Students' Perceptions of Factors that Contribute to Risk and Success in Accelerated High School Courses

Elizabeth Shaunessy-Dedrick
University of South Florida
Shaunessy@usf.edu

Shannon M. Suldo
University of South Florida
suldo@usf.edu

Rachel A. Roth
University of South Florida
roth.rachela@gmail.com

Sarah A. Fefer
University of Massachusetts, Amherst
sfefer@educ.umass.edu

In this qualitative study, we investigated 15 successful and 15 struggling high school students' perceived stressors, coping strategies, and intrapersonal and environmental factors that students perceive to influence their success in college-level courses. We found that students' primary sources of stress involved meeting numerous academic demands and seeking a balance between academic goals, social needs, and extracurricular activities. The most frequently described and commonly used coping responses viewed as effective involved time and task management, seeking temporary diversions, and cognitive reappraisal. Students perceived a strong work ethic and high achievement motivation as personal traits aligned with success, and support from a broad network of peers, parents, and teachers as environmental factors that are also related to optimal performance in rigorous accelerated high school programs.

Keywords: stress, coping, personal traits, environmental factors, International Baccalaureate, Advanced Placement

Adolescence is a complex developmental period marked by hormonal changes, heightened social awareness, and a striving for independence (McNamara, 2000). The proliferation of rigorous high school coursework provided through Advanced Placement (AP) and the International Baccalaureate Diploma Programme (hereafter IBD)

The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305A100911 to The University of South Florida. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

has prompted researchers to examine a range of issues specific to the adolescents in these curricula (i.e., Foust, Hertberg-Davis, & Callahan, 2008, 2009; Hertberg-Davis & Callahan, 2008; Shaunessy, Suldo, Hardesty, & Shaffer, 2006; Suldo & Shaunessy-Dedrick, 2013a). While completion of demanding high school courses increases the odds of college success (Adelman, 2006), students in AP and IBD classes have reported higher levels of perceived stress than their general education classmates (Suldo, Shaunessy, & Hardesty, 2008; Suldo & Shaunessy-Dedrick). Both IBD and general education students reported experiencing academic stressors; IBD students' stress pertained to academic requirements while general education students reported occasional academic struggles (Suldo, Shaunessy, Thalji, Michalowski, & Shaffer, 2009).

Although higher academic achievement often coincides with good mental health in the general population (Suldo, Gormley, DuPaul, & Anderson-Butcher, 2014), the stress incurred by AP and IBD students may offset some of the positive effects associated with high achievement. In previous studies involving AP and IBD learners, students reported deleterious social-emotional outcomes, such as sleep deprivation, cognitive withdrawal, self-isolation (Milburn, 2012), chronic fatigue (Foust et al., 2009), and emotional distress (Suldo et al., 2009). Furthermore, Suldo et al. (2009) found an inverse correlation between IBD students' academic stressors and their life satisfaction, and positive correlations between academic stressors and mental health problems (both internalizing and externalizing symptoms). Given the established inverse relationship between stress and academic achievement among adolescents in the general population (Kaplan, Liu, & Kaplan, 2005) and among AP and IBD students (described above), rigorous academic coursework may pose "an elevated probability of an undesired outcome," also known as a risk factor (Masten, Cutuli, Herbers, & Reed, 2009, p. 119) to some students. The personal qualities and environmental features that explain why some students thrive can be conceptualized as assets or resources; protective factors may be similarly facilitative in general, but are particularly beneficial when in the presence of higher risk (Masten et al., 2009). As suggested in previous IBD research (Suldo, Shaunessy, Michalowski, & Shaffer, 2008), strategies IBD students use to cope with academic stressors may serve as protective factors. Additional information is needed to guide educators and researchers in understanding which factors beyond student coping may hinder or facilitate AP and IBD students' success.

In the current study, we explored the assets that students perceive as contributory in determining which AP/IBD students thrive academically and emotionally despite the stress encountered in their demanding academic context as well as the factors that place themselves and their peers at elevated risk for struggling in AP or IBD. Prior research with a related population—gifted students— indicated that numerous personal traits as well as environmental resources pertinent to home, school, and peer groups were associated with positive academic outcomes (Reis, Colbert, & Hébert, 2005). To set the stage for the factors likely to emerge in students' sentiments, the following literature review includes a description of the context for the population of the current study and more detail about possible assets, as informed by prior research on predictors of success among other youth populations.

Theoretical Underpinnings Pertinent to Student Success

Two lines of inquiry have evolved over the last several decades and are described by Eccles and Wang (2012) as "fairly parallel lines of research on school success" (p. 134). Engagement theory has emerged from policy and school psychology research, while academic motivation has been informed by self-determination, achievement motivation, social-cognitive and self-efficacy theories, and the expectancy-value

theory of achievement (e.g., Reeve, Ryan, Deci, & Jang, 2007; Skinner & Pitzer, 2012). Student engagement reflects students' behavioral, emotional, and cognitive involvement in their coursework, which ultimately influences learning as reflected in course grades and other indicators of academic achievement (Reschly & Christenson, 2012). Facilitators of engagement include personal and environmental/social factors that contribute to student success. An individual's coping responses to academic stressors may also predict engagement (Skinner & Pitzer, 2012).

While engagement often reflects active task involvement, motivation pertains to intent and the underlying psychological processes that create an individual's drive to learn and achieve, including competence beliefs, autonomy, and relatedness (Skinner & Pitzer, 2012). Although engagement and motivation are theoretically distinct, they are often examined together (e.g., Martin, 2007) and inherently linked. For example, motivation may be necessary but not sufficient for engagement (Pekrun & Linnenbrink-Garcia, 2012), which is linked with academic achievement. School-based success through academic achievement may, in turn, increase motivation by enhancing a student's beliefs about his or her academic competence (Eccles & Wang, 2012). Among intellectually gifted students, academic achievement has been linked to positive attitudes towards learning (affective engagement), motivation for academic success (McCoach & Siegle, 2003a; Reis et al., 2005), and to indicators of cognitive engagement, such as self-discipline (Peterson, Duncan, & Canady, 2009) and grit (Duckworth & Seligman, 2005). Published research has not explored these personal assets among AP and IBD students in particular.

While a few investigators find that AP and IBD students are largely successful in managing academic stressors, a portion of study participants reported academic and/or social-emotional difficulties (Shaunessy et al., 2006; Suldo & Shaunessy-Dedrick, 2013a). To more thoroughly understand the range of academic and social-emotional outcomes experienced by AP and IBD students, additional research is needed to determine what contributes to (a) the success of students who thrive academically and emotionally and (b) the adversity experienced by students who are at risk for diminished academic social-emotional functioning. While academic stress and coping responses among IBD students have been considered to a limited extent, further exploration is needed for researchers to obtain a more nuanced understanding of influences that may hinder or facilitate AP and IBD students' academic and social-emotional functioning, including an individual's personal traits, educational and home environments, and relationships. Following the model established in resilience research by Masten et al. (2009), such investigations should include purposeful sampling of students who are thriving in this environment and those at-risk for poor academic performance and deleterious social-emotional functioning.

The AP and IBD Academic Context

Participation in AP and IBD is increasing in U.S. high schools in response to calls for more advanced curricular offerings (Iatarola, Conger, & Long, 2011), greater college readiness (Conley, 2005), greater performance on measures affecting high school rankings (Morse, 2012), and reduced undergraduate degree completion time (Adelman, 2006). Furthermore, AP and IBD courses are two options afforded to advanced students and gifted learners as accelerated learning alternatives to general education courses. Both AP and IBD curricula embed challenging concepts and content standards that are above typical grade-level expectations (Colangelo, Assounline, & Gross, 2004; Rogers, 2002; Van Tassel-Baska, 2001). Managed by the College Board, the AP Program offers 34 subject-specific exams in the arts, English, history and social sciences, world languages, and science (College Board, 2013a). Students select cafeteria-style

from their school's AP course offerings and may complete an end-of-course exam; universities and colleges consider exam performance in determining whether to award college credit. The program has seen tremendous growth, with the number of public school graduates who took an AP exam during high school growing from 18% in 2002 to 32.4% in 2012 (College Board, 2013b).

Although less commonly offered in the U.S. than AP classes, the IBD is a holistic curricular experience that encompasses many disciplines and is guided by a liberal arts philosophy. AP students may opt to pursue a single advanced course, but IBD students complete a cross-curricular program of study. Although the IBD Program is designed for juniors and seniors, IBD schools often provide a pre-IBD curriculum for 9th and 10th grade students to prepare them for the rigors of the IBD Program in 11th and 12th grade (Suldo & Shaunessy-Dedrick, 2013b). International Baccalaureate Diploma attainment is based on end-of-course exam scores, key program assessments embedded in coursework, major projects, course performance, and service to the community (IBO, 2014). College credit may be awarded by colleges and universities based on an applicant's end-of-course IBD exam performance.

Stress Associated with Participation in AP and IBD

According to McNamara's (2000) research on adolescents, most teens—regardless of academic curriculum—experience stress associated with hormonal changes, developmental tasks, and navigating social and intrapersonal experiences. Stress has been categorized as either perceived stress or environmental stress. Perceived stress is experienced after one's resources to deal with a given challenge are deemed by the individual to be taxed (Lazarus & Folkman, 1984). Environmental stressors refer to the cumulative number of objective external events experienced that pose a threat to one's well-being (Grant et al., 2003). External events include major disruptions (e.g., death of family member or trauma) and chronic conditions, such as conflict in relationships and pressure to achieve. Suldo and Shaunessy-Dedrick (2013a) found that AP and IBD students had statistically significant higher overall perceived stress than general education students at the same schools even after accounting for personality and socioeconomic differences. In a subsequent investigation, Suldo and Shaunessy-Dedrick (2013b) found that while there were no differences in perceived stress between students enrolled in advanced and general education curricula prior to entering high school, statistically significant differences were evident in the first semester, with IBD students reporting greater stress than peers in general education.

The notion of academics as a primary stressor was previously advanced by Ainslie and Shafer (1996) in their study of high school students pursuing rigorous curricula and by Peterson, Duncan, and Canady (2009) in their investigation of gifted youth. Students' primary environmental stressors pertained to school-related academic events, including writing papers, taking quizzes/tests (Ainslie & Shafer, 1996), and preparing for midterm examinations (Peterson et al). In a study of IBD and general education students, Suldo, Shaunessy, Thalji, Michalowski, and Shaffer (2009) found that students reported experiencing seven types of stressors. Of these stressors, academic requirements, such as test preparation, homework completion, and project development, were, by far, the greatest of the stressors described. In contrast, general education students experienced more stressors pertinent to relational issues with parents and peers as well as academic struggles (i.e., poor grades, difficulties learning). Thus, IBD students' elevated levels of perceived stress (Suldo & Shaunessy-Dedrick, 2013a; Suldo, Shaunessy, & Hardesty, 2008) may be closely related to students' heightened school-related demands.

Factors Associated with Risk and Resilience in the Curricular Context

Despite greater perceived stress reported by students in rigorous academic programs, Shaunessy et al. (2006) and Suldo and Shaunessy-Dedrick (2013a) found that, on average, AP and IBD students report intact mental health and achieve greater academic success relative to their peers in general education. The existence of assets and protective factors, or characteristics that predict positive outcomes across levels of risk and that reflect an increased likelihood of an optimal outcome (Masten et al., 2009), may explain how so many AP and IBD students thrive within a curricular context that is associated with gains in stress upon entry (Suldo & Shaunessy-Dedrick, 2013b). The small body of research specific to AP and IBD students' preferred coping strategies has largely focused on explaining individual differences in mental health (Suldo, Shaunessy, & Hardesty, 2008). In the next sections, we describe the results of these initial studies of coping within IBD students and suggest other intrapersonal and environmental factors that may serve as protective factors. Since no such comprehensive studies exploring predictors of risk and success among AP and/or IBD students currently exist in the literature, we are informed by the robust correlates of student academic outcomes implicated in research with general youth (i.e., engagement theory [Reschly & Christenson, 2012], student motivation [Skinner & Pitzer, 2012]) and also rely on relevant research with populations who likely participate in AP and IBD, namely academically and intellectually gifted youth (McCoach & Siegle, 2003a; Peterson et al.; 2009; Reis et al., 2005).

Coping strategies. Students who have difficulties managing academic stressors have a greater risk for experiencing diminished mental health than classmates who report less frequent stress associated with academic requirements (Suldo et al., 2009). High school students in IBD reported utilizing a wide variety of strategies to cope with their academic demands, including some cognitively sophisticated approaches that extend beyond those strategies typically listed in adolescent coping inventories (see Patterson & McCubbin, 1987; Skinner, Edge, Altman, & Sherwood, 2003). The primary coping responses IBD students mentioned included taking deliberate action steps to address problems, seeking social support, maintaining relationships with friends outside of IBD, cognitive reframing (also termed cognitive reappraisal), and reducing one's workload (Suldo, Shaunessy, Michalowski, & Shaffer, 2008). Students with above-average anxiety, a type of psychopathology, mentioned cognitive reframing more frequently than IBD classmates with low anxiety. Likewise, Reis et al. (2005) found that gifted or academically advanced youth utilized cognitive reappraisal as well as problem-solving strategies to manage challenges. Although cognitive reframing has surfaced in these studies, and Martin and Dahlen (2005) describe cognitive reframing as an adaptive coping response, further research is necessary to identify which additional coping strategies may be associated with positive academic and emotional outcomes among students in rigorous high school courses. Suldo, Shaunessy, Michaelowski, and Shaffer (2008) analyzed focus group data collected from IBD students who attended one rural school but additional investigations are needed with students that present greater academic, social-emotional, curricular, and community variability.

In an investigation of the validity of a forced-choice dilemma previously advanced by Gross (1989), wherein students grapple with making social sacrifices in order to achieve academic aspirations, Foust et al. (2008) found that neither AP nor IBD students made social or academic sacrifices. However, AP and IBD students both reported sacrificing sleep in order to complete academic tasks and maintain friendships (Foust et al., 2008). While sleep disruptions were a novel contribution to the literature addressing AP and IBD experiences and noteworthy as a strategy this

population uses to manage academic stress, this finding was secondary to Foust et al.'s (2008) primary research of possible social disadvantages associated with meeting academic demands. This descriptive work by Foust and colleagues also provided insights into students' perceptions of advantages associated with AP and IBD, including cognitive engagement in rigorous coursework and enhanced relationships with educators and classmates.

Personal traits. While coping responses are manifested following the onset of a stressor, personal traits occur in multiple situations regardless of one's level of stress (Masten et al., 2009). As noted above, individuals have personal qualities that may be beneficial in an array of situations, but especially helpful during crises, and can affect one's management of stress. These personal qualities may be resources (or assets) that likely affect academic and psychosocial functioning of students pursuing accelerated high school curricula. In studies of youth in general education, a number of personal traits have been linked with academic achievement; such traits include self-regulation (Azevedo & Cromley, 2004; Valiente, Lemery-Chalfant, Swanson, & Reiser, 2008), executive functioning (Best, Miller, & Naglieri, 2011), task commitment (Andersson & Bergman, 2011), and academic conscientiousness, which consists of diligence, persistence, carefulness, and seriousness (Shiner, 2000). Traits associated with greater performance among youth who are gifted include positive attitudes towards learning and motivation for academic success. Students who are gifted underachievers (or not earning grades commensurate with their academic ability) may have lower levels of academic aspirations, task persistence, and motivation for (and intrinsic interest in) learning compared to peers who are more competitive, self-confident, and independent, and who possess a mastery approach to learning (Albaili, 2003; McCoach & Siegle, 2003; Reis et al., 2005; Schick & Phillipson, 2009). Similarly, in Peterson et al.'s (2009) longitudinal study of students identified as gifted, a lack of self-discipline emerged as a perceived barrier to success, consistent with Duckworth and Seligman's (2005) findings that self-discipline was an even greater predictor of achievement than intelligence among middle school youth in a magnet school. Additionally, Deviney, Mills, Gerlich, and Santander (2011) found that students who were academically successful differed from peers with lower grades in their desire for organization and structure in work, higher valuation of analytic processes, and need for concurrent engagement in multiple demanding cognitive tasks. To date, researchers have not examined which of these traits may be relevant to AP and IBD student success.

Environmental factors. Examining general samples of children and adolescents, researchers have established that students' success is affected by multiple aspects of their environment, including relationship quality and support in the domains of family, peers, and school setting (e.g., Eccles & Wang, 2012; Reyes, Brackett, Rivers, White, & Salovey, 2012; Roorda, Kumon, Spilt, & Oort, 2011; Sheldon & Epstein, 2005). Other researchers have focused on the home and family contexts of learners who are gifted or academically advanced. Gottfried, Gottfried, Bathurst, and Guerin (1994) found stark contrasts between home environments of children identified as gifted and children not identified as gifted. The former was characterized by greater intellectual stimulation, more active parental involvement, greater exposure to both academic and cultural experiences, and less home and family conflict than the latter. More recently, Ingram, Wolfe, and Lieberman (2007) and Garret, Antrop-Gonzalez, and Velez (2010) found that families of high-achieving youth possess similar characteristics, including more involved caregiving and greater support for learning at home.

Regarding protective school environments, Rita and Martin-Dunlop (2011) found that students who perceived their biology teachers as supportive and fair earned higher

end-of-course biology exam scores than peers who did not hold similar perceptions. McCoach and Siegle (2003), found that high-achieving students, or those who (a) scored above the 91st percentile on an IQ test, (b) performed in the top 10% of their class academically, and (c) maintained a minimum grade point average of 3.75 or higher, differed greatly from low-achieving peers. High-achieving students were more positive about teachers and had greater motivation, self-regulation, goal valuation, pride, and positive affect toward their school than youth who achieved in the bottom half of their class with GPAs at or below 2.5. Peer groups also matter, as demonstrated by Ryan's (2001) findings that high-achieving youth remained connected with peers who were equally motivated and as successful academically. In related research, Reis et al. (2005) found that students who were high achievers participated in multiple extracurricular activities and maintained relationships with supportive adults and high-achieving peers. In contrast, students who underachieved were often disengaged from school, experienced stressful home environments, lacked positive peer networks, and were not constructive in scheduling after-school time (Reis et al., 2005). As Reis et al.'s (2005) research focused on underachieving learners, additional research is needed to determine which environmental factors AP and IBD students associate with favorable academic and mental health outcomes.

Study Purpose

Our purpose in exploring the constructs of stress, coping, and potential assets and protective factors (both personal traits and environmental features) was driven by our interest in making a contribution to the literature regarding the range of factors that students associate with optimal AP and IBD Program outcomes. In this study, we posed the following research questions:

1. What are the primary types of stressors faced by AP and IBD students?
2. What coping strategies are effective and ineffective in managing such stressors?
3. What personal characteristics contribute to student success in AP and IBD programs?
4. What social, familial, and educational supports and barriers influence students' success in AP and IBD?

Method

Participants

We sought participation from successful and struggling students through a type of purposeful sampling termed "extreme cases," representative of "outstanding success" or "notable [difficulty]" (Patton, 2002, p. 243). We selected this sampling strategy to ensure diversity in students' observations of what contributes to their own or their peers' challenges or successes, in order to discern possible factors within each of the broad domains of influence. In this study we sought to increase the variability of participants with respect to program affiliation, ethnicity, and socioeconomic background.

Three school districts that serve a range of socioeconomically, culturally, and linguistically diverse students located in urban, suburban, and rural areas participated in this study. Each public high school within Florida's 64 school districts currently offers AP courses and approximately 50% of these districts offer IBD in at least one high school. The three districts invited to participate agreed to identify two high schools that offered IBD for participation, though we designated one school in each district as the AP site and the other as the IBD site. In the AP sites, we purposefully selected AP students who were not concurrently enrolled in their school's IBD program. The six schools in this study reflect socioeconomic and ethnic diversity for the 2010–2011 school year (Florida Department of Education, 2014). Enrollment ranged from approximately 1400 to 2400 learners per school. The percentage of

students from low-income backgrounds varied from 16% to 62%; likewise, students identified as non-white ranged from 19% to 73%. Among the three schools designated as AP sites in this study, the number of AP classes offered ranged from 16 to 23.

In October and November 2010, we interviewed 30 students enrolled in AP (n = 19) or IBD (n=11) who were identified by their school leadership teams (composed of the administrator and guidance counselor with direct responsibility for the students in AP or IBD) as (a) successful (n=15) or (b) struggling (n=15) in managing demands inherent to their curricular context. Leadership teams from the participating schools recruited students based on their exceptionally high or poor academic, emotional, and/or social functioning in AP or IBD. In Table 1 we list each participant's

Table 1: *Participant Descriptors*

Name[a]	Successful	Struggling	Program		School[a]	Grade Level			Gender		Ethnicity[b]				
			IBD	AP		10	11	12	F	M	A	AA	H	MR	W
Amanda	X			X	Pemberton			X	X					X	
Brittany	X			X	Pemberton		X		X						X
John	X			X	Pemberton		X			X	X				
Diane		X		X	Pemberton		X		X						X
Roger	X			X	Pemberton			X		X					X
Jose		X		X	Pemberton		X			X			X		
Roman		X	X		Demaris			X		X					X
Christian	X		X		Demaris		X			X				X	
Tracey	X		X		Demaris			X	X						X
Alan		X	X		Demaris		X			X					X
Bart		X		X	Sterling			X		X					X
Davina		X		X	Sterling		X		X			X			
Anita	X			X	Sterling			X	X						X
Edward	X			X	Sterling			X		X			X		
Francisco	X			X	Sterling			X		X		X			
Oscar		X		X	Sterling		X			X					X
Janaeh		X		X	Sterling			X	X			X			
Ryan	X			X	Sterling		X			X					X
Nancy		X		X	Sterling			X	X						X
Nathan	X		X		Greenville			X		X	X				
Eric		X	X		Greenville			X		X			X		
Lexie	X		X		Greenville		X		X						X
Fiona	X		X		Central			X	X						X
Claudia		X	X		Central		X		X				X		
Nolan	X		X		Central		X			X			X		
Lionel		X	X		Central			X		X			X		
Mark	X			X	Richardson			X		X		X			
Chad		X		X	Richardson	X				X					X
Andrea		X		X	Richardson	X			X						X

Note[a]: pseudonyms.
Note[b]: Provided by schools according to demographics collected (A = Asian, AA = African American, H = Hispanic, MR = Multi-Racial, W = White).

designation as successful or struggling, program affiliation, school, grade level, gender, and ethnicity; pseudonyms are used for student and school names throughout this work. Students enrolled in AP courses met pre-requisite coursework set by the school, while IBD students were admitted based upon middle school math and reading achievement test scores and grade point average.

Procedures

We held meetings with each school's leadership team to explain the project purpose and the proposed process for selecting student participants. As leadership teams had the benefit of multiple years of close contact with AP and IBD learners and on-site expertise in working with students, teachers, and parents affiliated with both programs, we asked them to identify potential participants based on multiple data sources, including class rankings, performance on high-stakes tests, behavioral history, and anecdotal knowledge of students. We excluded freshmen from consideration in the identification procedure to ensure school teams had a minimum of one year of performance and behavioral data to inform recruitment selections. In addition to discussions about student recruitment, we provided schools with a written statement about the nomination process, which school teams disseminated to nominated AP or IBD students. In the recruitment request provided to participating school sites, we asked school leaders to nominate students who were thriving in academics and who displayed consistently positive emotional and social functioning. We also asked school leaders to nominate students who had experienced academic difficulties, social-emotional difficulties, or both, as those most at-risk for deleterious outcomes.

Parents of 32 students provided consent for their children to participate in individual interviews; 30 students were present on the days we collected data and assented to participate. School leaders did not record the number of students they invited who did not return signed parent consent forms. As the purpose of the study was to identify—not verify the accuracy of—students' perceptions, we did not collect data on individual participants' academic performance, cognitive ability levels, or previous exposure to gifted education programming, precluding comparisons of successful and struggling exemplars on these factors.

We explored student perspectives through individual interviews in order to encourage discussion of personal views that adolescents may not have been as comfortable sharing in focus groups with peers as reported in previous investigations of IBD students (Suldo, Shaunessy, Michalowski, & Shaffer, 2008; Suldo et al., 2009). Participating students met individually with an interviewer during the instructional day. The interviewer explained the project purpose, as well as the voluntary, confidential nature of participation, and offered a $10 gift card as compensation for participation. The Appendix contains the interview protocol, which took approximately 30 minutes to complete, though interviews varied in length according to the extent of an interviewee's responses.

Overview of Analysis Plan

Development of initial codes. We enlisted an independent service to transcribe all recordings of interviews, verified transcription accuracy against recordings and field notes, and ultimately determined that 1.5% of the words were incorrectly transcribed (errors were corrected upon identification). We employed applied thematic analysis (Guest, MacQueen, & Namey, 2012) in our examination of students' perceptions of stressors, coping strategies, traits, and environmental factors associated with successful outcomes in advanced curricular programs. Following a review of the transcripts, we noted types of information provided by students, and we developed codes—or labels—to assist us in uniformly denoting sections that reflected the codes. In keeping

Table 2: *Selected Codebook Excerpts*

Category	Theme	Code	Description	Examples
Stressors	Academic Assignments	Volume Of Assignments	Schoolwork; assignments associated with homework. Includes volume of classes and assignments.	A lot of homework; homework every night; need to stay on top of homework to prevent a pile-up; sheer workload of assignments from multiple teachers; overwhelming workload.
		Studying	Having to study in order to do well in classes.	Having to study for tests.
		Magnitude Of Projects	Having to prepare for and complete a time-intensive large project.	Internal assessments or other class projects; Extended essay; document-based questions (DBQs).
		Overlapping Due Dates For Assignments Or Tests	Having a lot of tests or assignments due in a short time period.	Two tests in same day; five tests in one week; "When I have a bunch of things overlapping at once, it causes [me] a lot of stress."
Coping	Cognitive Reappraisal	Perspective	Put problems in perspective.	See the big picture; others' situation is worse than my own; don't dwell on past/failures; recognize today is a new day; don't take things too seriously.
		Accept Reality	Adjust/lower standards for personal performance.	Accept you're not perfect; adjust to transition to AP/IBD by reducing expectations for personal performance.
		Focus On Positive	Focus on positive aspects of a situation.	Celebrate successes or accomplishments; savor; remind self of future benefits of program.
Personal Traits	Achievement Orientation	High	Goal-oriented towards future (e.g., academic and career success).	Focused on learning; sense of purpose at school; values [academic] success; excitement about future careers and schooling; high self-expectations; student is very focused on getting high grades ("takes GPA too seriously").
		Low	Living in the present without considering the future.	Does not have a goal or commitment in sight.
	Valuation of the rigorous coursework	High Commitment	Student personal interest in staying in program.	Personal choice to do well in classes; student high involvement in class.
		Low Commitment	Student not apparently interested in staying in program, or didn't make an informed choice to pursue AB/IBD	Chose IBD impulsively; only in program because parents forced student; student doesn't care about doing well in AP or IBD.

with Saldaña's (2009) guidelines, we iteratively developed a codebook of content descriptions, examples, and non-examples for each code based on statements provided by participants (see Table 2 for codebook excerpts). Each of the transcripts was independently coded by two of the four research team members who were involved in the coding; coders were blind to the students' school and designation as successful or struggling. We noted when a specific sentiment or idea was expressed; sentiments ranged from short phrases to several lines of discussion and varied according to speaker and elaboration style.

Establishing trustworthiness. Following independent coding, the four research team members, working in pairs, first verified passages they deemed codable, then noted the associated code indicated by each reader. We maintained a master record that contains a list of all codable sentiments, codes noted for each sentiment by each reader, and a notation of agreement/disagreement between coders. When coding differences occurred or consensus within pairs was not achieved following a discussion of the coding rationale, a third member of the research team was consulted and provided yet another independently-determined code. Inter-coder agreement ranged

from .82 to 1.00 across 30 transcripts; overall agreement was .92. Following tabulation of coder agreement, one research team member labeled each coded transcript unit and generated frequency counts of all codes in ATLAS.ti (2013), a qualitative data management software for organizing, sorting, and managing large datasets. Finally, we transferred frequency counts from ATLAS.ti into Excel for continued analysis.

Coded utterances varied in length, from abbreviated replies to lengthy responses. We determined the code that most closely corresponded from the iteratively developed codebook for each participant's codable response(s). Since participants may have discussed several ideas within a single sentiment, more than one code may have been noted. For instance, a student might have said, "I deal with school stress by sleeping but also by thinking about all of the good things that lie ahead for me—like a good college, scholarships, feeling proud of my accomplishments—because I was willing to put in the hard work now." This type of statement would be given two codes (sleeping and cognitive reframing) and contribute a total of two times to frequency counts (one count for sleeping and one count toward cognitive reframing).

Most students focused on a few types of coping responses, personal traits, and environmental factors, and often revisited ideas initially discussed, particularly when asked to clarify which of the coping strategies they previously mentioned are most effective or ineffective. In such cases, the coping strategy noted was counted only once, even if the student mentioned the very same sentiment more than once in the interview. For example, a student might have identified a host of coping strategies used in response to academic stressors, such as sleeping, doing the work, and working with friends. When asked which coping strategies were most effective, the student might have reiterated the strategies of doing the work and working with friends. In this case, we would count this as one mention of doing the work and one mention of working with friends.

To determine frequency we summed the number of times each code was mentioned within a given transcript, within a given subgroup (successful vs. struggling students), and across participants; these frequencies are listed within Tables 3, 4, 5, and 6. Each member of the research team reflected on the codes generated, code frequencies, intensity of expression based on emphasis and length of statements, and conceptual understandings guiding our work, and then discussed our interpretations of main ideas. Following a discussion of these independent analyses, we determined which of the main ideas were most salient in the data based on a holistic examination of frequency, intensity, and the relationship of ideas within and between transcripts (Charmaz, 2006). We define our salient main ideas as categories, and are included in Tables 3, 4, 5, and 6. Descriptions and selected student quotations are provided below to illustrate the categories, themes, and codes.

Results

Themes, related codes, and number of mentions across participants and within groups (successful, struggling) are provided in descending order within Tables 3, 4, 5, and 6. The sentiment totals are also provided by exemplar type (struggling vs. successful student, as identified by school leaders). Next, we further describe each of the themes included in the tables. We focused most on understanding the theme broadly across the entire group of accelerated learners in advanced curricula, with little emphasis on the exemplar type (i.e., successful or struggling), primarily because the participant may be reporting either a personal behavior or an observation of a peer's behaviors. Based on frequency counts of mentions as evidenced in the two far right columns of Tables 3, 4, 5, and 6, we concluded that successful and struggling students' experiences and observations are somewhat similar with respect to perceived stressors,

Table 3: *Stressors AP and IBD Students Mentioned: Categories, Themes, and Codes*

Category	Theme	Code	Number of Mentions (Number of Individuals)		
			Total	Successful	Struggling
Academic Issues	Academic Assignments	Volume of assignments, such as extensive Homework nightly	15	9	6
		Overlapping due dates for assignments or tests	11	8	3
		Worries about upcoming tests	11 (10)	5 (4)	6 (6)
		Difficult classes that exceed one's skill level	8	4	4
		Completing time-intensive large projects (e.g., Extended Essays)	5	2	3
		Studying for tests	5	3	2
		Grades are lower than desired	3	2	1
		Make-up work due to absences	3	2	1
		Adjusting to new school or grade	3	1	2
		Technology problems	2	2	0
	Problematic Approaches to School	Procrastination, forgetfulness, and/or lack of help-seeking causes problems	11 (9)	7 (5)	4
	Achievement Pressures	School's high standards and reputation	4	3	1
		Students' own high standards	2	1	1
		Parents' expectations for success	1	0	1
		Total	**84**	**49**	**35**
Constant Efforts to Balance Time Demands	Insufficient Time	Juggling academic demands with after-school commitments, like social and extracurricular activities	19 (15)	9 (6)	10 (9)
		Managing time for schoolwork (fitting all assignments into schedule)	3	3	0
		Unspecified time constraints (e.g., "not enough time in the day")	2	2	0
		Total	**24**	**14**	**10**
Additional Stressors[a]	Extra-curricular Concerns	Added responsibilities associated with extra-curricular activities	11 (9)	7 (6)	4 (3)
		Conflict with coach	2	1	1
		Achievement-related goals for extra-curricular activities	2	2	0
	Family	Family discord (e.g., parents fighting)	4	2	2
		Parent-child conflict	3	2	1
		Sibling relationships (e.g., conflict, miss sibling who left family home)	2	1	1
		Time-intensive obligations, such as chores and trips	2	2	0
		Illness or death in family	2	1	1
		Financial hardship	1	0	1
	College	Worries about getting into, and paying for, a preferred college	7 (6)	3	4 (3)
		Completing college applications	6	4	2
	Social	Romantic relationships (dating, conflict with partner)	6 (5)	4 (3)	2
		Peer relationships (e.g., conflict with classmates)	4	3	1
		Feeling isolated from peers	1	0	1

Note[a]: Totals were not provided for the additional stressors but are listed here for informational purposes. We determined that the salience of these discussions was not as great as those in the stressors above.
Note: Total mentions and total number of individuals are noted if different.

coping, traits, environmental factors, and classification of coping strategies as effective or ineffective**.** These similarities and differences are described below.

Primary Stressors Perceived by Students

Academic issues. Advanced Placement and IBD students identified several categories of academic concerns, including an overwhelming workload, as their primary

Table 4: *Coping Strategies AP and IBD Students Mentioned By Struggling and Successful Students*

Category	Theme	Code	Number of Times Code Mentioned (Number of Individuals)		
			Total	Successful	Struggling
Manage Time and Task	Efficient Time and Task Management Strategies[a]	Manage time (e.g., use a planner, make to-do list, study effectively)	20 (13)	10 (7)	10 (6)
		Tackle the work ("just do it")	5 (5)	2	3 (2)
		Prioritize assignments and commitments	5 (4)	4 (3)	1 (1)
		Manage tasks via strategies (e.g., break assignment into small tasks; focus on one task at a time)	3	2	1
		Get sufficient sleep to recharge and maintain good health	3	0	3
		Skip school to catch-up on schoolwork	1	1	0
	Inefficient Time and Task Management Strategies[b]	Sacrifice sleep (stay up late, wake early) to do schoolwork	3	3	0
		Overdoing (spend excessive time on one assignment or task)	2	1	1
		Take short breaks during work	1	1	0
		Deceive others or compromise work quality to get work done	1	0	1
		Manage time (i.e., view starting a task early as not helpful)	1	0	1
	Put off Assignments or School Work[b]	Procrastinate (delay work on assignments until last minute)	11 (9)	6 (4)	5 (5)
		Skip school to avoid classes you are not prepared for	2 (2)	1	1
		Total	**58**	**31**	**27**
Take Brief Breaks	Engage in Temporary Diversions[a]	Exercise (jog, play football, etc.)	14 (10)	8 (5)	6 (5)
		Socialize, spend time with friends	8 (7)	3 (3)	5 (4)
		Creative outlets, such as writing, art, cooking, and making music	7 (6)	5 (5)	2 (1)
		Take short breaks during work	5	4	1
		Sleep to escape problem	3	1	2
		Purposefully avoid or ignore stressor ("do anything else")	3	1	2
		Technology (watch TV, text, play videogames, surf Internet, etc.)	3	0	3
		Go outdoors for a walk/fresh air	2 (1)	0	2 (1)
		Eat	1	0	1
		Read for pleasure	1	0	1
	Engage in Temporary Diversions[b]	Purposefully avoid or ignore stressor ("do anything else")	6	3	3
		Technology (watch TV, text, play videogames, surf Internet, etc.)	4 (3)	0	4 (3)
		Sleep to escape problem	3	2	1
		Socialize, spend time with friends	2	0	2
		Creative outlets, such as writing, art, cooking, and making music	2	0	2
		Use illicit substances	2	1	1
		Listen to music	1	0	1
	Relax[a]	Use active relaxation strategies, such as deep breathing exercises	6	5	1
		Make time for "down time" or fun in schedule to relax	2	1	1
		Total	**75**	**34**	**41**

Continued on next page

Table 4: *Continued*

Category	Theme	Code	Number of Times Code Mentioned (Number of Individuals)		
			Total	Successful	Struggling
Seek Support from Others	Seek Support from Peers[a]	Turn to classmates to vent or to seek help or information	7 (6)	2 (2)	5 (4)
		Invest in close friendships for emotional support and help	3	2	1
		Turn to friends outside one's academic program to vent or for help or for perspective	2	2	0
		Turn to older students, typically those who have successfully navigated one's program	2	2	0
		Turn to significant other (boy or girlfriend) for support or advice	1	0	1
	Become Upset or Emotional[b]	Think obsessively about the stressor without taking action	3	2	1
		Turn to classmates to vent	3	2	1
		Become angry or irritable	2	2	0
	Seek Assistance from Educators[a]	Turn to teachers for help or information	5	1	4
		Turn to non-instructional educators (e.g., counselors, administrators) for help	3	1	2
	Seek Support from Parents[a]	Turn to parents for emotional support, advice, academic support, and perspective	8	4	4
	Avoid Turning to Others for Help[b]	Try to handle problems alone, withdrawal socially	3	2	1
		Fear seeking help from others	1	1	0
		Turn to parents for help, which causes additional worries	1	0	1
		Total	**44**	**23**	**21**
Redirect Thoughts	Cognitive Reappraisal[a]	Put problem in perspective (e.g., think others' situations are worse, don't take it too seriously)	8 (7)	7 (6)	1
		Focus on positive aspects in a situation (e.g., remind self of future benefits, savor successes)	5 (4)	3	2 (1)
		Adjust/lower personal standards	2	1	1
		Total	**15**	**11**	**4**

Note[a]: Perceived by students as effective coping strategies.
Note[b]: Perceived by students as ineffective coping strategies.
Note: Total mentions and total number of individuals are noted if different.

stressors. Students mentioned a constant barrage of assignments that warranted consistent attention, focus, and effort during and well after the school day. The magnitude of homework students described reflected extensive investments of time and energy dedicated to studying for tests, completing labor-intensive projects, and managing multiple concurrent assignments and due dates. They also reported managing hindrances to their course and/or test preparation efforts—including technology glitches or class meeting conflicts. When there was a confluence of these concerns, students expressed most concern about achieving academic success, which they felt contributed to an increase in stress. Students also described classes that exceeded their ability levels or challenged them beyond their skill set as especially taxing. The following quotation exemplifies the oft-voiced concern about the volume of the IBD workload, including how feeling

Table 5: *Personal Traits AP and IBD Students Mentioned: Categories, Themes, and Codes*

Category	Themes	Codes	Number of Times Code Mentioned (Number of Individuals)		
			Total	Successful	Struggling
Hard Work	Setting High Achievement Goals and Working Hard[a]	Strong work ethic; student is self-motivated, determined, and delays gratification to do schoolwork	25	14 (12)	11 (9)
		Strong achievement orientation (i.e., student focused on learning, earning good grades, and future academic goals)	8 (6)	5	3 (1)
		Strong study skills	6	3	3
		High personal commitment to success in academic program	3	2	1
	Not Valuing the AP-IBD Experience[b]	Poor work ethic; laziness	21	12	9
		Low student commitment to success in academic program (e.g., chose courses impulsively)	7	2	5
		Disinterest in learning or school; student apathy	3	1	2
	Overcommitted[b]	High social orientation results in too many social activities	4	2	2
		Time commitments for extra-curricular activities detract from academic endeavors	4	0	4
		Generally over-extended due to too many activities at same time (e.g., job, volunteerism, school)	3	2	1
		Total	**84**	**43**	**41**

Note[a]: Perceived by students as traits that facilitated.
Note[b]: Perceived by students as traits that hindered.
Note: Total mentions and total number of individuals are noted if different.

overwhelmed with work and getting behind because of the intense program demands exacerbates stress:

> So it's not really the problem of [IBD] being hard, it's just that there's so much to do. And there is a lot to do. I would think that in honors sometimes, there's stretches of time where there's not much homework or you can just take a break in class. Even in the easy days of IB, it's not so much like that. So it's just a lot of work to do. And when I think of stress, I think of all that work piling up because you didn't do it. (Christian)

Some students acknowledged that strategies they had used to manage academic requirements were not always beneficial and sometimes increased their stressors in attempts to offset the approaches used. Procrastination, for example, is one form of stress management, but putting off one's work not only creates an additional stressor pertinent to insufficient time when the student turns to the work, but also may lead to increased stress in the domain of academic performance if the resulting work is subpar. One AP student explained this concern:

> Let's say we have a major project that we've been given three months to do, and you wait to the last minute to do it. It's due tomorrow, you haven't started, and a project that's supposed to take you two months to do you get to do in less than 12 hours. And that can be a stressful situation for most people. (Mark)

Table 6: *Environmental Factors AP and IBD Students Mentioned: Categories, Themes, and Codes*

Category	Themes	Codes	Number of Mentions (Number of Individuals)		
			Total	Successful	Struggling
Peer Support Networks	Academic Assistance from Classmates[a]	Classmates in AP or IB courses provide academic support (e.g., study groups, share notes)	10	7	3
	Belongingness[a]	Close friendships in AP or IB provide connections, acceptance, sense of camaraderie	4	3	1
	Affiliation with Less Academically-Oriented Peer Group[b]	Peer group has low valuation of academics	10	4	6
		Peer pressure to engage in deviant behavior	1	1	0
		Total	**25**	**15**	**10**
Caring Teachers	Teacher Care and Support[a]	Teachers show care (e.g., provide emotional support, respect, encouragement, praise)	10	2	8
		Teachers show sense of humor	3	1	2
		Teachers show flexibility in responding to stressed students	1	0	1
	Teacher Creates Academically Challenging Environment[a]	Teachers' strong instructional skills (foster critical thinking, use active learning methods)	8	2	6
		Teachers' passion about content	1	0	1
		Classroom is conducive to learning because only academic-minded students are present	1	0	1
	Perceive Teachers do not Provide Effective Instruction[b]	Teacher(s) lack effective instructional skills	7	3	4
		Teacher(s) hold low expectations for student performance	1	0	1
		Total	**32**	**8**	**24**
Parents and Home Life	Parent Support[a]	Parental emotional support (e.g., praise, affection, shared time)	5	2	3
		Parental support for learning, including academic help and home-school collaboration	5	4	1
		General parent support (includes students' global or vague references to parents providing multiple types of support or acceptance)	3	1	2
	Low Parent Support for Learning[b]	Low parent support of child's academic demands (e.g., low understanding of curriculum requirements, insufficient assistance with homework)	9	6	3
		Parents appear disinterested in child's education	2	0	2
	Desirable Home Conditions[a]	Home is conducive to learning (e.g., homework facilitated via focused physical space and limited family responsibilities)	4	1	3
		Sufficient economic resources (e.g., computer/Internet access, transportation, school fees)	3	1	2
		Home environment provides sense of stability and safety	3	3	0
	Problematic Home Environment[b]	Discord at home (e.g., divorce, conflict between family members)	11	4	7
		Death of a parent	2	2	0
		Home is not conducive to studying (e.g., noisy, homework not prioritized)	2	1	1
	Family Financial Problems[b]	Student obligated to support family or contribute to child care	5	3	2
		Frequent family displacement	1	1	0
		Total	**55**	**29**	**26**

Note[a]: Perceived by students as conditions that facilitate student success.
Note[b]: Perceived by students as conditions that hinder student success.
Note: Total mentions and total number of individuals are noted if different.

Several students' academic-related stressors were compounded by perceptions of extreme pressure to achieve and maintain good grades. Pressure stemmed from multiple sources, including parents, teachers, self-standards, and the school community in cases where a student's school or program had a particularly strong reputation for academic success.

Efforts to balance time. Given their academic requirements, students explained that they felt constant stress regarding their management of extensive academic demands along with extracurricular commitments. Both successful and struggling students mentioned difficulties juggling a number of assignments and allocating sufficient time to both academics and extra-curricular activities. Students also expressed concern about their lack of sufficient time to meet family, social, and academic obligations. In order to meet these many commitments, students acknowledged that they often sacrificed sleep or neglected one of their other obligations to friends, family, or schoolwork. One student said that pursuing a rigorous course of study caused him to feel as if he "had no life" (Christian). Students expressed concern about a lack of sufficient school-preparation time due to the time lost and energy expended for extracurricular activities. Jose mentioned that he is often short of time and willpower needed to attend to schoolwork following sports activities: "I have football five days a week. So I'm just so tired after football. It's hard to muster up all the will and to just study a little bit." Other sources of stress mentioned were arguments with relatives, friends, or coaches; challenges initiating and maintaining peer and romantic relationships; and the toll of major life events (see "additional stressors" in Table 3).

Coping Strategies Used by AP and IBD Students in Response to Stressors

Manage time and tasks. Advanced Placement and IBD students mentioned managing stress by determining priorities, creating a schedule that targets these priorities, and adhering to the schedule. Students evidenced marked self-awareness of their master schedule and responsibilities both in and out of school. They overwhelmingly described use of time and task management strategies as a particularly effective way to manage school-related stress, as is reflected in the following statement:

> Most important is managing your time, definitely. If you either make yourself a schedule, or just know how long is going to take you to do certain things and kind of mentally plan that out that's definitely good. Because I know if I know when I need to do things and what times I'm going to be able to do things then I kind of have everything planned out before I start doing it. It's a lot easier to get through it. Whereas if I just say, "You're the giant pile of work" and say, "OK, I have to do all this by tomorrow morning" it's a lot more stressful. (Lionel)

One coping strategy expressed was to just do the work. According to one senior, "Biting the bullet and doing what I have to do . . . it's helped. It's the most valuable method" (Lionel). In addition to attacking the workload, students also recognized the value of breaking large projects into smaller, more manageable tasks, prioritizing tasks to be accomplished, occasionally (though not regularly) staying home from school to catch up on classwork, and regularly getting sufficient rest or sleep to maintain clear focus and good health. Tracey acknowledged that poor planning can debilitate health and academic performance. Such poor planning habits, she said, can activate a vicious cycle of getting behind on schoolwork and feeling worse due to the stress associated with feeling behind, then subsequently falling even further behind in school.

When prompted to reflect on what responses to stress were ineffective, students were quick to identify inefficient time and task management strategies (see Table 4).

Problematic time management efforts included some active, albeit unsuccessful, attempts to manage their workload, such as sacrificing sleep to complete schoolwork. Other approaches identified as ineffective included putting off assignments or schoolwork through procrastination, getting sidetracked on one assignment due to competing academic obligations, and starting an assignment at the last minute. Students also recognized the health and academic toll of cumulative sleep loss, which then negatively affects subsequent academic performance. According to Nolan, "a lot of people will run several nights in a row without adequate sleep. That's just not healthy at all, physically. Or emotionally, for that matter."

Take breaks and relax. One primary approach to minimizing academic stress was taking a study break to regain energy, to gain clarity of thought, and to lift oppressive feelings associated with stress. Common ways to relieve stress included exercising, reading for pleasure, cooking, writing, performing musically, surfing the Internet, playing video games, and socializing with friends. One student said, "even though taking a break uses time, if you take the break, a short break, and then go back and continue working, and not put off the working, then I think that really helps. You get your mind off of it for a while" (Tracey). Successful students in particular also reported coping with stress by taking time to relax, even if briefly, through purposeful relaxation strategies such as taking deep breaths.

Students also identified temporary avoidance/diversion strategies as *ineffective* ways to cope with stress on 20 occasions across the interviews, primarily because they became more engaged in pursuit of the diversion rather than returning from the diversion with renewed energy and focus to complete homework:

> Distractions . . . such as Facebook or . . . other websites, like Myspace, music websites, YouTube. There's a thing on the Internet called StumbleUpon. You can just click a button, and it gives you a random website. You can spend hours on it, just looking at random websites and reading the information. Time just flies by, and you don't get the [school] work done. Then, you stress out, trying to get it done. (Bart)

Struggling students discussed diversions as ineffective 14 times, while successful students mentioned diversions in a negative light six times. The greatest difference between struggling and successful students, aside from the frequency of diversion-related responses, was the nature of the diversions discussed. Struggling students were unique in mentioning technological diversions, and they more frequently discussed social and creative diversions as ineffective coping strategies.

Seek support. Students described seeking academic and emotional support from several sources, including friends, classmates, parents, and teachers. When describing peers from whom they receive support, many mentioned classmates who were in their AP and IBD classes. Students also described how a variety of other individuals provided emotional support or perspective, including parents, teachers, and older and successful AP or IBD students, as well as friends and significant others outside of AP and IBD. The academic support system is especially helpful to students in dealing with stressors related to studying and test performance:

> When we know we have a difficult test or something coming up in the class, we just all come together and . . . We all feel comfortable about different subjects, so we'll just help and try to explain to our friends what it is. (Andrea)

While turning to friends was reported as an effective strategy by some students, others recognized that turning to classmates could spiral into out-of-control venting, causing

them to become emotional and upset, which students described as an ineffective response to stress.

Some students mentioned turning to parents as an effective strategy for managing stress. Lexie referenced the perspective and emotional support her mother offers:

> I talk to my mom a lot. She actually teaches college, so she can sometimes help me go, "Well, relax. Everyone gets a B on a test." Or, "It's not the end of the world if you don't do so well on this."

Roman described his mother's academic support: "she gave me perfect . . . study strategies, and even wrote on sticky notes, and would flip them over when I got it right." Other students, predominantly those identified as struggling, discussed turning to teachers or tutors for assistance, though this was not a strategy students mentioned frequently. Students noted the inefficiency of deliberately avoiding assistance even when conditions became too difficult to manage independently which they attributed to a preference to manage problems alone or to a fear of asking for help.

Redirect thoughts. Students described managing stress by focusing on potential positive outcomes of their workloads, keeping their goals in mind, and reframing temporary problems in the context of the bigger picture (e.g., earning the IBD and how it will be beneficial). These cognitive reappraisal strategies often included reminding themselves of the future benefits of their demanding college-level courses, as well as attempting not to overreact to transient stressors by remembering that their situations could be worse. This latter strategy of coping by putting problems into perspective was discussed more often by successful than struggling students. One student explained as follows:

> Well, as [I] go through the IB program, . . . I try and think of what the end goal is, and how I'll get the diploma and get to go off to college. And I've heard a lot of teachers have even said, because there are teachers who have gone through the IB program, who are now teaching at the program who say, "Oh, it gets a lot easier." So sometimes, just looking off into the distance is helpful for me. When I see that I have so much work to do, I think it's all worth it in the end, and that's helpful. (Lexie)

Traits Students Perceive Influence Success

Hard work and high expectations. The importance of students setting high achievement goals and working hard to reach their goals was conveyed through frequently used terms, including "hard-working," "care [about school]," and "dedication." Amanda articulated the importance of motivation for achievement in her academic success: "I've always been the kind of person that wanted to get good grades just to get good grades. I always wanted to be proud of myself." Students also emphasized that their persistence in completing coursework and constant dedication to the program fueled their subsequent efforts and interest in school.

In contrast, participants mentioned that low valuation of advanced coursework, as manifested in minimal or insufficient effort on schoolwork/homework or low class participation, indicated a risk for low academic success and emotional wellness (see Table 5). Lexie, an IBD student, described the risk:

> Laziness is definitely something that's dangerous in IB. I think every student tries to procrastinate and every student is a little bit lazy. But if you're able to overcome that, if you're able to ignore those traits and try and change them, then you're definitely going to be more successful.

Likewise, students acknowledged challenges in advanced courses sometimes resulted from not fully considering course difficulty, particularly when they selected courses primarily for social reasons. Brittany explained her view on course determination:

> If you jump into an AP class just because your friend told you it was easy. You know, "Oh, it's an easy 'A,'" or "Don't worry about it, you'll pass." And you take the class just based on that. You may not be in the right place.

Students also considered how extracurricular activities may be distracting, especially for students who had a high need for social interaction, which may conflict with the simultaneous needed for independent academic preparation required for AP and IBD courses. Struggling students in particular also perceived that overextending oneself in extracurricular participation may divert time and energy away from AP or IBD schoolwork.

Environmental Factors Perceived to Influence Success

Peer networks. Both successful and struggling students mentioned the importance of having a reliable and comprehensive support system, comprised of peers, parents, and teachers (See Table 6). Regarding the value of peer support, students stated that successful students often secure academic assistance from classmates through study groups or peer tutoring. Such sentiments were conveyed outside of simple reactions to stress (i.e., coping by turning to friends during particularly demanding academic times), such that proactively forming strong bonds with classmates was viewed as a correlate of successful students. To that effect, students mentioned the benefits of surrounding themselves with friends who give academics high priority. Brittany explained how she prepares for her classes with the assistance of friends:

> My friends and I, we all do our homework together. We study, if we have a test coming up, we go to Panera and we all study together. I help my friends in my Spanish class. The weekend before a test, "Let's go to [a local café] and study." I help them with anything they don't understand and we review the vocab[ulary] and quiz each other. But if you don't have your friends supporting you [in] school . . . you're not going to be as motivated.

Although some students acknowledged the importance of a network of school-focused classmates as facilitative to school success, other students identified the risks associated with affiliating with a less academically-oriented peer. They also emphasized the potential negative influence of a peer group that includes (or consists primarily of) friends who do not value school, as well as peer pressure to engage in risky behaviors. As Brittany explained, friends can have a great bearing on academic success and social choices:

> It's all about the group of friends you have, obviously. If you're running around with a group of people who skip class, or they don't do their homework. They're just coming to school because they have to . . . Either you're going to see that that's not working for you and you need to be motivated on your own and make new friends, [or] most of the time, you run with what they're doing.

Students described a strong sense of belongingness provided by strong connections with other high-achieving classmates. Participants expressed a sense of belongingness to specific AP and IBD classes and to the IBD program, as they acknowledged feeling a sense of shared goals to achieve, investment in the academic progress of classmates, and social acceptance from peers whom they recognized as equally

dedicated to learning. Nathan aptly expressed this sense of connectedness and acceptance among classmates:

> In terms of social environment, I know that [in] other schools, if people would say, "Oh. That person, what a nerd," or made fun of them – but here, no. IBD students—With 133 IBD students—nobody calls another a nerd. They're all in the same thing. There [aren't any] negative aspects of working hard; there's only positive aspects. You gain respect from your peers.

Effective, caring teachers. Students indicated that the social and pedagogical expertise of teachers greatly influences the success of AP and IBD students. Specifically, participants described educators' expressions of care and support, skill in creating academically challenging and stimulating classroom environments, and dedication to the teaching profession as critical factors for student success. According to Jose, "we have really good teachers who actually like teaching, love it. They just don't do it for a job, but actually do it because they like it, they love it." Conversely, perceived lack of instructional skill and low teacher expectations were both mentioned as factors that hinder student success. For instance, Amanda described how a teacher's skills affected her:

> Last year I had, my history teacher, and I love history. And it was just so annoying that it sounded like he had no idea what he was talking about. And I know it's because it was his second year teaching AP and everything, but still. OK, his lecture? Like, all over the place. And it was so annoying.

Students who school leaders identified as struggling emphasized the role of teachers three times more often than peers identified by school leadership teams as successful (i.e., 24 to 8 mentions, respectively, of caring teachers as helpful and ineffective teachers as barriers to student success).

Parental support and home life. Parental support was commonly mentioned as critical to student success. In discussing the nature of parents' support, students acknowledged that parents' understanding of the program expectations and the ways their child's life was affected—from time commitment for course preparation to intensity of the program experience on the child's academic and social-emotional world—were possibly conditions that affected student success, as mentioned by Lionel:

> I think having parents who don't understand the IBD program as fully as they could, could definitely harm you. Because I know, when I first started coming home with homework from the IBD program, my mom would be like, why are you, you know. She really didn't understand . . . the depth of the work that I had to do. And she caught on and that was good.

In addition to parents' understanding of the program, students viewed supportive parents as those who communicated a high value for learning/education, were available to provide technical assistance and emotional support at opportune times, and allowed the student to prioritize schoolwork above family outings and responsibilities at home. Students described family support in terms of desirable home conditions, including stability (minimal discord between family members, financial predictability), consistent parental expectations, sufficient family economic resources, and a home environment that facilitated focused studying. In contrast, students identified several chronic stressors at home that may contribute to academic and social-emotional risk, including instability and family discord (e.g., parents fighting or divorcing; a noisy or otherwise distracting environment that poses challenges to focusing on homework), financial problems that introduce additional concerns such

as providing childcare for younger siblings and in extreme cases homelessness, and low parent support for learning as conveyed by a lack of availability or involvement in schooling.

The Role of Grade Level in Student Stress and Coping

Although we did not set out to examine how students' AP and IBD experiences changed or stayed constant across their high school years, students mentioned that they had encountered unique stressors at specific stages of school or grade levels, which were also related to the coping strategies they used to manage such stressors. The predominant stressors seniors discussed included college issues, such as application deadlines, financial planning, admission to a highly selective college, and expectations about college performance. Other students reflected on the transitions from middle to high school as examples of phases of schooling that were sometimes challenging; among IBD students, the Pre-IBD years (grades 9 and 10) were especially daunting. With regard to preferred coping strategies, students commented that their use of specific coping behaviors and perceptions of the efficacy of each had evolved with their experiences and maturity.

Discussion

The pooled findings regarding various sources of stress are consistent with prior research with students in IBD and youth identified as gifted; the primary stressors identified pertained to academic requirements, school-related pressures, and managing multiple commitments (Ainslie & Shafer, 1996; Peterson et al., 2009; Suldo et al., 2009). Although students in the current study expressed concern about the time constraints for academic, social, and extra-curricular goals, they did not indicate pressure to select academic success at the expense of social acceptance, otherwise termed a "forced choice" mindset. Overall, the students in this study expressed a greater concern for life balance through academic rigor, meaningful social interactions, and sufficient attention to personal health. Aside from reduced time for an active social life, social concerns did not appear to be stressors for the students in this investigation, in contrast to other research in which high school graduates identified as gifted mentioned social rejection as a significant stressor (Peterson et al., 2009). In summary, these current findings provide a nuanced understanding of stressors that AP and IBD students encounter, which may have been afforded by the nature of the data collection (i.e., one-on-one interviews rather than focus groups with classmates) and purposeful sampling of students recognized by school leaders as particularly successful or struggling relative to their academic peers.

The primary coping themes identified in the current study are consistent with prior research that identified time management as one of the most effective approaches to coping with academic stress (Suldo, Shaunessy, Michalowski, & Shaffer, 2008). Students described a range of time management tactics, including diversions and procrastination, which students deemed, for the most part, as an effective way of managing stress, particularly through athletic activities or brief breaks from schoolwork presuming a return to the academic demand. Consistent with Foust and colleagues' (2008) findings, wherein students discussed sufficient sleep as helpful but lack of sleep as harmful, students in the current investigation described sleep as helpful (i.e., effective) unless it was utilized as an avoidance strategy. Finally, while students in IBD have previously described procrastination as both effective and ineffective (Suldo, Shaunessy, Michalowski, & Shaffer, 2008), students in the current study framed procrastination as an ineffective method of managing academic stress.

Students frequently mentioned seeking support from others to deal with stress, which reflects a common theme in extant coping literature. For example, Suldo et al. (2008)

found that students frequently mentioned support seeking as an effective strategy, which equally involved friends within and outside of IBD. The authors of the same study also reported that students found venting to peers about stressors to be ineffective, a sentiment echoed by students in the current study. Furthermore, students in the current study provided specific examples of effective social support strategies, including seeking academic or emotional support from parents, educators, and friends, particularly those who had completed AP or IBD coursework. Prior researchers of students in AP and IBD (Foust et al., 2008) and of teens identified as gifted (Preuss & Dubow, 2004) have identified support seeking among classmates as an approach utilized. Similarly, students in the present study mentioned the ineffectiveness of managing difficulties independently. Suldo et al. (2008) noted that IBD students with high anxiety mentioned more frequently their attempts to independently manage difficulties than IBD students with low anxiety. Based on these findings, we not only find further support for the benefits associated with social support, but we also hypothesize that isolation may be associated with psychological risk. Finally, as in Suldo et al.'s (2008) investigation, it is also notable that the students in the current study did not mention turning to drugs or alcohol to cope, in contrast with common escape-oriented coping strategies reported by individuals dealing with college-related stressors (Ackermann & Morrow, 2007).

Regarding personal traits that may be associated with success within the AP or IBD curriculum, students emphasized the importance of personal work habits and sustained focus. In prior research, Andersson and Bergman (2011) and Poropat (2009) linked conscientiousness to academic achievement. Our findings extend the importance of hard work and high goal setting to success among individuals already recognized as relatively high-achieving and ambitious. Even some students' comments about stress and coping reflect conscientiousness. For example, coping through time and task management may be viewed as a behavioral expression of conscientiousness. Our findings are consistent with research on the important role of students' mindsets advanced by Subotnik, Olszewski-Kubilius, and Worrell (2011), who noted that "several researchers argue that motivation, drive, or grit are at the center of eminent levels of achievement" (p. 17). Furthermore, Subotnik et al. (2011) cited intrinsic motivation, task commitment, and achievement motivation as central to understanding which youth identified as gifted subsequently develop into the most productive, even eminent, individuals. The construct of grit, which refers to perseverance and passion for long-term goals, captures the ideas conveyed by students in the current study particularly well. Duckworth and Quinn (2009) found that higher levels of grit in adolescents attending a magnet public school were linked to better grades both concurrently and one year later. Similarly, students in AP and IBD in the current study communicated that hard work and dedication were essential to success in accelerated coursework. More research is needed to determine the extent to which students' levels of intrapersonal factors such as grit, high standards, focus (versus over-commitment), and engagement in learning (Deviney et al., 2011) are uniquely associated with differences in outcomes among students in accelerated high school curricula.

Students in AP and IBD in the current investigation indicated that environmental contexts had a great bearing on both academic and social-emotional outcomes, akin to findings from research with youth from general and gifted education. Specific to the latter, Subotnik and colleagues (2011) posited that students' trajectory to maximum productivity is in part enhanced by external factors via opportunities and resources available inside and outside of school, including support from significant others. For students pursuing AP and IBD, the crucial resources may involve strong

connections with academically focused classmates, warm and passionate teachers, and parents who understand and respect the academic demands of these rigorous courses. Likewise, a stressful home life is perceived to contribute to risk at school. These youth perceptions that emphasize emotional support and a home environment that facilitates learning are in line with results of prior studies with high-achieving and gifted children (Garrett et al., 2010; Gottfried et al., 1994; Ingram et al., 2007; Reis et al., 2005).

Students' emphasis on peer support and connectedness to school is consistent with findings from prior research of similar populations which deemed social network disruptions as detrimental (Peterson et al., 2009) and social support systems as a positive influence (Ryan, 2001). Given the programmatic features that distinguish accelerated curricular opportunities in high school, continued exploration of the role of belongingness is warranted. The established research on belongingness has focused primarily on college freshmen (Freeman, Anderman, & Jensen, 2007) and general education populations of young children (Solomon, Battistich, Kim, & Watson, 1997) and adolescents (Goodenow, 1993; Murdock, Anderman, & Hodge, 2000).

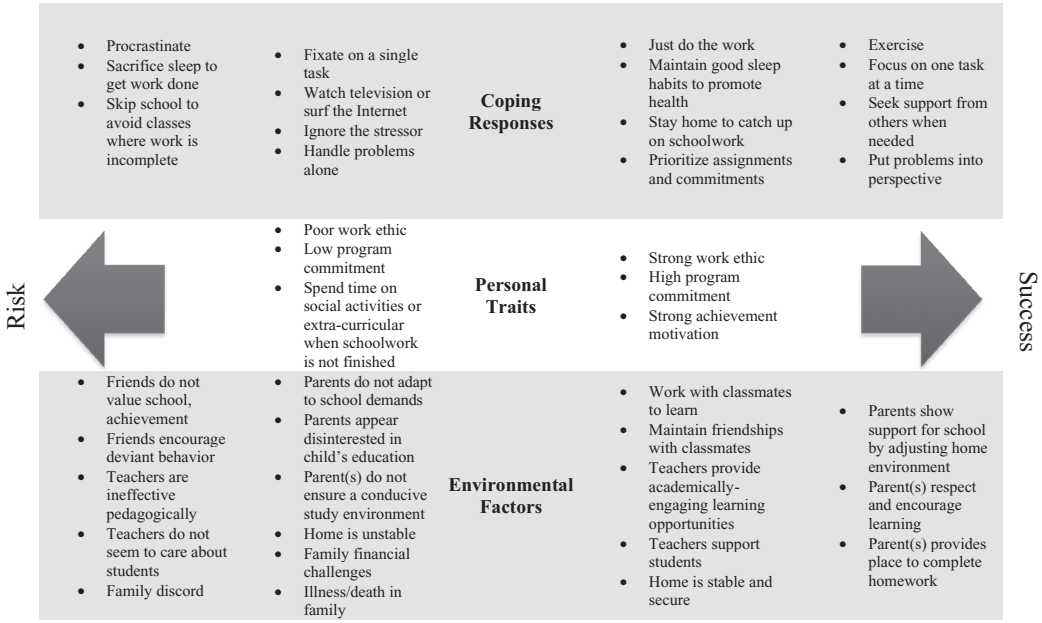
Students' perceptions that supportive teachers facilitate success are consistent with McCoach and Siegle's (2003) and Rita and Martin-Dunlop's (2011) findings with high school students identified as gifted. Struggling students in the current study were more likely than successful students to discuss teacher relationships and teacher efficacy as central to their performance in AP and IBD. Struggling students may seek support from teachers more often than successful students; the latter may be more self-sufficient in learning and may, thus, require fewer supports. In a previous investigation in AP and IBD classes, Hertberg-Davis and Callahan (2008) found a preponderance of one-way communication via lectures and a minimum of student-centered learning experiences occurred. Both are instructional approaches that may be ineffective strategies for learners who thrive when provided student-to-student and student-to-teacher interactions.

Although further research is needed to more fully discern the role of teachers in the learning experience, students in the current study who were struggling discussed the teacher's role in hindering academic progress to a much greater extent than classmates who were successful. Indeed, instructional methods can play a central role in the learning process, as described by Hertberg-Davis and Callahan (2008), though reliance on others may also account for these statements. As the current study included a small sample of AP and IBD students, more research with larger populations of students is needed to explore how struggling students (a) define effective and ineffective AP and IBD teachers, (b) perceive teachers' expression of care (e.g., through tutoring methods and time devoted to students beyond the instructional day; expression of interest in individual students' development beyond the course and school), and (c) respond to various instructional approaches.

Contributions to Theory Pertinent to Student Success

Consistent with prior research on resilience (Masten et al., 2009) and predictors of student success (Eccles & Wang, 2012), AP and IBD students in the current study described a range of personal assets and environmental resources that may be associated with student success or risk. The personal assets suggested by students in our sample are consistent with the forms of student engagement and motivation identified in prior research with different populations (McCoach & Siegle, 2003a; Reis et al., 2005), and the environmental resources span school, peer, and familial contexts (see Figure 1). Further, our findings are consistent with Skinner and Pitzer's (2012) assertions that students' coping strategies may become personal assets that

Figure 1: *Factors Associated with Success and Risk in AP and IBD*



protect them from adverse outcomes in the face of challenging circumstances, which present in the form of intense academic demands for the AP and IBD populations. As such, future endeavors to identify potential protective factors among AP and IBD students must consider a wide array of constructs including student coping, other personal assets such as grit and motivation, and environmental resources available within and beyond the school.

Study Limitations

Regarding limitations to the study design, we did not ask participating schools to note the number of students who were invited but did not agree to participate. Thus, the response rate is not available. Additionally, rather than independently verifying students' classification as struggling or successful in academic and social-emotional health, we relied on the expertise of our school partners to select students while considering the socio-cultural context of the learners they identified. Left to the subjective judgment of the professional staff at each site (including school administrators and counselors), students at one school deemed successful or struggling may have been perceived differently by staff at another school. Our confidence in the school-based identification of successful and struggling students was largely based on the administrators' multi-year observation of students in AP or IBD. Future explorations might include other selection criteria, such as academic performance measures (grade point average, end-of-course exam scores) and a behavioral checklist of indicators for emotional well-being completed by informants.

Conclusions

Enrollment in AP and IBD has increased nationwide, but very little research exists to guide educational personnel and researchers in understanding students' needs. While the extant literature on intrapersonal and environmental predictors of risk and success addresses students served primarily in non-accelerated courses, students who opt for college-level coursework in high school are a unique population who remain

under-studied. Information is needed to guide educators and families in providing appropriate supports for students in AP and IBD. Although the research we report is but an early step towards identifying helpful strategies for coping with school-based stressors as well as facilitative traits and environmental resources, the work represents a step toward more targeted efforts. Future research may focus on larger-scale investigations of the extent to which the various factors identified in the current study are empirically related to academic success and optimal mental-health functioning among students in AP and IBD.

References

Ackermann, M., & Morrow, J. (2007). A principal components analysis and validation of the Coping with the College Environment Scale (CWCES). *Journal of College Student Retention: Research, Theory and Practice*, *9*, 133–148. doi:10.2190/CS.9.2.a

Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college*. Washington, D.C.: U.S. Department of Education.

Ainslie, R., & Shafer, A. (1996). Mediators of adolescents' stress in a college preparatory environment. *Adolescence*, *31*, 913–924.

Albaili, M. A. (2003). Motivational goal orientations of intellectually gifted achieving and underachieving students in the United Arab Emirates. *Social Behavior and Personality*, *31*, 107–120.

Andersson, H., & Bergman, L. R. (2011). The role of task persistence in young adolescence for successful educational and occupational attainment in middle adulthood. *Developmental Psychology*, *47*, 950–960. doi:10.1037/a0023786

ATLAS.ti Scientific Software Development GmbH. (2013). ATLAS.ti (Version 7) [Computer Software]. Berlin, Germany. Retrieved from http://www.atlasti.com

Azevedo, R., & Cromley, J. G. (2004). Does training on self-regulated learning facilitate students' learning with hypermedia? *Journal of Educational Psychology*, *96*, 523–535. doi:10.1037/0022-0663.96.3.523

Best, J. R., Miller, P. H., & Naglieri, J. A. (2011). Relations between executive function and academic achievement from ages 5 to 17 in a large, representative national sample. *Learning and Individual Differences*, *21*, 327–336. doi:10.1016/j.lindif.2011.01.007

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Thousand Oaks, CA: Sage.

Colangelo, N., Assouline, S. A., & Gross, M. U. M. (Eds.) (2004). *A nation deceived: How schools hold back America's brightest students*. The Templeton National Report on Acceleration. Iowa City, IA.

College Board (2013a). *AP Courses*. Retrieved from https://apstudent.collegeboard.org/apcourse

College Board (2013b). *9th Annual AP Report to the Nation*. Retrieved from http://media.collegeboard.com/digitalServices/pdf/ap/rtn/9th-annual/9th-annual-ap-report-appendix-a.pdf

Conley, D. T. (2005). *College knowledge: What it really takes for students to succeed and what we can do to get them ready*. San Francisco: Jossey-Bass.

Deviney, D., Mills, L. H., Gerlich, R. N., & Santander, C. (2011). Impact of behavioral factors on GPA for gifted and talented students. *Academy of Educational Leadership Journal*, *15*, 55–57.

Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the Short Grit Scale (Grit-S). *Journal of Personality Assessment*, *91*, 166–174. doi:10.1080/00223890802634290

Duckworth, A. L., & Seligman, M. (2005). Self-discipline outdoes IQ in predicting academic performance of adolescents. *Psychological Science*, *16*, 939–944. doi:10.1111/j.1467-9280.2005.01641.x

Eccles, J., & Wang, M. T. (2012). Part I commentary: So what is student engagement anyway? In S. L. Christenson, A. L. Reschly, and C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 133–145). New York, NY: Springer Science + Business Media.

Florida Department of Education (2014). *School Accountability Report: 2010*. Retrieved from http://schoolgrades.fldoe.org/reports/index.asp

Foust, R. C., Hertberg-Davis, H., & Callahan, C. M. (2008). "Having it all" at sleep's expense: The forced choice of participants in Advanced Placement courses and International Baccalaureate programs. *Roeper Review*, *30*, 121–129. doi:10.1080/02783190801955293

Foust, R. G., Hertberg-Davis, H., & Callahan, C. M. (2009). Students' perceptions of the non-academic advantages and disadvantages of participation in Advanced Placement and International Baccalaureate programs. *Adolescence*, *44*, 289–312.

Freeman, T. M., Anderman, L. H., & Jensen, J. M. (2007). Sense of belonging of college freshman at the classroom and campus levels. *Journal of Experimental Education*, *75*, 203–220.

Garrett, T., Antrop-Gonzales, R., & Velez, W. (2010). Examining the success factors of high-achieving Puerto Rican male high school students. *Roeper Review*, *32*, 106–115. doi:10.1080/02783191003587892

Grant, K. E., Compas, B. E., Stuhlmacher, A. F., Thurm, A. E., McMahon, S. D., & Halpert, J. A. (2003). Stressors and child and adolescent psychopathology: Moving from markers to mechanisms of risk. *Psychological Bulletin*, *129*, 447–466. doi:10.1037/0033-2909.129.3.447

Goodenow, C. (1993). Classroom belonging among early adolescent students: Relationships to motivation and achievement. *Journal of Early Adolescence*, *13*, 21–43.

Gottfried, A. W., Gottfried, A. E., Bathurst, K., & Guerin, D. (1994). *Gifted IQ: Early Developmental Aspects-The Fullerton Longitudinal Study*. NY: Plenum Publishing Corp.

Gross, M. (1989). The pursuit of excellence or the search for intimacy? The forced-choice dilemma of gifted youth. *Roeper Review*, *11*, 189–194. doi:10.1080/02783198909553207
Guest, G., MacQueen, K. M., & Namey, E. E. (2012). *Applied thematic analysis*. Los Angeles, CA: Sage.
Hertberg-Davis, H., & Callahan, C. M. (2008). A narrow escape: Gifted students' perceptions of Advanced Placement and International Baccalaureate Programs. *Gifted Child Quarterly*, *52*, 199–216. doi:10.1177/0016986208319705
Iatarola, P., Conger, D., & Long, M. C. (2011). Determinants of high schools' advanced course offerings. *Educational Evaluation and Policy Analysis*, *33*, 340–359.
Ingram, M., Wolfe, R. B., & Lieberman, J. M. (2007). The role of parents in high-achieving schools serving low-income, at-risk populations. *Education on Urban Society*, *39*, 479–497. doi:10.1177/0013124507302120
International Baccalaureate Organization (IBO, 2014). *The IB Diploma Programme*. Retrieved from http://www.ibo.org/diploma/
Kaplan, D. S., Liu, R. S., & Kaplan, H., B. (2005). School related stress in early adolescence and academic performance three years later: The conditional influence of self expectations. *Social Psychology of Education*, *8*, 3–17. doi:10.1007/s11218-004-3129-5
Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
Martin, A. J. (2007). Examining a multidimensional model of student motivation and engagement using a construct validation approach. *British Journal of Educational Psychology*, *77*, 413–440. doi:10.1348/000709906X118036
Martin, R. C., & Dahlen, E. R. (2005). Cognitive emotion regulation in the prediction of depression, anxiety, stress, and anger. *Personality and Individual Differences*, *39*, 1249–1260. doi:10.1016/j.paid.2005.06.004
Masten, A. S., Cutuli, J. J., Herbers, J. E., & Reed, M. J. (2009). Resilience in development. In Snyder, C. R., & Lopez, S. J. (Eds.), *The Oxford handbook of positive psychology* (2nd ed.; pp. 117–131). New York: Oxford University Press.
McCoach, D. B., & Seigle, D. (2003). Factors that differentiate underachieving gifted students from high achieving gifted students. *Gifted Child Quarterly*, *47*, 144–153. doi:10.1177/001698620304700205
McNamara, S. (2000). *Stress in young people: What's new and what can we do*? New York: Continuum.
Milburn, K. M. (2012). Experiences of high-achieving high school students who have taken multiple concurrent Advanced Placement courses. *Dissertation Abstracts International Section A*, *73*, 522.
Morse, J. (2012). *Methodology: Best high schools*. Retrieved from http://education.usnews.rankingsandreviews.com/education/high-schools/articles/2009/12/09/methodology-americas-best-high-schools
Murdock, T. B., Anderman, L. H., & Hodge, S. A. (2000). Middle-grades predictors of students' motivation and behavior in high school. *Journal of Adolescent Research*, *15*, 327–351. doi:10.1177/0743558400153002
Patterson, J. M., & McCubbin, H. I. (1987). Adolescent coping style and behaviors: Conceptualization and measurement. *Journal of Adolescence*, *10*, 163–186. doi:10.1016/S0140-1971(87)80086-6
Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
Pekrun, R. & Linnenbrink-Garcia, L. (2012). Academic emotions and student engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 259–282). New York, NY: Springer Science + Business Media.
Peterson, J. S., Duncan, N., & Canady, K. (2009). A longitudinal study of negative life events, stress, and school experiences of gifted youth. *Gifted Child Quarterly*, *53*, 34–49. doi:10.1177/0016986208326553
Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin*, *135*, 322–338. doi:10.1037/a0014996
Preuss, L. J., & Dubow, E. F. (2004). A comparison between intellectually gifted and typical children in their coping responses to a school and peer stressor. *Roeper Review*, *26*, 105–111. doi:10.1080/02783190409554250
Reeve, J., Ryan, R. M., Deci, E. L., & Jang, H. (2007). Understanding and promoting autonomous self-regulation: A self-determination theory perspective. In D. Schunk & B. Zimmerman (Eds.), *Motivation and self-regulated learning: Theory, research, and application* (pp. 223–244). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
Reis, S. A., Colbert, R. D., & Hébert, T. P. (2005). Understanding resilience in diverse, talented students in an urban high school. *Roeper Review*, *27*, 110–120. doi:10.1080/02783190509554299
Reschly, A. L., & Christenson, S. L. (2012). Jingle, jangle, and conceptual haziness: Evolution and future directions of the engagement construct. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 3–19). New York, NY: Springer Science + Business Media.
Reyes, M. R., Brackett, M. A., Rivers, S. E., White, M., & Salovey, P. (2012). Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology*, *104*, 700–712. doi:10.1037/a0027268
Rita, R., & Martin-Dunlop, C. (2011). Perceptions of the learning environment and associations with cognitive achievement among gifted biology students. *Learning Environments Research*, *14*, 25–38. doi:10.1007/s10984-011-9080-4
Rogers, K. B. (2002). Grouping the gifted and talented: Questions and answers. *Roeper Review*, *24*, 102–107. doi:10.1080/02783190209554140
Roorda, D. L., Kooman, H. M. Y., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher-student relationships on students' school engagement and achievement: A meta-analytic approach. *Review of Educational Research*, *81*, 493–529. doi:10.3102/0034654311421793
Ryan, A. M. (2001). The peer group as a context for the development of young adolescent motivation and achievement. *Child Development*, *72*, 1135–1150. doi:10.2307/1132433
Saldaña, J. (2009). *The coding manual for qualitative researchers*. Los Angeles, CA: Sage.

Schick, H., & Phillipson, S. N. (2009). Learning motivation and performance excellence in adolescents with high intellectual potential: What really matters? *High Ability Studies*, *20*, 15–37. doi:10.1080/13598130902879366

Shaunessy, E., Suldo, S. M., Hardesty, R. B., & Shaffer, E. S. (2006). School functioning and psychological well-being of International Baccalaureate and general education students: A preliminary examination. *Journal of Secondary Gifted Education*, *17*, 76–89.

Sheldon, S. B., & Epstein, J. L. (2005). Involvement counts: Family and community partnerships and mathematics achievement. *Journal of Educational Research*, *98*, 196–206. doi:10.3200/JOER.98.4.196-207

Shiner, R. L. (2000). Linking childhood personality with adaptation: Evidence for continuity and change across time into late adolescence. *Journal of Personality and Social Psychology*, *78*, 310–325. doi:10.1037/0022-3514.78.2.310

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, *129*, 216–269. doi:1037/0033–2909.129.2.216

Skinner, E. A., & Pitzer, J. R. (2012). Developmental dynamics of student engagement, coping, and everyday resilience. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 21–44). New York, NY: Springer Science + Business Media. doi:10.1007/978-1-4614-2018-7_2

Solomon, D., Battistich, V., Kim, D., & Watson, M. (1997). Teacher practices associated with students' sense of the classroom as a community. *Social Psychology of Education*, *1*, 235–267. doi:10.1007/BF02339892

Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2011). Rethinking giftedness and gifted education: A proposed direction forward based on psychological science. *Psychological Science in the Public Interest*, *12*, 3–54. doi:10.2307/23074849

Suldo, S. M., Gormley, M., DuPaul, G., & Anderson-Butcher, D. (2014). The impact of school mental health on student and school-level academic outcomes: Current status of the research and future directions. *School Mental Health*, *6*, 84–98. doi:10.1007/s12310-013-9116

Suldo, S. M. & Shaunessy-Dedrick, E. (2013a). The psychosocial functioning of high school students in academically rigorous programs. *Psychology in the Schools*, *50*, 823 –843. doi:10.1002/pits.21708

Suldo, S. M. & Shaunessy-Dedrick, E. (2013b). Changes in stress and psychological adjustment during the transition to high school among freshmen in an accelerate curriculum. *Journal of Advanced Academics*, *24*, 195–218. doi:10.1177/1932202X13496090

Suldo, S. M., Shaunessy, E., & Hardesty, R. (2008). Relationships among stress, coping, and mental health in high-achieving high school students. *Psychology in the Schools*, *45*, 273–290. doi:10.1002/pits.20300

Suldo, S. M., Shaunessy, E., Michalowski, J., & Shaffer, E. J. (2008). Coping strategies of high school students in an International Baccalaureate program. *Psychology in the Schools*, *45*, 960–977. doi:10.1002/pits.20345

Suldo, S. M., Shaunessy, E., Thalji, A., Michalowski, J., & Shaffer, E. (2009). Sources of stress for students in high school college preparatory and general education programs: Group differences and associations with adjustment. *Adolescence*, *44*, 925–948.

Valiente, C., Lemery-Chalfant, K., Swanson, J., & Reiser, M. (2008). Prediction of children's academic competence from their effortful control, relationships, and classroom participation. *Journal of Educational Psychology*, *100*, 67–77. doi:10.1037/0022-0663.100.1.67

Van Tassel-Baska, J. (2001). The role of Advanced Placement in talent development. *Journal of Secondary Gifted Education*, *12*, 126–132.

Appendix

Interview Protocol

1. What pops into your head when you hear the word "stress"? Please think about a few recent times when you faced difficulties or felt stress (give student a minute of silence to facilitate recall).

2. What situations or difficulties have led you to feeling stress recently?
   - CUE: Tell me some things about school that make you feel stress

Now, please think about what you did in response to the problem- in other words, what you did to deal with the stressful situation (give student a minute of silence to facilitate recall).

3. When you are stressed (by situations such as __, ___), what do you tend to do?
   - PROBE: What else do you do when you're feeling stress?
   - CUE: Who (else) do you turn to for help or advice in times of stress?
4. Out of the all of the things you have tried to do in the past to help yourself feel better, which things were effective in helping you cope with the stress?
   - PROBE: What else worked to help you cope?
5. Which things that you did in response to stress have not been effective in helping you to cope?
6. (Use as needed) We've talked about school stressors a lot today- what is most important in handling stress caused by school?

7. Let's switch gears for a few minutes and talk about things besides coping strategies. What <u>else</u> helps students (you or your classmates) succeed in your AP/IB program and stay emotionally healthy?
   - PROBE: What else <u>besides use of good coping strategies</u> influences success?
   - CUE: What about students' social, classroom, and home <u>environments</u> influence success?
   - CUE: What <u>personal traits</u> seem to increase the likelihood of being successful in AP/IBD?
8. Now let's talks about what factors (besides ineffective coping strategies) contribute to students NOT succeeding. What puts students (you or your classmates) at risk for doing <u>poorly</u>, either in your AP/IBD program or emotionally?
   - PROBE: What else <u>besides use of ineffective coping strategies</u> puts students at risk?
   - CUE: What about students' social, classroom, and home <u>environments</u> has a negative impact on their ability to be successful in AP/IBD?
   - CUE: What <u>personal traits</u> do students have that seem to increase the likelihood of struggling in AP/IBD?

9. [Summarize responses] is that correct? Would you like to add anything?