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A Mediational Model Predicting Adjustment in Affluent Adolescents: The Role of Parental Perfectionism, Perceived Parental Pressure, and Organized Activity Involvement

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A MEDIATIONAL MODEL PREDICTING ADJUSTMENT IN AFFLUENT ADOLESCENTS: THE ROLE OF PARENTAL PERFECTIONISM, PERCEIVED PARENTAL PRESSURE, AND ORGANIZED ACTIVITY INVOLVEMENT

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To my friends and family for their love and support and to Dr. Amy Bohnert for her guidance, wisdom, and unwavering confidence in me. All have been instrumental in promoting my personal and professional development, and deserve many thanks.

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ABSTRACT

The current cross-sectional study evaluated the relative contributions of parental perfectionism (i.e., self-oriented, other-oriented, and socially prescribed), perceived parental pressure, and organized activity involvement (i.e., intensity) on depressive symptoms, anxiety, substance use, and life satisfaction in a sample of affluent adolescents. Findings indicated that parental perfectionism, and specifically other-oriented and socially prescribed perfectionism, is an important contextual factor negatively influencing affluent adolescent adjustment. Additionally, perceived parental pressure was found to have robust associations with adolescent adjustment and to explain the link between parental perfectionism and adolescent adjustment. Furthermore, the current study revealed a synergistic association between intensity of organized activity involvement and perceived parental pressure. Results highlighted that affluent adolescents may be differentially impacted by OA involvement, and demonstrated the importance of considering the context perceived parental pressure when examining the extent to which affluent adolescents get involved in OAs and the impact that participation in OAs has on their adjustment.

CHAPTER ONE

INTRODUCTION

Although considerable research during the past century has explored the risks and protective factors influencing adjustment in both middle-class and economically disadvantaged youth and adolescents, similar efforts have not been made with those from affluent families and communities. However, in part prompted by recent media attention on the problems prevalent among affluent youth, researchers have begun to focus on youth growing up in the "culture of affluence" (Cashman & Twaite, 2009; Luthar, 2003). Findings suggest that affluent adolescents, who were once thought to be low-risk, report significantly more depression, anxiety, and substance use than normative samples and their inner-city, economically disadvantaged counterparts (Luthar & Lantendresse, 2005a). As such, additional studies investigating the salient factors influencing adjustment among affluent adolescents is needed (Luthar, 2003).

The current study proposed a mediational model (see Figure 1) to determine why affluent adolescents (10^{th} graders) experience elevated rates of adjustment difficulties. The study aimed to evaluate the relative contributions of parental perfectionism (i.e., self-oriented, other-oriented, and socially prescribed), perceived parental pressure, and organized activity involvement (i.e., intensity) on depressive symptoms, anxiety, substance use, and life satisfaction in a sample of affluent adolescents by examining the fit of the proposed model as well as the direct and indirect effects among these variables. In addition, the proposed model was assessed separately for male and female adolescents.

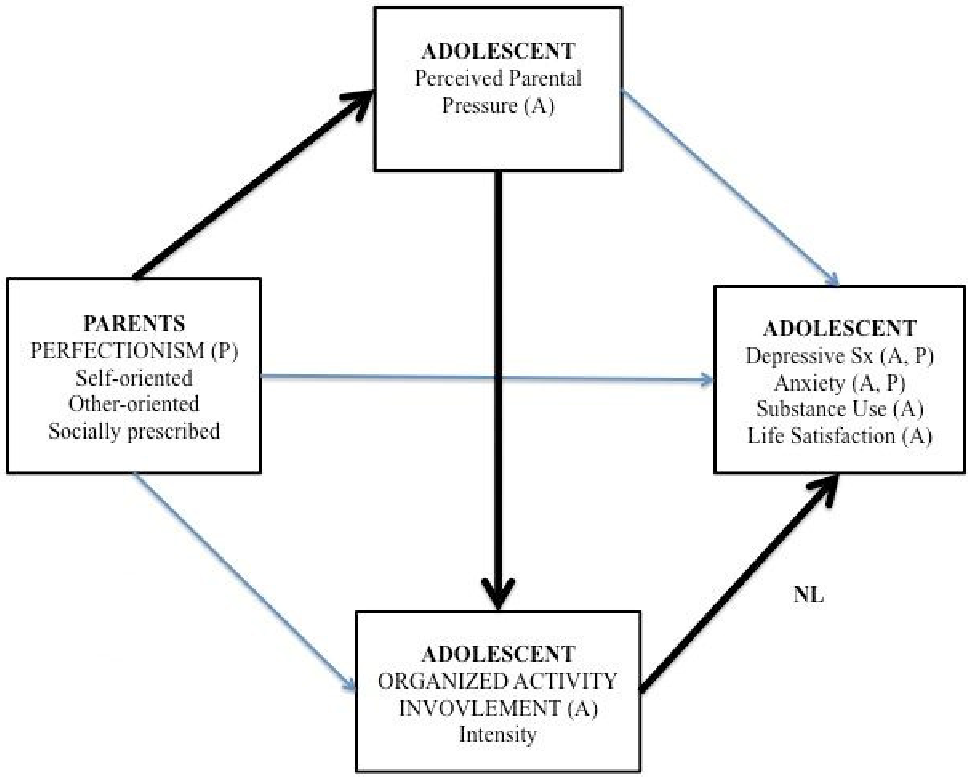


Figure 1. Full mediational model. Bolded/black arrows indicate main pathway proposed to be investigated. NL = nonlinear pathway; A = adolescent report; P = parent report.

Adjustment in Adolescents

Adolescence is a period characterized by transitions, challenges, and changes in the physical, social, intellectual, and emotional domains (Ogul & Gencoz, 2003) and a time when youth may experience various behavioral and emotional difficulties (Graber, 2004). Given that internalizing symptoms (i.e., depressive symptoms, anxiety) and substance use have been identified as common difficulties among adolescents and especially problematic among affluent adolescents (Luthar, 2003; Luthar & Latendresse, 2005a; Luthar, Shoum, & Brown, 2006), these specific adjustment outcomes were selected for investigation in the current study. Affluent adolescent report of their satisfaction with life was also assessed.

Internalizing symptoms. Internalizing symptoms refer to problems or disorders that signify a core disturbance in intropunitive emotion and mood and often include depression and anxiety disorders and the subclinical problems in these areas (Zahn-Waxler, Klimes-Dougan, & Slattery, 2000). Although research suggests that adolescents demonstrate more mood changes than adults and that some moodiness in adolescence is normative (Larson, Csikszentmihalyi, & Graef, 1980), studies indicate that internalizing problems impact up to 20% of children and adolescents in modern communities (Sawyer et al., 2001). More specifically, depressive and anxiety symptoms have been shown to elevate in adolescence, with anxiety often preceding depression (Graber, 2004). Further, although comorbidity rates between anxiety and depression range from 20-50% (Zahn-Waxler et al., 2000), anxiety and depressive disorders/symptoms have been shown to be distinct in presentation and etiological pathways (Moffitt et al., 2007) and were therefore tested separately in the current study.

Internalizing symptoms in affluent adolescents. It has become clear that money does not buy happiness, and that individuals from wealthy, industrialized Western nations are not any more satisfied than those from less advantaged regions (Csikszentmihalyi, 1999). Specifically, using Experience Sampling Methodology (ESM) across three years, Csikszentmihalyi (1999) determined that upper middle-class adolescents reported the lowest levels of happiness and self-esteem while those in the lowest socioeconomic strata reported the highest. Furthermore, despite the resources available in wealthy, suburban communities, research suggests that affluent youth demonstrate adjustment difficulties commensurate with those struggling with economic deprivation, sparse resources, and exposure to violence (Luthar & D'Avanzo, 1999).

A series of studies conducted by Luthar and colleagues (NESSY: The New England Study of Suburban Youth) following a cohort of affluent, suburban youth from 6th grade through high school have uncovered significant internalizing difficulties. One such study demonstrated that overall levels of anxiety are significantly higher among high-SES than in low-SES 10th graders, and that depressive symptoms were marginally higher but not statistically significant in high-SES youth (Luthar & D'Avanzo, 1999). Rates of internalizing symptoms in affluent youth were also shown to be higher than normative levels. Specifically, 20% of 10th grade affluent females reported experiencing depression—a rate three times greater than the national average (Luthar & D'Avanzo, 1999). Likewise, rates of anxiety among affluent boys and girls were also shown to be slightly higher than normative levels (Luthar & D'Avanzo, 1999).

Furthermore, research investigating the developmental trajectory of internalizing difficulties among affluent youth indicates that problems arise and intensify as youth approach adolescence. For example, Luthar and Becker (2002) detected a sharp increase in internalizing symptoms among affluent, suburban youth between the ages of 12 and 13 years. The authors discovered that while the rate of depression in 6th grade boys and girls were at the normative level, the rate of depression among 7th grade girls was twice as high as levels in the normative sample. Furthermore, it has been shown that internalizing problems identified in affluent youth in 10th grade either level off or escalate over time (D'Avanzo, Hites, & Luthar, 2001). For example, D'Avanzo and colleagues (2001) found that levels of depressive symptoms remained generally high from 10th to 12th grade (22% and 19%, respectively), while the incidence of clinically significant anxiety in girls increased from 20% in 10th grade to almost 30% in 12th grade. In sum, research suggests that internalizing symptoms (i.e., depressive symptoms, anxiety) are elevated among affluent adolescents and that these symptoms intensify as they proceed through high school.

Substance use. Along with heightened levels of depressive and anxiety symptoms, adolescence is a developmental period characterized by an elevated risk for experimentation with substances (Chassin et al., 2004). Substance use has been shown to begin in adolescence, with the first intoxication between 7th and 10th grades (Johnston, O'Malley, & Bachman, 2000). Data from the Monitoring the Future (MTF) study, a nationally-based survey, show that adolescent substance use is relatively common by the end of high school, with 54% of 12th graders using some illegal drug (most commonly marijuana) in their lifetime and 73% of high school seniors reporting drinking in the past year (Johnston, O'Malley, & Bachman, 2002). Furthermore, Zoccolillo, Vitaro, and Tremblay (1999) indicated that among adolescents who reported using alcohol more than five times in their lives, 70% of boys and 53% of girls also reported experiencing at least one alcohol-related problem (i.e., going to school drunk). Likewise, of those indicating more than five instances of drug use, 94% of boys and 85% of girls indicated at least one drug-related problem. Notable, 3-4% and 2-3% of adolescents aged 13-16 years were indicated as diagnosable for alcohol and drug use disorders, respectively (Zoccolillo et al., 1999).

Substance use in affluent adolescents. Rates of substance use have also been shown to be particularly elevated among affluent adolescents (Bogard, 2005; Luthar & D'Avanzo, 1999; Luthar & Goldstein, 2008). Data from the MTF study demonstrated that by 12th grade, high-SES youth reported the highest rate of marijuana, cocaine, hallucinogens, ecstasy, anabolic steroids, inhalant, and tranquilizer use (Johnston, O'Malley, & Bachman, 1998). Research indicates that affluent adolescent males are 21% more likely to use illicit drugs than normative samples and 35% more likely than their economically disadvantaged counterparts to abuse alcohol (Luthar & D'Avanzo, 1999). Affluent females similarly show elevated levels, with cigarette and marijuana use nearly twice the normative rate (Luthar & D'Avanzo, 1999; Luthar & Goldstein, 2008; Mesic, 2008). Interestingly, a positive link between substance use and internalizing symptoms has been identified among affluent adolescents (Bogard, 2005; Luthar & D'Avanzo, 1999), suggesting that suburban adolescents use alcohol and other drugs to self-medicate against experienced pressures and related adjustment difficulties (D'Avanzo et al., 2001; Luthar & D'Avanzo, 1999).

Like with internalizing difficulties, a developmental trajectory for substance use among affluent youth has been identified. Findings from Luthar & Becker (2002)'s study indicate that the frequency of substance use tripled from 6th to 7th grade. Furthermore, rates of substance use increased between 10th and 12th grade; approximately 20% more 12th graders than 10th graders reported using marijuana and drinking to intoxication

(D’Avanzo et al., 2001). Additionally, McMahon & Luthar (2006) found that of the subgroup of affluent adolescents reporting multiple problem behaviors (i.e., substance use, delinquency, poor interest in academics), 20% of these students demonstrated continued and persistently high levels of substance use across time.

In sum, findings from prior studies indicate that internalizing difficulties (i.e., depressive symptoms, anxiety) and substance use problems (i.e., marijuana, alcohol, cigarette use) intensify in middle school and continue to elevate as adolescents, and affluent adolescents in particular, proceed through high school.

Life satisfaction. Although the majority of research in psychology has focused on pathology and negative outcomes, there has been a recent move towards investigating factors that contribute to youth’s well-being (Larson, 2000). Low levels of pathological symptoms do not necessarily suggest positive adjustment; as such, it has been recommended to include indicators of psychological health (i.e., life satisfaction) in order to obtain a clear and comprehensive understanding of adjustment among adolescents (Cowen, 1991; Gilman & Huebner, 2003).

Life satisfaction (LS), a global assessment of an individual’s quality of life according to his or her own chosen criteria (Shin & Johnson, 1978), has become a variable of interest in the shift towards positive psychology. LS is conceptualized as the cognitive component of “subjective well-being” (SWB), and is thought to be more stable than the affective component of SWB. LS therefore extends beyond an individual’s response to current life events or mood states (Diener, 1994; Diener, Suh, Lucas, & Smith, 1999; Gilman, 2001).

Despite developmental theories and empirical evidence that point to adolescence as a period laden with emotional difficulties, most children view their lives in a positive light (Huebner, Drane, & Valois, 2000). In a recent study, 73% of 5,544 U.S. adolescents reported being “mostly satisfied” to “delighted” with their lives (Huebner et al., 2000). On the other hand, approximately 11% of adolescents reported that they were “mostly dissatisfied” with life or that life was “terrible.” Early studies indicate that intrapersonal and interpersonal environmental variables rather than demographic variables (i.e., SES) account for the greatest amount of variance in adolescent life satisfaction (Huebner, 1991a, 1991b).

Life satisfaction in affluent adolescents. Few studies have examined the factors associated with life satisfaction in an affluent adolescent population. However, research has indicated that objective conditions such as family income are only weakly correlated with life satisfaction (see Diener & Suh, 1997). Research examining differences in global LS across the socioeconomic spectrum has demonstrated mixed results; findings indicate either no differences in LS by SES or minimally higher levels of life satisfaction reported by high- versus low-SES youth (e.g., Adelman, Taylor, & Nelson, 1989; Ash & Huebner, 2001; Neto, 1993). Assuming a positive psychology perspective, the current study examined the contextual factors that directly and/or indirectly influence positive adjustment (i.e., life satisfaction) among affluent adolescents.

Parental Perfectionism

A large body of research has focused on investigating the important factors influencing adolescent adjustment. Genetics, biology (markers, neurodevelopment, and hormones), family and peer relationships, stress, cognitive processes and personality factors have been identified as important correlates or causative variables. The bioecological model of human development (Bronfenbrenner & Morris, 2006) suggests that both proximal and distal factors interact with individual characteristics to shape development. In other words, development "happens" through a process of moment-to-moment interactions between the individual and his/her surroundings over time (Mahoney, Vandell, Simpkins, & Zarrett, 2009). It is thought that certain aspects of the contextual surrounds may be particularly influential within the culture of affluence (Luthar & Sexton, 2004). For example, Luthar (2003) suggests that an over-emphasis on success is one such "culturally salient stressor," and that perceived parental pressure to succeed is a potential cause of distress among affluent youth (Luthar & Becker, 2002).

Research on the construct of perfectionism has burgeoned over the past 20 years. Although perfectionism was originally presented as a unidimensional concept focusing on self-directed cognitions (Burns, 1980), researchers have since extended the construct by determining which aspects of perfectionism may be considered "normal," "positive," "healthy," or "adaptive" versus "neurotic," "negative," "unhealthy," or "maladaptive." Although dichotomizing perfectionism into adaptive versus maladaptive is common in the literature, the current study utilized Hewitt and Flett's (1991) multidimensional conceptualization of perfectionism which identifies three separate domains: self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism.

Self-oriented perfectionism is defined as perfectionistic demands towards oneself, and often involves exceedingly high, unrealistic, and self-imposed standards accompanied by an intensive self-scrutiny, criticism, and inability to accept flaws and failure in oneself (Hewitt & Flett, 1991). *Other-oriented perfectionism* is self-oriented perfectionism turned outward and involves demanding that others meet ones own exaggerated and unrealistic standards and stringently evaluating others' performance (Blatt, 1995). *Socially prescribed perfectionism* reflects when one perceives perfectionistic demands from others directed towards oneself. This domain involves a preoccupation with evaluations from others and encompasses the belief that other people hold unrealistic expectations that one must meet in order to win their approval (Blatt, 1995; Lundh, 2004).

Perfectionism in affluent parents. Although no known studies to date have explored perfectionism in affluent parents, theory and research suggests that an unrelenting pressure to compete, succeed, and achieve pervades the culture of affluence (Cashman & Twaite, 2009; Luthar & Sexton, 2004; Warner, 2006). The current study proposes that this pressure to be perfect directed onto parents from their current or past contextual surrounds may result in a *socially prescribed perfectionism*. In addition to perceiving pressures from their own parents, it is possible that affluent parents, as Festinger's (1954) social comparison theory suggests, evaluate themselves and their family through comparisons to others in their community rather than by objective standards. Further, parents may internalize external messages to be perfect throughout childhood, adolescence, and adulthood and develop a *self-oriented perfectionism*. The current study investigated the way in which the three distinct domains of perfectionism in affluent parents directly and indirectly influence levels of internalizing symptoms, substance use, and life satisfaction in their adolescent children.

Parental perfectionism and adolescent adjustment. In addition to parents' perfectionistic strivings being related to their own negative psychological functioning (Flett et al., 2002), the current study suggests that perfectionism in affluent parents may also negatively impact adjustment in their adolescent children. Although a number of studies have identified indirect and direct links between parental perfectionism and adjustment difficulties in their children, no research to date has investigated these relations in a sample of affluent parents and adolescents.

Prior research has identified that perfectionism is often "transmitted" across generations and that children suffer as a result. That is, children with perfectionistic parents have been shown to also demonstrate perfectionism and experience concurrent psychological difficulties (Hewitt & Flett, 1991) such as low self-esteem, depression, and suicidality (e.g., Hamilton & Schweitzer, 2000; Yoon & Lau, 2008). For example, Cook and Kearney (2008) found that parental perfectionism was related to their children's self-oriented perfectionism. Although additional findings indicated socially prescribed parental perfectionism was inversely related to sons' internalizing psychopathology (Cook & Kearney, 2008), other researchers have shown that children who host self-oriented and socially prescribed perfectionism also experience higher levels depression and anxiety (Hewitt & Flett, 1991).

Further, some studies indicate that parental perfectionism is directly linked to adolescent adjustment problems. For example, Berlin (1985) found that among a group of women seeking psychological treatment with complaints of excessive self-criticism, most linked their problems to "demanding, perfectionistic parents" (p. 23). Additionally, it has been shown that parents of emotionally troubled adolescents tend hold unrealistic and extreme beliefs related to their child being perfect (i.e., other-oriented perfectionism) (Roehling & Robin, 1986). Studies utilizing a multidimensional conceptualization of perfectionism demonstrate that certain domains of perfectionism tend to be linked to adolescent adjustment. For example, Randolph and Dykman (1998) found that socially prescribed parental perfectionism was linked to a development of dysfunctional attitudes and subsequent proneness to depression among college students.

Perceived Parental Pressure

In addition to assessing if parental perfectionism directly influences adolescent adjustment, the current study proposed a model that aims to determine if affluent adolescents with perfectionistic parents perceive high levels of parental pressure, which is then associated with their adjustment difficulties (see Figure 1). Perceived parental pressure is often conceptualized as the degree to which youth perceive their parents to (a) set high performance standards for them (i.e., evaluation), and (b) be overly critical of their performance after failing to achieve those high standards (i.e., criticism) (Luthar & Becker, 2002; Sagar & Stoeber, 2009; Stoeber, 1998; Stumpf & Parker, 2000).

Parental perfectionism and perceived parental pressure. Surprisingly, few studies to date have examined how parental perfectionism impacts adolescents' perception of parental pressure and no study to date has assessed this link within the culture of affluence. Prior research on individual characteristics of perfectionists, however, points to the likelihood that adolescents may perceive pressure from a perfectionistic parent. Perfectionists often engage in critical self-evaluations and constant self-scrutiny, and then demand others to meet their unrealistic standards (Soenens et al., 2005). In other words, perfectionistic parents may “project the wishes and norms that they feel unable to achieve themselves onto their children, and then critically evaluate the behaviors of their children and induce guilt when norms are not met” (Soenens et al., 2005, p. 359.). Likewise, Missildine (1963) suggests that perfectionistic parents not only belittle their own accomplishments but also find it difficult to accept and reward their children’s efforts. Thus, rather than approving their children’s behavior, perfectionistic parents may constantly push them to do better.

Studies assessing the transmission of perfectionism from parents to children support that perfectionistic youth do in fact perceive pressure from their perfectionistic parents. For example, in a cross-sectional study of college-aged females and their parents, daughters who were concerned about their own mistakes and failures perceived that their perfectionistic parents set high expectations and were highly critical of them (Frost, Lahart, & Rosenblate, 1991). Studies using a multidimensional conceptualization of perfectionism indicate similar findings. Research suggests, for example, that parents who exhibit high levels of socially prescribed perfectionism are perceived by their children as highly critical, unsupportive, and unable to acknowledge their needs while parents with high levels of other-oriented perfectionism were perceived to be highly controlling (Randolph & Dykman, 1998; Wintre & Sugar, 2000). These findings suggest not only that parents with high levels of perfectionism are perceived as exerting pressure on their children, but also that the nature of pressure depends on the type of perfectionism.

Clinical accounts indicate that affluent adolescents in particular experience intense and relentless pressure to achieve, which begins at a young age with parental expectations that their children succeed in school and then move onto to prestigious jobs (Cashman & Twaite, 2009; Rosenfeld & Wise, 2000). In line with other-oriented perfectionism, affluent parents have been said to mistake their own ambitions for their children's, and then push their children participate in activities and academics at high levels despite their children feeling unable or unmotivated to do so (Mesic, 2008). Therefore, in the culture of affluence, anything less than adolescent fulfilling expectations of perfection may be considered a failure and potentially criticized by his/her parent.

Empirical research with affluent adolescents has corroborated these clinical accounts. More specifically, Luthar & Latendresse (2005b) demonstrated that adolescents' perceptions of parental pressure, namely criticism and evaluation, were positively linked with parents' valuing their children's success rather than personal integrity, suggesting that critical and evaluative parents assume a goal- versus process-orientation towards achievement. Related, research indicates that perfectionistic parents tend to focus more on their children's achievements than on the process of learning (Flett et al., 2002).

Interestingly, although Luthar and colleagues (2005b) found that there was a subgroup of children in both low- and high-SES communities who perceived their parents to be highly critical and emotionally distant, it was only among the affluent adolescents that a higher level of perceived parental criticism and expectation was linked to parents' emphasis on personal success rather than personal integrity. Alternatively, levels of criticism and expectations were unrelated to low-SES parents' achievement values. Thus, although low-income youth may benefit from high parental expectations to motivate them to pursue academic success, affluent adolescents may suffer because they perceive that parents are expecting perfect performance and are critical of anything less.

Perceived parental pressure and adolescent adjustment. As adolescence is a developmental period characterized by increases in self-consciousness and a growing sensitivity to social standards and achievement expectations, it is likely that perceived parental pressure impacts adolescent adjustment (Flett et al., 2002). The parent-child relationship is often implicated as an important contextual factor influencing internalizing difficulties in adolescents (Hudson & Rapee, 2001; Rapee, 1997; Renshaw, 2008), and findings consistently support that adolescents who experience high levels of life stress (i.e., perceived parental pressure) are more likely to use alcohol and/or drugs (Chassin et al., 2004). More specifically, numerous studies indicate that perceptions of parental criticism and exceedingly high parental expectations, both key elements in the concept of parental pressure (Luthar & Becker, 2002; Sagar & Stoeber, 2009; Stoeber, 1998; Stumpf & Parker, 2000), are related to the development of psychological disorders (Biran & Reese, 2007; Renshaw, 2008). The current study investigated whether perception of parental pressure is linked to high levels of internalizing symptoms and substance use and low levels of life satisfaction in a sample of affluent adolescents. Of note, the majority of research studying adjustment outcomes related to adolescents' perception of parental pressure has focused on internalizing symptoms, and particularly depression, rather than risk behaviors such as substance use and indicators of positive adjustment such as life satisfaction.

Several studies have demonstrated that perceived parental pressure is related to depressive symptoms and somatic complaints in youth, adolescents, and college students (Neumeister, 2004; Stoeber & Rambow, 2007). Research suggests that parents who are more critical tend to have children who later develop a self-criticizing voice (Clark & Coker, 2009), resulting in increased depressive symptoms (Blatt, 1974). For example, Yoon and Lau (2008) found that Asian American college students' perception of high parental expectations and criticism was related not only to their own perfectionism, but also directly to their depression. Further, Renshaw (2007) found that perceived criticism by family members predicted a worsening of depressive symptoms over the course of 2-3 weeks among undergraduate students with at least mild depressive symptoms at the start of the study.

Fewer studies have investigated the link between perceived parental pressure and adolescents' anxiety symptoms, substance use, and life satisfaction. Related to anxiety, research shows that perceived parental pressure is associated with youths' fears of upsetting important others and having an uncertain future (Sagar & Stoeber, 2009). Further, in examining the efficacy of exposure therapy for individual with anxiety disorders, Chambless and Steketee (1999) demonstrated that higher pre-treatment ratings of perceived criticism was the only predictor of less improvement in self-reported anxiety symptoms post treatment. Fals-Steward and colleagues (2001) have published the only known study to date of perceived criticism in a sample of individuals with substance use problems. The researchers found that higher pre-treatment scores of perceived criticism (from their romantic partners) was linked to higher rates of relapse, shorter time to relapse, and lower percentage of days abstinent among men participating in behavioral couples therapy.

Although no study to date has examined the specific link between perceived parental pressure and life satisfaction (LS), studies have investigated the association between LS and related parenting practices and styles. For example, unengaged parenting is negatively related to LS (Gilman & Huebner, 2003; Petito & Cummins, 2000) while components of an authoritative parenting style (specifically instrumental and emotional social support") are associated with increased levels of LS (Park, 2004; Stevenson, Maton, & Teti, 1999; Young, Miller, Norton, & Hill, 1995). Furthermore, prior studies investigating family and school factors impacting life satisfaction in Chinese high school students indicated that adolescents' relationship with their parents was the strongest predictor of adolescent report of life satisfaction (Leung & Leung, 1992), and that adolescents' satisfaction with their family was the largest contributor to overall ratings of life satisfaction (Gilman, Huebner, & Laughlin, 2000**)**. Studies also indicate that when adolescents do not perceive themselves as fulfilling parental standards or expectations, essential components of the concept of perceived parental pressure, they also report lower levels of life satisfaction (Oishi & Sullivan, 2005).

Specific to the culture of affluence, it is hypothesized that very much like their parents, affluent youth experience and internalize external pressures for perfection. Clinical reports suggest that parents are one source of evaluative and critical pressure, and that affluent youth commonly feel as though their accomplishments are unimpressive and never good enough (Cashman & Twaite, 2009). Recent empirical studies support this suggestion, demonstrating that achievement pressure from parents is significantly associated with distress among affluent youth (Ablard & Parker, 1997; Luthar & Becker, 2002). For example, Luthar and Becker (2002) found that affluent adolescents, and girls in particular, who perceive that their parents emphasize their achievements more than their personal well-being report higher levels of internalizing symptoms. Further, affluent adolescents who then began to set these excessively high standards for themselves did not confer any benefits in terms of academic achievement but were shown to experience greater emotional distress (i.e., composite measure of depressive symptoms and anxiety scores) and demonstrate higher levels of delinquency (Luthar & Becker, 2002). In fact, adjustment problems have been shown to be worst amongst affluent adolescents who are low-achieving and thus unable to satisfy parental expectations (Ansary & Luthar, 2009).

To extend studies focusing on the relations between affluent adolescents' perception of parental achievement pressure and adjustment outcomes, Luthar and Latendresse (2005b) investigated how perceived parental criticism and expectation in particular were associated with adolescent adjustment. The researchers demonstrated that affluent youth who perceived high levels of parental criticism were increasingly vulnerable to negative adjustment outcomes (Luthar & Lantendresse, 2005b), with affluent girls particularly sensitive to perceptions of parental criticism. Importantly, although both perceived parental criticism and expectations were found to be positively correlated, (Luthar & Latendresse, 2005b; McArdle & Duda, 2004), parental criticism was deemed a salient risk factor among these youth whereas parental expectations was not found to be clearly negative nor positive in influencing internalizing or externalizing symptoms (Luthar & Latendresse, 2005b).

In sum, given these findings, the current study extends prior research by examining the direct relation between parental perfectionism and adolescent adjustment as well as the indirect relation through perceived parental pressure.

Organized Activity Involvement

The proposed full mediational model (see Figure 1) suggests that in addition to perceived parental pressure, parental perfectionism and adjustment may also be indirectly associated via affluent adolescents' involvement in organized activities. Specifically, the current study posits that high levels of parental perfectionism will be associated with affluent adolescents' highly intense involvement in organized activities (i.e., "resume building"), which will then be linked to adolescents' experiencing high levels of depressive symptoms, anxiety, and/or substance use and low levels of life satisfaction.

Following the lead of other researchers in the field (i.e., Mahoney, Larson, Eccles, & Lord, 2005), the current study will operationalize *organized activities* (OA) as those that are structured, adult-supervised, constructive, voluntary, take place during after-school-hours, and are school- or community-based. Many early studies assessed activity involvement as a dichotomous variable, comparing outcomes between those individual involved in at least one OA and those who are not involved (see Mahoney & Cairns, 1997; Mahoney, Schweder, & Stattin, 2002 for examples). However, recent studies have begun to measure participation using various indices including *intensity* of OA involvement.

Although there is no consensus, researchers suggest that intensity is best captured by using a score that reflects the total number of hours per week engaged either across all activities or in a particular type of activity (Bohnert, Fredricks, & Randall, 2010); however, some studies define intensity of involvement as the “total number of activities” rather than total number of hours per week. Prior research indicates that intensity is a unique construct that captures specific features of youth’s participation experiences (Busseri, Rose-Krasnor, Willoughby, & Chalmers, 2006; Denault & Poulin, 2009a; Fredricks & Eccles, 2006b; Rose-Krasnor, Busseri, Willoughby, & Chalmers, 2006). Specifically, greater intensity of OA involvement has been shown to provide youth with an opportunity to develop strong relationships with peers and adults (Bohnert, Aikins, & Edidin, 2007) as well as hone teamwork skills , and emotional regulation abilities (Hansen & Larson, 2007).

Organized activity involvement and adolescent adjustment. The majority of prior work investigating the influence OA involvement has on adolescent adjustment points its advantages. However, there is some suggestion that participation in OAs may differentially impact development for high- versus low-income youth and that negative outcomes may result when youth become involved at very levels (Mahoney, 2000;

Marsh, 1992; Marsh & Kleitman, 2002). More specifically, although youth from affluent families are more likely to become involved in OAs (Huebner & Mancini, 2003; Pedersen & Seidman, 2005) and participate with greater intensity once they get involved (Bartko & Eccles, 2003; Fredricks & Eccles, 2006a; Markstrom, Li, Blackshire, & Wilfong, 2005), research commonly indicates that the benefits of OA participation are greatest for low-income, disadvantaged youth (Mahoney, 2000; Mahoney & Cairns, 1997; Marsh, 1992; Marsh & Kleitman, 2002). Further, a few studies have identified non-linear relations between intensity and adjustment outcomes, indicating that youth involvement in OA at a very high level (i.e., 15-25 hours per week) can result in compromised academic performance (Marsh & Kleitman, 2002) and high levels of internalizing symptoms (Randall & Bohnert, 2009) and substance use (Rose-Krasnor et al., 2006).

Concerning the culture of affluence, researchers, pediatricians, and clinicians posit that affluent youth are exposed to an "after-school pressure cooker" (Gilbert, 1999), overbooking their schedules with organized activities in an effort to secure admittance to competitive colleges (Luthar & Becker, 2002; Luthar & D'Avanzo, 1999; Luthar et al., 2006). Furthermore, as proposed in the "over-scheduling hypothesis" (see Mahoney, Harris, & Eccles, 2006), it is thought that affluent youth are often over-involved to such a degree that they suffer from stress-related problems such as stomachaches, headaches, and insomnia as well as psychological difficulties such as depression and anxiety (Luthar & Sexton, 2004). Thus, the current study sought to determine if a non-linear relation better describes the link between OA involvement and adjustment in affluent adolescents and will present non-linear findings in the following discussion when possible.

OA and internalizing symptoms. Although adolescents have been shown to experience elevated rates of depressive and anxiety symptoms (Graber, 2004), the majority of research on OA involvement has focused instead on academic achievement and externalizing symptoms as outcomes (i.e., Darling, 2005; Eccles & Barber, 1999; Eccles et al., 2003; Mahoney, 2000; Mahoney et al., 2003; Youniss, McLellan, Su, & Yates, 1999). Interestingly, of the studies that examine psychological outcomes, most assess internalizing symptoms in general or just depressive symptoms and few known studies to date have examined how OA participation impacts levels of anxiety in youth and adolescents. Furthermore, findings from research investigating the influence of OA participation has on internalizing symptoms is mixed.

Specifically, there is a lack of consensus on how intensity of OA participation influences adolescent internalizing symptoms. Some studies indicate that more intense participation is associated with lower levels of internalizing symptoms. For example, Bartko and Eccles (2003) demonstrated that uninvolved adolescents reported more depressive symptoms than highly involved adolescents. Likewise, longitudinal findings indicate that more intense involvement, measured by total number of activities (Bohnert, Kane, & Garber, 2008) and frequency of participation (Ripke, Huston, & Casey, 2006) predicted fewer internalizing symptoms in middle- and high-school aged youth. Specific to sport involvement, several studies indicate that high intensity predicts fewer depressive symptoms years later (Fredricks & Eccles, 2005; McHale, Crouter, & Tucker, 2001;

Simpkins, Fredricks, Davis-Kean, & Eccles, 2006). However, numerous cross-sectional and longitudinal studies have failed to detect a significant relation between intensity of OA involvement and internalizing problems, depressive symptoms, and social anxiety (i.e., Darling, 2005; Melman, Little, & Akin-Little, 2007; Rose-Krasnor et al., 2006).

There is some indication that non-linear relations may better explain the link between intensity of OA participation and internalizing symptoms and thus clarify why studies using linear analyses result in mixed findings. For example, Randall and Bohnert (2009) detected a non-linear (U-shaped) relation between intensity of involvement (average number of hours per week spent in OA) and depressive symptoms, with depressive symptoms highest among adolescents who were either under- or over-involved in OA. However, Bohnert and Garber (2007) were unable to identify non-linear trends between the number of activities adolescents participated in and their levels of internalizing and externalizing symptoms. The current study posited that a non-linear relation (U-shaped) may best capture the association between intensity of OA participation and depressive symptoms and anxiety in affluent adolescents. That is, it is hypothesized that depressive symptom and anxiety levels will be highest among affluent adolescents who are either not involved or very intensely involved in OA (i.e., 20 or more hours per week).

OA and substance use. Although it is well documented that OA participation is related to fewer risky behaviors and externalizing problems such as smoking, marijuana use, and delinquent and antisocial behaviors (Barber, Eccles, & Stone, 2001; Darling, 2005; Eccles & Barber, 1999; Eccles et al., 2003; Mahoney, 2000; Mahoney et al., 2003;

Youniss et al., 1999), findings from research investigating the link between intensity of involvement and substance use are more mixed. Some studies indicate that more intense participation in OA is associated decreases in substance use. In a longitudinal study examining the links between OA participation and externalizing and internalizing symptoms (while controlling for prior symptoms), Bohnert and Garber (2007) demonstrated that greater intensity (total number of activities) was associated with lower levels of externalizing symptoms, tobacco use, and substance use among 12th graders. Conversely, there is also evidence that OA participation may be linked to higher rates of substance use and risk behaviors at higher intensity of involvement. For example, Busseri and colleagues (2006) found that greater intensity was linked to increased risk behaviors over time.

Although beyond the scope of the current review, it is important to note that research suggests that the relation between intensity of OA participation and risk behaviors varies by type of activity (Duncan, Duncan, Strycker, & Chaumeton, 2002; Fredricks & Eccles, 2005; Ripke et al., 2006; Rose-Krasnor et al., 2006) as well as by gender of the participant (Linville & Huebner, 2005). For example, Luthar and colleagues (2006) found that more time in academically-oriented activities was related only to girls' delinquency and substance use and more time spent in sports was linked to higher levels of risk behavior including substance use (Bartko & Eccles, 2003; Fauth, Roth, & Brooks-Gunn, 2007).

However, it may be the case that involvement in OA is linked to decreases in substance use only up to a certain threshold level of participation, perhaps clarifying the inconsistent findings among studies utilizing linear analyses. Significant non-linear findings (i.e., inverted U-shaped) have indicated diminishing returns at extreme levels of participation, with more intense participation related to more illicit substance use than moderate participation (Marsh & Kleitman, 2002). Likewise, Mahoney et al. (2006) demonstrated that higher intensity of OA participation was linked to less cigarette use but that adolescents participating in 25 or more hours of OA per week drink more alcohol than those with more moderate participation (5-15 hr/week) but not more than non-participants. Furthermore, in a sample of affluent youth, Luthar et al. (2006) indicted that girls with extremely high level of involvement (as compared to medium and low levels) showed elevated levels of substance use. Thus, the current study posited that a non-linear relation (U-shaped) may best capture the association between intensity of OA participation and substance use in affluent adolescents. That is, it hypothesized that substance use levels will be highest among affluent adolescents who are either not involved or very intensely involved in OA (i.e., 20 or more hours per week).

OA and life satisfaction. Despite the movement toward a positive youth development perspective, little research to date has examined relations between participation in organized activities and adolescent report of life satisfaction. However, research has demonstrated that participation in OAs influences positive outcomes such as competence, engagement, positive affect, and positive changes in self-esteem (Bohnert, Richards, Kolmodin, & Lakin, 2008; Larson, 2000; Linver, Roth, & Brooks-Gunn, 2009; Marsh, 1992). Of the few studies investigating life satisfaction as an outcome variable related to involvement in OAs, Maton (1990) demonstrated a positive and significant association between OA involvement and life satisfaction among adolescents. Likewise, another study exploring the impact of frequency of OA involvement (defined as the total number of organized activities since enrolling in high school and then categorized in "low," "medium," and "high" frequency group) on adolescent report of life satisfaction (Gilman, 2001), indicated that the highly involved group reported higher levels of school satisfaction. However, ratings of global life satisfaction or satisfaction with family, friends, living environment was not found to be different from the "low" and "medium" involved groups. It is thought that the link between organized activity participation and increases in life satisfaction is mediated by social interaction with peers and important adults (Park, 2004).

Parental perfectionism and organized activity involvement. Although numerous studies have examined relations between OA involvement and adolescent adjustment, no study to date has considered if parental perfectionism directly impacts the intensity of participation. However, parenting practices have been identified as instrumental in adolescents' discretionary time-use choices (Bohnert et al. 2007; Eccles et al., 1983). For example, some studies have found that parental psychopathology (i.e., maternal depression) negatively impacts the degree to which youth are involved in OA (i.e., lower intensity) (Bohnert et al., 2007). Conversely, children with parents who believe that OAs are important for youth development (Fredricks, Simpkins, & Eccles, 2005) and support their child's participation (Anderson, Funk, Elliot, & Smith, 2003; Fletcher, Elder, & Mekos, 2000; Huebner & Mancini, 2003), and who themselves become involved in adult-based activities (thus modeling participation) (Denault & Poulin, 2009b) have children who tend to be more highly involved in OA.

Furthermore, the concepts of “achievement by proxy distortion” (Tofler, Knapp, & Drell, 1998; Tofler, Knapp, & Drell, 1999) and “reverse dependency” (Smoll & Cummings, 2006) may provide insight on how parental perfectionism can influence youth OA involvement. Similar to the way parents’ *other-oriented perfectionism* may manifest, achievement by proxy distortion refers to when a parent places his/her child in a potentially exploitive situation (i.e., training for an elite sport) so that the parent can satisfy his/her own conscious or unconscious needs for achievement (Tofler et al., 1998). Likewise, Smoll and Cummings (2006) suggest that a subset of parents may be motivated by reverse dependency such that their reliance on their children’s success in OA leads them to become intrusive in such a way that impedes youth’s autonomous choices (i.e., involvement in organized activities). Thus, although the relation between the various domains of parental perfectionism and adolescent’s OA involvement has not been explored, there is reason to hypothesize that these constructs are related, particularly in an affluent sample. As such, the current investigation aimed to address a gap in the literature by assessing if perfectionism among affluent parents directly influences their adolescents’ intensity of organized activity involvement. However, as described in following section, the current study also explored whether the relation between parental perfectionism and OA involvement is indirect through perceived parental pressure.

Perceived parental pressure and organized activity involvement. The current study aimed to assess links between several variables included in the proposed meditational model (see Figure 1). In particular, the investigation will evaluate if 1) parental perfectionism and adolescent OA involvement are indirectly linked through perceived pressure and 2) perceived parental pressure and adolescent adjustment are indirectly linked through intensity of adolescent OA involvement.

Although no known study to date has assessed specifically how perceived parental pressure (i.e., criticism and evaluation) directly impacts intensity of adolescents' OA involvement, clinicians and researchers suggest that perceived parental pressure to be perfect may influence the reasons for and extent of youths' participation in OA. Counter to research indicating that parents' encouragement, warmth and support is associated with more involvement in OA (Anderson et al., 2003; Fletcher et al., 2000; Leff & Hoyle, 1995; Lewko & Ewing, 1980), perceived parental pressure has strong and consistently positive links with youths' extrinsic rather than self-determined, autonomous reasons for OA involvement (Stoeber & Eismann, 2007). Additionally, affluent adolescents with perfectionistic parents who emphasize success rather than personal integrity and who rely on their children to satisfy their needs for achievement may perceive parental pressures to resume build and thus become very highly involved in OA. Therefore, it is likely that parental perfectionism and intensity of adolescent OA involvement (i.e., high involvement) are indirectly associated through perceived parental pressure.

Furthermore, the current study sought to determine if perceived parental pressure and affluent adolescent internalizing problems, substance use, and life satisfaction are indirectly associated through OA involvement. Although research has not yet investigated this proposed indirect relation, a number of studies point to its feasibility by indicating that when youth perceive external pressures related to their OA involvement, they tend to reap fewer benefits from participation. For example, it has been shown that elite athletes who perceive higher levels of pressure from their parents enjoy the sport less and engage in more negative self-evaluation (Brustad, 1988; Hellstedt, 1990). Further, it has been found that parental pressure in the context of competitive sports and academics is related to various negative developmental outcomes including somatic complaints, negative self-concept, feelings of failure and inadequacy, and anxiety (Brustad, 1988; Feltz & Albrecht, 1986; Gould, Horn, & Spreeman, 1983; Scanlan, Stein, & Ravizza, 1991; Smith, Zingale, & Coleman, 1978). As such, it is possible that youth who become involved in OA as a result of perceived parental pressures and presumably participate in the context of perceived parental pressure may experience adjustment difficulties as a result.

Specific to affluent adolescents, studies investigating the relation between OA involvement and adjustment have highlighted that perceived parental pressure is an important factor to consider. In fact, Luthar and colleagues (2006) suggest that extreme involvement in OA (i.e., over-scheduling hypothesis) among affluent youth may be a “scapegoat for the ‘ubiquitous achievement pressures’” (p. 583). In other words, the researchers detected limited support for the negative effects of over-scheduling in high-SES youth and instead discovered that when parents’ attitudes toward achievement were considered, links between OA involvement and adolescent outcomes reduced in strength. Furthermore, although the small cluster of affluent youth with a distinctively high level of OA involvement did not differ from the normative sample in terms of developmental outcomes, results indicated that affluent youth characterized by high levels of perceived parental criticism and expectations reported higher internalizing symptoms and substance use as well as lower grades (Luthar et al., 2006).

Thus, although the above findings suggest that perceived parental pressure is a better predictor of adjustment problems among affluent youth than high levels of OA participation, the current study posited that when adolescents become more involved in OA, specifically within the context of high levels of perceived parental pressures, they will experience elevated depressive symptoms, anxiety, substance use, and lower levels of life satisfaction.

Proposed Mediational Model

Overall, the current study aimed to examine a determine if affluent youth with perfectionistic parents perceive high levels of parental pressure, which is associated with high involvement in OA, and linked to adjustment difficulties (see bolded arrows in Figure 1). Furthermore, the current study sought to determine if female or male adolescents are more sensitive to the influence of parental perfectionism, perceptions of parental pressure, and high intensity of OA involvement.

Gender. Specifically, gender was evaluated as a moderating variable in the current study by testing the full proposed meditational model separately for adolescent females and males. Assessing the model separately by gender is important for several reasons. First, there is evidence of gender differences through development. Namely, females demonstrate less psychopathology than boys, but by adolescence, girls but not boys show a marked increase in anxiety and mood disorders/symptoms (Zahn-Waxler et al., 2000). Second, given the likelihood of greater participation by mothers in the current study along with the fact that prior research indicates that females may be particularly susceptible to maternal perfectionism and perceive more pressure from mothers (Besharat, 2003; Frost et a al., 1991; Vieth & Trull, 1999) the proposed model was thought to fit best for female adolescents. Last, gender differences have been detected in levels of OA involvement (i.e., Rose-Krasnor et al., 2006) and OA involvement has been shown to differentially impact adjustment among male versus female participants. For example, Fredricks and Eccles (2006a) found that gender moderated the relation between participation (in school clubs) and alcohol and marijuana use, with male participants demonstrating lower levels of use while no differences were detected between female participants and nonparticipants. Given that gender has been shown to moderate several of the pathways included in the proposed model, the current study examined whether the fit of the proposed full mediational model differs for male and female adolescents.

Summary and Study Aims

The current study seeks to determine how the culturally and contextually salient factors of parental perfectionism, perceived parental pressure, and organized activity involvement directly and indirectly impacts affluent adolescents' adjustment (see Figure 1). Although significant relations between adolescent adjustment and the various independent and mediating variables included in the model have been identified, no study to date has examined how all of the included factors interact to influence levels of depressive symptoms, anxiety, substance use, and life satisfaction in affluent youth.

In order to provide information about the mechanisms by which affluent adolescents begin to demonstrate heightened internalizing problems and substance use and report lower levels of life satisfaction, the following specific aims were addressed: (1) Test the proposed full mediational model (see bolded arrows in Figure 1) to understand the relations between parental perfectionism, adolescent perceived parental pressure, and intensity of organized activity involvement as they influence affluent adolescents' internalizing symptoms, substance use, and life satisfaction. The fit of the proposed model (see bolded arrows in Figure 1) was examined for each domain of parental perfectionism (self-oriented, other-oriented, socially prescribed perfectionism), and each adjustment outcome (depressive symptoms, anxiety, substance use, and life satisfaction). The study also assessed if the fit of the model differs for adolescent females and males. (2) Examine the indirect effects among all included variables.

Questions and Hypotheses

Three-factor model of parental perfectionism. Research Question 1 was, Does a measurement model consisting of 3 correlated factors for perfectionism (self-oriented, other-oriented, socially prescribed perfectionism) provide a good fit of the data? Does it provide a better fit of the data than a one-factor model of perfectionism? It was hypothesized that a three-factor model of parental perfectionism, consisting of self-oriented, other-oriented, and socially prescribed perfectionism, would provide a good fit of the data as well as a better fit than a one-factor model of perfectionism.

Non-linear relation between OA intensity and adjustment. Research Question 2 was, Is the association between OA intensity and adjustment better described by a non-linear versus linear relation? It was hypothesized that a non-linear relation between OA intensity and adjustment would be significant, such that depressive symptoms, anxiety, and substance use levels are highest and life satisfaction lowest among affluent adolescents who are either minimally involved or extremely intensely involved in OAs.

Direct relation. Research Question 3 was, What is the relation between parental perfectionism and adolescent adjustment in an affluent sample? It was hypothesized that higher levels of parental perfectionism (other-oriented and socially prescribed in particular) would be associated with increased levels of adolescent adjustment difficulties, including higher levels of depressive symptoms, anxiety, and substance use and lower levels of life satisfaction.

Indirect pathways. Research Question 4 was, Is parental perfectionism indirectly related to adolescent adjustment through perceived parental pressure? It was hypothesized that higher levels of parental perfectionism (other-oriented and socially prescribed in particular) would be linked to increases in perceived parental pressure, which would be negatively associated with adolescent adjustment, including higher levels of depressive symptoms, anxiety, substance use and lower levels of life satisfaction.

Research Question 5 was, Is parental perfectionism indirectly related to adolescent adjustment through intensity of organized activity involvement? It was hypothesized that higher levels of parental perfectionism (other-oriented and socially prescribed in particular) would be linked to OA involvement (higher intensity), which at very high levels (non-linear) would be negatively associated with adolescent adjustment, including higher levels of depressive symptoms, anxiety and substance use and lower levels of life satisfaction.

Research Question 6 was, Is parental perfectionism indirectly related to intensity of organized activity involvement through perceived parental pressure? It was hypothesized that higher levels of parental perfectionism (other-oriented and socially prescribed in particular) would be associated with higher levels of perceived parental pressure, which would be linked to very high levels of involvement in organized activities.

Research Question 7 was, Is perceived parental pressure indirectly related to adolescent adjustment through intensity of organized activity involvement? It was hypothesized that higher levels of perceived parental pressure would be linked to OA involvement (higher intensity), which at very high levels (non-linear) would be negatively associated with adolescent adjustment, including higher levels of depressive symptoms, anxiety and substance use and lower levels of life satisfaction.

Proposed full mediational model. Research Question 8 was, Is the proposed full meditational model a good fit? The current study hypothesized that the proposed full mediational model (see bolded arrows in Figure 1) would be a good fit for explaining the impact of adolescents' perceptions of parental pressure and involvement in organized activities on the relation between parental perfectionism and adjustment in affluent adolescents. Namely, it was hypothesized that higher levels of parental perfectionism (other-oriented and socially prescribed in particular) would be associated with higher levels of perceived parental pressure, which would be linked to very high involvement in organized activities (non-linear relation), which would be negatively associated with adolescent adjustment (i.e., high levels of depressive symptoms, anxiety, and substance use, and low levels of life satisfaction).

Gender. Research Question 9 was, Does the proposed full meditational model fit better for male versus female adolescents? The current study hypothesized that the proposed full meditational model (see bolded arrows in Figure 1) would fit better for female adolescents than for male adolescents.

CHAPTER TWO

METHOD

Participants

Participants included 123 (53 males; 40%) adolescents and 127 parents from four high schools in affluent communities in the Northeast and Midwest. Of note, the current study considered only complete adolescent-parent dyads and thus used data from families that had both an adolescent and at least one parent complete the survey. The analytic sample included 88 parent-child pairs. Within the analytic sample, 80 mothers and 28 fathers completed the parent survey, and both parents participated in 20 families. Thus, analyses include the following parent-child pairs: 60 mother-child, 8 father-child, and 20 mother/father-child. Table 1 presents data regarding the number of students in each participating school's 10^{th} grade class, and the number who returned consent forms, responded "yes" (consented) and "no" (declined) to participation, and the number of completed surveys by mothers, fathers, adolescents, and adolescent-parent dyad participants.

In the analytic sample, 35 adolescents were male and 53 were female (*M* age = 15.56, *SD* = 0.37). Adolescents were 86% Caucasian, 5% African American, and 9% Asian American. Of parents who reported their highest level of education (n = 84) and using the status of the more educated parent in families with two participating parents, 1% of parents graduated high school, 7% completed some college, 30% graduated

Table 1. Number of returned consents, declined, consented, and completed mother, father, adolescent, and adolescent-parent surveys by school

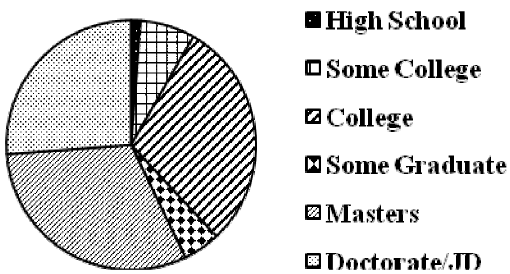
	School 1	School 2	School 3	School 4
	BBHS	FPHS	NNHS	AHS
1	(*n* = 36)	(*n* = 29)	(*n* = 18)	(*n* = 5)
Total class size	106	82	458	447
Returned consents	86	74	45	10
Declined	28	23	15	0
Consented	58	51	30	10
Completed mother survey	36	29	20	7
Completed father survey	13	11	7	0
Completed adolescent survey	55	38	21	7
Completed adolescent-parent day survey	36	29	18	5

college, 5% completed some graduate school, 31% received a Master's degree, and 26% obtained a Doctorate/JD degree. Twelve percent of parents/families who reported family annual income (n = 67) reported earning under \$100,000 per year, 71% between \$100,000 and \$500,000, 12% between \$500,000 and \$900,000, and 5% \$1,000,000 or more (see Figure 2).

The analytic sample was similar to the original sample in terms of demographics, including age (M age = 15.54, SD = 0.38), ethnicity (i.e. 86% Caucasian, 3% African American, 2% Hispanic/Latino, and 9% Asian American), and annual income (i.e. 15%

under $100,000 per year, 64% between $100,000 and $500,000, 14% between $500,000 and $900,000, and 7% $1,000,000 or more).

Parental Education



Family Income

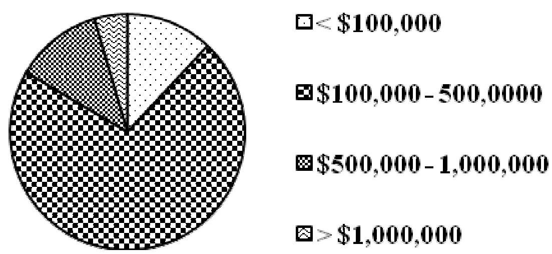


Figure 2. Highest level of parental education and family income in analytic sample (by percentage).

Participants were recruited during the Fall semester of 10th grade and the inclusion criteria used to select affluent communities/schools to participate in this study were based on prior studies with this population (see Luthar & Goldstein, 2008; Luthar et al., 2006). Using census data provided by city-data.com (US Census Bureau, 2008), schools were selected from schools in townships with 1) a median annual family income at or above $100,000 and 2) 25% or more of adults with a graduate degree. Further, participating families were required to have one adolescent in 10th grade in one of the selected high schools. Of note, due to recruitment difficulties, the researchers altered inclusion criteria slightly to include an urban, private school in a Midwestern city that, due to being in an urban setting, is not in a township that satisfies the inclusion criteria. Thus, in the case of this school, the investigators obtained information about the school population and noted that the median family income of the school is over $100,000 with more than 25% of parents with a graduate degree.

Procedure

Parents and adolescents were recruited from high schools from four affluent high schools in the Midwest and Northeast. Investigators contacted appropriate school personnel (i.e., information services, research coordinators, superintendent, principal) to discuss the aims and procedures of the current study and to assess interest. If the school administrators expressed interest in participating in the study, the investigators discussed plans for dissemination of study information to parents and adolescents at that school including fliers and/or newsletter announcements. In addition, school personnel granted permission to investigators to conduct in-person visits to each school to provide a brief description of the research and responsibilities of participation to 10th graders.

Also during the in-school visit, the investigators provided consent forms for the adolescents to bring home for their parents to sign. Adolescents were asked to bring the signed consent form back to school to place in a box provided by the researchers. Adolescents were notified that, regardless of whether their parents agree to participate, by bringing back the consent form, they will receive a small prize (i.e., healthy snack). Adolescents were also told that by taking the online survey, they are providing their consent to participate (i.e., the first page of the online survey is an assent form and adolescents have the option to decline). Parents also received an email from school personnel describing the study and alerting them to it. Once the investigator obtained the parental consent form, links to the online survey were emailed to each parent/caregiver(s) and the adolescents separately. Of note, consent from only one parent was required for the family to participate, but both parents/caregivers were encouraged to participate if possible. Online materials instructed parents/caregivers and adolescents to complete their surveys alone in order to ensure confidentiality. Follow-up emails were sent to those participants who did not complete study materials after approximately two weeks in order to ensure that parents and adolescents received the online links and to address any questions or concerns.

Adolescents were reminded that all responses including the information they provide will be kept confidential and thus will not be shared with parents, teachers, activity leaders, law enforcement providers, or any other adults/children. Additionally, adolescents were instructed that they can skip questions that they do not feel comfortable answering. They were also reminded that they can withdraw from the study at any time and that withdrawing will not affect their academic standing. Further, adolescents were sent a separate link to the survey via their personal email accounts to ensure that their answers were kept confidential (see Appendix B for all study measures).

After the data collection, families in which one adolescents and up to one parents/caregiver completed the questionnaires were entered in a raffle to win an iPad. Three iPads in total were raffled. Further, once data was entered via the online questionnaires, data was de-identified and checked by trained graduate and undergraduate students.

Measures

Demographics. Parents filled out a demographic questionnaire, providing information including their highest level of education, their approximate annual income, the family annual income, family structure (i.e., number of family members in the home) and family practices (i.e., number of family meals together) as well as the age, gender, and ethnicity of their adolescent child. Adolescents were also asked to provide demographic information including their age, gender, and ethnicity.

Parental perfectionism. Parents/caregivers completed the *Multidimensional Perfectionism Scale* (MPS: Hewitt & Flett, 1991), a 45-item measure of perfectionism in which fifteen items are each devoted to the three perfectionism subscales: 1) self-oriented, 2) socially prescribed, and 3) other-oriented. Items are rated on a seven-point scale. Item examples include ‘‘One of my goals is to be perfect in everything I do” (self-oriented), “My family expects me to be perfect” (socially prescribed), and “I have high expectations for the people who are important to me” (other-oriented). Items are answered on a 7-point scale from 1 (strongly disagree) to 7 (strongly agree) with some reverse scoring. Scores were computed by averaging across items for each domain. The subscales have respectively demonstrated good internal consistency (.89/.79/.86) and test–retest reliability (.88/.85/.75). The MPS’s three-factor composition has been supported in clinical and nonclinical populations, and subscale scores correlate significantly with other measures of constructs comprising respective perfectionism dimensions (Hewitt & Flett, 1991). Internal consistency for the subscales (averaging parents' scores when two parent reporters for a family) in the current study were good and in agreement with prior findings (.85/.84/.78).

Perceived parental pressure. To measure perceived parental pressure, adolescents completed the Perceived Parental Pressure subscale from the English version of the *Multidimensional Inventory of Perfectionism in Sport* (MIPS; Stoeber, Otto, & Stoll, 2005) which was translated from the original German version (Stöber, Otto, & Stoll, 2004) to English using a back-translation procedure involving two bilingual speakers (one native English, one native German; see Brislin, Lonner, & Thorndike, 1973). The measure is comprised of eight items that make no reference to sport and were thus left unmodified. Items are answered on a 7-point scale from 1 (strongly disagree) to 7 (strongly agree), and scores were computed by averaging across items. Findings from Sagar & Stoeber (2009) indicated high reliability across scores with Cronbach's alphas > .80. The current study also indicated good internal consistency (α = .94).

Organized activity involvement. Adolescents filled out the *Organized Activities Inventory* (OAI), a measure created for the current study, to assess their current level of participation in OAs. Adolescents were instructed to report on the organized activities they were involved in during the past calendar year (i.e., from Fall of 9th grade to Fall of 10th grade) that take place outside of school hours. A grid was provided with three columns: activity name, number of hours/week, number of months participating in the activity. Specifically, for each activity, participants were asked to record the average number of hours they participated per week in the activity and the number of months they have participated in that activity over the past year. Adolescents were also asked to indicate if their current involvement reflects the average number of activities and typical hours/week they spend in activities at any given point during the calendar year.

To determine intensity of OA involvement, the participant's *average* hours/week spent in *all* activities *across the previous academic school year* was calculated. To do so, the proportion of year a participant spent in each listed activity was first calculated (i.e., 3 months in ballet / 12 = 0.25 of the year in ballet). Next, the value obtained was multiplied by the number of hours per week spent in the activity. The value obtained represents the number of hours per week, on average, spent in the activity across the year (i.e., 0.25 year ballet x 2 hours/week = 0.5 hours/week, on average, spent in ballet across the year). The resulting values for all listed activities were then summed to provide a value that describes the average hours per week spent in *all* organized activities across the previous academic school year (i.e., 0.5 ballet + 2.0 math club = 2.5 hours/week in all activities across the year).

Adolescent adjustment. Adolescents completed measures of depressive symptoms, anxiety, substance use, and satisfaction with life to assess psychological adjustment.

Depressive symptoms. Parents filled out the *Achenbach Child Behavior Checklist – Depression Scales* (CBCL-D) and adolescents filled out the *Achenbach Youth Self Report – Depression Scales* (YSR-D) in order to assess parent and self-reported depressive symptoms. The CBCL-D and YSR-D are 13 items from the 118-item CBCL and YSR measures (Achenbach, 1991). Participants read each statement and were instructed to rate whether it is not true, somewhat true, or very true. Examples of the statements include "can't concentrate, can't pay attention," "feels worthless or inferior," and "withdrawn, uninvolved with others." The current study omitted the two questions regarding suicidality (i.e., harms self or attempts suicide, talks about killing self). Clarke, Lewinsohn, Hops, and Seeley's (1992) examination of the psychometric properties of the CBCL-D demonstrated good internal consistency ($\alpha = .81$ for mothers, $\alpha = .76$ for fathers), as did the YSR-D ($\alpha = .80$). Examination of internal consistency in the current study indicated good psychometric properties for the CBCL-D ($\alpha = .79$ for mothers, $\alpha = .80$ for fathers) and YSR-D ($\alpha = .85$).

Anxiety. Parents filled out the *Achenbach Child Behavior Checklist – Anxiety Scales* (CBCL-A) and adolescents filled out the *Achenbach Youth Self Report – Anxiety Scales* (YSR-A) in order to assess parent and self-reported anxiety symptoms. The CBCL-A and YSR-A are 16 items from the 118-item CBCL and YSR measures (Achenbach, 1991), respectively. Participants read each statement and were instructed to rate whether it is not true, somewhat true, or very true. Examples of the statements include "cannot get his/her mind off certain thoughts," "too fearful or anxious," and "fears he/she might think or do something bad." In Kendall and colleagues' (2007) examination of the psychometric properties of the CBCL-A, the measure was found to have high internal consistency and to adequately discriminate between youth (ages 7-14) with and without diagnosed anxiety disorders. Construct validity of the scale was supported by high correlations with other reliable anxiety measures (e.g., MASC, RCMAS). Additionally, the scale displayed sensitivity to treatment effects. As the authors did not develop an anxiety scale of the Youth Self-Report Scale, the same items identified as composing the CBCL-A scale were used to construct the YSR-A for the current study. Examination of internal consistency in the current study indicated good psychometric properties for the CBCL-A (α = .85 for mothers, α = .84 for fathers) and YSR-A (α = .91)

Substance use. Adolescents filled out the *Frequency of Drug Use Grid* (SUG) similar to that used in the Monitoring the Future Study Survey (Johnston, O'Malley, & Bachman, 1984) and studies conducted by Luthar and colleagues (i.e., Luthar & Goldstein, 2008). Adolescents reported on the frequency of use of cigarette/smokeless tobacco, alcohol, and marijuana, as well as drinking to get drunk during the past 30 days using a 7-point scale (1 = *never*, 2 = *less than 2 time per month*, 3 = *2–4 times per month*, 4 = *1–2 times per week*, 5 = *3–4 times per week*, 6 = *5–6 times per week*, and 7= *usually every day*). The reliability and validity of this type of self-report have been documented (seewww.monitoringthefuture.org). Following the approach in prior studies (Luthar & Becker, 2002; Luthar & D'Avanzo, 1999), a composite substance use variable was computed by adding the frequency ratings for cigarettes/smokeless tobacco, alcohol (drinking and drunk), and marijuana. Scores on the continuous composite measure of substance use will range from 5-*no use of any substances over the past month* to 35-*daily use over the past month*. It has been shown that creating a composite frequency score yields a reliable and valid index of global involvement in substance use (Needle, Su, & Lavee, 1989) and a number of researchers have utilized this strategy to create global measures of substance use among adolescents (e.g., see McMahon & Luthar, 2006).

Life satisfaction. The *Satisfaction with Life Scale* (LS) is a measure of life satisfaction developed by Diener and colleagues (Diener, Emmons, Larsen, & Griffin, 1985). It does not assess satisfaction with life in any particular domain, but rather satisfaction with life as a whole. The LS consists of 5 items (e.g. "In most ways, my life is close to ideal" and "If I could live my life over, I would change almost nothing") and was completed by adolescents. Adolescents indicated their agreement with each statement with responses ranging from 1 (strongly disagree) to 7 (strongly agree). The LS shows discriminant validity from other emotional well-being measures and good convergent validity with other assessments of subjective well-being. It also shows strong internal reliability ($\alpha = .87$), good temporal stability, and sufficient sensitivity to be valuable in detecting change in life satisfaction of periods of time. For the current study, the LS similarly demonstrated strong internal reliability ($\alpha = .88$).

CHAPTER THREE

RESULTS

Data Preparation

Missing data. As the data set was approximately 99.2% complete (0.8% missing), all missing values were replaced via individual mean substitution. One advantage of this procedure is that it uses the non-missing information from each particular scale to calculate the mean for the missing items. Furthermore, as the missing cases represented a very small percentage of the overall data set (i.e., less than 1-2% of the total data set), the results obtained after having employed a mean substitution procedure are likely identical to the results that may have been obtained had the missing item not occurred (Widaman, 2006). The sample mean (rather than the individual's mean) was imputed in two instances when a participant left an entire measure blank (n = 1 missing the CBCL, n = 1 missing OA Intensity).

Outliers and skewness. Per the recommendation of Tabachnick & Fidell (2007), two adolescents who reported standardized intensity scores that exceeded $z = 3.29$ or 41.76 hours/week of organized activity involvement were treated as univariate outliers ($p < .001$). Further, one additional adolescent who reported 40 hours/week ($z = 3.09$) was considered an outlier given that the remaining adolescent intensity scores fell at or under 27.17 hours/week. Also per the Tabachnick and Fidells's (2007) recommendation, the outlying cases' scores were assigned a raw score that is still deviant, but not so deviant;

specifically, these three individuals were assigned a raw score that was slightly above 2 *SD* units above the mean (*M* =12.19, *SD* = 7.10), at 30 hours per week.

All variables aside from substance use yielded normal distributions. Participant reports of substance use produced almost no variability and were positively skewed (indicating no to minimal substance use, skewness = 2.77). While the scale of the substance use measure ranges from 5-35, the student responses ranged from 5-14 (*M* = 5.80, *SD* = 1.54).

Omission of substance use from analyses. Substance use is considered in the literature to be a "low base rate behavior," or a behavior with a large proportion of the sample not engaged and a smaller proportion of at-risk individuals reporting varying levels of use (large number of "zero-values") (Simons, Neal, & Gaher, 2006). Similarly, the substance use variable in the current sample was positively skewed (see above) and reflected a large percentage (67%) of zero-values.

Although analyses tailored to examining predictors of low base rate behaviors have recently been proposed (i.e., Neal & Simons, 2007), the current sample not only reported a disproportionately large count of zero-values (67% of the sample reported abstinence from *all* substances), but also demonstrated a constrained degree of variability among "users." For example, regarding marijuana use, 92% reported no use, 5% once in the past month, 2% 2-4 times per month, 1% 1-2 times per week, and 0% 3 times per week to daily use. There is also limited clinical utility of understanding the difference between subjects reporting abstinence (67%) and once-per-month use (24%) and of analyzing factors that may predict more regular use among the four participants who reported using substances 1-2 times per week.

Furthermore, report of substance use in the current study seemed to underestimate trends seen in prior research on affluent adolescents. Although Luthar and colleagues' (1999, 2008) rates were expected to be higher given that yearly versus monthly use was assessed, findings from the current study seemed to minimize the degree of use found in prior work. For example, 3% of the current sample reported use of cigarettes, 32% alcohol, 8% marijuana, 0% illicit drugs, and 17% had gotten drunk within the past month. Conversely, Luthar and colleagues (1999, 2008) reported that approximately 30-52% of affluent adolescents used cigarettes, 70-85% alcohol, 40-50% marijuana, 50% illicit drugs, and 68% had gotten drunk within the past year.

Considering that 1) the substance data was highly skewed, 2) there is limited clinical utility of analyzing factors that may contribute to a limited range of substance use among users, and 3) the adolescents in the current sample appeared to under-report their substance use, *the substance use variable was not included in subsequent analyses.*

Creating Composites

Perfectionism. In instances when both mother and father report was obtained on the MPS (n = 20), perfectionism scores reflect the *average of* mother and father totals. However, in most cases, only one parent completed the perfectionism questionnaire, and this parent's score was used in analyses (n = 60 for mothers, n = 8 for fathers).

Adolescent depressive symptoms and anxiety. Although adolescent ratings of their own depressive symptoms and anxiety were significantly positively correlated with parent ratings of their adolescent (see Table 2), the proportion of shared variance (i.e., effect size; r^2) between parent and adolescent report is small for depressive symptoms (r^2 = 0.13) and anxiety (r^2 = 0.17). Of note, effect sizes ranging between 0.1 and 0.23 are considered to be small (Cohen, 1988; 1992). Further, paired *t*-test revealed that parent report of adolescent depressive symptoms (*M* = 3.94, *SD* = 4.03) was significantly different from adolescent report (*M* = 8.33, *SD* = 5.62), *t* (174) = 5.96, $p < .01$. Similarly, parent report of adolescent anxiety symptoms (*M* = 4.74, *SD* = 4.61) was significantly different from adolescent report (*M* = 9.49, *SD* = 7.33), *t* (174) = 5.14, $p < .01$.

Thus, the small effect size/shared variance and significant mean differences between parent and adolescent report of adolescent internalizing symptoms indicate that adolescent and parent report are different, and thus not comparable nor similar enough to create a composite score. However, including both parent and adolescent report in analyses would dramatically increase the number of analyses conducted, thus increasing the likelihood of Type II error. Furthermore, prior research indicates that adolescents tend to be better reporters of their internalizing symptoms than their parents (i.e., Handwerk, Larzelere, Soper, & Friman, 1999; Seiffge-Krenke & Kollmar, 1998). *As such, only adolescent report of their depressive symptoms (YSR-D) and anxiety (YSR-A) was used for the current study.*

Three-factor model of perfectionism. To address Question/Hypothesis 1 (i.e., *Does a measurement model consisting of three-correlated factors for perfectionism provide a good and better fit of the data than a one-factor model of perfectionism?),* confirmatory factor analysis (CFA) via LISREL 8.8 (Jöreskog & Sörbom, 1996) was

Table 2. Means, standard deviations, ranges, and bivariate correlations between adolescent and parent report of adolescent anxiety and depressive symptoms

Outcome variables	1	2	3	4
1. YSR-A	—			
2. CBCL-A	.42**	—		
3. YSR-D	.82**	.29*	—	
4. CBCL-D	.34**	.86	.36**	—
Mean	9.49	4.74	8.33	3.94
SD	7.33	4.61	5.62	4.03
Range	0-31	0-24	0-23	0-23

Note. YSR-A and YSR-D refer to adolescent report of their own anxiety and depressive symptoms, respectively. CBCLA-A and CBCL-D reflect parent assessment (averaging if two parents) of their teen's anxiety and depressive symptoms, respectively. Higher scores on all measures indicate greater impairment;

**p* < .05 (2-tailed), ***p* < .01 (2-tailed).

conducted to compare the goodness of fit of the one- versus three-factor model of the Multidimensional Perfectionism Scale (MPS). CFA involves specifying a model—a hypothesized pattern of factor loadings and intercorrelations—and then evaluating how well the model explains parents' responses on the MPS. The one-factor model of perfectionism provided a poor fit, explaining approximately 49% of the common variance (χ^2 (945, N = 88) = 1895.91, RMSEA = .12, SRMR = .12, CFI = .76, NNFI = .75). The three-factor model of the MPS as proposed by Hewitt & Flett (1991) (i.e., self-oriented, other-oriented, and socially prescribed domains) also provided a poor fit, explaining approximately 52% of the common variance (χ^2 (942, N = 88) = 1763.92, RMSEA = .10, SRMR = .12, CFI = .80, NNFI = .79). However, given the large number of parameters (93 parameters for the 3-factor model and 90 for the 1-factor model) and small sample size (N = 88) in the current analysis versus the recommendation to have 5-10 subjects per parameter for adequate power, the likelihood of getting an acceptable fitting model for the 3-factor model was minimal (Hu & Bentler, 1999; Kline, 2004). Importantly, the 3-factor model fit the data significantly better than the one-factor model of perfectionism, $\Delta \chi^2$ (3, N = 88) = 290.67, p < .0001. Thus, although neither the one- nor three-factor model provided a statistically acceptable fit of the data, the 3-factor model of perfectionism proved to be a significantly better conceptualization of the MPS measure. *As such, subsequent analyses were run separately for 1) self-oriented, 2) other-oriented, and 3) socially prescribed domains of parental perfectionism.*

Non-linear relation between OA intensity and adjustment. The nonlinear effects between OA intensity and adjustment variables were assessed prior to running analyses to determine if a quadratic OA term should be included in the full proposed and alternative mediational models and analyses of indirect pathways (see Question/Hypothesis 2: *Is the association between OA intensity and adjustment better described by a non-linear versus linear relation?*). Analyses indicated that OA intensity was *not* non-linearly related depressive symptoms, anxiety, and life satisfaction (see Table 3). *As such, the linear term for OA was used for all subsequent analyses.*

Table 3. Hierarchical multiple regression analyses predicting nonlinear relations between OA intensity and depressive symptoms, anxiety, and life satisfaction

	Adjustment outcomes								
	Depressive sxs			Anxiety			Life satisfaction		
Predictor	ΔR^2	β	p	ΔR^2	β	p	ΔR^2	B	p
Step 1									
OA intensity	.01	-.11	.30	.01	-.08	.44	.01	.11	.30
Step 2									
OA intensity^2	.02	-.42	.23	.01	-.26	.46	.00	.06	.23

Descriptives and Correlations

After preparing the data, (e.g., examining outliers and missing data, calculating composites for study measures; see above description), preliminary descriptive analyses (means, standard deviations, ranges, and correlations) were run with all study variables (see Table 4). Means and standard deviations for all study variables by school are also presented (see Table 5). One-way ANOVAs were used to compare mean differences in study variables across the four schools, and, no significant differences were detected.

Table 4. Means, standard deviations, ranges, and bivariate correlations between all study variables

Variables	1	2	3	4	5	6	7	8	9	10
1) SOP	1									
2) OOP	.62**	1								
3) SPP	.49**	.46**	1							
4) PPP	0.1	.21*	.25*	1						
5) OA	.24*	.21*	0.19	.27*	1					
6) Dep sxs	-0.09	-0.09	0.12	.30**	-0.11	1				
7) Anxiety	-0.08	-0.04	0.14	0.2	-0.08	.82**	1			
8) Life satisfaction	0.19	0.14	-0.08	-.39**	0.11	-.57**	-.51**	1		
9) Sub use	0.01	0.03	0.16	-0.04	-0.08	0.12	0.12	0.03	1	
10) Gender†	-0.08	0.06	0.05	-0.17	0.14	0.18	.29*	0.03	-0.01	1
M	60.61	58.99	45.66	22.77	12.17	8.33	9.49	24.05	5.8	--
SD	13.02	10.92	11.92	10.2	7.1	5.62	7.33	6.79	1.55	--
Range	29-98	21-79	23-73	Aug-48	0-30	0-23	0-31	Jul-35	14-May	--

Note. SOP (self-oriented perfectionism), OOP (other-oriented perfectionism), and SPP (socially prescribed perfectionism) = average of mother and father when both parents' scores were available; PPP = adolescent report of perceived parental pressure; OA = average hours/week adolescents spent in organized activities; Dep Sxs and Anxiety = adolescent report of anxiety and depressive symptoms, respectively; Sub Use = adolescent report of substance use. Higher scores for Dep Sxs, Anxiety, and Sub Use = higher levels of the symptoms and risky behaviors; Higher scores on the Life Satisfaction = greater levels of life satisfaction.

* p < .05 (2-tailed), ** p < .01 (2-tailed); † Spearman rank correlation value.

Table 5. Means and standard deviations of all study variables by school

	School 1	School 2	School 3	School 4
	(*n* = 36)	(*n* = 29)	(*n* = 18)	(*n* = 5)
Variables	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
SOP	61.75 (14.96)	60.08 (11.03)	61.35 (12.16)	52.80 (12.52)
OOP	57.96 (10.65)	58.69 (13.42)	61.88 (7.10)	57.80 (8.58)
SOP	45.75 (12.38)	45.46 (13.57)	47.46 (9.16)	39.80 (6.69)
PPP	24.09 (10.60)	20.34 (9.16)	23.86 (11.10)	22.06 (9.95)
OA	12.16 (6.54)	13.62 (7.60)	12.83 (7.23)	9.05 (7.78)
Depressive symptoms	8.79 (6.15)	6.84 (4.44)	10.26 (6.09)	6.80 (4.82)
Anxiety	10.57 (8.09)	7.78 (5.89)	11.05 (8.10)	6.00 (4.00)
Life satisfaction	24.53 (7.38)	24.05 (6.25)	23.90 (7.30)	21.10 (3.61)
Sub use	5.86 (1.44)	6.21 (2.04)	5.06 (0.24)	5.60 (0.89)

Each domain of parental perfectionism (i.e., self-oriented, other-oriented, socially prescribed) was measured on a scale ranging from 15-105. Overall, the mean levels of self-oriented (SOP; $M = 60.61$), other-oriented (OOP; $M = 58.99$), and socially prescribed (SPP; $M = 45.66$) perfectionism were moderate. Paired *t*-test was used to determine if scores on the three domains significantly differed from one another. Results indicated that self-oriented and other-oriented perfectionism were significantly higher than SPP, t (87) = 11.12, $p < .0001$ and t (87) = 10.55, $p < .0001$, respectively. Alternatively, SOP and OOP scores were not significantly different from each other.

Perceived parental pressure (PPP) was measured on a scale with a possible range of 8-48. Overall, the mean levels of PPP was moderate (M = 22.77). Both depressive symptoms and anxiety were measured on a scale with a possible range of 0-32, with mean levels of depressive symptoms (M = 8.33) and anxiety (M = 9.49) relatively low. Life satisfaction, which was measured on a scale with a possible range of 5-35, was relatively high (M = 24.05). These descriptive statistics indicate that the sample examined in the present study was relatively well-adjusted.

With regards to substance use, 67% of adolescents reported no use of any substances within the past 30 days, 23% reported smoking, drinking, getting drunk or using marijuana 1 time in the past month, and the remaining 9% reported using one or more of the substances 1-4 times in the past month. More specifically, 97% of adolescents reported never using cigarettes and 3% using once in the past month. Sixty-eight percent of adolescents reported abstaining from alcohol, 25% using once in the past month, 5% 2-4 times, and 1% 1-2 times per week. In terms of getting drunk, 83% reported never, 13% once n the past month, 3% 2-4 times in the past month, and 1% 1-2 times per week. Ninety-two percent of adolescents reported never using marijuana, 5% reported once in the past month, 2% 2-4 times in the past month, and 1% 1-2 times per week. Lastly, 100% of the sample reported never using recreational drugs (i.e., prescription drugs for recreational use) in the past month.

Bivariate correlation analyses (see Table 3) indicated that the three parental perfectionism domains were positively correlated ($p < .01$). Additionally, SPP was positively correlated with PPP ($p < .05$) while SOP was positively associated with the hours/week (intensity) of organized activity involvement ($p < .05$). All outcome measures were correlated, with adolescent report of depressive symptoms and anxiety positively correlated to each other but negatively correlated with life satisfaction ($p < .01$ for all correlations). Further, PPP was positively correlated with depressive symptoms ($p < .01$) and negatively correlated with life satisfaction ($p < .05$), but unrelated to anxiety symptoms. Additionally, PPP was positively correlated with intensity of organized activity involvement ($p < .05$). Of note, no significant correlations were found between the three domains of parental perfectionism and adjustment measures (depressive symptoms, anxiety, and life satisfaction) variables. Substance use was not correlated with any of the other variables included in the model.

In order to examine possible differences in study variables based on adolescent gender, *t*-tests were conducted to examine gender differences across all included variables. Analyses indicated that the only significant gender difference was with regard to anxiety, with females reporting higher levels of anxiety ($M = 10.92$, $SD = 7.93$) than males ($M = 7.32$, $SD = 6.78$), $t\ (86) = -2.31$, $p < .05$.

Indirect Effects

Although use of the causal steps approach (Baron & Kenny, 1986) and Sobel test (Sobel, 1982, 1986) was initially proposed for analyzing indirect relations for the current study, methodology was altered to test mediated effects by using the bootstrapping approach. Although the causal steps approach and Sobel test (Sobel, 1982, 1986) are the most widely used, these methods are among the lowest in power in examining meditational models (Fritz & MacKinnon, 2007; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002) and assume that the sampling distribution of the indirect effect is normal despite the fact that the sampling distribution of *ab* tends to be asymmetric, with a positive skewness and nonzero kurtosis (Bollen & Stine, 1990; Stone & Sobel, 1990).

In light of recent criticisms of the causal steps approach, bootstrapping techniques were utilized to conduct analyses of indirect pathways. Bootstrapping is considered to be the most valid and powerful method for examining indirect effects in mediation (Hayes, 2009) for several reasons. First, inferences can be made based on estimates of the actual indirect effects themselves. Second, no assumptions are made about the shape of the sampling distribution of the indirect effects. Third, no estimates of standard error are needed.

The bootstrapping approach includes four main steps (Shrout & Bolger, 2002). First, the original sample *n* is used as a population reservoir to create a pseudo (bootstrap) sample of *N* people by randomly sampling observations with replacement from the original *n*. Next, for each bootstrap sample, *a* and *b* are estimated and the product of the path coefficients are recorded. The third step involves repeating Steps 1 and 2 for a total of *k* times (where k = 5,000 as recommended by Hayes, 2009). When complete, this procedure results in *k* estimates of the indirect effect, and the distribution of this indirect effect will function as an approximation of the sampling distribution of the indirect effect. Finally, the *k* estimates will be used to generate a percentile-based bootstrap confidence interval, for which the cut points exclude (α/2) x 100% of the values from each tail of the empirical distribution. If zero is not between the lower and upper bound, then it is acceptable to claim that the indirect effect is not zero (Hayes, 2009; Shrout & Bolger, 2002). The present study used bootstrapping to generate bias corrected (BC) confidence intervals (CI's, 95%), as they have been shown to produce better Type I error rates and power compared to conventional CIs (Preacher, Rucker, & Hayes, 2007; Preacher & Hayes, 2008). All results are based on a bootstrapped sample of n = 5,000 as recommended by Hayes (Personal communication, May 13, 2011).

Twenty-four indirect pathway models were tested to determine (a) whether parental perfectionism (self-oriented, other-oriented, socially prescribed) and adolescent adjustment (depressive symptoms, anxiety, life satisfaction) are indirectly related through perceived parental pressure (PPP), (b) whether parental perfectionism (SOP, OOP, SPP) and adolescent adjustment (depressive symptoms, anxiety, and life satisfaction) are indirectly related through intensity of organized activity involvement (OA) (see Table 7), (c) whether parental perfectionism (SOP, OOP, SPP) and adolescent organized activity intensity (OA) are indirectly related through PPP (see Table 8 and Figures 8 and 9), and (d) whether PPP and adolescent adjustment (depressive symptoms, anxiety, life satisfaction) are indirectly related through intensity of OA. Using bootstrapping procedures, nine of the twenty-four models tested yielded significant indirect effects.

Parental perfectionism and adolescent adjustment (direct relation). Results indicated that the direct relations between the three dimensions of parental perfectionism (self-oriented, other-oriented, and socially prescribed) were unrelated to outcomes (depressive symptoms, anxiety, and life satisfaction) (see Tables 6 and 7).

Table 6. Indirect effect of parental perfectionism on adolescent adjustment through perceived parental pressure

Model/pathway	*B*	*SE*	BC lower	BC upper
SOP → PPP → Dep sxs	—	—	-.0088	.0521
SOP → Depressive sxs	-.03	.05	—	—
SOP → PPP	.08	.08	—	—
PPP → Depressive sxs	.17**	.06	—	—
SOP → PPP → Depressive sxs	-.05	.04	—	—
OOP → PPP → Dep sxs	—	—	.0077	.0897
OOP → Depressive sxs	-.05	.06	—	—
OOP → PPP	.20*	.10	—	—
PPP → Depressive sxs	.18**	.06	—	—
OOP → PPP → Depressive sxs	-.08	.05	—	—
SPP → PPP → Dep sxs	—	—	.0023	.1017
SPP → Depressive sxs	.06	.05	—	—
SPP → PPP	.21*	.09	—	—
PPP → Depressive sxs	.16**	.06	—	—
SPP → PPP → Depressive sxs	.02	.05	—	—
SOP → PPP → Anxiety	—	—	-.0062	.0587
SOP → Anxiety	-.05	.06	—	—
SOP → PPP	.08	.08	—	—
PPP → Anxiety	.15*	.08	—	—
SOP → PPP → Anxiety	-.06	.06	—	—
OOP → PPP → Anxiety	—	—	.0008	.0964
OOP → Anxiety	-.03	.07	—	—
OOP → PPP	.20*	.10	—	—
PPP → Anxiety	.16*	.08	—	—
OOP → PPP → Anxiety	-.06	.07	—	—
SPP → PPP → Anxiety	—	—	-.0055	.1009
SPP → Anxiety	.09	.07	—	—
SPP → PPP	.21*	.09	—	—
PPP → Anxiety	.13	.08	—	—
SPP → PPP → Anxiety	.06	.07	—	—
SOP → PPP → Life satisfaction	—	—	-.0755	.0174
SOP → LS	.10ms	.05	—	—
SOP → PPP	.08	.08	—	—
PPP → LS	-.28***	.06	—	—
SOP → PPP → LS	.12*	.05	—	—

Model/pathway	*B*	*SE*	BC lower	BC upper
OOP → PPP → Life satisfaction	—	—	-.1277	-.0120
OOP → LS	.09	.07	—	—
OOP → PPP	$.20^{*}$	.10	—	—
PPP → LS	$-.29^{***}$	.07	—	—
OOP → PPP → LS	$.15^{*}$	.06	—	—
SPP → PPP → Life satisfaction	—	—	-.1422	-.0052
SPP → LS	-.05	.06	—	—
SPP → PPP	$.21^{*}$	.09	—	—
PPP → LS	$-.26^{**}$	.07	—	—
SPP → PPP → LS	.01	.06	—	—

Table 7. Indirect effect of parental perfectionism on adolescent adjustment through intensity of organized activity involvement

Model/pathway	*B*	*SE*	BC lower	BC upper
SOP → OA → Dep Sxs	—	—	-.0400	.0122
SOP → Depressive Sxs	-.04	.05	—	—
SOP → OA	.13*	.06	—	—
OA → Depressive Sxs	-.08	.09	—	—
SOP → OA → Depressive Sxs	-.02	.05	—	—
OOP → OA → Dep Sxs	—	—	-.0499	.0093
OOP → Depressive Sxs	-.05	.06	—	—
OOP → OA	.14*	.07	—	—
OA → Depressive Sxs	-.08	.09	—	—
OOP → OA → Depressive Sxs	-.03	.06	—	—
SPP → OA → Dep Sxs	—	—	-.0482	.0026
SPP → Depressive Sxs	.06	.05	—	—
SPP → OA	.12ms	.06	—	—
OA → Depressive Sxs	-.11	.09	—	—
SPP → OA → Depressive Sxs	.06	.05	—	—
SOP → OA → Anxiety	—	—	-.0433	.0153
SOP → Anxiety	-.05	.06	—	—
SOP → OA	.13*	.06	—	—
OA → Anxiety	-.07	.12	—	—
SOP → OA → Anxiety	-.04	.06	—	—
OOP → OA → Anxiety	—	—	-.0583	.0096
OOP → Anxiety	-.03	.07	—	—
OOP → OA	.14*	.07	—	—
OA → Anxiety	-.08	.12	—	—
OOP → OA → Anxiety	-.02	.07	—	—
SPP → OA → Anxiety	—	—	-.0550	.0037
SPP → Anxiety	.09	.07	—	—
SPP → OA	.12ms	.07	—	—
OA → Anxiety	-.12	.11	—	—
SPP → OA → Anxiety	.09	.07	—	—
SOP → OA → Life Satisfaction	—	—	-.0184	.0420
SOP → LS	.10ms	.05	—	—
SOP → OA	.13*	.06	—	—

Model/pathway	*B*	*SE*	BC lower	BC upper
OA → LS	.07	.11	—	—
SOP → OA → LS	.09	.06	—	—
OOP → OA → Life Satisfaction	—	—	-.0133	.0569
OOP → LS	.09	.07	—	—
OOP → OA	.14*	.07	—	—
OA → LS	.08	.11	—	—
OOP → OA → LS	.08	.07	—	—
SPP → OA → Life Satisfaction	—	—	-.0047	.0598
SPP → LS	-.05	.06	—	—
SPP → OA	.12ms	.06	—	—
OA → LS	.13	.11	—	—
SPP → OA → LS	-.06	.06	—	—

Indirect effect of parental perfectionism on adolescent adjustment through perceived parental pressure. Results revealed that zero was not contained within the lower and upper limits when the relations between OOP and depressive symptoms and SPP and depressive symptoms were considered to be indirectly associated through PPP (BC lower = .0077, BC upper = .0897; BC lower = .0023, BC upper = .1017, respectively) (see Table 6). This indicates that, although OOP and SPP were not significantly related to adolescent report of depressive symptoms, OOP, SPP and adolescent depressive symptoms were indirectly related through PPP (see Figures 3 and 4). Thus, adolescents perceive more parental pressure when 1) parents report that they experience high perfectionistic standards from their environment and 2) parents expect perfection from others, and then subsequently report higher levels of depressive symptoms.

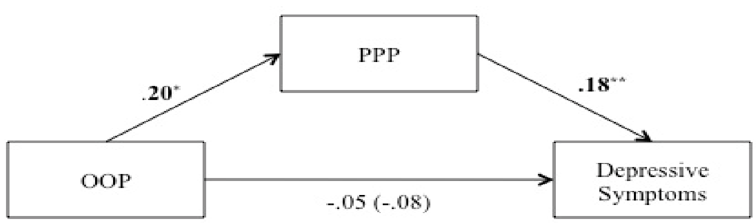


Figure 3. Unstandardized coefficients for the indirect relation between other-oriented parental perfectionism (OOP) and depressive symptoms through perceived parental pressure (PPP). The direct effect (controlling for perceived parental pressure) coefficient is located parenthetically in the figure and significant paths are in bold type.

However, relative to anxiety, only the relation between OOP and anxiety was indirectly associated though perceived parental pressure (see Table 6). Results revealed that zero was not contained within the lower and upper limits for anxiety (BC lower = .0008, BC upper = .0964). Findings revealed that adolescents perceived more parental pressure when parents expect high levels of perfection from others, and subsequently, adolescents reported higher levels of anxiety (see Figure 5).

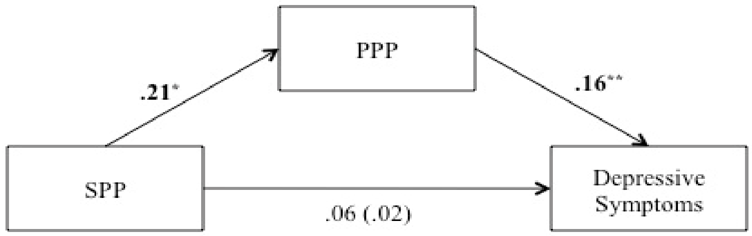


Figure 4. Unstandardized coefficients for the indirect relation between socially prescribed parental perfectionism (SPP) and depressive symptoms through perceived parental pressure (PPP). The direct effect (controlling for perceived parental pressure) coefficient is located parenthetically in the figure and significant paths are in bold type.

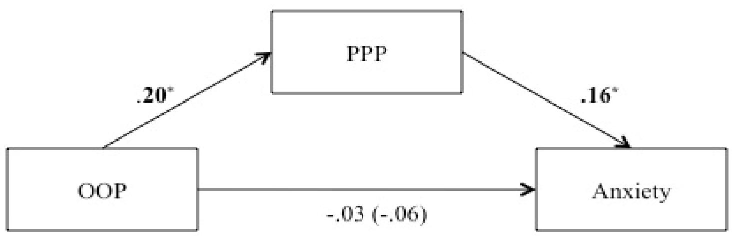


Figure 5. Unstandardized coefficients for the indirect relation between other-oriented parental perfectionism (OOP) and anxiety through perceived parental pressure (PPP). The direct effect (controlling for perceived parental pressure) coefficient is located parenthetically in the figure and significant paths are in bold type.

Results also revealed that zero was not contained within the lower and upper limits when the relations between OOP and life satisfaction and SPP and life satisfaction were considered to be indirectly associated through PPP (BC lower = -.1277, BC upper = -.0120; BC lower = -.1422, BC upper = -.0052, respectively) (see Table 6). This indicates that, although OOP and SPP were not significantly related to life satisfaction, OOP, SPP and adolescent life satisfaction were indirectly related through PPP (see Figures 6 and 7). Thus, adolescents perceive more parental pressure when 1) parents report that they experience high perfectionistic standards from their environment and, 2) parents expect perfection from others. Adolescents subsequently reported lower levels of life satisfaction.

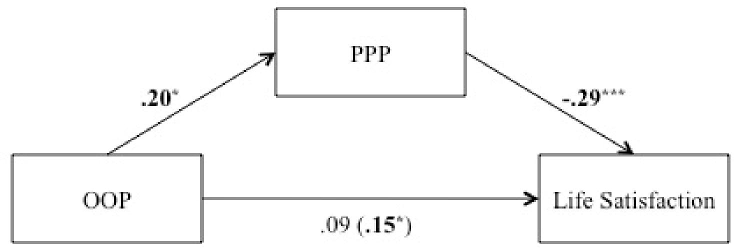


Figure 6. Unstandardized coefficients for the indirect relation between other-oriented parental perfectionism (OOP) and life satisfaction through perceived parental pressure (PPP). The direct effect (controlling for perceived parental pressure) coefficient is located parenthetically in the figure and significant paths are in bold type.

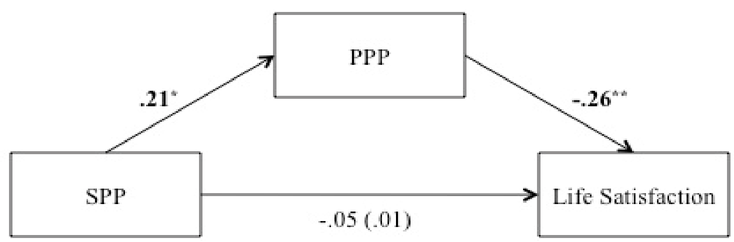


Figure 7. Unstandardized coefficients for the indirect relation between socially prescribed parental perfectionism (SPP) and life satisfaction through perceived parental pressure (PPP). The direct effect (controlling for perceived parental pressure) coefficient is located parenthetically in the figure and significant paths are in bold type.

Indirect effect of parental perfectionism on intensity of OA involvement through perceived parental pressure. Findings also indicated that domains of perfectionism and intensity of organized activity involvement are indirectly linked through perceived parental pressure (see Table 8). Results revealed that zero was not contained within the lower and upper limits when OOP and SPP were considered to be indirectly associated with OA through PPP (BC lower = .0023, BC upper = .0854; BC lower = .0010, BC upper = .0987, respectively) (see Figures 8 and 9). Thus, adolescents perceive more parental pressure when 1) parents report that they experience high perfectionistic standards from their environment and, 2) parents expect perfection from others. Adolescents then subsequently spend more hours per week in organized activities.

Table 8. Indirect effect of parental perfectionism on intensity of organized activity involvement through perceived parental pressure

Model/pathway	*B*	*SE*	BC lower	BC upper
SOP → PPP → OA	—	—	-.0092	.0563
SOP → OA	.13*	.06	—	—
SOP → PPP	.08	.08	—	—
PPP → OA	.17*	.07	—	—
SOP → PPP → OA	.12*	.06	—	—
OOP → PPP → OA	—	—	**.0023**	**.0854**
OOP → OA	.14*	.07	—	—
OOP → PPP	.20*	.10	—	—
PPP → OA	.16*	.07	—	—
OOP → PPP → OA	.10	.07	—	—
SPP → PPP → OA	—	—	**.0010**	**.0987**
SPP → OA	.12ms	.06	—	—
SPP → PPP	.21*	.09	—	—
PPP → OA	.16*	.07	—	—
SPP → PPP → OA	.08	.06	—	—

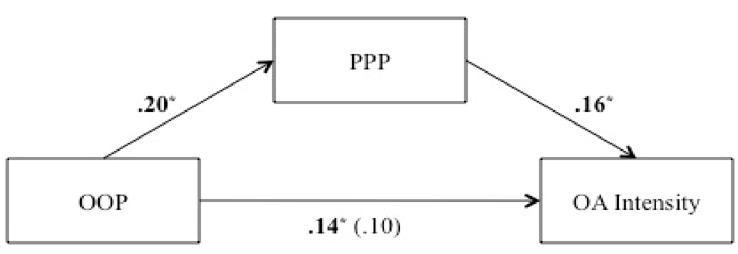


Figure 8. Unstandardized coefficients for the indirect relation between other-oriented parental perfectionism (OOP) and intensity of organized activity involvement (OA intensity) through perceived parental pressure (PPP). The direct effect (controlling for perceived parental pressure) coefficient is located parenthetically in the figure and significant paths are in bold type.

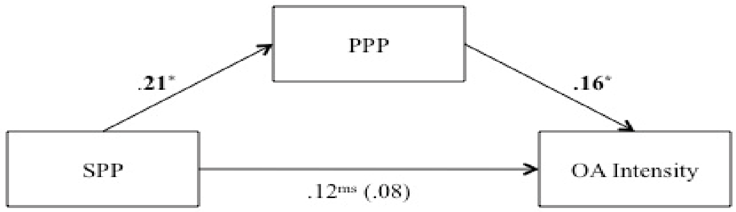


Figure 9. Unstandardized coefficients for the indirect relation between socially prescribed parental perfectionism (OOP) and intensity of organized activity involvement (OA Intensity) through perceived parental pressure (PPP). The direct effect (controlling for perceived parental pressure) coefficient is located parenthetically in the figure and significant paths are in bold type.

Indirect effect of perceived parental pressure on adolescent adjustment through intensity of organized activity involvement. Results also demonstrated that PPP was indirectly related to adolescent adjustment through OA intensity (see Table 9). Results revealed that zero was not contained within the lower and upper limits for OA when depressive symptoms and life satisfaction were considered as outcomes (BC lower = -.0801, BC upper = -.0020; BC lower = .0067, BC upper = .1056, respectively). Thus, adolescents who perceive more parental pressure also spend more hours per week in organized activities, and subsequently report *better* outcomes (i.e., lower levels of depressive symptoms and higher levels of life satisfaction) (see Figures 10 and 11).

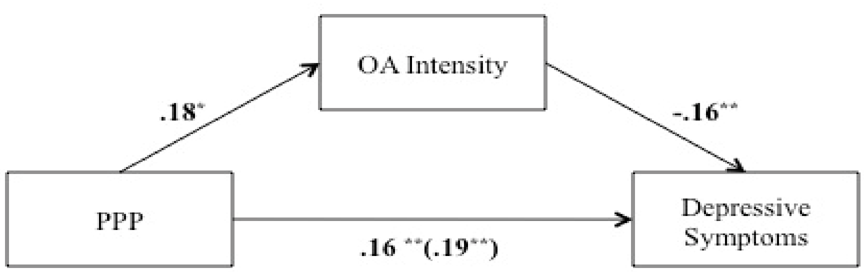


Figure 10. Unstandardized coefficients for the indirect relation between perceived parental pressure (PPP) and depressive symptoms through intensity of organized Activity involvement (OA intensity). The direct effect (controlling for perceived parental pressure) coefficient is located parenthetically in the figure and significant paths are in bold type.

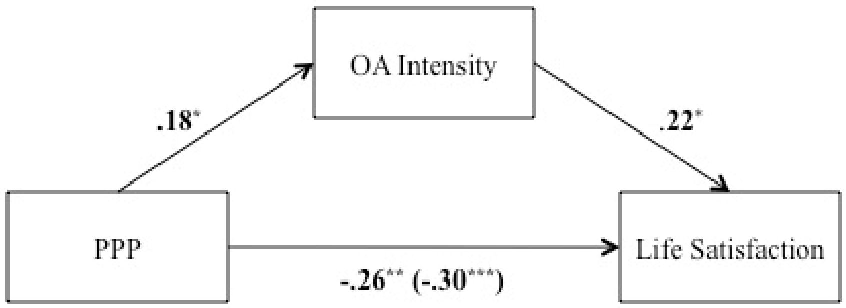


Figure 11. Unstandardized coefficients for the indirect relation between perceived parental pressure (PPP) and life satisfaction through intensity of organized activity involvement (OA intensity). The direct effect (controlling for perceived parental pressure) coefficient is located parenthetically in the figure and significant paths are in bold type.

Table 9. Indirect effect of perceived parental pressure on adolescent adjustment through intensity of organized activity involvement

Model/pathway	*B*	*SE*	BC lower	BC upper
PPP → OA → Dep sxs	—	—	**-.0801**	**-.0020**
PPP → Depressive sxs	.16**	.06	—	—
PPP → OA	.18*	.07	—	—
OA → Depressive sxs	-.16*	.08	—	—
PPP → OA → Depressive sxs	.19**	.06	—	—
PPP → OA → Anxiety	—	—	-.0837	.0004
PPP → Anxiety	.14ms	.08	—	—
PPP → OA	.18*	.07	—	—
OA → Anxiety	-.15	.11	—	—
PPP → OA → Anxiety	.17*	.08	—	—
PPP → OA → Life satisfaction	—	—	**.0067**	**.1056**
PPP → LS	-.26**	.07	—	—
PPP → OA	.18*	.07	—	—
OA → LS	.22*	.10	—	—
PPP → OA → LS	-.30***	.07	—	—

Note for Tables 6-9. Bolded values and highlighted cells identify significant indirect pathways (zero not contained within the lower and upper limits).

* $p \leq$ 0.05 (2-tailed), ** $p \leq$ 0.01 (2-tailed), *** $p \leq$ 0.001 (2-tailed).

Full Mediational Model

Structural equation modeling (SEM) via LISREL 8.80 was used to test all nine proposed full meditational models (see bolded in Figure 1). Given recommendations to assess a theoretically-sound alternative to the proposed model (Weston & Gore, 2006), an alternative to the full meditational model which allowed perceived parental pressure to also relate directly with adjustment outcomes was tested (see Figures 12-16). Of the nine models, none of the originally proposed full mediational models were found to be a good fit; however, five of the alternative models met the criteria for a good fitting model. Two of the five significant models included *other-oriented perfectionism* (OOP) while *socially prescribed perfectionism* (SPP) was assessed in the remaining three models. Consequently, no models with *self oriented perfectionism* (SOP) demonstrated adequate fit.

Other-oriented perfectionism. The first model including OOP in the model posited that higher levels of other-oriented parental perfectionism (OOP) would be associated with higher levels of perceived parental pressure (PPP), which would be linked to higher levels of organized activity involvement (OA), which would be associated with higher levels of depressive symptoms. The original model provided poor absolute fit, χ^2 (3, N = 88) = 14.51, SRMR = .12, RMSEA = .21 and poor relative fit, CFI = .33, NNFI = -.34. However, the alternative model, allowing perceived parental pressure to correlate with depressive symptoms, provided reasonably close absolute fit, χ^2 (2, N = 88) = 3.85, SRMR = .07, RMSEA = .10 and acceptable relative fit, CFI = 0.89, NNFI = 0.68 (see Figure 12). Similar to significant indirect pathways described above, not all relations within the model were in the direction hypothesized. More specifically, as expected, higher levels of parental OPP was linked to higher levels of PPP, and higher levels of PPP was associated with both greater intensity of OA involvement *and* higher levels of depressive symptoms. However, counter to expectation, greater intensity of OA was linked to *lower* levels of depressive symptoms when the link between PPP and depressive symptoms was included in the model.

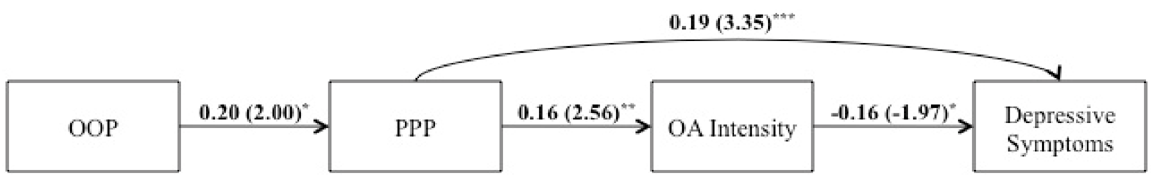


Figure 12. Structural equation model predicting depressive symptoms by OPP, PPP, and OA intensity. Goodness of fit statistics included absolute fit (SRMR = .07; RMSEA = .10) and relative fit (CFI = .89; NNFI = .68). Significant paths are in bold type, and the unstandardized betas (*Z* scores) are reported. **p* ≤ .05 (2-tailed). ***p* ≤ .01 (2-tailed). ****p* ≤ .001 (2-tailed).

The second of these five models posited that higher levels of parental other-oriented perfectionism (OOP) would be associated with higher levels of perceived parental pressure (PPP), which would be linked to higher levels of organized activity involvement (OA), which would be associated with higher levels of anxiety symptoms. The original full meditational model provided poor absolute fit, χ^2 (3, N = 88) = 7.46, SRMR = .09, RMSEA = .13 and poor relative fit, CFI = .63, NNFI = .26. However, the alternative model, allowing PPP to correlate with anxiety, provided reasonably close absolute fit, χ^2 (2, N = 88) = 2.68, SRMR = .06, RMSEA= .06 and acceptable relative fit, CFI = .94, NNFI = .83 (see Figure 13). Again, not all relations within the model were in the direction hypothesized. More specifically, as expected, higher levels of OPP was linked to higher levels of PPP, and higher levels of PPP was associated with both greater intensity of OA involvement *and* higher levels of anxiety. However, OA was *unrelated* to anxiety levels when the link between PPP and anxiety was included in the model.

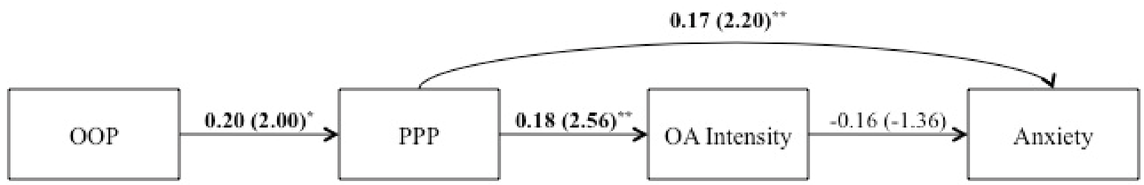


Figure 13. Structural equation model predicting anxiety by OPP, PPP, and OA intensity. Goodness of fit statistics included absolute fit (SRMR = .06; RMSEA = .06) and relative fit (CFI = .94; NNFI = .83). Significant paths are in bold type, and the unstandardized betas (*Z* scores) are reported. **p* ≤ .05 (2-tailed). ***p* ≤ .01 (2-tailed). ****p* ≤ .001 (2-tailed).

Socially prescribed perfectionism. The remaining good-fitting models included socially prescribed parental perfectionism (SPP) and all three adjustment outcomes (i.e., depressive symptoms, anxiety, and life satisfaction). The first model predicted that higher levels of SPP would be associated with higher levels of PPP, which would be linked to higher levels of OA involvement, which would be associated with higher levels of depressive symptoms. Again, the original full meditational model provided poor absolute fit, χ^2 (3, N = 88) = 12.95, SRMR = .12, RMSEA =.19 and poor relative fit, CFI = .47, NNFI = -.06. However, the alternative model, allowing perceived parental pressure to correlate with depressive symptoms, provided good absolute fit, χ^2 (2, N = 88) = 2.29, SRMR = .04, RMSEA = .04 and good relative fit, CFI = .98, NNFI = .96 (see Figure 14). As expected, SPP was linked to higher levels of PPP, and higher levels of PPP were associated with greater OA intensity and higher levels of depressive symptoms. However, counter to expectation, greater intensity of OA was linked to *lower* levels of depressive symptoms when the link between PPP and depressive symptoms was included in the model.

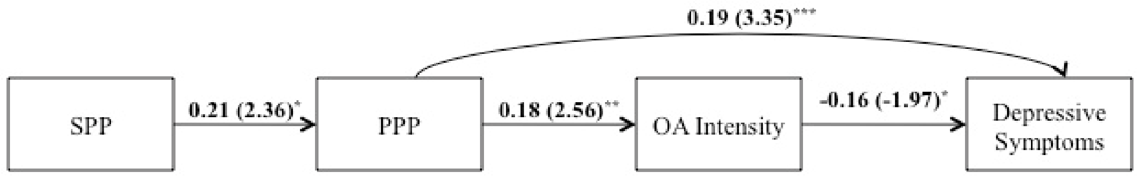


Figure 14. Structural equation model predicting depressive symptoms by SPP, PPP, and OA intensity. Goodness of fit statistics included absolute fit (SRMR = .04; RMSEA = .04) and relative fit (CFI = .98; NNFI = .96). Significant paths are in bold type, and the unstandardized betas (*Z* scores) are reported. *$p \leq .05$ (2-tailed). **$p \leq .01$ (2-tailed). ***$p \leq .001$ (2-tailed).

The second model hypothesized higher levels of parental SPP would be associated with higher levels of PPP, which would be linked to higher levels OA involvement, which would be associated with higher levels of anxiety. As stated previously, the original model provided poor absolute fit, χ^2 (3, N = 88) = 7.63, SRMR = .09, RMSEA =.13 and poor relative fit, CFI = .68, NNFI = .36. However, the alternative model, which allowed PPP to correlate with anxiety, provided good absolute fit, χ^2 (2, N = 88) = 2.85, SRMR = .05, RMSEA = .07 and good relative fit, CFI = .94, NNFI = .82 (see Figure 15). More specifically, as expected, higher levels of parental SPP was linked to higher levels of PPP, and higher levels of PPP was associated with greater intensity of OA involvement and higher levels of anxiety. However, counter to expectation, OA was unassociated with anxiety when the link between SPP and anxiety was included in the model.

The final model hypothesized that higher levels of parental SPP would be associated with higher levels of PPP, which would be associated with higher levels of OA involvement, which would be linked to lower levels of life satisfaction. Again, the originally proposed full meditational model provided poor absolute fit, χ^2 (3, N = 88) = 20.34, SRMR = .14, RMSEA = .24 and poor relative fit, CFI = .27, NNFI = -.46.

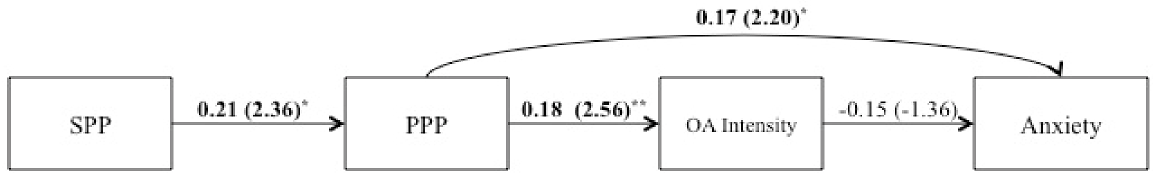


Figure 15. Structural equation model predicting anxiety by SPP, PPP, and OA intensity. Goodness of fit statistics included absolute fit (SRMR = .05; RMSEA = .07) and relative fit (CFI = .94; NNFI = .82). Significant paths are in bold type, and the unstandardized betas (*Z* scores) are reported. *$p \leq .05$ (2-tailed). **$p \leq .01$ (2-tailed). ***$p \leq .001$ (2-tailed).

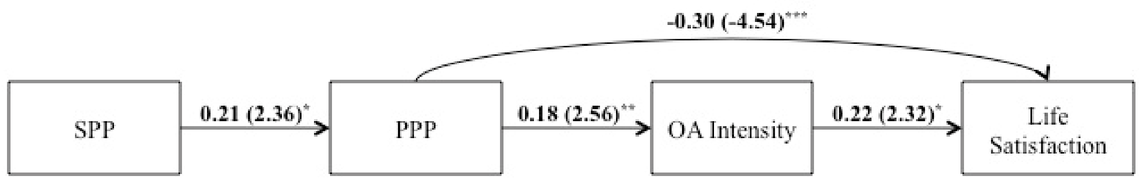


Figure 16. Structural equation model predicting life satisfaction by SPP, PPP, and OA intensity. Goodness of fit statistics included absolute fit (SRMR = .04; RMSEA = .00) and relative fit (CFI = 1.00; NNFI = 1.04). Significant paths are in bold type, and the unstandardized betas (*Z* scores) are reported. *$p \leq .05$ (2-tailed). **$p \leq .01$ (2-tailed). ***$p \leq .001$ (2-tailed).

However, the alternative model, allowing PPP to correlate with life satisfaction, provided excellent absolute fit, χ^2 (2, N = 88) = 1.68, SRMR = .04, RMSEA = 0.0 and excellent relative fit, CFI = 1.00, NNFI = 1.04 (see Figure 16). As expected, SPP was linked to higher levels of PPP, and higher levels of PPP was associated to greater OA intensity and lower levels of life satisfaction. However, counter to expectations, greater intensity of OA was linked to *higher* levels of life satisfaction when the link between PPP and life satisfaction was included in the model.

Gender

Structural equation modeling (SEM) via LISREL 8.80 was used to examine if the fit of all proposed and alternative full mediational models was better for male versus female adolescents (see Table 10). To test for gender differences in all SEM models, male and female matrices were first compared with regard to factor loadings. Then, males and females were compared with respect to factor variance/covariance. Finally, males and females were compared with respect to unique error variance.

First, for each proposed and alternative full meditational model, a baseline model for males and a baseline model for females were run separately. The two (male, female) chi-square values and respective degrees of freedom were summed to yield an overall baseline model to serve as a comparison group for testing invariance. For example, when considering the alternative full meditational model and SPP and life satisfaction, a baseline model for males (χ^2 = 3.14 (2)) and a baseline model for females (χ^2 = 2.16 (3)) were run separately and an overall baseline model served as a comparison group (χ^2 = 5.30 (4)) for testing invariance. The second model, which tested the equivalence of path coefficients, was used to determine if forcing path coefficients to be equal across male and female data significantly worsened model fit compared with the baseline model with summed male and female chi-square values and *df*s. In the example described above, a model testing the equivalence of path coefficients, χ^2 = 9.88 (8), indicated that forcing path coefficients to be equal across male and female data did not significantly worsen model fit compared with the abovementioned baseline model, Dχ^2 = 4.58 (4), $p = ns$, suggesting that the model fits equally well for males and females. Using this technique, all of the proposed and alternative full meditational models fit equally well for male and female adolescents (see Table 10).

Table 10. Gender as moderator of proposed and alternative full mediational models

Proposed	χ^2	*df*	Dχ^2	Ddf	*p*	Alternate	χ^2	*df*	Dχ^2	Ddf	*p*
Self-Oriented Perfectionism (SOP)											
DEP SXS						DEP SXS					
Model 1[a]	21.06	6				Model 1[a]	7.17	4			
Model 2[b]	*25.68*	*9*	*4.62*	*3*	*NS*	Model 2[b]	10.84	8	*3.67*	*4*	*NS*
ANXIETY						ANXIETY					
Model 1[a]	13.92	6				Model 1[a]	6.41	4			
Model 2[b]	18.91	9	*4.99*	*3*	*NS*	Model 2[b]	10.49	8	*4.08*	*4*	*NS*
LS						LS					
Model 1[a]	33.82	6				Model 1[a]	14.96	4			
Model 2[b]	38.05	9	*5.65*	*3*	*NS*	Model 2[b]	19.27	8	*4.31*	*4*	*NS*
Other-Oriented Perfectionism (OOP)											
DEP SXS						DEP SXS					
Model 1[a]	17.73	6				Model 1[a]	3.84	4			
Model 2[b]	21.45	9	*3.72*	*3*	*NS*	Model 2[b]	6.6	8	*2.76*	*4*	*NS*
ANXIETY						ANXIETY					
Model 1[a]	10.03	6				Model 1[a]	2.52	4			
Model 2[b]	14.12	9	*4.09*	*3*	*NS*	Model 2[b]	5.69	8	*3.17*	*4*	*NS*
LS						LS					
Model 1[a]	32.4	6				Model 1[a]	13.27	4			
Model 2[b]	*35.71*	9	*3.31*	*3*	*NS*	Model 2[b]	16.94	8	*3.67*	*4*	*NS*

Proposed	χ^2	*df*	Dχ^2	Ddf	*p*	Alternate	χ^2	*df*	Dχ^2	Ddf	*p*
Socially Prescribed Perfectionism (SPP)											
DEP SXS						DEP SXS					
Model 1[a]	16.05	6		*3*		Model 1[a]	2.15	4			
Model 2[b]	20.67	9	*4.62*		*NS*	Model 2[b]	5.82	8	*3.67*	*4*	*NS*
ANXIETY						ANXIETY					
Model 1[a]	9.25	6				Model 1[a]	1.74	4			
Model 2[b]	14.25	9	*5*	*3*	*NS*	Model 2[b]	5.82	8	*4.08*	*4*	*NS*
LS						LS					
Model 1[a]	24.43	6				Model 1[a]	5.3	4			
Model 2[b]	28.65	9	*4.22*	*3*	*NS*	Model 2[b]	9.88	8	*4.58*	*4*	*NS*

[a] Model 1: Baseline model in which the two (male, female) baseline models' chi-square (χ^2)values and respective degrees of freedom were summed to yield an overall baseline model to serve as a comparison group for testing invariance.

[b] Model 2: Nested invariant model, forcing path coefficients to be equal across male and female data.

CHAPTER FOUR

DISCUSSION

This study offers unique insights into the development of adjustment difficulties and life satisfaction among adolescents within the culture of affluence. Although high-SES youth report higher rates of depressive symptoms, anxiety, and substance use than normative samples and their low-SES counterparts (Luthar & Latendresse, 2005a), few studies to date have investigated the salient contextual influences on adjustment in affluent adolescents (Luthar, 2003). The current study expands prior research on affluent adolescents by including various factors thought to influence affluent adolescent adjustment, examining the effect they have on each other, and by considering parental traits or characteristics (i.e., parental perfectionism) as an essential yet understudied component. More specifically, relations between parental perfectionism, perceived parental pressure, and intensity of organized activity involvement and their contributory influence on adjustment (depressive symptoms, anxiety, and life satisfaction) were examined.

Adjustment in Affluent Adolescents

This study contributes to the literature by clarifying the processes by which various contextual factors may influence affluent adolescent adjustment. It is important to note that the adolescents included in this study described themselves as relatively well-adjusted. Overall, adolescents reported low to moderate levels of depressive symptoms, anxiety, and life satisfaction; however, adjustment outcomes were normally distributed, indicating that adolescents also indicated a wide range of symptom levels.

Importantly, despite prior research indicating that substance use is a significant problem in this population (Bogard, 2005; Luthar & D'Avanzo, 1999; Luthar & Goldstein, 2008), this outcome was not assessed in the current study. Findings indicated that the variable was extremely skewed with 67% adolescents in the current study denying substance use and an additional 24% reporting only minimal use (once per month). Adolescents in the current sample may not have engaged in as much substance use as reported in prior studies, or it is possible that they were concerned about reporting or admitting to behaviors that may "taint" their façade of perfection. Furthermore, although substance use is conceptualized as a low base rate behavior and statistical methods for analyzing data with excessive zeros have been developed, it was concluded that there was limited clinical utility in examining contextual factors influencing no to minimal substance use as well as the few subjects who reported drinking, getting drunk, or using marijuana one time per week.

Parental Perfectionism

Of the studies that have examined specific contextual influences on affluent adolescent adjustment, no known study to date has considered parent report of their own personality traits or characteristics (i.e., parental perfectionism) as a significant factor. More specifically, although adolescents' *perceptions* of parenting behaviors and values have been explored in prior research on affluent youth, research has not examined parental perfectionism as a primary component. Thus, the current study expands the literature by assessing how parental perfectionism influences parenting behaviors (i.e., pressure as perceived by their adolescent children) as well as adolescent behaviors (i.e., intensity of organized activity involvement) and their emotional adjustment (i.e., adolescent depressive symptoms, anxiety, life satisfaction). Furthermore, although direct links between parental perfectionism and adolescent adjustment were not found, the current study supported the suggestion that parental perfectionism is an important variable to consider when examining the *processes* that influence affluent adolescent adjustment.

As expected, confirmatory factor analyses indicated that a three-factor model of perfectionism was better fitting than a one-factor conceptualization. Findings indicated that each domain of perfectionism (self-oriented, other-oriented, socially prescribed) had a differential impact on adolescents' perceptions of parental pressure, their intensity of OA involvement, and reports of adjustment. Parents indicated experiencing, on average, moderate levels of each domain of perfectionism, with significantly higher levels of self-oriented and other-oriented than socially prescribed perfectionism. These findings lend support to prior theory and research that identifies internal and external pressures (on parents) to compete, succeed, and achieve within the culture of affluence (Cashman & Twaite, 2009; Luthar & Sexton, 2004; Warner, 2006). Importantly, despite the fact that parents in the current study reported the highest levels of self-oriented perfectionism — the internally-focused and intrapersonal domain — the full meditational models and indirect pathways that were significant only included *other-oriented* and *socially prescribed* perfectionism.

Perceived Parental Pressure

Perceived parental pressure (PPP) was found to have robust and consistent associations with adolescent report of depressive symptoms, anxiety, and life satisfaction. In fact, due to PPP's significant and strong influence on adolescent adjustment in the current investigation, an alternative to the proposed full mediational model was assessed which also included the path between PPP and adjustment variables. Results revealed that the full mediational model fit the data better when the link between PPP and adjustment was included. This finding is consistent with prior work on affluent youth by Luthar and colleagues (Luthar & Becker, 2002; Luthar and Latendresse, 2005b) that identified PPP as an important factor to consider when understanding influences on affluent adolescent development (Luthar & Becker, 2002; Luthar & Latendresse, 2005b; Luthar et al., 2006)

The current study also highlighted the important role that PPP has in explaining the link between parental perfectionism and negative adolescent adjustment outcomes. Although evidence of a direct link between parental perfectionism and indicators of adolescent adjustment was not found, parents in the current study confirmed that the perfectionistic pressure they experience from their contextual surrounds (i.e., socially prescribed perfectionism) and their focus on having others in their lives be perfect (i.e., other-oriented perfectionism) manifests in their parenting behaviors as evidenced by adolescents' perceptions of parental pressure. Alternatively, higher levels of self-oriented perfectionism, often identified in the literature to be related to adaptive qualities such as self-actualization and constructive striving for achievement (Blatt, 1995), did not directly nor indirectly impact adolescent adjustment. In other words, parents with high levels of self-oriented perfectionism may be more likely to focus on fulfilling their own personal standards and goals rather than pressuring their children to succeed and achieve.

Parent traits or characteristics (i.e., parental perfectionism), related beliefs (i.e., value on achievement success), and behaviors (i.e., parental pressure) have all been implicated as contributing factors to children's experiencing demands to achieve perfectly as well as to their overall adjustment (Hyson, Hirsh-Pasek, Rescorla, Cone, & Martell-Boinske, 1991). For example, Hyson et al. (1991) found that parents with "high pressure" personality dispositions (including perfectionism, rigidity, critical attitudes, and anxiety) are "driven by status needs" and support values and beliefs associated with achievement and success. These parents also embrace developmentally inappropriate expectations for their children, and demonstrate behaviors that push or "hurry" their children to achieve skills earlier than is possible when considering the typical progression of child development (Hyson et al., 1991; Sigel, 1987). More recently, Luthar & Latendresse (2005b) demonstrated that adolescents' perceptions of parental pressure are positively linked to parents' valuing their children's success rather than personal integrity. Related, research indicates that perfectionistic parents tend to focus more on their children's achievements than on the process of learning (Flett et al., 2002).

Findings also support the premise that parental perfectionism (other-oriented and socially prescribed perfectionism in particular) is indirectly linked to adolescent report of depressive symptoms, anxiety, and life satisfaction *through perceived parental pressure*.

The current study indicated that other-oriented perfectionism in parents was linked to higher levels of perceived parental pressure, which was associated with higher levels of depressive symptoms and anxiety and lower levels of life satisfaction among affluent adolescents. Similarly, socially prescribed parental perfectionism was linked to higher levels of depressive symptoms and lower levels of life satisfaction, but not anxiety, though its association to pressuring parenting behavior. It is possible, however, that adolescents who are more depressed and less satisfied with life perceive their parents as more pressuring, or that parents pressure children who are "down" because they appear unmotivated or apathetic.

Interestingly, the concept of "hothousing," which became popular both in the media and among researchers in the 1980s, is highly applicable to the current finding that parental perfectionism was indirectly linked to adolescent adjustment through perceived parental pressure. Hothousing is defined as the process by which parents induce children to gain knowledge that is typically acquired at a later developmental stage (Sigel, 1987) and was thought to be particularly prevalent within upper-middle to upper-class families. Hothousing was identified to include a subset of parents who have high pressure (perfectionistic) personality dispositions (Hyson et al., 1990) and was proposed to contribute to stress, pressure, and "achievement anxiety" and a feeling among children that they have value (to their parents) only when "producing" (Sigel, 1987). More recent work supports this stance, indicating that when adolescents do not perceive themselves as fulfilling parental standards or expectations they also report higher levels of depressive symptoms, anxiety and lower levels of life satisfaction (i.e., Neumeister, 2004; Oishi & Sullivan, 2005; Sagar & Stoeber, 2009; Stoeber & Rambow, 2007).

In support of the current study's assertion that the above described process is "culturally salient" and *specific to affluence,* Sigel (1987) argued that hothousing style of parenting is influenced by beliefs developed from "both broad sociohistorical views and from parents' personal histories" (pp. 219-220). He explained that pressuring parenting behavior can be understood within the context of demographic shifts specific to high-SES families which included the increase in number of dual career couples and a generation of parents who have "less time to spend with their children and higher anxiety in relation to themselves and their offspring" (Gallagher & Coché, 1987, p. 203). In other words, affluent parents' expectations for children to be highly successful, perhaps even beyond their child's capabilities, were imposed by the culture they exist within, endorsed by the social institutions that compose it (i.e., families, schools), and supported by the ideals created by a competitive society. Interestingly, as Sigel identified hothousing as the zeitgeist in the 1980s, he correctly warned in 1987 that, "the pressure on children will continue, although it may change form. For example, a computer in every school will probably be the wave of the future to make learning easier and more efficient" (Sigel, 1987, pg. 223). Findings from the current study therefore corroborate suggestion by the media, clinicians, and researchers within the past 20 years of the link between parental dispositions and beliefs (i.e., parental perfectionism), parenting behaviors (i.e., perceived parental pressure), and adolescent adjustment specifically among high-SES populations.

Organized Activity Involvement

Organized activity involvement has largely been associated in the literature with positive developmental outcomes. Results from the current study may lend support, however, to prior research indicating that intensity of OA involvement differentially impacts development for high- versus low-income youth (Mahoney, 2000). More specifically, the current study highlighted the importance of considering *the context of participation* when understanding the relation between OA involvement and adjustment for affluent adolescents. Results revealed an important, synergistic association between organized activity involvement and the context of parental pressure within the culture of affluence.

Organized activity involvement and nonlinear relations. The current study confirms prior research demonstrating that although youth from affluent families are more likely to become involved in OAs (Huebner & Mancini, 2003; Pedersen & Seidman, 2005) and participate with greater intensity once they get involved (Bartko & Eccles, 2003; Fredricks & Eccles, 2006a; Markstrom et al., 2005), the benefits of OA participation are not as apparent as those identified among low-income, disadvantaged youth (Mahoney, 2000; Mahoney & Cairns, 1997; Marsh, 1992; Marsh & Kleitman, 2002). Adolescents in current study spent an average of 12 hours per week in activities, which is approximately 7 hours more per week than the "typical" American high school student (Mahoney et al., 2006). Counter to expectation, however, despite being more intensely involved in OAs than the average adolescent, affluent adolescents in the sample did not indicate overscheduling effects; in other words, they did not report being negatively impacted by extremely high levels of involvement.

Although evidence for the overscheduling hypothesis (Mahoney et al., 2006) is mixed, a few prior studies have indicated that extremely high levels of OA involvement is linked to greater levels of internalizing symptoms (i.e., Randall & Bohnert, 2009; Randall & Bohnert, 2010) and several other studies have demonstrated overscheduling effects in terms of adolescent substance use (Luthar et al., 2006; Mahoney et al., 2006; Marsh & Kleitman, 2002). Of the few studies that have explored and detected overscheduling effects, however, only one other specifically investigated the relation between extremely high levels of involvement and outcomes within an *affluent* sample. It is possible, for example, that adolescents from middle- and low-SES populations are differentially impacted by highly intense involvement. Overscheduling effects noted in prior studies using more economically-diverse samples may reflect a high level of OA intensity along with other time commitments. For example, while affluent adolescents may spend most of their discretionary time in OAs, highly involved, low-SES children may also responsible for caring for siblings and/or holding a job *in addition to* their OA participation. Furthermore, it is possible that affluent adolescents may be more acclimated to spending a large amount of their discretionary time in structured activities (being hothoused, for example) and thus do not experience or report negative outcomes associated with extremely intense involvement. Of note, the current study was unable to assess nonlinear relations between intensity of OA and risk taking behavior (i.e., substance use), which has been confirmed in earlier studies on affluent youth.

Organized activity involvement and perceived parental pressure. The current study supports prior research that emphasizes the importance of considering the parental pressure when examining 1) the extent to which affluent adolescents get involved in OAs and 2) the relations between OA involvement and affluent adolescent adjustment.

Adolescents who reported more parental pressure (and had parents with higher levels of perfectionism) also reported spending more hours per week in organized activities. More specifically, when parents reported higher levels of other-oriented and socially prescribed perfectionism, their children also indicated higher levels of perceived parental pressure and more intense OA participation. Although the current study did not examine reasons for adolescents' involvement in OAs (i.e., "because my parents want me to" or "it's important for my future"), the findings point to higher levels of OA involvement among adolescents who also described a pressuring family environment.

As noted earlier, it has been found "high pressure" parents with perfectionistic traits engage in behaviors (i.e., hothousing) that include adult choice of learning activities for children and earlier timetables for children's acquisition of skills and development (Hyson et al., 1991; Sigel, 1987). In other words, adolescents with perfectionistic parents may perceive parental pressures to "resume build" and thus become very highly involved in organized activities. Research has shown that parenting practices are instrumental in shaping adolescents' discretionary time-use choices (Bohnert et al. 2007; Eccles et al., 1983), and that PPP has strong and consistently positive links with youths' extrinsic rather than self-determined, autonomous reasons for OA involvement (Stoeber & Eismann, 2007). Furthermore, parents' beliefs and values specific to organized activity involvement are often assumed by their children (Shannon, 2006). For example, if parents adopt a “means to an end” philosophy, adolescents will likely endorse parental messages that discretionary time should be used “productively” rather than for relaxing, restoration, and having fun (Shannon, 2006).

Why might perfectionistic parents from the culture of affluence endorse “productive” discretionary time use (i.e., high involvement in organized activities) for their children? The current shift among high-SES families away from child-initiated “free” or unstructured play towards structured involvement in activities with an educational or future-oriented thrust has been noted in popular culture (i.e., novel “Battle Hymn of the Tiger Mother” and movie “The Race to Nowhere”) as well as by researchers (i.e., Fisher, Hirsh-Pasek, Golinkoff, & Gryfe, 2008). Similar to the hothousing concept described above, it has been argued that “cultural values and norms” shape parents’ beliefs and perceptions of leisure time use. Free, unstructured play has been described as “under siege” today as parents assume a cultural emphasis on didactic instruction (Fisher et al., 2008) and thus focus on using discretionary time to resume build for future success and achievement rather than for relaxation or fun (Fisher et al., 2008; Shannon, 2006). Therefore, although directionality cannot be determined, it is thought that affluent parents in the current study who are influenced by beliefs associated with other-oriented and socially prescribed perfectionism may pressure their children to make discretionary time use choices (i.e., high intensity of OA involvement) which then negates the benefit that involvement can have on minimizing depressive symptoms and anxiety and increasing levels of life satisfaction.

The current study also suggests that perceptions of parental pressure may negatively influence the links between OA involvement and positive adolescent development. Although it is has been proposed that affluent youth are often over-involved to such a degree that they suffer from stress-related problems such as stomachaches, headaches, and insomnia as well as psychological difficulties such as depression and anxiety (Luthar & Sexton, 2004), findings from the current study lend support to Luthar and colleagues' (2006) assertion that highly intense involvement among high-SES youth is a "scapegoat" for the "ubiquitous achievement pressures" seen in the culture of affluence. Analyses in the current study demonstrated a similar effect. When PPP was accounted for in indirect pathways and in the alternative full mediational model, the association between OA intensity and adjustment became significant such that more time spent in OA was linked to *lower levels* of depressive symptoms *and higher levels* of life satisfaction. In other words, the more time affluent youth spent involved in OAs, the better off they were when accounting for the role of PPP. This may suggest a synergistic relation between OA involvement and perceived parental pressure in explaining affluent adolescents' adjustment.

Why might the relation between intensity of OA involvement and adjustment alter when PPP is included in the model? Prior research suggests that perceived parental pressure negatively influences adolescents' experience in OA once involved. For example, parental pressure in the context of competitive sports and academics has been found to be related to various negative developmental outcomes including somatic complaints, negative self-concept, feelings of failure and inadequacy, and anxiety

(Brustad, 1988; Feltz & Albrecht, 1986; Gould et al., 1983; Scanlan et al., 1991; Smith et al., 1978). Rathunde's (2001) longitudinal study investigating the impact of adolescents' quality of experience while participating in OAs may help explain why pressured youth reap fewer benefits from involvement and may even experience negative outcomes.

Using Experience Sampling Methodology (ESM), Rathunde (2001) confirmed that the quality of family context, and specifically the degree of perceived parental support and challenge, had an impact on adolescents' *engagement* in OAs. Findings suggest that a combination of both parental support and challenge contributed to adolescents' "undivided" interest or "flow" while participating. On the other hand, adolescents from high-challenge/low support families spent significantly more time in OAs and reported negative moods and "drudgery" (high "work-like" but low "playful" modes of engagement). The authors speculate that adolescents from low support/high challenge families may have felt overwhelmed by the demands placed on them and received the message from parents that they expect their children to achieve but cannot be counted on for emotional support (Rathunde, 2001). Thus, as in the current study, the benefits of OA involvement were less apparent within the context of perceived parental pressure.

Full Mediational Model

The current study examined a full mediational model (see bolded arrows in Figure 1) to understand the relations between parental perfectionism, perceived parental pressure, and organized activity involvement as they influence affluent adolescent depressive symptoms, anxiety, substance use, and life satisfaction. The fit of the model was examined for each domain of parental perfectionism (self-oriented, other-oriented, socially prescribed perfectionism), and each adjustment outcome (depressive symptoms, anxiety, and life satisfaction). Findings indicated that the proposed model provided a poor fit across all domains of parental perfectionism and adjustment outcomes.

However, the fit of the alternative full mediational model, which included the link between perceived parental pressure and adjustment, was found to be adequate to excellent depending on the domain of perfectionism and adjustment outcome assessed. More specifically, results indicated that higher levels of socially prescribed parental perfectionism was linked to higher levels of perceived parental pressure, which was associated with both greater adjustment difficulties (higher levels of depressive symptoms and anxiety and lower levels of life satisfaction) and more intense involvement in organized activities. More hours/week spent in activities, however, was linked to better adjustment (lower levels of depressive symptoms, greater life satisfaction). Findings indicated a similar process when other-oriented parental perfectionism was considered, with the only difference being that life satisfaction was not a significant outcome. Thus, results from the current study also identified how several culturally salient factors may interact to influence adjustment among affluent adolescents.

Counter to expectation, however, gender was not found to be a significant moderator of the full alternative mediational model. This finding suggests that the processes proposed to influence adolescent adjustment in the current study similarly impacted male and female affluent adolescents. This finding was surprising as gender differences have been found in prior literature in all of the included contextual factors.

More specifically, girls but not boys show a marked increase in anxiety and mood disorders and symptoms in adolescence (Zahn-Waxler et al., 2000), females are particularly susceptible to maternal perfectionism and perceive more pressure from mothers (Besharat, 2003; Frost et a al., 1991; Vieth & Trull, 1999), and OA involvement has been shown to differentially impact adjustment among male versus female participants (Fredricks & Eccles, 2006a). However, it is possible that the small and uneven nature of the male and female samples used in the gender analyses (i.e., 35 males, 53 females) decreased the likelihood that significant gender differences would be detected.

Limitations and Future Directions

The current study is one of the first to examine the impact of various contextual factors on affluent adolescent adjustment as well as on each other, and to consider the role parental perfectionism. However, there were several limitations. First, the current study only evaluated the indirect pathways and full mediational model with a sample of affluent adolescents. Although this study proposes that the factors included in the models were “culturally salient” based on prior literature, it was neither able to compare the results to low- or middle-class adolescents nor examine the model with an ethnically diverse sample. Therefore, future research is needed to clarify whether the theories proposed in the current study are unique to the affluent adolescent population or whether it is consistent pattern among adolescents from a wide range of socioeconomic and ethnic backgrounds.

In addition, the adolescents in the current sample were relatively well-adjusted which may have attenuated the strength of the findings. By considering the proportion of affluent adolescents exceeding clinical cut-offs for internalizing symptoms and risk behaviors and comparing these levels to national norms, Luthar and colleagues (Luthar & D'Avanzo, 1999) found that affluent adolescents are demonstrating significant problems. Rates of clinically significant depressive symptoms in affluent adolescent girls, for example, were twice as high as those in normative samples and 22% of affluent adolescent girls reported anxiety symptoms above the clinical cutoff (Luthar & Becker, 2002; Luthar & D'Avanzo, 1999). Furthermore, Luthar and colleagues (1999, 2008) reported that approximately 30-52% of their sample used cigarettes, 70-85% alcohol, 40-50% marijuana, 50% illicit drugs, and 68% had gotten drunk in the past year. In fact, 7% of seventh-grade boys reported drinking to intoxication or using marijuana once a month.

Unfortunately, the current study was unable to compare adolescents' depressive and anxiety symptoms and substance use levels to normative samples nor clinical cut-offs as this data was not available for the measures used (YSR-D, YSR-A, and SUG); however, mean levels of these outcomes were relatively low. This may be due to underreporting effects, which may be a result of a concern for privacy (Sills & Song, 2002), a general distrust of electronic data collection methodology (Scriven & Smith-Ferrier, 2003), and uncontrolled responding environments (surveys administered at home) (Stanton & Rogelberg, 2001). Luthar and colleagues (i.e., Luthar & D'Avanzo, 1999; Luthar & Becker, 2002; Luthar & Goldstein, 2008), alternatively, utilized passive consent, primarily paper and pencil surveys, collected data during school hours, and often had a long-standing, collaborative relationships with school administrators and parents. Additionally, it is possible that self-selection effects explain the low levels of symptomology; adolescents who agreed to participate in this study may be better adjusted that those who declined participation (i.e., data was not missing at random) and are thus not representative of the school or community population. It is important to note that participation rates in each of the four participating schools ranged from 2% - 55% of the 10th grade class. To support candid report of symptoms and to maximize participation rates, investigators should consider utilizing Luthar and colleagues' recruitment and data collection strategies. Furthermore, future research should assess the fit of the models with a clinical sample and use measures for depressive symptoms, anxiety, and substance use that have normative data and clinical cut-offs available.

Additional limitations of the study are methodological in nature. First, the cross-sectional design limits what can be concluded about the directionality of the findings. It is important to note, however, that although 10th graders were asked to report on current perceptions of parental pressure and their adjustment, OA intensity scores were based primarily on 9th grade involvement. Secondly, the small sample size compromised the power to detect significant findings. The current study required complete child-parent pairs, which decreased the analytic sample. This issue was particularly salient when the number of parameters in proposed models exceeded what is recommended given the sample size (i.e., confirmatory factor analysis of the Multidimensional Perfectionism Scale and gender analyses) (Hu & Bentler, 1999; Kline, 2004). Lastly, aside from parental perfectionism, all other variables included in the study were assessed by adolescent report. Future studies should use a larger sample and a multi-method approach with a longitudinal design to assess the developmental progression of parental perfectionism, perceived parental pressure, OA involvement, and affluent adolescent adjustment.

Furthermore, although the current study collected data from four different high schools across the country, school-level differences were not considered. While this aspect of the study makes the data more generalizable, it also raises questions about school differences. While conducting individual analyses by school would provide more clarity on this issue, the sample size was not large enough to do so. Future studies should investigate the role of school climate on adolescent adjustment and determine how/if the school environment may support or counter the beliefs and pressuring behaviors of perfectionistic parents. This information may help inform parent, teacher, and student intervention and/or prevention programs aimed at reducing adjustment problems in affluent communities.

Additionally, the current study examined intensity of OA involvement, which is only one dimension of OA involvement commonly assessed (Bohnert et al., 2010). Future research should also determine whether involvement in a certain type of OA (i.e., sports, performing arts, etc) or a wide versus narrow range of activity types impacts affluent adolescent adjustment. For example, given that adolescents participate in sports at a higher rate than other organized activities (National Center for Education Statistics, 2005) and that sports involvement consumes the most number of hours of activity per week (Mahoney et al., 2006), continued research on the benefits specific to involvement in organized sport activities is warranted.

Conclusion

The current study expands prior research by examining various factors thought to relate to affluent adolescent adjustment, studying the effects they have on each other, and considering parental traits/characteristics (i.e., parental perfectionism) as an essential component. Several meditational models and indirect pathways were identified that provide valuable information regarding the interaction of various influences on depressive symptoms, anxiety, and life satisfaction among affluent adolescents. Findings highlighted parental perfectionism, and specifically other-oriented and socially prescribed perfectionism, as an important contextual component to consider when examining the relevant associations with affluent adolescent adjustment. Additionally, perceived parental pressure was found to have robust associations with adolescent adjustment and also explain the link between parental perfectionism and adolescent adjustment. Furthermore, the current study revealed an important, synergistic association between intensity of organized activity involvement and perceived parental pressure. Results highlighted that affluent youth may be differentially impacted by OA involvement, and demonstrated the importance of considering the context perceived parental pressure when examining the extent to which affluent adolescents get involved in OAs and the impact that participation in OAs has on their adjustment.

By investigating the unique and combined influences that various contextual factors have on affluent adolescent adjustment, this study helps to clarify aims for the development of prevention and intervention programs. For example, findings from the current investigation support the idea that parents within the culture of affluence report an immense amount of pressure from their external environment to be perfect, and that this struggle may be “passed on” to their children. As such, developing programs that focus on supporting parents and helping them manage their stress may help minimize the extent to which their children report negative developmental outcomes. Furthermore, by decreasing parental perfectionism and the pressure parents put on their children to achieve, it is possible that affluent adolescents will also begin to reap the full benefits of their involvement in organized activities. Although it is clear that prevention and intervention programs which aim to counter the phenomenon of “ubiquitous achievement pressures” within the culture of affluence must assume a multi-systemic approach, this study is an important step towards achieving the goal of positive youth development and promotion of better adjustment among affluent adolescents.

REFERENCES

Ablard, K. E., & Parker, W. D. (1997). Parents' achievement goals and perfectionism in their academically talented children. *Journal of Youth and Adolescence, 26*, 651–667.

Achenbach, T. M. (1991). *The child behavior Checklish/4-18 and 1991 profile.* Burlington: University of Vermont, Department of Psychiatry.

Adelman, H. S., Taylor, L., & Nelson, P. (1989). Minors' dissatisfaction with their life circumstances. *Child Psychiatry and Human Development, 20*, 135–147.

Anderson, J. C., Funk, J. B., Elliot, R., & Smith, P. H. (2003). Parental support and pressure and children's extracurricular activities: Relationships with amount of involvement and affective experience of participation. *Applied Developmental Psychology, 24*, 241–257.

Ansary, N. S., & Luthar, S. S. (2009). Distress and academic achievement among adolescents of affluence: A study of externalizing and internalizing problem behaviors and school performance. *Development and Psychopathology, 21*, 319–341.

Ash, C., & Huebner, E. S. (2001). Environmental events and life satisfaction reports of adolescents: A test of cognitive mediation. *School Psychology International, 22*, 320–336.

Barber, B. L., Eccles, J. S., & Stone, M. R. (2001). Whatever happened to the jock, the brain, and the princess? Young adult pathways linked to adolescent activity involvement and social identity. *Journal of Adolescent Research, 16*, 429–455.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.

Bartko, W. T., & Eccles, J. S. (2003). Adolescent participation in structured and unstructured activities: A person-oriented analysis. *Journal of Youth and Adolescence, 32*, 233–241.

Berlin, S. (1985). Maintaining reduced levels of self-criticism through relapse-prevention treatment. *Social Work Research & Abstracts, 21*, 21–33.

Besharat, M. A. (2003). Parental perfectionism and children's test anxiety. *Psychological Reports, 93*, 1049–1055.

Biran, M. W., & Reese, C. (2007). Parental influences on social anxiety: The sources of perfectionism. *Journal of the American Psychoanalytic Association, 55*, 282–285.Blatt, S. J. (1974). Levels of object representation in anaclitic and introjective depression. *Psychoanalytic Study of the Child, 24*, 107–157.

Blatt, S. J. (1995). The destructiveness of perfectionism: Implications for the treatment of depression. *American Psychologist, 50*, 1003–1020.

Bogard, K. L. (2005). Affluent adolescents, depression, and drug use: The role of adults in their lives. *Family Therapy, 32*, 95–120.

Bohnert, A. M., Aikins, J. W., & Edidin, J. (2007). The role of organized activities in facilitating social adaptation across the transition to college. *Journal of Adolescent Research, 22,* 1–20.

Bohnert, A., Fredricks, J., & Randall, E. (2010). Capturing unique dimensions of youth's organized activity involvement: Theoretical and methodological considerations. *Review of Educational Research, 80,* 576–610.

Bohnert, A. M., & Garber, J. (2007). Prospective relations between organized activity participation and psychopathology during adolescence. *Journal of Abnormal Child Psychology, 35*, 1021–1033.

Bohnert, A. M., Kane, P., & Garber, J. (2008). Organized activity participation and internalizing and externalizing symptoms: Reciprocal relations during adolescence. *Journal of Youth and Adolescence, 37,* 239–250.

Bohnert, A. M., Richards, M. H., Kolmodin, K. E., & Lakin, B. L. (2008). Young urban African American adolescents' experiences of discretionary time activities. *Journal of Research on Adolescence, 18,* 517–539.

Bollen, K. A., & Stine, R. (1990). Direct and indirect effects: Classical and bootstrap estimates of variability. *Sociological Methodology*, *20,* 115–140.

Brislin, R. W., Lonner, W. J., & Thorndike, R. M. (1973). *Cross-cultural research methods*. New York, NY: Wiley.

Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner, & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development* (6th ed., pp. 793–828). Hoboken, NJ, US: Wiley.

Brustad, R. J. (1988). Affective outcomes in competitive youth sport: The influence of intrapersonal and socialization factors. *Journal of Sport and Exercise Psychology, 10*, 307–321.

Burns, B. (1980). *Feeling good: The new mood therapy*. New York, NY: Morrow.

Busseri, M. A., Rose-Krasnor, L., Willoughby, T., & Chalmers, H. (2006). A longitudinal examination of breadth and intensity of youth activity involvement and successful development. *Developmental Psychology, 42*, 1313–1326.

Cashman, O., & Twaite, J. A. (2009). *Toxic wealth: How the culture of affluence can harm us and our children*. Santa Barbara, CA, US: Praeger/ABC-CLIO.

Chambless, D. L., & Steketee, G. (1999). Expressed emotion and behavior therapy outcome: A prospective study with obsessive-compulsive and agoraphobic outpatients. *Journal of Consulting and Clinical Psychology, 67*, 658–665.

Chassin, J., Hussong, A., Barrera, M., Molina, B. S. G., Trim, R., & Ritter, J. (2004). Adolescent substance use. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology* (2nd ed., pp. 665–696). Hoboken, NJ, US: Wiley.

Clark, S., & Coker, S. (2009). Perfectionism, self-criticism and maternal criticism: A study of mothers and their children. *Personality and Individual Differences, 47*, 321–325.

Clarke, G. N., Lewinsohn, P. M., Hops, H., & Seeley, J. R. (1992). A self- and parent-report measure of adolescent depression: The child behavior checklist depression scale (CBCL-D). *Behavioral Assessment, 143*(3-4), 443–463.

Cook, L. C., & Kearney, C. A. (2009). Parent and youth perfectionism and internalizing psychopathology. *Personality and Individual Differences, 46*, 325–330.

Cowen, E. L. (1991). In pursuit of wellness. *American Psychologist, 46*, 404–408.

Csikszentmihalyi, M. (1999). If we are so rich, why aren't we happy? *American Psychologist, 54*, 821–827.

Darling, N. (2005). Participation in extracurricular activities and adolescent adjustment: Cross-sectional and longitudinal findings. *Journal of Youth and Adolescence, 34*, 493–505.

D'Avanzo, K., Hites, S., & Luthar, S. S. (April, 2001). Psychopathology and competence in relation to substance use: Two-year cross-domain links among suburban youth. Presented at biennial meeting of the Society for Research on Child Development, Minneapolis, MN.

Denault, A., & Poulin, F. (2009a). Intensity and breadth of participation in organized activities during the adolescent years: Multiple associations with youth outcomes. *Journal of Youth and Adolescence, 38*, 1199–1213.

Denault, A., & Poulin, F. (2009b). Predictors of adolescent participation in organized activities: A five-year longitudinal study. *Journal of Research on Adolescence, 19*, 287–311.

Diener, E. (1994). Assessing subjective well-being: Progress and opportunities. *Social Indicators Research, 31*, 103–157.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49*, 71–75.

Diener, E., & Suh, E. M. (1997). Measuring quality of life: Economic, social, and subjective indicators. *Social Indicators Research, 40*, 189–216.

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*, 276–302.

Duncan, S. C., Duncan, T. E., Strycker, L. A., & Chaumeton, N. R. (2002). Relations between youth antisocial and prosocial activities. *Journal of Behavioral Medicine, 25*, 425–438.

Eccles, J. S., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., & Meece, J. L. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motivation* (pp. 75–146). San Diego, CA: W.H. Freeman.

Eccles, J. S., & Barber, B. L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research, 14*, 10–43.

Eccles, J. S., Barber, B. L., Stone, M., & Hunt, J. (2003). Extracurricular activities and adolescent development. *Journal of Social Issues, 59*, 865–889. Bakwe.

Fals-Stewart, W., O'Farrell, T. J., & Hooley, J. M. (2001). Relapse among married or cohabiting substance-abusing patients: The role of perceived criticism. *Behavior Therapy, 32*, 787–801.

Fauth, R. C., Roth, J. L., & Brooks-Gunn, J. (2007). Does the neighborhood context alter the link between youth's after-school time activities and developmental outcomes? A multilevel analysis. *Developmental Psychology, 43*, 760–777.

Feltz, D. L., & Albrecht, R. R. (1986). Psychological implications of competitive running. In M. Weiss, & D. Gould (Eds.), *Sport for children and youth* (pp. 332–351). Champaign, IL: Human Kinetics.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7,* 117–140.

Fisher, K., Hirsh-Pasek, K., Golinkoff, R. M., & Gryfe, R. G. (2008). Conceptual split? Parents' and experts' perceptions of play in the 21st century. *Journal of Applied Developmental Psychology, 29,* 305–316.

Fletcher, A. C., Elder, G. H. J., & Mekos, D. (2000). Parental influences on adolescent involvement in community activities. *Journal of Research on Adolescence, 10,* 29–48. Bakwe.

Flett, G. L., Hewitt, P. L., Oliver, J. M., & MacDonald, S. (2002). Perfectionism in children and their parents: A developmental analysis. In G. L. Flett, & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 88–132). Washington, DC: American Psychological Association.

Fredricks, J. A., & Eccles, J. S. (2005). Developmental benefits of extracurricular involvement: Do peer characteristics mediate the link between activities and youth outcomes? *Journal of Youth and Adolescence, 34*, 507–520.

Fredricks, J. A., & Eccles, J. S. (2006a). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations. *Developmental Psychology, 42*, 698–713.

Fredricks, J. A., & Eccles, J. S. (2006b). Extracurricular involvement and adolescent adjustment: Impact of duration, number of activities, and breadth of participation. *Applied Developmental Science, 10,* 132–146.

Fredricks, J. A., Simpkins, S., & Eccles, J. S. (2005). Family socialization, gender, and participation in sports and instrumental music. In C. R. Cooper, C. T. Garcia Coll, W. T. Bartko, H. Davis, & C. Chatman (Eds.), *Developmental pathways through middle childhood: Rethinking contexts and diversity as resources* (pp. 41–62). Mahwah, NJ: Erlbaum.

Fritz M. S., & MacKinnon D. P. (2007). Required sample size to detect the mediated effect. *Psychological Science*, *18,* 233–239.

Frost, R. O., Lahart, C. M., & Rosenblate, R. (1991). The development of perfectionism: A study of daughters and their parents. *Cognitive Therapy and Research, 15,* 469–489.

Gallagher, J. M., & Coché, J. (1987). Hothousing: The clinical and educational concerns over pressuring young children." *Early Childhood Research Quarterly, 2,* 203–210.

Gilbert, S. (1999, August 3). For some children, it's an after-school pressure cooker. *New York Times,* pp. F7.

Gilman, R. (2001). The relationship between life satisfaction, social interest, and frequency of extracurricular activities among adolescent students. *Journal of Youth and Adolescence, 30*, 749–767.

Gilman, R., & Huebner, S. (2003). A review of life satisfaction research with children and adolescents. *School Psychology Quarterly, 18,* 192–205.

Gilman, R., Huebner, S., & Laughlin, J. E. (2000). A first study of the Multidimensional Students' Life Satisfaction Scale with adolescents. *Social Indicators Research, 52,* 135–160.

Gould, D., Horn, T., & Spreeman, J. (1983). Sources of stress in junior elite wrestlers. *Journal of Sport Psychology, 5,* 159–171.

Graber, J. A. (2004). Internalizing problems during adolescence. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology* (2nd ed., pp. 587–626). Hoboken, NJ: Wiley.

Hamilton, T. K., & Schweitzer, R. D. (2000). The cost of being perfect: Perfectionism and suicide ideation in university students. *Australian and New Zealand Journal of Psychiatry*, *34,* 829–835.

Handwerk, M. L., Larzelere, R. E., Soper, S. H., & Friman, P. C. (1999). Parent and child discrepancies in reporting severity of problem behaviors in three out-of-home settings. *Psychological Assessment*, *11*, 14–23.

Hansen, D. M., & Larson, R. W. (2007). Amplifiers of developmental and negative experiences in organized activities: Dosage, motivation, lead roles, and adult-youth ratios. *Journal of Applied Developmental Psychology, 28,* 360–374.

Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation in the new millennium. *Community Monograph, 76,* 408–420.

Hellstedt, J. C. (1990). Early adolescent perceptions of parental pressure in the sport environment. *Journal of Sport Behavior, 13,* 135–144.

Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology, 60,* 456–470.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1–55.

Hudson, J. L., & Rapee, R. M. (2001). Parent--child interactions and anxiety disorders: An observational study. *Behaviour Research and Therapy, 39,* 1411–1427.

Huebner, E. S. (1991a). Correlates of life satisfaction in children. *School Psychology Quarterly, 6,* 103–111.

Huebner, E. S. (1991b). Initial development of the Student's Life Satisfaction Scale. *School Psychology International, 12,* 231–240.

Huebner, E. S., Drane, W., & Valois, R. F. (2000). Levels and demographic correlates of adolescent life satisfaction reports. *School Psychology International, 21,* 281–292.

Huebner, A. J., & Mancini, J. A. (2003). Shaping structured out-of-school time use among youth: The effects of self, family, and friend systems. *Journal of Youth and Adolescence, 32,* 453–463.

Hyson, M. C., Hirsh-Pasek, K., Rescorla, L., Cone, J., & Martell-Boinske, L. (1991). Ingredients of parental "pressure" in early childhood. *Journal of Applied Developmental Psychology, 12, 347–365.*

Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1984). *Drugs and American high school students: 1875–1983* (vol. 85). Washington, DC: US Government Printing Office.

Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1998). *National survey results on drug use from the monitoring the future study, (1975 – 1997): Volume 1: Secondary school students*. Bethesda, MD: National Institute on Drug Abuse.

Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (2000). *Monitoring the future: National results in adolescent drug use: Overview of key findings, 1999.* NIH Publication No. 00–4690. Bethesda, MD: Department of Health and Human Services.

Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (2002). *Monitoring the future national results on adolescent drug use: Overview of key findings, 2001*. NIH Publication No. 02-5105. Bethesda, MD: National Institute on Drug Abuse.

Jöreskog, K. G., & Sörbom, D. (1996). *LISREL 8: User's reference guide*. Chicago, IL: Scientific Software International.

Kendall, P., Puliafico, A. C., Barmish, A. J., Choudhury, M. S., Henin, A., & Treadwell, K. S. (2007). Assessing anxiety with the child behavior checklist and the teacher report form. *Anxiety Disorders, 21*, 1004–1015.

Kline, R. B. (2004). *Principles and practice of structural equation modeling: Issues and techniques* (2nd ed.). New York, New York, NY: Guilford Press.

Larson, R. (2000). Toward a psychology of positive youth development. *American Psychologist, 55,* 170–183.

Larson, R., Csikszentmihalyi, M., & Graef, R. (1980). Mood variability and the psychosocial adjustment of adolescents. *Journal of Youth and Adolescence, 9,* 469–490.

Leff, S. S., & Hoyle, R. H. (1995). Young athletes' perceptions of parental support and pressure. *Journal of Youth and Adolescence, 24*, 187–203.

Leung, J., & Leung, K. (1992). Life satisfaction, self-concept, and relationship with parents in adolescence. *Journal of Youth and Adolescence, 21*, 653–665.

Lewko, J. H., & Ewing, M. E. (1980). Sex differences and parental influence in sport involvement of children. *Journal of Sport Psychology, 2,* 62–68.

Linver, M. R., Roth, J. L., Brooks-Gunn, J. (2009). Patterns of adolescents' participation in organized activities: Are sports better when combined with others, *Developmental Psychology, 45*, 354–367.

Linville, D. C., & Huebner, A. J. (2005). The analysis of extracurricular activities and their relationship to youth violence. *Journal of Youth and Adolescence, 34*, 483–492.

Lundh, L. G. (2004). Perfectionism and acceptance. *Journal of Rational-Emotive and Cognitive-Behavior Therapy, 22,* 255–269.

Luthar, S. S. (2003). The culture of affluence: Psychological costs of material wealth. *Child Development, 74,* 1581–1593.

Luthar, S. S., & Becker, B. E. (2002). Privileged but pressured?: A study of affluent youth. *Child Development, 73*, 1593–1610.

Luthar, S. S., & D'Avanzo, K. (1999). Contextual factors in substance use: A study of suburban and inner-city adolescents. *Development and Psychopathology, 11,* 845–867.

Luthar, S. S., & Goldstein, A. S. (2008). Substance use and related behaviors among suburban late adolescents: The importance of perceived parent containment. *Development and Psychopathology, 20*, 591–614.

Luthar, S. S., & Latendresse, S. J. (2005a). Children of the affluent: Challenges to well-being. *Current Directions in Psychological Science, 14*, 49–53.

Luthar, S. S., & Latendresse, S. J. (2005b). Comparable "risks" at the socioeconomic status extremes: Preadolescents' perceptions of parenting. *Development & Psychopathology, 17*, 207–230.

Luthar, S. S., & Sexton, C. C. (2004). The high price of affluence. In R. V. Kail (Ed.), *Advances in child development and behavior* (1st ed., pp. 125–162). San Diego, CA, US: Elsevier Academic Press.

Luthar, S. S., Shoum, K. A., & Brown, P. J. (2006). Extracurricular involvement among affluent youth: A scapegoat for "ubiquitous achievement pressures"? *Developmental Psychology, 42*, 583–597.

MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods,* 7, 83–104.

Mahoney, J. L. (2000). School extracurricular activity participation as a moderator in the development of antisocial patterns. *Child Development, 71*, 502–516.

Mahoney, J. L., & Cairns, R. B. (1997). Do extracurricular activities protect against early school dropout? *Developmental Psychology*, *33*, 241–253.

Mahoney, J. L., Harris, A. L., & Eccles, J. S. (2006). *Organized activity participation, positive youth development, and the over-scheduling hypothesis* (Social Policy Report No. 4). Ann Arbor, MI: Society for Research in Child Development.

Mahoney, J. L., Larson, R. W., Eccles, J. S., & Lord, H. (2005). Organized activities as developmental contexts for children and adolescents. In J. L. Mahoney, R. W. Larson & J. S. Eccles (Eds.), *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 3–22). Mahwah, New Jersey: Erlbaum.

Mahoney, J. L., Schweder, A. E., & Stattin, H. (2002). Structured after-school activities as a moderator of depressed mood for adolescents with detached relations to their parents. *Journal of Community Psychology*, *30*, 69–86.

Mahoney, J. L., Vandell, D. L., Simpkins, S. D., & Zarrett, N. (2009). Adolescent out-of-school activities. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology, Vol 2: Contextual influences on adolescent development* (3rd ed., pp. 228–269). Hoboken, NJ: Wiley.

Markstrom, C. A., Li, X., Blackshire, S. L., & Wilfong, J. J. (2005). Ego strength development of adolescents involved in adult-sponsored structured activities. *Journal of Youth and Adolescence, 34,* 85–95.

Marsh, H. W. (1992). Extracurricular activities: Beneficial extension of the traditional curriculum or subversion of academic goals? *Journal of Educational Psychology, 84*, 553–562.

Marsh, H. W., & Kleitman, S. (2002). Extracurricular school activities: The good, the bad, and the nonlinear. *Educational Review, 72*, 464–514.

Maton, K. I. (1990). Meaningful involvement in instrumental activity and well-being: Studies of older adolescents and at risk urban teen-agers. *American Journal of Community Psychology, 18,* 297–321.

McArdle, S., & Duda, J. L. (2004). Exploring social-contextual correlates of perfectionism in adolescents: A multivariate perspective. *Cognitive Therapy and Research, 28,* 765–788.

McHale, S. M., Crouter, A. C., & Tucker, C. J. (2001). Free-time activities in middle childhood: Links with adjustment in early adolescence. *Child Development, 72,* 1764–1778.

McMahon, T. J., & Luthar, S. (2006). Patterns and correlates of substance use among affluent, suburban high school students. *Journal of Clinical Child and Adolescent Psychology, 35*, 72–89.

Melman, S., Little, S. G., & Akin-Little, K. A. (2007). Adolescent overscheduling: The relationship between levels of participation in scheduled activities and self-reported clinical symptomology. *The High School Journal, 90*, 18–30.

Mesic, P. (2008, November). Privileged. *North Shore*, 68–73.

Missildine, W. H. (1963). Perfectionism: If you must strive to “do better.” In W. H. Missildine (Ed.), *Your inner child of the past* (pp. 75–90). New York, NY: Pocket Books.

Moffitt, T. E., Caspi, A., Harrington, H., Milne, B. J., Melchior, M., Goldberg, D., & Poulton, R. (2007). Generalized anxiety disorder and depression: Childhood risk factors in a birth cohort followed to age 32. *Psychological Medicine, 37*, 441–452.

National Center for Educational Statistics. (2005). *Digest of education statistics tables and figures 2004*. Washington, DC: Author.

Neal, D. J., & Simons, J. S. (2007). Inference in regression models of heavily skewed alcohol use data: A comparison of ordinary least squares, generalized linear models, and bootstrap resampling. *Psychology of Addictive Behaviors, 21,* 441–452.

Needle, R., Su, S., & Lavee, Y. (1989). A comparison of the empirical utility of three composite measures of adolescent overall drug involvement. *Addictive Behaviors, 14*, 429–441.

Neto, F. (1993). The satisfaction with life scale: Psychometric properties in an adolescent sample. *Journal of Youth and Adolescence, 22,* 125–134.

Neumeister, K. L. S. (2004). Factors influencing the development of perfectionism in gifted college students. *Gifted Child Quarterly*, *48*, 259–274.

Ogul, M., & Gencoz, T. (2003). Roles on perceived control and coping strategies on depressive and anxiety symptoms of Turkish adolescents. *Psychological Reports, 93*, 659–672.

Oishi, S., & Sullivan, H. W. (2005). The mediating role of parental expectations in culture and well-being. *Journal of Personality, 73,* 1267–1294.

Park, N. (2004). The role of subjective well-being in positive youth development. *The Annals of the American Academy, 591,* 25–39.

Pedersen, S., & Seidman, E. (2005). Contexts and correlates of out-of-school activity participation among low-income urban adolescents. In J. L. Mahoney, R. Larson & J. S. Eccles (Eds.), *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 85–109). Mahwah, NJ: Erlbaum.

Petito, F., & Cummins, R. A. (2000). Quality of life in adolescence: The role of perceived control, parenting style, and social support. *Behaviour Change, 17,* 196–207.

Preacher, K. J., & Hayes, A. F. (2008). Contemporary approaches to assessing mediation in communication research. In A. F. Hayes, M. D. Slater, & L. B. Snyder (Eds.), *The SAGE sourcebook of advanced data analyses methods for communication research* (pp. 13–54). Thousand Oaks CA: Sage.

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Assessing moderated mediation hypotheses: Theory, method, and prescriptions. *Multivariate Behavioral Research*, *42*, 185–227.

Randall, E., & Bohnert, A. M. (2009). Organized activity involvement, depressive symptoms, and social adjustment in adolescents: Ethnicity and socioeconomic status as moderators. *Journal of Youth and Adolescence, 38*, 1187–1198.

Randolph, J. J., & Dykman, B. M. (1998). Perceptions of parenting and depression-proneness in the offspring: Dysfunctional attitudes as a mediating mechanism. *Cognitive Therapy and Research, 22*, 377–400.

Rapee, R. M. (1997). Potential role of childrearing practices in the development of anxiety and depression. *Clinical Psychology Review, 17*, 47–67.

Rathunde, K. (2001). Family context of the development of undivided interest: A longitudinal study of family support and challenge and adolescents' quality of experience. *Applied Developmental Science, 5,* 158–171.

Renshaw, K. D. (2007). Perceived criticism only matters when it comes from those you live with. *Journal of Clinical Psychology, 63*, 1171–1179.

Renshaw, K. D. (2008). The predictive, convergent, and discriminant validity of perceived criticism: A review. *Clinical Psychology Review, 28,* 521–534.

Ripke, M. N., Huston, A. C., & Casey, D. M. (2006). Low-income children's activity participation as a predictor of psychosocial and academic outcomes in middle childhood and adolescence. In A. C. Huston, & M. N. Ripke (Eds.), *Developmental contexts in middle childhood: Bridges to adolescence and adulthood* (pp. 260–282). New York, NY: Cambridge University Press.

Roehling, P. V., & Robin, A. L. (1986). Development and validation of the Family Beliefs Inventory: A measure of unrealistic beliefs among parents and adolescents. *Journal of Consulting and Clinical Psychology, 54,* 693–697.

Rose-Krasnor, L., Busseri, M. A., Willoughby, T., & Chalmers, H. (2006). Breadth and intensity of youth activity involvement as contexts for positive development. *Journal of Youth and Adolescence, 35*, 385–399.

Rosenfeld, A., & Wise, N. (2000). *The over-scheduled child: Avoiding the hyper-parenting trap*. New York, NY: St. Martin's Griffin.

Sagar, S. S., & Stoeber, J. (2009). Perfectionism, fear of failure, and affective responses to success and failure: The central role of fear of experiencing shame and embarrassment. *Journal of Sport and Exercise Psychology, 31,* 602–627.

Sawyer, M. G., Arney, F. M., Baghurst, P. A., Clark, J. J., Graetz, B. W., Kosky, R. J., . . . Zubrick, S. R. (2001). The mental health of young people in Australia: Key findings from the child and adolescent component of the national survey of mental health and well-being. *Australian and New Zealand Journal of Psychiatry, 35,* 806–814.

Scanlan, T. K., Stein, G. L., & Ravizza, K. (1991). An in-depth study of former elite figure skaters: III. Sources of stress. *Journal of Sport and Exercise Psychology, 13,* 103–120.

Scriven, A., & Smith-Ferrier, S. (2003). The application of online surveys for workplace health research. *Journal of the Royal Society for the Promotion of Health, 123*, 95–101.

Seiffge-Krene, I., & Kollmar, F. (1998). Discrepancies between mothers' and fathers' perceptions of sons' and daughters' problem behavior: A longitudinal analysis of parent-adolescent agreement on internalizing and externalizing problem behavior. *Journal of Child Psychology and Psychiatry, 39*, 687–69.

Shannon, C. S. (2006). Parents' messages about the role of extracurricular and unstructured leisure activities: Adolescents' perceptions. *Journal of Leisure Research, 38*, 398–420.

Shin, D., & Johnson, D. (1978). Avowed happiness as an overall assessment of the quality of life. *Social Indicators Research, 5,* 475–492.

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods, 7*, 422–445.

Sigel, I. (1987). Does hothousing rob children of their childhood? *Early Childhood Research Quarterly, 2,* 211–225.

Sills, S., & Song, C. (2002). Innovations in survey research: An application of web-based surveys. *Social Science Computer Review, 20,* 22–30.

Simons, J. S., Neal, D. J., & Gaher, R. M. (2006). Risk for marijuana-related problems among college students: An application of zero-inflated negative binomial regression. *The American Journal of Drug and Alcohol Abuse, 32,* 41–53.

Simpkins, S. D., Fredricks, J. A., Davis-Kean, P. E., & Eccles, J. S. (2006). Healthy mind, healthy habits: The influence of activity involvement in middle childhood. In A. C. Huston, & M. N. Ripke (Eds.), *Developmental contexts in middle childhood: Bridges to adolescence and adulthood* (pp. 283–302). New York, NY: Cambridge University Press.

Smith, M. D.; Zingale, S. A., & Coleman, J. M. (1978). The influence of adult expectancy/child performance discrepancies upon children's self-concepts. *American Educational Research Journal, 15,* 259–265

Smoll, F. L., & Cummings, S. P. (2006). Enhancing coach-parent relationships in youth sports: Increasing harmony and minimizing hassle. In R. V. Kail, & H. W. Reese (Eds.), *Applied sport psychology: Personal growth to peak performance* (5th ed., pp. 192–204). Boston, MA: McGraw-Hill.

Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equations models. In S. Leinhart (Ed.), *Sociological Methodology 1982* (pp. 290–312). San Francisco, CA: Jossey-Bass.

Sobel, M. E. (1986). Some new results direct effects and their standard errors in covariance structure analysis. In N. B. Tuma (Ed.) *Sociological methodology* (pp. 159–186). San Francisco, CA: Jossey-Bass.

Soenens, B., Elliot, A. J., Goossens, L., Vansteenkiste, M., Luyten, P., & Duriez, B. (2005). The intergenerational transmission of perfectionism: Parents' psychological control as an intervening variable. *Journal of Family Psychology, 19,* 358–366.

Stanton, J. S., & Rogelberg, S. G. (2001). Using internet/intranet web pages to collect organizational research data. *Organizational Research Methods, 4,* 199–216.

Stevenson, W., Maton, K. I., & Teti, D. M. (1999). Social support, relationship quality, and well-being among pregnant adolescents. *Journal of Adolescence, 22*, 109–121.

Stoeber, J. (1998). The Frost Multidimensional Perfectionism scale: More perfect with four (instead of six) dimensions. *Personality and Individual Differences, 24*, 481–491.

Stoeber, J., & Eismann, U. (2007). Perfectionism in young musicians: Relations with motivation, effort, achievement, and distress. *Personality and Individual Differences, 43*, 2182–2192.

Stoeber, J., Otto, K., & Stoll, O. (2004). Mehrdimensionales inventarzu perfektionismus im sport (MIPS). In J. Stoeber, K. Otto, E. Pescheck & O. Stoll (Eds.), *Skalendockumentation "perfektionismus im sport"* (pp. 4–13). Halle/Saale, Germany: Martin Luther University of Halle, Department of Educational Psychology.

Stoeber, J., Otto, K., & Stoll, O. (2005). Perfectionistic aspirations in athletes: Except for the negative reactions, they're positive! Paper presented at the meeting of the Stress and Anxiety Research Society, Halle/Saale, Germany.

Stoeber, J., & Rambow, A. (2007). Perfectionism in adolescent school students: Relations with motivation, achievement, and well-being. *Personality and Individual Differences, 42*, 1379–1389.

Stone C. A., & Sobel M. E. (1990). The robustness of estimates of total indirect effects in covariance structure models estimated by maximum likelihood. *Psychometrika*, *55*, 337–352.

Stumpf, H., & Parker, W. D. (2000). A hierarchical structural analysis of perfectionism and its relation to other personality characteristics. *Personality and Individual Differences, 28*, 837–852.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics* (5th ed.). Boston, MA: Allyn and Bacon.

Tofler, M. B., Knapp, P. K., & Drell, M. J. (1998). The achievement by proxy spectrum in youth sports: Historical perspective and clinical approach to pressured and high-achieving children and adolescents. *Sport Psychiatry, 7,* 803–820.

Tofler, M. B., Knapp, P. K., & Drell, M. J. (1999). The "achievement by proxy" spectrum: Recognition and clinical response to pressured and high-achieving children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*, 213–216.

U.S. Census Bureau (2008). *Quick facts*. Retrieved December 1, 2009, from http://quickfacts.census.gov/qfd/states/00000.html

Vieth, A. Z., & Trull, T. J. (1999). Family patterns of perfectionism: An examination of college students and their parents. *Journal of Personality Assessment, 72*, 49–67.

Warner, J. (2006). *Perfect madness: Motherhood in the age of anxiety*. New York, New York, NY: Penguin group.

Weston, R., & Gore, P. A. (2006). A brief guide to structural equation modeling. *The Counseling Psychologist*, *34,* 719–751.

Widaman, K. F. (2006). Missing data: What to do with or without them. *Monographs of the Society for Research in Child Development*, *71*, 42–64.

Wintre, M. G., & Sugar, L. A. (2000). Relationship with parents, personality, and the university transition. *Journal of College Student Development, 41*, 202–214.

Yoon, J., & Lau, A. S. (2008). Maladaptive perfectionism and depressive symptoms among Asian American college students: Contributions of interdependence and parental relations. *Cultural Diversity and Ethnic Minority Psychology, 14*, 92–101.

Young, M. H., Miller, B. C., Norton, M. C., & Hill, E. J. (1995). The effect of parental supportive behaviors on life satisfaction of adolescent offspring. *Journal of Marriage and the Family, 57,* 813–822.

Youniss, J., McLellan, J. A., Su, Y., & Yates, M. (1999). The role of community service in identity development: Normative, unconventional, and deviant orientations. *Journal of Adolescent Research, 14*, 248–261.

Zahn-Waxler, C., Klimes-Dougan, B., & Slattery, M. J. (2000). Internalizing problems of childhood and adolescence: Prospects, pitfalls, & progress in understanding the development of anxiety and depression. *Development and Psychopathology, 12,* 443–466.

Zoccolillo, M., Vitaro, F., & Tremblay, R. E. (1999). Problem drug and alcohol use in a community sample of adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 38*, 900–907.

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