exhibitionism (Raskin & Terry, 1988). Subscales are based on behavioral criteria for narcissistic personality, and include items such as, “I like it when others brag about good things I've done” (dichotomous responses: yes/no). The alpha coefficient for exhibitionism was .65.

Parent Criticism—The four-item subscale of the Multidimensional Perfectionism Scale (Frost et al., 1990), with items such as “I never feel like I can meet my parents' standards”, yielded an alpha coefficient of .80.

Parent Depression—The depression section of the Family History Screen (FHS, Weissman et al., 2000) was used to measure teen's perceptions of depressive symptoms in each parent (dichotomous responses: yes/no). Alpha coefficients for mothers/fathers, respectively, were .74/.71. Illustrative items are, “Did your mother/father ever have a period during which they felt depressed that lasted two weeks or more?”

Alienation from Parents—The Alienation subscale of the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987) consists of 50 items (25 each pertaining to mothers/fathers, α 's = .79/.79) rated on a 5-point scale, such as, “I don't get much attention from my mother/father”.

Self-Blame—The Self-Blame subscale of the Children's Perception of Interparental Conflict Scale (Grych, Seid, & Fincham, 1992) consists of 4 items, including “My parents blame me when they have arguments”.

Social Interactions—The Network of Relationships Inventory (NRI) (Furman & Buhrmester, 1985) contains 29 items measuring overall social support (α , .82) from and negative interactions (α , .83) with close friends. Examples include, “How much do you share secrets and private feelings with your close friend”? and “How much do you and your close friend get upset or made at each other”?

Envy—We used 3 subscales of an Envy measure (Luthar et al., 2013; 4 items each), corresponding to distinct types of envy that high school students may feel: envy of looks or appearance (α , .89), popularity (α , .88), and wealth (α , .77).

Results

Descriptive Data

Table 2 presents means and standard deviations on all variables separately by school. A one-way multivariate analysis of variance (MANOVA) showed significant main effects for school (Wilks λ , 0.81, $p < .001$).

In follow-up univariate analyses, significant school differences were seen on only one adjustment measure: substance use. As shown in Table 2, co-ed boys reported relatively high substance use compared to the all-boys sample, with a large effect size (partial $\eta^2 = .19$).

A one-way multivariate analysis of variance (MANOVA) on the predictor variables showed significant main effects for school (Wilks λ , 0.85, $p < .001$). Follow up ANOVAs showed that co-ed boys reported greater social support from their friends, but also experienced more negative interactions with their friends. Additionally, this group had higher levels of envy for looks, as well as overall feelings of envy towards their peers.

Simple correlations among all variables are displayed in Table 3, with values for co-ed boys in the top right half of the table and those for all-boys shown in the bottom left. The patterns of correlations show strong associations between conceptually linked variables, but to avoid Type 1 errors, all inferences about salient patterns are reserved for the more stringent multivariate analyses that follow.

Comparisons with national norms: Maladjustment

As in past reports, we compared maladjustment levels among our samples with national normative data. Figure 1 displays results on substance use. As previously reported (Luthar & Barkin, 2012), boys in the co-ed private school exhibited strikingly elevated levels of substance use compared to national norms. The all-boys lower levels of substance use was equally salient, as they reported using alcohol, getting drunk, and smoking marijuana at a rate of less than one third the national average.

Figure 2 displays the proportion of boys reporting clinically significant symptom levels on the YSR. In contrast to findings on substance use, all-boys fared worse on internalizing and externalizing symptoms compared to national norms (12% and 10% “much above average”, respectively, versus 2% national norm). Both all-boys and co-ed boys showed elevations of more than 4-5 times the national norms on overall internalizing and externalizing dimensions.

Comparisons with norms: Narcissistic Exhibitionism

We conducted exploratory analyses to determine if as a group, affluent boys manifest higher rates of narcissism than their less affluent peers. Although national normative data are not available on the NPI to our knowledge, we did obtain values on two socioeconomically diverse samples of college males: 693 first-year college boys (Ackerman, Brecheen, Corker, Donnellan, & Witt, 2013, unpublished raw data, College Life Study) and 291 college boys (mean age, 19; Maxwell, Donnellan, Hopwood, & Ackerman, 2011). Mean values in these more diverse samples were 1.44 (SD 1.65) and 1.93 (SD 1.70) respectively; these values are a little more than half those of both samples of affluent boys in this study (means of 2.93 and 3.10; Table 2).

Multiple Regression Analyses: Effects of Relationships with Parents and Peers

Table 4 presents the effects of salient dimensions of relationships with parents and peers in predicting to teens' adjustment outcomes. Considered together, boys' reports of their relationships with parents and peers, along with dimensions of envy, accounted for almost half the variation in their internalizing and externalizing symptom levels, with R squared values ranging from .43 to .51.

Parent criticism was uniquely linked to internalizing symptoms among co-ed boys and to externalizing symptoms among all-boys. Perceived maternal depression was associated with internalizing symptoms for both groups, and to externalizing symptoms as well among the co-ed boys; in addition, maternal alienation was associated with co-ed boys' internalizing symptoms. In notable contrast, alienation from and perceived depression of fathers was

linked to externalizing, substance use, and narcissism outcomes for all-boys. Furthermore, self-blame for family conflicts uniquely predicted substance use for the all-boys group.

Similarly, findings suggest differences in the relative importance of aspects of peer relationships on adjustment for all-boys and co-ed boys. As expected, negative peer relationships were linked to externalizing symptoms for both groups. Contrary to expectations, peer support was positively associated with externalizing symptoms and narcissistic exhibitionism among co-ed boys. Envy of peers' good looks emerged as a unique predictor of internalizing symptoms and narcissistic exhibitionism among co-ed boys, and of externalizing behaviors among all-boys.

Discussion

Results of this study show that affluent boys in elite single-sex and co-ed private schools are at risk for serious adjustment problems across multiple domains of functioning, with rates of clinically significant internalizing and externalizing symptoms nearly three times those in national norms. In striking contrast to our prior studies on upper middle class youth, the all-boys cohort was our first sample that did not report elevated substance use compared to national norms.

Multivariate regression analyses showed unique associations between discrete aspects of relationships with parents and peers, and adolescent outcomes, with (a) perceived criticism by parents, a core, defining feature of maladaptive perfectionism, linked with symptoms for both groups of boys. Also consistently linked to symptoms in both schools were (b) perceived maternal depression, (c) peer envy, and (d) negative peer interactions. Among co-ed boys, perceived maternal depression, alienation from mothers, support from peers, and envy of peers' attractiveness showed strong associations with multiple areas of maladjustment. In contrast, perceived father depression and alienation were related to several indices of distress only for boys at the single-sex school. Each of these findings is discussed in turn.

Maladjustment Domains

Our most salient finding was the striking difference in rates of alcohol consumption, with over 45% of co-ed boys reporting being drunk in the past year (national norm = 30%) compared with only 8% of all-boys. It is important to note, however, that the all-boys school sampled in this study endorses a strict, no substance use policy: administrators and students alike reported to our research team that youth were automatically expelled from school if they were caught drinking or smoking. This zero-tolerance policy may have curtailed all-boys' substance use in high school, but it is not clear if this benefit would be sustained in college.

Boys in both our samples showed high rates of externalizing behaviors as well as internalizing symptoms, supporting Lund and Dearing's (2012) finding that youth from affluent neighborhoods engage in rule-breaking behavior more frequently than their middle-class counterparts, and replicating prior reports of high delinquency rates among affluent boys (Luthar & Barkin, 2012; Luthar & Goldstein, 2008). Both samples reported clinically

elevated levels of anxiety and depression at a rate of more than 5 times the national average. This finding indicates that in hyper-achievement-oriented settings, boys may experience distress not only in traditionally male problems of externalizing behaviors, but may also struggle considerably with covert, traditionally female symptoms of an internalizing nature (Nolen-Hoeksema, 2002).

Narcissism—Exploratory analysis showed that both the all-boys and co-ed boys might be susceptible to developing unhealthy, narcissistic exhibitionist traits. Grandiose narcissism may be a problem particularly among boys in affluent, upwardly mobile communities, due to preoccupation with obtaining power and related symbols of influence such as sex and wealth. Through high school and beyond, social status is highly influenced by physical attractiveness (Chase, 2008; see also the association between envy of peers' looks and narcissistic exhibitionism among co-ed boys here), and in college, social ranking is strongly linked to wealth as well (Luthar et al., 2013). The long-term costs of affluent boys' efforts to earn reputations as the “big man on campus” (Chase, 2008, p.55), a term that connotes alpha-dog status, may be long lasting and deep. These boys might have difficulty engaging in authentic, intimate personal relationships: they may also be at risk for chauvinistic, entitled attitudes and behaviors towards women (Luthar et al., 2013).

Predictors of maladjustment: Discrete aspects of parent-son relationships

Findings in this study strongly support prior contentions that parental criticism -- a core, defining feature of youths' maladaptive perfectionism (Frost et al., 1990) -- is a major vulnerability factor for personal maladjustment (Hewitt & Flett, 1991; Luthar et al., 2013). Simple correlations showed significant links with internalizing and externalizing symptoms in both samples of boys, and even in the stringent multivariate analyses considering shared variance across multiple predictors, it was uniquely linked with overall internalizing symptoms among co-ed boys and with externalizing behaviors among all boys.

Interestingly, perceived parent criticism also showed significant univariate links not only with felt alienation from each parent but also with self-blame for conflict *between* parents, and with envy of peers' wealth. These associations warrant further attention in future multivariate models, as they suggest a breadth of adjustment dimensions adversely affected by perceived parent criticism, including self-blame for events outside one's direct control (which fosters depression, see Grych, Seid, & Fincham, 1992), and enviousness of others' material possessions, also linked with distress (Luthar et al., 2013; Deci & Ryan, 2012).

The association between perceived parent criticism and feelings of alienation from parents is particularly important to highlight, as it suggests that upper middle class boys who feel criticized by their parents for failing to achieve may feel distant from and resentful of them. In other words, our findings support the intuitive but overlooked notion that when adolescents feel that their parents disapprove of their achievement levels, they can develop feelings of alienation toward their parents, and these feelings in turn can engender significant adjustment problems. As Yates et al. (2008) established in their prospective research, affluent public school students' feelings of parent criticism were linked with their

feelings of alienation from parents, and the latter then predicted non-suicidal self-injurious behaviors.

The association between perceived parent criticism and self-blame points to a tendency for those exposed to perfectionism pressures to feel responsible for a range of outcomes. Similarly, the strong association in our findings between boys' perceived parent criticism and self-blame for conflict between parents suggests that the effects of perceived parental criticism on boys' self-blame may extend beyond the realm of personal achievement to their parents' relationships, a domain that is both outside of themselves and beyond their control.

In addition to the parent criticism component of maladaptive perfectionism, we found several intriguing associations specific to relationships with mothers and with fathers. First, our findings confirm the decisive importance of relationships with mothers. Perceived maternal depression was the only parent-son factor to be linked to internalizing symptoms in both samples of boys, as well as externalizing problems for the co-ed youth. Also among the co-ed boys, feelings of alienation from their mothers were associated with internalizing symptoms. It is possible that late adolescent boys in co-educational schools may increasingly look to their mothers for closeness and nurturance as they negotiate the complex, challenging dynamics of cross-gender interactions, including developing intimate relationships with female peers.

Perceived paternal depression and/or alienation from fathers predicted three of four outcome domains for all-boys and none for co-ed boys. Perhaps boys in single-sex schools -- asked to navigate a peer culture of masculinity while trying to discover what it means, looks, and feels like to 'be a man' -- identify with their fathers and look to them for support and guidance. Single-sex schools promote the crucial impact of male role models on boys' development (theibsc.org, 2013), and our findings show that boys experience distress when they perceive emotional distance (and perhaps, undue pressures to excel) from the most significant male figure in their lives: their fathers.

Peer relationships and the salience of envy

Negative interactions with friends predicted externalizing symptoms for both samples, supporting the oft-reported robust relationship between peer conflicts and externalizing behaviors in youth (Leary, Twenge, & Quinlivan, 2006). Considering that peer rejection, insults, and social exclusion are associated with aggression (Twenge, Baumeister, Tice, & Stucke, 2001), it was not surprising that antagonism and conflict in close friendships were associated with externalizing symptoms for all-boys and co-ed boys.

Contrary to expectations, social support from close friends did not appear to protect boys from negative outcomes. In fact, multivariate analyses showed that social support from friends was linked to exhibitionist narcissism for co-ed boys, suggesting that peer closeness and admiration may contribute to these boys' attention-seeking behaviors, or that arrogant behavior patterns serve to reinforce veneration amongst peers.

Group comparisons on envy showed that, overall, co-ed boys exhibited greater envy of peers than did all-boys, that is, on cumulative envy scores encompassing peers' looks, wealth, and

popularity. This finding, in turn, rested largely on significant differences in envy of others' physical attractiveness.

Of the various peer envy dimensions, why might envy for looks be elevated among the co-ed as compared to all-boys? Physical attractiveness is related to self-esteem (Morin, Maiano, Marsh, Janosz, & Nagengast, 2011), peer acceptance (Vannatta, Gartsetin, Zeller, & Noll, 2009), and popularity (Lafontana & Gillessen, 2002). Most importantly -- in terms of relevance to the present findings -- it is strongly related to being "desired by girls" among affluent adolescent boys (Luthar et al., 2013; Chase, 2008). Thus, more than envy of peers' attractiveness per se, it may well be envy of peers who are highly desired by girls that we captured in our measure; this latter dimension might well be more salient for boys in a coeducational school than in a same sex one.

With regard to the negative potential ramifications of peer envy for boys' personal adjustment, results of our regression analyses showed unique associations, again, for envy of peers' looks. This variable was significantly associated with internalizing symptoms and with narcissistic exhibitionism among the co-ed boys, and also with externalizing symptoms among all-boys.

These findings make intuitive sense in light of established research evidence from both social and developmental psychology. Individuals are known to compare themselves to those closest to them (Fiske, 2010; Ninivaggi, 2010), and adolescence is naturally a time of heightened self-evaluation. With this in mind, we suggest that affluent boys are likely to be envious of their friends because extrinsic attributes that connote high status, such as looks and wealth, are highly coveted in the material, hypercompetitive culture of affluence. Furthermore, since envy induces both humiliation and anger (Fiske, 2010; Smith, 2008), it is unsurprising that envy was associated with disparate forms of distress across school contexts (Deci & Ryan, 2012).

Limitations/Caveats/Future Directions

The measurement of all parent, peer, and personal dimensions by adolescents' self-report has inherent limitations, which we believe are outweighed by their value in capturing affluent teens' perception of their relationships with their parents and peers, and how these relationships relate to adjustment across various dimensions (see Luthar et al., 2013). Although we could have used teacher or parent reports to capture teens' delinquency and internalizing symptoms, youth self-report are most often used to measure illegal behaviors (www.monitoringthefuture.org; Loeber et al., 1993), as teens are likely to hide illegal activity from parents and teachers. Additionally, adolescent boys are more likely than girls to conceal internalizing distress.

The cross-sectional nature of this work is its most significant limitation, as it prevents any definitive conclusions about the direction of associations reported. For example, it is possible that adolescents' internalizing distress influences maternal depression rather than the other way around.

Our findings attest to the need for future research on different dimensions of narcissism among affluent boys. They may indeed be at more risk on this front as compared to norms, so we need to assess different dimensions of narcissism, including entitlement and exploitation (DSM-IV-TR, 2006; Raskin & Terry, 1988) with well normed instruments (e.g. the Pathological Narcissism Inventory; Pincus et al., 2009).

Future research should attempt to replicate our findings of the relative costs and benefits of attending single-sex versus coeducational private schools across different regions of the country. Studying a new, affluent single-sex population would help us to (a) determine which internalizing and externalizing dimensions of affluent teens' maladjustment generalize to other geographical contexts and (b) explain whether all-boys' low levels of substance use compared to both national norms and our own prior research on affluent youth is a product of the strict substance use policy of the all-boys school surveyed in our sample, or of more far-reaching positive effects of a single-sex school environment (www.theibsc.org, 2013).

In terms of interventions, we echo Luthar and colleagues' (2013) emphasis on the urgent need for more proactive prevention. Affluent schools and communities can hold workshops and lectures that help parents understand the inimical effects of high achievement pressure, notably, parental communications that emphasize the child's "failures to excel," youths' felt detachment from parents, and unacknowledged parental depression. PTA meetings are an ideal setting for parents to gather and discuss these pertinent issues that challenge their children's well being, such as ways to prioritize intrinsic values at home so that boys do not rely on extrinsic markers of success, such as status or appearance, as measures of self-worth (Koplewicz, Gurian, & Williams, 2009). Our findings also suggest the need for single-sex schools, in particular, to hold support groups for fathers, whose ability to establish and maintain supportive relationships with their children seems to be vitally important to their adolescent sons' well-being. Finally, teachers and administrators at prestigious schools would do well to examine the priorities collectively held for their students. Pressures to achieve and pursue 'personal perfection' must be tempered with a school-based commitment to developing the 'whole child', proactively cultivating a balanced sense of self and a value-system that emphasizes personal growth, integrity, and authentic connections with others.

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Figure 1.

The percentage of students reporting substance use in the past month, compared to national norms (2006). National normative data are not available for girls and boys separately.

Figure 2.

Incidence of clinically significant self-reported symptoms among students, as compared to national norms.

Table 1
Description of participating samples

	All-Boys	Co-Ed Boys
Grade	9-11	9-11
# of Boys	144	173
White	75%	76.9%
Black	7.5%	3.5%
Hispanic	2.7%	2.3%
Asian	5.4%	9.2%
Other	2%	3.5%
Biracial/Multiracial	6%	4.6%
Marital Status		
Married	86.5%	85.5%
Separated	3.4%	2.3%
Divorced	5.4%	8.2%
Never Married	2.7%	1.2%
SAT Median Scores		
Reading	740	710
Math	740	700
Writing	750	745

Note: All-Boys, East Coast suburban sample; Co-ed Boys, East Coast urban sample

Table 2

Means (standard deviations) on outcomes and predictors

Variable	All-Boys		Co-ed Boys		F value	Eta sq
	Mean	SD	Mean	SD		
Outcomes						
Internalizing	9.26	0.61	7.96	0.57	2.43	0.00
Externalizing	10.29	0.60	10.59	0.56	0.14	0.00
Substance Use	1.09	2.27	4.95	4.85	78.58***	0.19
Narcissistic Exhibition	2.93	1.55	3.10	1.59	0.61	0.00
Predictors: Parents						
Criticism	9.20	3.78	8.43	3.81	3.33 [‡]	0.01
Mom Depression	0.18	0.21	0.17	0.19	0.36	0.00
Dad Depression	0.13	0.18	0.17	0.21	2.44	0.01
Mom Alienation	3.05	0.68	2.95	0.57	2.32	0.01
Dad Alienation	2.32	0.81	2.17	0.72	3.10 [‡]	0.01
Self-Blame	0.31	0.41	0.41	0.49	2.67	0.01
Predictors: Peers						
Support	2.91	0.66	3.21	0.71	13.90***	0.04
Negative Interactions	1.63	0.61	1.84	0.76	6.93**	0.02
Envy-Looks	0.55	0.52	0.68	0.55	4.24*	0.01
Envy-Wealth	0.26	0.36	0.31	0.39	1.66	0.01
Envy-Popularity	0.68	0.53	0.79	0.53	2.96 [‡]	0.01
Total Envy	10.98	7.41	12.96	7.92	5.06*	0.02

Note:

*** p<001.

** p<.01;

* p<.05;

[‡] p<.10.

Table 3

Intercorrelations among variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Internalizing		0.62**	0.01	0.12	0.29**	0.39**	0.23**	0.49**	0.41**	0.19*	-0.14	0.22**	0.44**	0.31**	0.33**
2. Externalizing	0.48**		0.16*	0.33**	0.21**	0.36**	0.19*	0.45**	0.39**	0.21**	0.14	0.31**	0.39**	0.37**	0.26**
3. Substance Use	0.08	0.48**		0.16*	-0.02	0.03	-0.04	0.10	0.03	-0.03	0.02	0.07	0.09	0.06	0.12
4. Narcissistic Exhibition	-0.02	0.29**	0.29**		0.03	0.15	0.07	0.13	0.15	0.10	0.27**	0.09	0.45**	0.13	0.12
5. Parent Criticism	0.30**	0.39**	0.18*	0.02		-0.01	0.08	0.35**	0.38**	0.35**	-0.03	0.08	0.04	0.19*	0.14
6. Mom Depression	0.44**	0.31**	0.17*	0.21*	0.19*		0.44**	0.30**	0.31**	0.13	0.03	0.13	0.26**	0.43**	0.30
7. Dad Depression	0.37**	0.41**	0.31**	0.13	0.20**	0.66**		0.08	0.40**	0.06	-0.03	0.09	0.13	0.40**	0.18*
8. Mom Alienation	0.49**	0.29**	0.10	0.25**	0.52**	0.29*	0.17*		0.71**	0.46**	-0.07	0.29**	0.33**	0.26**	0.25**
9. Dad Alienation	0.52**	0.50**	0.24**	0.37**	0.50**	0.31**	0.32**	0.81**		0.44**	-0.10	0.22**	0.28**	0.25**	0.30**
10. Self-Blame	0.36**	0.41**	0.32**	0.18*	0.44**	0.19*	0.21*	0.34**	0.43**		-0.02	0.17*	0.21*	0.28**	0.09
11. Peer Support	0.00	0.09	-0.04	0.03	0.03	0.05	0.06	-0.07	-0.03	0.03		0.13	0.05	-0.10	0.07
12. Neg. Peer Interactions	0.17	0.47**	0.04	0.15	0.08	0.11	0.20*	0.09	0.08	0.08	0.13		0.14	0.21*	0.09
13. Envy-Looks	0.34**	0.33**	0.06	0.39**	0.16	0.35**	0.26**	0.24**	0.26**	0.16	0.05	0.14		0.37**	0.67**
14. Envy-Wealth	0.31**	0.37*	0.06	0.13	0.28**	0.43**	0.24**	0.40**	0.26**	0.28**	0.19*	-0.10	0.37**		0.31**
15. Envy-Popularity	0.33**	0.26**	0.12	0.12	0.14	0.30**	0.18**	0.25**	0.30**	0.14	0.07	0.09	0.67**	0.31**	

Note: Correlations for All-Boys are listed in the bottom left half of the diagonal and correlations for Co-ed Boys are listed in the top right half of the diagonal.

**
p<.01;

*
p<.05.

Table 4
Multiple regressions: Relational predictors and boys' outcomes

Predictors	INTERNALIZING		EXTERNALIZING		SUBSTANCE USE		NARC. EXHIBITION	
	All-Boys	Co-Ed	All-Boys	Co-Ed	All-Boys	Co-Ed	All-Boys	Co-Ed
Parent Criticism	0.10	0.14*	0.20*	0.11	-0.01	-0.07	0.14	0.01
Mom Depression	0.26*	0.25**	-0.04	0.23**	0.04	0.09	0.23	0.06
Dad Depression	0.03	0.08	0.23*	0.01	0.33**	-0.08	-0.21	-0.05
Mom Alienation	0.08	0.23*	-0.06	0.16	-0.17	0.18	-0.22	-0.10
Dad Alienation	0.23	-0.05	0.23†	0.00	0.15	-0.02	0.41*	0.20
Self Blame	0.10	-0.10	0.14†	-0.01	0.28**	-0.05	0.15	0.00
Peer Support	0.10	-0.10	0.02	0.24***	-0.10	0.02	0.04	0.26**
Neg. Peer Int.	-0.02	0.07	0.33***	0.24***	-0.04	0.03	-0.02	0.00
Envy-Looks	0.09	0.27**	0.19*	0.14	-0.03	0.07	0.22	0.44***
Envy-Wealth	-0.01	0.20*	0.05	0.13	-0.24	-0.24	-0.05	-0.15
Envy-Popularity	0.13	-0.10	-0.01	0.03	0.11	0.12	-0.09	0.07
Total R2	.43***	.47***	.51***	.45***	.23**	0.07	.23**	.29**

Note:

*** p<001.

** p<.01;

* p<.05;

† p<.10;

* Values in italics appear to be due to suppressor effects, as the statistically significant beta weights are opposite in valence to those in parallel zero-order correlations. Hence, they are not interpreted.