

The Need to Succeed:
Pressure and Overextension in High Achieving Schools

by

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ABSTRACT

Students at High Achieving Schools (HASs) have recently been identified as an at-risk population, and excessive pressure to excel is considered the cause of this maladjustment. However, the specific aspects of pressure that lead to these outcomes have yet to be comprehensively explored. In two schools, one public and one independent, this study examined multiple constructs potentially implicated: feelings of pressure to succeed from different sources (parents, teachers, coaches, the self, and friends) and total felt pressure. Also considered are dimensions of being overextended across commitments, including hours of sleep, homework, and levels of associated strain and enjoyment. These indices were all examined in relation to adolescents' internalizing and externalizing symptoms, as well as feelings of disengagement with school, after controlling for attachment to both parents. Results showed that total felt pressure, and pressure felt from the self, were most notably related to internalizing symptoms and disengagement with school. Additionally, strain from commitments showed unique links with depression, anxiety, and negative feelings about school. Finally, enjoyment from different commitments showed robust links with feelings about school. Overall, the different pressure predictors showed sporadic links with externalizing behaviors and substance use. Findings are discussed in terms of directions for interventions as well as future research with HAS populations.

DEDICATION

To my big sister, Corynn, for supporting me from day one. To Lyndsey, for cheering me on every day, even from 2,000 miles away. To Skye and Andrea, for sticking by my side through the highs and lows of graduate school thus far. And, lastly, to Darla, for teaching me patience and persistence.

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Introduction

Youth in high-achieving contexts have recently been identified as an at-risk population by the National Academies of Science, Engineering, and Medicine (NASEM; 2019). This report outlines that individuals in high-achieving contexts are at risk for adjustment problems as a result of experiencing excessive pressure to excel. This construct captures the sense of pressure, beyond needing to succeed in their academics and extracurricular activities, that adolescents feel they are expected to out-perform those around them. The NASEM (2019) conclusions built upon findings outlined in the Robert Wood Johnson Foundation's most recent Report on Adolescent Wellness, which identified excessive pressure to excel as one of the most prominent risk factors for poor adolescent well-being (Geisz & Nakashian, 2018). Pressure and its related outcomes are especially prominent within the context of high achieving schools (HASs; Luthar & D'Avanzo, 1999) – schools that have high standardized test scores, provide many opportunities for students (both academic and extracurricular), and whose students go on to attend elite universities post-graduation (Luthar & Kumar, 2018). Together, these reports highlight the need for more research exploring how pressure impacts adolescents in HASs (Geisz & Nakashian, 2018).

While the population in question (youth in HASs) has historically been described as “affluent,” this is a broad and not always accurate generalization; although students at HASs typically come from affluent families, these schools also include students from other socioeconomic backgrounds (Luthar, Small, & Ciciolla, 2018). What unites the samples studied are high levels of academic success (e.g., college admission statistics,

SAT scores), and students within these types of schools are simply more likely to come from affluent families.

High achieving students manifest a myriad of negative outcomes; most notably, they report elevated levels of both internalizing and externalizing problems, including serious levels of anxiety, depression, and rule-breaking (Lund & Dearing, 2012; Luthar, Barkin, & Crossman, 2013). In addition, these students show significantly higher levels of substance use beginning in adolescence (Botticello, 2009; Song et al., 2009) and continuing into adulthood (Luthar et al., 2018). Excessive pressure to excel has been identified as a primary mechanism through which these undesirable outcomes emerge (Luthar et al., 2013; Geisz & Nakashian, 2018; NASEM, 2019), making this construct an important area of study for the well-being of youth in HASs.

Although it is clear that high achieving students show elevated adjustment problems as a result of this pressure, the specific mechanisms through which high pressure leads to maladjustment have yet to be comprehensively explored. Accordingly, the central aim in this work is to disentangle the various sources of felt pressures. Efforts to obtain a clearer understanding of the relative effects of different pressure indicators may help identify the most salient areas for intervention within this at-risk population.

Overextension

For students in this at-risk population, there is some evidence that being overextended is related to adjustment outcomes. Overextension, or being “stretched too thin,” often comes in the form of excessive homework and course assignments, as well as additional extracurricular activities. In a survey administered by Kouzma and Kennedy

(2004), high school students were asked to identify their most prominent sources of stress. Three of the top eight identified stressors were related to excessive workload: “too much to do,” “studying for examinations,” and “how much needs to be learned.” This identifies facets of overextension as primary stressors for adolescent students, as more than a third of the top reported stressors fall within this category.

As a construct, overextension is related to but distinct from pressure. While academic pressure assesses the internalized “need to succeed,” overextension evaluates the extent to which students feel “stretched too thin” as a result of pressure. Many students within HASs have immense workloads that are time-consuming and stressful and may contribute to maladjustment (Luthar & Kumar, 2018). Thus, overextension may play a role in maladjustment, independent of feelings of pressure, among youth in HASs.

Prior research has examined the role that workload plays in the well-being of adolescents in HASs. For example, Galloway, Conner, and Pope (2013) found that, within a sample of high achieving youth, students spent on average more than three hours on homework each night. Yet, more time spent on homework in itself is positively related to academic stress and overall lack of balance in students’ lives; thus, the relative strength of links between hours on homework and maladjustment, as opposed to links involving other aspects of pressure, remain unclear. Other studies have also identified a relationship between burnout (i.e., exhaustion caused by excessive stress) and depressive symptoms (Fiorilli, De Stasio, Di Chiacchio, Pepe, & Salmela-Aro, 2017), suggesting a clear link between overextension and well-being outcomes. Additionally, schoolwork pressure has

been linked to psychosomatic and psychological complaints (Hjern, Alfven, & Ostberg, 2007).

Overextension is also often discussed in the context of sleep. For example, Foust, Hertberg-Davis, & Callahan (2007) found that “gifted” students were motivated to achieve good grades and maintain a strong social life, and that they consciously placed their sleep on the backburner to do so (i.e., they would choose to sleep less in order to meet their academic and social goals). This aligns with the “I can, therefore I must” mentality (Luthar et al., 2013); students feel that because they are able to do something, they must do it. As overextension becomes the norm, students lose sleep, which may contribute to their maladjustment over time.

Academic Pressure: By Domain

Academic pressure is typically discussed broadly in the literature, but one of the most clearly identified component sources is performance in *upper-level courses* (e.g., Advanced Placement (AP), International Baccalaureate (IB) courses) which, of course, is linked with the college admissions process (Iatarola, Conger, & Long, 2017). Research indicates that students in advanced courses are at higher risk for elevated stress (Suldo, Shaunessy, & Hardesty, 2008) and, in turn, experience increased levels of maladjustment (e.g., lower emotional well-being; Suldo, O’Brennan, Storey, & Shaunessy-Dedrick, 2018). In focus groups with students who currently attended HASs, advanced placement courses were identified as a primary source of stress, with many students reporting simultaneous enrollment in multiple advanced courses (Leonard et al., 2015). While the inclusion of these curricula can be beneficial for many students, they also create a more

intense workload, which has been shown to directly impact the well-being of those enrolled (Suldo et al., 2018).

Aside from the pressure of courses, arguably the most salient aspect of academic pressure in high school is determining what to do after graduation. College is typically the next step for high achieving students, as these schools are more likely to be academically competitive and have a higher rate of graduates who attend elite universities (Luthar & Kumar, 2018). Additionally, students who come from wealthier families attend college at a much higher rate than those from lower socioeconomic backgrounds (Cahalan & Perna, 2015). Thus, students from high achieving schools are likely to experience a second significant academic stressor, the *college admissions process*, especially as they seek acceptance to selective institutions.

In fact, when high achieving high school students were asked open-ended questions about what causes them the most stress, academics and the college admissions process came up as the most salient factors; these were rated even higher overall than stressors outside of school (e.g., those related to family and peer relationships, such as divorce or illness; Conner, Pope, & Galloway, 2009). A study by Bradshaw, Espinoza, and Hausman (2001) found that high achieving students not only felt pressure throughout the college decision making process, but that they also felt more pressure than typical high school students. This supports the idea that college stress is a salient domain of pressure for adolescent students, especially within the context of HASs.

While overall *course grades* have been studied as a source of stress for students (Conner et al., 2009), these are typically explored within the context of college

admissions; in other words, students tend to report feeling pressure to get good grades in order to get into a good college (Leonard et al., 2015). Many students also report enrolling in advanced courses specifically to boost their résumé (Leonard et al., 2015). This suggests that much of the pressure to do well in courses overall, and particularly advanced courses, is linked to the process of college applications. Collectively, these aforementioned studies highlight the importance of including multiple aspects of pressure (e.g., grades, AP courses, college admissions) when exploring the overall impact of this construct.

Academic Pressure: By Source

While academic stress, broadly speaking, has been shown to have a significant impact on adolescent students, there is also reason to believe that this pressure may have differential effects depending on its source. In other words, the *sources* of academic pressure (e.g., parents, teachers, coaches, oneself, peers) may be differentially linked to well-being outcomes in high achieving students.

As *parents* are typically the most proximal figures in their child's life (Collins & Laursen, 2004), it is not surprising that much of the literature identifying external sources of pressure and associated adjustment difficulties has focused on parents. To illustrate, Deb, Strodl, and Sun (2015) found that 66% of high school students reported feeling pressure from their parents to do well academically, suggesting that parental pressure is felt by a large percentage of high school students. With regard to ramifications for adjustment problems, Stoeber and Rambow (2007) found that perceived parental pressure to be "perfect" was linked to somatic complaints in adolescent students.

While adolescent students are typically still dependent upon their parent(s) or other primary caregiver(s) for meeting their basic needs (Collins & Laursen, 2004), they are also at a period in their life that is characterized by increasing independence (Steinberg & Morris, 2001). A major aspect of adolescent development is an increased awareness of how one is viewed by others, most prominently one's peers (Steinberg & Morris, 2001). Given the developmental stage of adolescent students, it is reasonable to suggest that the opinions of others – most notably, *peers* – could be a significant contributor to the pressure felt by students in high achieving schools.

There is some literature that examines the impact of *peers* on academic achievement, though most of these studies have explored peer relationships as a protective mechanism. Support from peers has been identified as a buffer for adolescents, in that peer relationships help protect those facing academic pressure from later maladjustment (Song et al., 2015; Leonard et al., 2015). However, research has also found that students compare themselves to their peers, suggesting that a competitive culture could also be present within these schools (Leonard et al., 2015). Lyman and Luthar (2014) found that high levels of envy of peers (seen as doing better than oneself) characterized HAS students in affluent communities much more so than students in low-income communities; levels of envy as well as strength of links with maladjustment were particularly pronounced among affluent girls. In highly competitive cultures, therefore, peer relationships can be an additional source of pressure. Ongoing competition is fostered when a student body is made up of mostly high achieving students, who are then compared to one another (Luthar & Kumar, 2018).

In addition to parents and peers, *teachers* could also be a source of pressure for high achieving students. Similar to peers, teachers have mostly been studied in a positive light in relation to academic pressure (i.e., how supportive teacher relationships can lead to better student well-being). Social support provided by teachers has been shown to be influential in predicting positive adjustment outcomes for students, especially in adolescence (Tennant et al., 2015). Less of the literature has focused specifically on academic pressure imposed by teachers; however, one study found that teacher-imposed academic pressure had a strong negative impact on student well-being (though weaker than parent-imposed pressure; Song et al., 2015). Thus, although the literature is limited, there is reason to believe that academic pressure from teachers may have a negative impact on the well-being of students.

The findings regarding *self-imposed pressure* are limited. Some students report believing that the overall academic pressure they feel is largely self-imposed (Leonard et al., 2015); however, in the previously-mentioned Kouzma and Kennedy study (2004) where high school students were asked to identify their most prominent sources of stress, the “need to do well imposed by others” was rated as an even more salient stressor than self-imposed pressure to excel. More research is needed to further understand the role that self-imposed pressure plays in the adjustment of high achieving students relative to external sources of pressure.

Parent Attachment

In order to disentangle the potentially unique effects of different pressure variables on adolescents, it is important to control for other dimensions that tend to have

strong links with their mental health, and parent attachment is the most obvious. There is a large body of research supporting the association between parent attachment and adolescent well-being (Mikulincer & Shaver, 2012), both in relation to internalizing symptoms (Agerup, Lydersen, Wallander, & Sund, 2015; Brumariu & Kerns, 2010; van Eijck, Branje, Hale, & Meeus, 2012) and externalizing behaviors (Stewart & Suldo, 2011; Lecompte & Moss, 2014).

More specifically, low levels of parent attachment have been linked significantly with adolescents' depressive symptoms (Agerup et al., 2015) and symptoms of anxiety (van Eijck et al., 2012). When examined alongside peer attachment, parent attachment has shown to have a stronger link with internalizing outcomes, suggesting that it has a notable influence beyond general social support (Agerup et al., 2015). Parent attachment has not only been associated with internalizing symptoms in adolescence, but into young adulthood as well (Agerup et al., 2015), suggesting that it has lasting effects.

Parent attachment and support also play a role in the display of externalizing behaviors during adolescence (Stewart & Suldo, 2011; Lecompte & Moss, 2014). Parallel to research on internalizing disorders, studies have found that parent attachment is more influential than peer attachment in predicting externalizing behaviors (Stewart & Suldo, 2011). Interestingly, academic achievement has been identified as a potential moderator of the relation between parent support and symptoms of externalizing behaviors (e.g., rule breaking; Stewart & Suldo, 2011), which is especially important to consider within the context of high-achieving adolescent students.

Overall, the literature suggests that attachment to mothers and attachment to fathers have a comparable impact on adolescent well-being (Brumariu & Kerns, 2010; Agerup et al., 2015; Ebbert, Infurna, & Luthar, 2019). However, one study by van Eijck and colleagues (2012) found a bidirectional relationship between father attachment and symptoms of anxiety in adolescence but found only a unidirectional relationship for mothers (i.e., anxiety symptoms predicted attachment over time, but not vice-versa). This suggests that some differences may exist between attachment in these relationships, though the research supporting this is relatively limited.

Operationalization of Major Constructs

With regard to outcome variables in the present study, the focus was on major mental health indices that are known to be commonly elevated in the context of HASs (Ebbert, Kumar, & Luthar, 2019; Luthar & Kumar, 2018). These include the internalizing symptoms of depression and anxiety (that, conceptually, are most likely to be affected by ongoing feelings of high pressure) as well as rule breaking (which includes cheating and lying) and substance use (as some students might self-medicate; Luthar et al., 2013). Also considered as an outcome were students' feelings of disengagement with school (i.e., the sense that they do not belong or fit in at the school, or simply do not want to be there), as this dimension could also be affected by subjective experiences of high academic pressure.

The Present Study

Although it is known that high achieving students face elevated levels of maladjustment as a result of pressure, the specific aspects of pressure that lead to these

outcomes have yet to be comprehensively explored. The current study aimed to fill this gap by first accounting for the role of parent attachment, then examining the degree to which overextension (i.e., hours of sleep, time on homework, and commitment strain and enjoyment) might have an impact on adolescent well-being compared to pressure. This project comparatively examined total pressure and distinct sources of academic pressure (i.e., from parents, teachers, coaches, the self, and friends) and their differential impact on symptoms of distress commonly observed in HAS cohorts: Anxiety, Depression, Rule-Breaking, and Substance Use. The impact on Disengagement with School was also examined.

We hypothesized that measures of academic pressure would be uniquely related to negative outcomes, over and above parent attachment and overextension. Furthermore, we hypothesized that total academic pressure would be most consistently predictive of well-being outcomes in adolescent students, but that specific sources of pressure would stand out as well. Of the sources of academic pressure, we expected parental pressure to be most strongly related to well-being outcomes, followed by peers and teachers. We expected these relationships to be more predictive of mental health outcomes than high pressure felt from the self or coaches (as not all students are athletes). As in prior work on HAS students, all research questions and analyses were considered separately for boys and girls.

Method

Participants

Participants were from two high achieving schools in the United States: one public school in the Northwest (School 1) and one independent school in the Northeast (School 2). As part of their ongoing work to promote positive youth development, school officials administered a survey on well-being, felt pressures, and other risk and protective factors in the Spring of 2019. The principal or head of school informed all parents about the nature of the survey and provided the option to have their children not participate. Students were also told that participation in the survey was optional and not required by the school.

In School 1, the sample included 1205 students of the 1446 eligible to participate, representing 83% of the student body (excluding those who were absent or refused to participate). The sample in School 2 consisted of 375 students which represented 96% of the total student body. As students who reported “other” as their gender identity made up less than 3% of each sample, they were excluded because the analyses were run separately by gender. Both schools included students in grades 9-12. The final sample for School 1 consisted of 59% female students ($n=589$), while School 2 was comprised of 49% female students ($n=182$). Ethnicities were 62% versus 58% white, 21% versus 13% Asian/Asian American/Pacific Islander, and 17% versus 30% other.

Measures

Adjustment outcomes. Adjustment outcomes were measured using the Well-Being Index (WBI), a relatively brief measure of salient internalizing and externalizing

symptoms and outcomes that are commonly seen in studies of HAS students (i.e., Depression, Anxiety, Rule Breaking, Substance Use, Disengagement with School). In past work, this measure has been validated against the Youth Self Report (YSR; Achenbach & Rescorla, 2001; Ebbert et al., 2019). Reliability coefficients (Cronbach's α) in the current study were as follows: School 1, Depression 0.81 for boys and 0.85 for girls; Anxiety, 0.82 for boys and 0.84 for girls; Rule Breaking, 0.78 for boys and 0.80 for girls. In School 2, coefficients for Depression, Anxiety, and Rule Breaking, respectively, were 0.83 for boys and 0.86 for girls; 0.81 for boys and 0.85 for girls; and 0.70 for boys and 0.81 for girls.

For frequency of Substance Use, α s at School 1 were 0.73 for boys and 0.78 for girls, and α s at School 2 were 0.75 for boys and 0.71 for girls. Parallel values for Disengagement from School were 0.73 for boys and 0.78 for girls in School 1, and 0.75 for boys and 0.71 for girls in School 2.

Parent Attachment. Mom Attachment and Dad Attachment were measured using the Inventory of Parent and Peer Attachment (IPPA) Short Form (Raja, McGee, & Stanton, 1992). For each parent, students were asked to indicate how true a number of statements were (e.g., "*My mother respects my feelings*") on a scale of 1 (Never True) to 5 (Always True). For Mom Attachment, α s at School 1 were 0.88 for boys and 0.91 for girls; at School 2, α s were 0.85 for boys and 0.87 for girls. Parallel values for Dad Attachment were 0.89 for boys and 0.92 for girls in School 1, and 0.88 for boys and 0.92 for girls in School 2.

Table 1
Alpha Values for Predictor and Outcome Variables

Predictors	NW-Pub1-19		NE-Ind4-19	
	Boys	Girls	Boys	Girls
Mom Attachment	0.88	0.91	0.85	0.87
Dad Attachment	0.89	0.92	0.88	0.92
Homework Time	0.78	0.74	0.72	0.71
Commitment: Strain	0.92	0.82	0.76	0.84
Commitment: Enjoy	0.90	0.87	0.76	0.83
Pressure: Total	0.73	0.70	0.66	0.65
Outcomes				
Depression	0.81	0.85	0.83	0.86
Anxiety	0.82	0.84	0.81	0.85
Rule Breaking	0.78	0.80	0.70	0.81
Substance Use	0.73	0.78	0.75	0.71
Disengagement with School	0.73	0.78	0.75	0.71

Overextension: Commitment Strain and Enjoyment. Commitment Strain and Enjoyment were measured using the following stem question: “*For each of the items below, on a scale of 1 to 5, with 1 being the least and 5 being the most, please rate a) how much of a strain it was on you and b) how much you enjoyed it.*” Students responded to this question for each of the following activities: (1) advanced courses, (2) clubs/extracurriculars, (3) competitive sports, (4) volunteering, (5) job/internship, (6) study abroad, (7) being tutored, and (8) holding a leadership position. For commitment *strain*, reliability (Cronbach’s α) was 0.92 for boys and 0.82 for girls in School 1, and 0.76 for boys and 0.84 for girls in School 2. For commitment *enjoyment*, reliability (Cronbach’s α) was 0.90 for boys and 0.87 for girls in School 1, and 0.76 for boys and 0.83 for girls in School 2.

Overextension: Sleep and Homework Time. Sleep Time was measured by asking students “*On average, how many hours of sleep do you get on a regular school night?*”. As this was a single question in the survey, reliability analyses could not be conducted. Correlation coefficients are provided in Table 3 for School 1 and Table 4 for School 2.

Homework Time was measured by asking students “*On average, how much time do you spend completing homework.... on a school night? On Saturday? On Sunday?*” A score was created by averaging each item to obtain a total score. Reliability (Cronbach’s α) was 0.78 for boys and 0.74 for girls in School 1, and 0.72 for boys and 0.71 for girls in School 2 for the total homework time score.

Academic Pressure. Students were asked to respond to the following prompt: “*I feel academic pressure (e.g., to get into a good college, to get good grades, to take advanced level courses) from...*”. They were provided with a list of individuals ((1) parents, (2) teachers, (3) coaches, (4) self, and (5) friends) and were asked to rate the pressure they felt from the listed individual on a scale of 1 (Not at All) to 5 (A Great Deal). The individual pressure scores were also summed to compute a total pressure score, for which reliability (Cronbach’s α) was 0.73 for boys and 0.70 for girls in School 1, and 0.66 for boys and 0.65 for girls in School 2. In the interest of brevity, these Pressure variables are referred to as “P: Source” (e.g., P: Parents, P: Total).

Statistical Analysis

The present study was a secondary analysis of extant data. Analyses were run in SPSS software (IBM SPSS Statistics for Windows, Version 25.0). Two groups of hierarchical regression analyses were conducted to examine the impact of sources of overextension and pressure. For both sets of analyses, the first block included measures of parent attachment (Mom Attachment and Dad Attachment) and the second block added measures of overextension (Homework Time, Sleep Time, Commitment Strain, and Commitment Enjoyment). In the first set of analyses, the third block added the aggregate score of academic pressure (Pressure: Total). In the second set of analyses, the third block added academic pressure by source (i.e., P: Parents, P: Teachers, P: Coaches, P: Self, P: Friends). Analyses were run separately by sex.

Results

Descriptive Statistics

Means and standard deviations for all predictor and outcome variables are presented in Table 2, separated by school and gender. Also presented in Table 2 are the results of three one-way analyses of variance (ANOVAs) performed on predictor variables to examine differences by sex, school, and the sex*school interaction.

The first ANOVA revealed significant sex differences on multiple predictor variables. Specifically, whereas boys reported greater levels of Dad Attachment ($F=11.11, p<.005, \eta^2 = .01$), girls demonstrated greater levels of Homework Time ($F=64.75, p<.005, \eta^2 = .05$), Commitment Strain ($F=10.83, p<.005, \eta^2 = .01$), Commitment Enjoyment ($F=8.81, p<.005, \eta^2 = .01$), P: Total ($F=28.64, p<.005, \eta^2 = .02$), P: Teachers ($F=23.73, p<.005, \eta^2 = .02$), P: Self ($F=56.00, p<.005, \eta^2 = .04$), and P: Friends ($F=17.15, p<.005, \eta^2 = .01$). Among the outcome variables, there were significant sex differences for Depression ($F=56.41, p<.01, \eta^2 = .04$), Anxiety ($F=139.86, p<.01, \eta^2 = .08$), and Disengagement with School ($F=54.93, p<.01, \eta^2 = .03$), with girls reporting greater symptoms on all three scales. Aside from Anxiety, most variables (predictor and outcome) had small effect sizes (ranging from $\eta^2=.01$ to $\eta^2=.05$), meaning there were only minor differences between boys and girls on these measures. Anxiety had a marginally medium effect size ($\eta^2=.08$), suggesting a more prominent difference between Anxiety symptoms in boys and girls.

The second ANOVA revealed significant school differences as well. Whereas students in the public school reported higher rates of P: Parents ($F=8.15, p<.005, \eta^2 =$

Table 2
Descriptive Statistics and ANOVA Results for Predictor and Outcome Variables

	School 1												School 2											
	Boys				Girls				Boys				Girls				Sex				School Type*Sex			
	N= 614	Mean	SD		N= 588	Mean	SD		N= 193	Mean	SD		N= 182	Mean	SD		F (Partial η^2)	F (Partial η^2)	F (Partial η^2)	F (Partial η^2)				
Predictors																								
Mom Attachment	45.41	9.81	45.48	10.31	47.63	8.08	47.40	8.54	0.06 (.00)	8.80* (.01)	0.01 (.00)	43.15	11.29	11.11* (.01)	0.85 (.00)									
Dad Attachment	44.40	10.06	42.78	11.79	46.16	9.67	43.15	11.29	11.11* (.01)	0.98 (.00)	0.85 (.00)	6.73	1.05	0.17 (.00)	1.16 (.00)									
Sleep Time	7.12	2.29	7.21	1.87	6.92	1.11	6.73	1.05	0.17 (.00)	7.14 (.01)	1.16 (.00)	2.57	1.14	64.75* (.05)	5.10 (.00)									
Homework Time	0.84	0.52	1.11	0.55	2.12	1.21	2.57	1.14	64.75* (.05)	878.01* (.40)	5.10 (.00)	3.22	0.81	10.83* (.01)	0.20 (.00)									
Commitment: Strain	2.94	0.92	3.14	0.83	3.07	0.81	3.22	0.81	10.83* (.01)	4.37 (.00)	0.20 (.00)	3.64	0.74	8.81* (.01)	0.08 (.00)									
Commitment: Enjoy	3.34	0.93	3.51	0.82	3.48	0.79	3.64	0.74	8.81* (.01)	7.81 (.01)	0.08 (.00)	16.15	3.85	28.64* (.02)	0.51 (.00)									
Pressure: Total	14.65	4.30	16.40	4.00	15.00	4.10	16.15	3.85	28.64* (.02)	0.05 (.00)	0.51 (.00)	3.48	1.28	0.43 (.00)	0.09 (.00)									
Pressure: Parents	3.57	1.26	3.71	1.15	3.46	1.36	3.48	1.28	0.43 (.00)	8.15* (.01)	0.09 (.00)	3.29	1.20	23.73* (.02)	0.03 (.00)									
Pressure: Teachers	2.74	1.22	3.17	1.23	2.93	1.24	3.29	1.20	23.73* (.02)	4.01 (.00)	0.03 (.00)	1.83	1.20	1.34 (.00)	0.01 (.00)									
Pressure: Coaches	1.89	1.10	1.96	1.20	1.76	1.13	1.83	1.20	1.34 (.00)	3.68 (.00)	0.01 (.00)	4.52	0.86	56.00* (.04)	1.18 (.00)									
Pressure: Self	3.82	1.26	4.42	0.94	4.09	1.07	4.52	0.86	56.00* (.04)	5.70 (.00)	1.18 (.00)	3.04	3.67	17.15* (.01)	0.80 (.00)									
Pressure: Friends	2.65	1.37	3.13	1.41	2.78	1.45	3.04	1.42	17.15* (.01)	0.02 (.00)	0.80 (.00)	7.92	4.03	54.93* (.03)	1.09 (.00)									
Outcomes																								
Depression	6.27	3.99	8.09	4.31	6.82	4.23	8.74	4.56	56.41* (.04)	5.75 (.00)	0.04 (.00)	4.91	10.80	139.86* (.08)	0.01 (.00)									
Anxiety	6.76	4.04	9.85	4.55	7.77	4.19	10.80	4.91	139.86* (.08)	14.30* (.01)	0.01 (.00)	3.28	3.14	3.11 (.00)	0.03 (.00)									
Rule Breaking	3.32	3.09	3.04	3.04	3.63	2.73	3.28	3.14	3.11 (.00)	2.38 (.00)	0.03 (.00)	1.88	2.68	0.01 (.00)	1.75 (.00)									
Substance Use	1.24	2.47	1.46	2.42	2.07	3.47	1.88	2.68	0.01 (.00)	16.16* (.01)	1.75 (.00)	8.45	3.67	54.93* (.03)	1.09 (.00)									
Disengagement with School	5.99	3.67	7.92	4.03	7.00	3.85	8.45	3.67	54.93* (.03)	11.37 (.01)	1.09 (.00)													

Note. According to Bonferroni corrections: * $p < .005$ for Predictor Variables (11); * $p < .01$ for Outcome Variables (5)

.01), independent school students exhibited greater levels of Mom Attachment ($F= 8.80$, $p<.005$, $\eta^2 = .01$), Homework Time ($F= 878.01$, $p<.005$, $\eta^2 = .40$), Anxiety ($F= 14.30$, $p<.01$, $\eta^2 = .01$), and Substance Use ($F= 16.16$, $p<.01$, $\eta^2 = .01$). Of these variables, Homework Time had a notably large effect size ($\eta^2 = .40$). This suggests that students differed prominently in the amount of time they spent on homework, depending upon the school they attended (School 1 versus School 2). All other variables had small effect sizes ($\eta^2 = .01$), which suggests minimal differences. The results from the third ANOVA (sex*school) determined that there were no significant interaction effects.

Correlations

Correlation coefficients are presented in Table 3 (School 1) and Table 4 (School 2). For both schools and genders, the Parent Attachment variables (Mom Attachment and Dad Attachment) were significantly and positively correlated, ranging from $r= .42$ ($p<.01$) to $r=.66$ ($p<.01$). Similarly, Pressure variables were consistently correlated with one another across school and gender (ranging from $r=.11$ ($p<.05$) to $r=.77$ ($p<.01$)). Outcome variables were also significantly correlated. Within School 1, all outcome variables were significantly positively correlated for both genders. Similarly, for School 2, all outcomes were significantly positively correlated for girls. For boys, all outcome variables were significantly correlated, with the exception of Substance Use and Depression for boys in School 2.

Of note, each source of pressure was significantly correlated with multiple well-being outcomes. Of the adults, both parents and teachers were significantly correlated with multiple outcomes, whereas coaches were more sporadically correlated and with

Table 3
Correlation Table for Boys and Girls (School 1)

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Mom Attachment	-	.42**	-.12**	-.17**	-.14**	-.06	.08	-.09*	-.04	.21**	.04	.09*	-.46**	-.23**	-.41**	-.15**	-.31**
2. Dad Attachment	.66**	-	-.12**	-.16**	-.18**	-.05	.01	-.03	-.06	.20**	.08	.03	-.45**	-.27**	-.22**	-.06	-.32**
3. Pressure: Collapsed	-.11**	-.10*	-	.67**	.77**	.67**	.55**	.70**	.27**	.05	.16**	-.04	.22**	.36**	.12**	.12**	.31**
4. Pressure: Parents	-.28**	-.22**	.71**	-	.45**	.27**	.31**	.27**	.18**	-.03	.08	.00	.21**	.22**	.09*	.04	.23**
5. Pressure: Teachers	-.11*	-.12**	.73**	.46**	-	.50**	.29**	.33**	.17**	.03	.09*	-.03	.24**	.32**	.17**	.14**	.31**
6. Pressure: Coaches	-.03	-.03	.61**	.22**	.44**	-	.11*	.33**	.20**	.05	.10*	-.05	.07	.19**	.06	.10*	.15**
7. Pressure: Self	.04	.06	.69**	.45**	.32**	.22**	-	.32**	.19**	.14**	.17**	-.03	.11*	.24**	-.07	-.05	.12**
8. Pressure: Friends	-.02	-.02	.70**	.32**	.34**	.32**	.39**	-	.20**	.00	.12**	-.02	.11*	.25**	.11**	.13**	.23**
9. Commitment: Strain	.01	.02	.30**	.19**	.28**	.18**	.18**	.19**	-	.14**	.23**	.03	.18**	.26**	.06	.09*	.25**
10. Commitment: Enjoy	.28**	.32**	.12*	.03	.07	.08	.14**	.08	.28**	-	.05	-.02	-.19**	-.08	-.22**	-.11*	-.23**
11. Homework Time	-.02	-.03	.20**	.10*	.13**	.13**	.17**	.16**	.15**	.09*	-	-.01	.09*	.22**	-.02	-0.04	.18**
12. Sleep Time	.03	.09	.09*	.05	.04	.04	.09*	.08	.02	.10*	.02	-	-.12**	-.07	-.03	-0.01	-.07
13. Depression	-.47**	-.43**	.22**	.28**	.15**	.09*	.09*	.13**	.13**	-.17**	.05	-.03	-	.68**	.36**	.09*	.66**
14. Anxiety	-.31**	-.33**	.27**	.21**	.24**	.11**	.16**	.20**	.12**	-.13**	.13**	-.01	.67**	-	.24**	.11**	.62**
15. Rule Breaking	-.25**	-.23**	.09*	.08	.08	.10*	-.06	.10*	.09*	-.10*	-.01	-.03	.34**	.33**	-	.47**	.39**
16. Substance Use	-.05	-.07	.11**	.03	.12**	.13**	-.01	.12**	.15**	-.02	.02	.03	.12**	.11**	.43**	-	.15**
17. Disengagement	-.40**	-.39**	.28**	.24**	.24**	.16**	.16**	.15**	.24**	-.22**	.10*	-.03	.63**	.60**	.38**	.13**	-

Note. Boys' correlations are reported below the diagonal and girls' correlations are reported above the diagonal.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 4
Correlation Table for Boys and Girls (School 2)

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Mom Attachment	-	.55**	-.12	-.22**	-.07	.01	-.09	-.01	-.07	.22**	.04	.22**	-.50**	-.21**	-.41**	-.28**	-.37**
2. Dad Attachment	.66**	-	.04	-.12	.07	.01	.16*	.05	-.05	.22**	.08	.20**	-.32**	-.10	-.43**	-.33**	-.34**
3. Pressure: Collapsed	-.10	-.15*	-	.69**	.77**	.59**	.57**	.61**	.28**	-.04	.25**	-.18*	.28**	.37**	.04	.09	.25**
4. Pressure: Parents	-.29**	-.25**	.68**	-	.58**	.24**	.29**	.12	.14	-.09	.14	-.21**	.26**	.23**	.16*	.04	.17*
5. Pressure: Teachers	-.07	-.17*	.72**	.49**	-	.36**	.30**	.25**	.30**	.00	.14	-.08	.21**	.28**	.04	.10	.17*
6. Pressure: Coaches	.15*	.11	.59**	.18*	.34**	-	.14	.17*	.13	.15*	.17*	-.09	.04	.13	-.01	-.07	.05
7. Pressure: Self	-.02	.00	.62**	.30**	.26**	.26**	-	.33**	.08	.03	.22**	-.05	.20**	.29**	-.15*	.03	.24**
8. Pressure: Friends	-.05	-.11	.65**	.19**	.26**	.24**	.31**	-	.23**	-.18*	.15	-.14	.20**	.28**	.03	.17*	.21**
9. Commitment: Strain	-.13	-.16*	.25**	.11	.15*	.10	.20**	.24**	-	-.12	.20**	-.01	.10	.28**	.11	.13	.20**
10. Commitment: Enjoy	.18*	.30**	.07	-.01	-.04	.17*	.08	.03	.07	-	.06	.20**	-.26**	-.18*	-.24**	-.15*	-.39**
11. Homework Time	-.03	-.07	.17*	.01	.16*	.01	.22**	.17*	.29**	.17*	-	-.15*	-.06	.01	-.08	-.09	.04
12. Sleep Time	.25**	.21**	-.02	.05	.08	.01	-.09	-.10	-.04	-.03	-.21**	-	-.23**	-.08	-.13	-.03	-.33**
13. Depression	-.36**	-.32**	.11	.08	.14	-.05	.19*	.04	.11	-.16*	.17*	-.28**	-	.60**	.28**	.16*	.60**
14. Anxiety	-.22**	-.23**	.24**	.13	.25**	.03	.28**	.12	.25**	-.16*	.07	-.17*	.67**	-	.15*	.23**	.54**
15. Rule Breaking	-.32**	-.27**	.17*	.23**	.11	.11	-.13	.16*	.08	-.10	-.15*	-.07	.16*	.14	-	.47**	.39**
16. Substance Use	.03	.05	-.04	-.08	-.10	.12	-.12	.04	-.01	-.02	-.13	-.09	-.03	.01	.40**	-	.20**
17. Disengagement	-.29**	-.32**	.24**	.20**	.22**	.11	.15*	.11	.12	-.25**	-.04	-.17*	.65**	.61**	.30**	.04	-

Note. Boys' correlations are reported below the diagonal and girls' correlations are reported above the diagonal.
* $p < .05$, ** $p < .01$, *** $p < .001$

fewer outcomes. In contrast, pressure from the self and pressure from friends appeared to be consistently linked with outcomes, most notably Anxiety and Disengagement with School.

Hierarchical Regression Analyses: Pressure Total

Depression. Table 5 presents the results of hierarchical regression analyses predicting Depression. In School 1, Model 1 was significant for boys ($R^2 = .24, p < .001$), demonstrating that both Mom and Dad Attachment significantly predicted symptoms of Depression. Further, the addition of Overextension Variables (Commitment: Strain, Commitment: Enjoy, Homework Time, and Sleep Time) explained an additional 3% of the variance ($R^2 = .27, p < .001$). The addition of P: Total in Model 3 accounted for an additional 1% of the variance for boys ($R^2 = .27, p < .001$). Within the complete model predicting Depression, Mom Attachment and Dad Attachment ($\beta = -.31, p < .01$ and $\beta = -.19, p < .001$, respectively), Commitment: Strain ($\beta = .13, p < .01$), and P: Total ($\beta = .10, p < .05$) were significant. For girls in School 1, both Model 1 and Model 2 were significant ($R^2 = .29, p < .001$; $R^2 = .35, p < .001$). Similar to the boys' outcome, both Mom and Dad Attachment ($\beta = -.32, p < .001$ and $\beta = -.28, p < .001$) as well as Commitment: Strain ($\beta = .12, p < .01$) significantly predicted symptoms of Depression in the third model. The addition of P: Total in Model 3 explained 1% of the variance, and Model 3 was statistically significant ($R^2 = .36, p < .001$).

In School 2, Model 1 was significant for boys ($R^2 = .14, p < .001$). Model 2 explained an additional 7% of the variance by adding Commitment: Strain, Commitment: Enjoy, Homework Time, and Sleep Time as predictors ($R^2 = .21, p < .001$). The addition of

Table 5
Regression Analyses for Depression and Anxiety by School and Gender: Values are Standardized Beta Coefficients

	School 1												School 2											
	Depression						Anxiety						Depression						Anxiety					
	Boys			Girls			Boys			Girls			Boys			Girls			Boys			Girls		
	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S		
Pressure:	-0.33 ^c	-0.33 ^c	-0.35 ^c	-0.35 ^c	-0.10	-0.10	-0.12 ^a	-0.12 ^a	-0.25	-0.25	-0.48 ^c	-0.48 ^c	-0.11	-0.11	-0.21 ^a	-0.21 ^a	-0.01	-0.01	-0.17	-0.17	-0.01	-0.01		
Mom Att.	-0.21 ^c	-0.21 ^c	-0.30 ^c	-0.30 ^c	-0.25 ^c	-0.25 ^c	-0.20 ^c	-0.20 ^c	-0.15	-0.15	-0.05	-0.05	-0.17	-0.17	-0.01	-0.01	-0.01	-0.01	-0.17	-0.17	-0.01	-0.01		
Dad Att.	0.24 ^c	0.24 ^c	0.29 ^c	0.29 ^c	0.10 ^c	0.10 ^c	0.07 ^c	0.07 ^c	0.14 ^c	0.14 ^c	0.26 ^c	0.26 ^c	0.06 ^b	0.06 ^b	0.04 ^a	0.04 ^a	0.04 ^a	0.04 ^a	0.06 ^b	0.06 ^b	0.04 ^a	0.04 ^a		
Total R ²	0.32 ^c	0.32 ^c	0.33 ^c	0.33 ^c	0.08	0.08	0.11 ^a	0.11 ^a	0.23 ^a	0.23 ^a	0.44 ^c	0.44 ^c	0.08	0.08	0.17	0.17	0.04 ^a	0.04 ^a	0.06 ^b	0.06 ^b	0.04 ^a	0.04 ^a		
Mom Att.	-0.20 ^c	-0.20 ^c	-0.29 ^c	-0.29 ^c	-0.24 ^c	-0.24 ^c	-0.20 ^c	-0.20 ^c	-0.07	-0.07	-0.01	-0.01	-0.07	-0.07	0.04	0.04	-0.07	-0.07	0.04	0.04	-0.07	-0.07		
Dad Att.	0.16 ^c	0.16 ^c	0.15 ^c	0.15 ^c	0.14 ^b	0.14 ^b	0.22 ^c	0.22 ^c	0.04	0.04	0.07	0.07	0.24 ^b	0.24 ^b	0.26 ^b	0.26 ^b	0.26 ^b	0.26 ^b	0.24 ^b	0.24 ^b	0.26 ^b	0.26 ^b		
Strain	-0.06	-0.06	-0.08 ^a	-0.08 ^a	-0.08	-0.08	-0.06	-0.06	-0.15 ^a	-0.15 ^a	-0.11	-0.11	-0.16 ^a	-0.16 ^a	-0.11	-0.11	-0.11	-0.11	-0.16 ^a	-0.16 ^a	-0.11	-0.11		
Enjoy	0.05	0.05	0.13 ^b	0.13 ^b	0.12 ^b	0.12 ^b	0.22 ^c	0.22 ^c	0.14	0.14	-0.08	-0.08	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.05	-0.05		
HW	-0.01	-0.01	-0.09 ^a	-0.09 ^a	-0.01	-0.01	-0.06	-0.06	-0.18 ^a	-0.18 ^a	-0.14 ^a	-0.14 ^a	-0.14	-0.14	-0.05	-0.05	-0.05	-0.05	-0.14	-0.14	-0.05	-0.05		
Sleep	0.03 ^b	0.03 ^b	0.06 ^c	0.06 ^c	0.04 ^b	0.04 ^b	0.12 ^c	0.12 ^c	0.07 ^b	0.07 ^b	0.04 ^a	0.04 ^a	0.08 ^b	0.08 ^b	0.09 ^b	0.09 ^b	0.09 ^b	0.09 ^b	0.08 ^b	0.08 ^b	0.09 ^b	0.09 ^b		
R ² Change	0.27 ^c	0.27 ^c	0.35 ^c	0.35 ^c	0.14 ^c	0.14 ^c	0.19 ^c	0.19 ^c	0.21 ^c	0.21 ^c	0.30 ^c	0.30 ^c	0.14 ^c	0.14 ^c	0.13 ^b	0.13 ^b	0.13 ^b	0.13 ^b	0.14 ^c	0.14 ^c	0.13 ^b	0.13 ^b		
Total R ²	0.31 ^b	0.31 ^b	0.32 ^c	0.32 ^c	0.07	0.07	0.09 ^a	0.09 ^a	0.23 ^a	0.23 ^a	0.40 ^c	0.40 ^c	0.07	0.07	0.12	0.12	0.09 ^b	0.09 ^b	0.13 ^b	0.13 ^b	0.09 ^b	0.09 ^b		
Mom Att.	-0.19 ^b	-0.19 ^b	-0.28 ^c	-0.28 ^c	-0.22 ^c	-0.22 ^c	-0.17 ^c	-0.17 ^c	-0.06	-0.06	-0.05	-0.05	-0.05	-0.05	-0.01	-0.01	-0.05	-0.05	-0.06	-0.06	-0.01	-0.01		
Dad Att.	0.13 ^b	0.13 ^b	0.12 ^b	0.12 ^b	0.08	0.08	0.16 ^c	0.16 ^c	0.02	0.02	0.01	0.01	0.20 ^b	0.20 ^b	0.19 ^a	0.19 ^a	0.19 ^a	0.19 ^a	0.20 ^b	0.20 ^b	0.19 ^a	0.19 ^a		
Strain	-0.07	-0.07	-0.09 ^a	-0.09 ^a	-0.10 ^a	-0.10 ^a	-0.09	-0.09	-0.15 ^a	-0.15 ^a	-0.14	-0.14	-0.17 ^a	-0.17 ^a	-0.12	-0.12	-0.10	-0.10	-0.15 ^a	-0.15 ^a	-0.12	-0.12		
Enjoy	0.04	0.04	0.12 ^b	0.12 ^b	0.11 ^b	0.11 ^b	0.19 ^c	0.19 ^c	0.14	0.14	0.10	0.10	-0.05	-0.05	-0.11	-0.11	-0.10	-0.10	-0.11	-0.11	-0.10	-0.10		
HW	-0.01	-0.01	-0.08 ^a	-0.08 ^a	-0.01	-0.01	-0.05	-0.05	-0.18 ^a	-0.18 ^a	-0.18 ^a	-0.18 ^a	-0.15 ^a	-0.15 ^a	-0.09	-0.09	-0.09	-0.09	-0.15 ^a	-0.15 ^a	-0.09	-0.09		
Sleep	-0.01	-0.01	-0.08 ^a	-0.08 ^a	-0.02	-0.02	-0.02	-0.02	-0.11	-0.11	-0.11	-0.11	-0.15 ^a	-0.15 ^a	-0.09	-0.09	-0.09	-0.09	-0.15 ^a	-0.15 ^a	-0.09	-0.09		
P: Parents	-	-	0.12 ^a	0.12 ^a	-	-	0.02	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
P: Teachers	-	-	-0.04	-0.04	-	-	0.13 ^b	0.13 ^b	-	-	0.13	0.13	-	-	0.09	0.09	-	-	0.22 ^b	0.22 ^b	-	-		
P: Coaches	-	-	0.01	0.01	-	-	-0.07	-0.07	-	-	0.00	0.00	-	-	-0.02	-0.02	-	-	-0.03	-0.03	-	-		
P: Self	-	-	0.03	0.03	-	-	0.06	0.06	-	-	0.13 ^b	0.13 ^b	-	-	0.12	0.12	-	-	0.23 ^b	0.23 ^b	-	-		
P: Friends	-	-	0.03	0.03	-	-	-0.01	-0.01	-	-	0.09 ^a	0.09 ^a	-	-	-0.07	-0.07	-	-	-0.04	-0.04	-	-		
P: Total	0.10 ^a	0.10 ^a	0.10 ^a	0.10 ^a	0.21 ^c	0.21 ^c	0.24 ^c	0.24 ^c	0.07	0.07	0.23 ^b	0.23 ^b	0.20 ^b	0.20 ^b	0.32 ^c	0.32 ^c	-	-	0.32 ^c	0.32 ^c	-	-		
R ² Change	0.01 ^a	0.01 ^a	0.02 ^b	0.02 ^b	0.04 ^c	0.04 ^c	0.05 ^c	0.05 ^c	0.06 ^c	0.06 ^c	0.04 ^b	0.04 ^b	0.06 ^b	0.06 ^b	0.09 ^b	0.09 ^b	0.09 ^b	0.09 ^b	0.06 ^a	0.06 ^a	0.09 ^b	0.09 ^b		
Total R ²	0.27 ^c	0.27 ^c	0.36 ^c	0.36 ^c	0.18 ^c	0.18 ^c	0.24 ^c	0.24 ^c	0.26 ^c	0.26 ^c	0.35 ^c	0.35 ^c	0.18 ^c	0.18 ^c	0.23 ^c	0.23 ^c	0.23 ^c	0.23 ^c	0.36 ^c	0.36 ^c	0.21 ^c	0.21 ^c		

Note. Values in italics appear to be due to suppressor effects, as the statistically significant beta weights are opposite in valence to those in parallel zero-order correlations; hence, they are not interpreted. P: T = Pressure Total, P: S = Pressure by Source.
^a*p* < .05, ^b*p* < .01, ^c*p* < .001

P: Total in Model 3 did not explain significant additional variance. For girls in the same school, both Model 1 and Model 2 were significant ($R^2=.26, p<.001$; $R^2=.30, p<.001$), as well as Model 3 ($R^2=.35, p<.01$). The addition of P: Total in Model 3 accounted for 4% of the variance.

Anxiety. See Table 5 for hierarchical regression analyses predicting to symptoms of Anxiety. For male students in School 1, all three models were significant ($R^2=.10, p<.001$; $R^2=.14, p<.001$; $R^2=0.18, p<.001$; Model 1, Model 2, and Model 3, respectively). Within Model 3, the addition of P: Total accounted for an additional 4% of the variance. Dad Attachment was significant within this third block ($\beta=-.22, p<.001$), as were the overextension variables Commitment: Enjoyment ($\beta=-.10, p<.05$) and Homework Time ($\beta=.09, p<.05$). P: Total was also significant ($\beta=.21, p<.001$). Female students also had significant results for all three models: ($R^2=.07, p<.001$; $R^2=.19, p<.001$; $R^2=.24, p<.001$). For girls, the following variables were significant in Model 3: Mom Attachment ($\beta=-.09, p<.05$), Dad Attachment ($\beta=-.17, p<.001$), Commitment Strain ($\beta=.16, p<.001$), and Homework Time ($\beta=.19, p<.001$). P: Total was significant ($\beta=.24, p<.001$) and accounted for 5% of the variance.

At School 2, boys had significant results for Model 1 ($R^2=.06, p<.01$) and Model 2 ($R^2=.14, p<.001$). Further, the addition of P: Total in Model 3 accounted for 4% of the total variance ($R^2=.18, p<.001$). Commitment Strain ($\beta=.20, p<.05$), Commitment Enjoyment ($\beta=-.17, p<.05$), Sleep Time ($\beta=-.15, p<.05$), and P: Total ($\beta=.20, p<.01$) each significantly predicted Anxiety in Model 3. Within this school, results for female students were similar to results for male students. All three models were significant ($R^2=.04,$

$p < .05$; $R^2 = .13$, $p < .01$; $R^2 = .21$, $p < .001$), with the addition of P: Total in the third model accounting for 9% of the variance. For girls, Commitment Strain ($\beta = .19$, $p < .05$), and P: Total ($\beta = .32$, $p < .001$) were significant in the third model.

Rule Breaking. Table 6 presents the results of hierarchical regression analyses predicting to Rule Breaking behaviors. For boys at School 1, Model 1, Model 2, and Model 3 were significant ($R^2 = .06$, $p < .001$; $R^2 = .07$, $p < .001$; $R^2 = .08$, $p < .001$). For girls at the same school, all three models were significant as well ($R^2 = .20$, $p < .001$; $R^2 = .21$, $p < .001$; $R^2 = .21$, $p < .001$). Moreover, for both boys and girls at this school, the addition of P: Total did not account for any additional variance in predicting Rule Breaking.

For School 2 boys, Model 1 and Model 2 were significant ($R^2 = .10$, $p < .001$; $R^2 = .14$, $p < .001$), as well as Model 3 ($R^2 = .16$, $p < .05$). Within this third model, the addition of P: Total accounted for 2% of the total variance. Within the third block, Mom Attachment ($\beta = -.22$, $p < .05$), Homework Time ($\beta = -.21$, $p < .01$), and P: Total ($\beta = .15$, $p < .05$) each remained significant. For girls at School 2, all three models were significant ($R^2 = .23$, $p < .001$; $R^2 = .26$, $p < .001$; $R^2 = .26$, $p < .001$); however, the addition of Pressure: Total in Model 3 did not account for any additional variance.

Substance Use. See Table 6 for model results predicting to Substance Use. At School 1, only Model 2 and Model 3 were significant for boys ($R^2 = .03$, $p < .05$; $R^2 = .03$, $p < .05$). All three models were significant for girls ($R^2 = .03$, $p < .01$; $R^2 = .05$, $p < .01$; $R^2 = .05$, $p < .01$), but pressure did not account for significant additional variance in the third model. At School 2, none of the models were significant for boys, and only Model 1 was significant for girls ($R^2 = .15$, $p < .001$).

Table 6
Regression Analyses for Rule Breaking and Substance Use by School and Gender: Values are Standardized Beta Coefficients

	School 1												School 2											
	Rule Breaking						Substance Use						Rule Breaking						Substance Use					
	Boys			Girls			Boys			Girls			Boys			Girls			Boys			Girls		
	P: T	P: S	P: T	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S			
Pressure:	-0.17 ^b	-0.09	-0.17 ^b	-0.38 ^c	-0.38 ^c	-0.03	-0.03	-0.13 ^a	-0.13 ^a	-0.25 ^b	-0.25 ^b	-0.26 ^b	-0.26 ^b	-0.01	-0.01	-0.15	-0.15	-0.24 ^b	-0.24 ^b	-0.12 ^c	-0.12 ^c			
Mom Att.	0.06 ^c	0.06 ^c	0.20 ^c	0.20 ^c	0.00	0.00	0.03 ^b	0.03 ^b	0.10 ^c	0.10 ^c	0.23 ^c	0.23 ^c	0.00	0.00	0.00	0.00	0.12 ^c	0.12 ^c	-0.14	-0.14				
Dad Att.	-0.16 ^b	-0.08	-0.16 ^b	-0.36 ^c	-0.36 ^c	-0.02	-0.02	-0.11 ^a	-0.11 ^a	-0.22 ^a	-0.22 ^a	-0.23 ^b	-0.23 ^b	0.04	0.04	-0.14	-0.14	-0.23 ^b	-0.23 ^b	0.07	0.07			
Strain	0.12 ^b	0.12 ^b	0.05	0.05	0.17 ^b	0.17 ^b	0.10 ^a	0.10 ^a	0.11	0.11	0.07	0.07	0.06	0.06	0.12	0.12	0.06	0.06	0.06	0.06				
Enjoy	-0.06	-0.06	-0.12 ^b	-0.12 ^b	-0.05	-0.05	-0.09	-0.09	0.00	0.00	-0.11	-0.11	-0.03	-0.03	-0.06	-0.06	-0.08	-0.08	-0.08	-0.08				
HW	-0.04	-0.04	0.03	0.03	0.01	0.01	0.00	0.00	-0.20 ^b	-0.20 ^b	-0.06	-0.06	-0.17 ^a	-0.17 ^a	-0.08	-0.08	0.03	0.03	0.03	0.03				
Sleep	-0.01	-0.01	0.01	0.01	0.03	0.03	0.03 ^a	0.03 ^a	0.04	0.04	0.02	0.02	-0.16 ^a	-0.16 ^a	0.02	0.02	0.02	0.02	0.02	0.02				
R ² Change	0.02	0.02	0.02 ^a	0.02 ^a	0.03 ^a	0.03 ^a	0.03 ^a	0.03 ^a	0.14 ^c	0.14 ^c	0.26 ^c	0.26 ^c	0.04	0.04	0.04	0.04	0.15 ^c	0.15 ^c	0.02	0.02				
Total R ²	0.07 ^c	0.07 ^c	0.21 ^c	0.21 ^c	0.03 ^a	0.03 ^a	0.03 ^b	0.03 ^b	0.14 ^c	0.14 ^c	0.26 ^c	0.26 ^c	0.04	0.04	0.04	0.04	0.15 ^c	0.15 ^c	0.02	0.02				
Mom Att.	-0.16 ^b	-0.07	-0.16 ^b	-0.35 ^c	-0.34 ^c	-0.01	-0.03	-0.10 ^a	-0.09	-0.22 ^a	-0.22 ^a	-0.23 ^b	-0.23 ^b	0.04	0.00	-0.13	-0.13	-0.28 ^b	-0.28 ^b	0.07	0.07			
Dad Att.	-0.08	-0.08	-0.10 ^a	-0.09 ^a	-0.09 ^a	-0.03	-0.03	-0.05	-0.05	-0.09	-0.09	-0.27 ^b	-0.27 ^b	0.07	0.07	-0.24 ^b	-0.24 ^b	0.10	0.10	0.07	0.07			
Strain	0.11 ^a	0.11 ^a	0.03	0.04	0.15 ^b	0.14 ^b	0.09	0.09	0.08	0.08	0.07	0.06	0.06	0.05	0.10	0.07	0.07	0.05	0.05	0.07	0.07			
Enjoy	-0.06	-0.06	-0.13 ^b	-0.12 ^b	-0.06	-0.05	-0.09 ^a	-0.09 ^a	-0.08	-0.08	-0.11	-0.11	-0.03	-0.03	-0.06	-0.06	-0.03	-0.03	-0.03	-0.03				
HW	-0.05	-0.05	0.02	0.03	0.00	0.00	-0.01	-0.01	-0.21 ^b	-0.21 ^b	-0.04	-0.04	-0.17 ^a	-0.17 ^a	-0.10	-0.10	-0.09	-0.09	-0.09	-0.09				
Sleep	-0.02	-0.02	0.01	0.00	0.02	0.02	-0.01	-0.01	-0.04	-0.04	-0.02	-0.02	-0.16 ^a	-0.16 ^a	0.05	0.05	0.04	0.04	0.04	0.04				
P: Parents	-	0.01	-	-0.06	-	-0.09	-	-0.07	-	0.16	-	0.12	-	-0.01	-	-	-	-	-	-				
P: Teachers	-	-0.02	-	0.18 ^b	-	0.07	-	0.13 ^a	-	-0.02	-	-0.01	-	-0.11	-	-	-	-	-	-				
P: Coaches	-	0.08	-	-0.10 ^a	-	0.07	-	0.00	-	0.15	-	0.00	-	0.18 ^a	-	-	-	-	-	-				
P: Self	-	-0.11 ^a	-	-0.07	-	-0.04	-	-0.12 ^a	-	-0.25 ^b	-	-0.20 ^a	-	-0.14	-	-	-	-	-	-				
P: Friends	-	0.11 ^a	-	0.08	-	0.10	-	0.12 ^a	-	0.18 ^a	-	0.06	-	0.09	-	-	-	-	-	-				
P: Total	0.04	-	0.05	-	0.08	-	0.07	-	0.15 ^a	-	0.01	-	0.00	-	0.09	-	-	-	-	-				
R ² Change	0.00	0.02	0.00	0.03 ^b	0.01	0.03 ^a	0.01	0.03 ^b	0.02 ^a	0.10 ^b	0.00	0.03	0.00	0.05	0.01	0.05	0.01	0.05	0.01	0.05				
Total R ²	0.08 ^c	0.10 ^c	0.21 ^c	0.24 ^c	0.03 ^a	0.06 ^b	0.05 ^b	0.08 ^c	0.16 ^c	0.24 ^c	0.26 ^c	0.29 ^c	0.04	0.09	0.15 ^c	0.19 ^c	0.05	0.05	0.05	0.05				

Note: Values in italics appear to be due to suppressor effects, as the statistically significant beta weights are opposite in valence to those in parallel zero-order correlations; hence, they are not interpreted. P: T = Pressure Total, P: S = Pressure by Source.

* $p < .05$, $p < .01$, $p < .001$

Disengagement with School. Table 7 presents results for hierarchical regression analyses predicting to Disengagement with School. At School 1, all three models were significant for boys (Model 1 $R^2=.18$, $p<.001$; Model 2 $R^2=.28$, $p<.001$; Model 3 $R^2=.30$, $p<.001$). The addition of P: Total within the third model explained an additional 3% of the variance ($\beta=.17$, $p<.001$). All variables except for Sleep Time were significant within the third model. Likewise, all three models were significant for girls at School 1 as well (Model 1 $R^2=.14$, $p<.001$; Model 2 $R^2=.27$, $p<.001$; Model 3 $R^2=.30$, $p<.001$), with the addition of P: Total in the third model explaining 3% of the overall variance ($\beta=.19$, $p<.001$).

Finally, for male students at School 2, Model 1 and Model 2 were both significant ($R^2=.12$, $p<.001$; $R^2=.18$, $p<.001$). The third model was significant as well ($R^2=.22$, $p<.001$); the addition of P: Total explained 5% of the variance ($\beta=.22$, $p<.01$). Commitment Enjoyment ($\beta=-.22$, $p<.01$) was also significant within this model. For female students, all three models were significant (Model 1 $R^2=.16$, $p<.001$; Model 2 $R^2=.32$, $p<.001$; Model 3 $R^2=.35$, $p<.001$). Within the third model, Dad Attachment ($\beta=-.16$, $p<.05$), Commitment Enjoyment ($\beta=-.28$, $p<.001$), and Sleep Time ($\beta=-.17$, $p<.05$) were significant. P: Total was also significant in Model 3 ($\beta=.18$, $p<.01$) and explained 3% of the total variance.

Hierarchical Regression Analyses: Pressure by Source

Depression. Table 5 presents the results of hierarchical regression analyses predicting Depression, with Pressure broken down by source (Parents, Teachers, Coaches, Self, and Friends). For boys at School 1, the addition of the Pressure variables

Table 7
Regression Analyses for Disengagement with School by School and Gender: Values are Standardized Beta Coefficients

	School 1						School 2					
	Disengagement with School			Disengagement with School			Disengagement with School			Disengagement with School		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Pressure:	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S	P: T	P: S
Mom Att.	-0.21 ^c	-0.21 ^c	-0.21 ^c	-0.22 ^c	-0.22 ^c	-0.22 ^c	-0.15	-0.15	-0.15	-0.25 ^b	-0.25 ^b	-0.25 ^b
Dad Att.	-0.26 ^c	-0.26 ^c	-0.26 ^c	-0.23 ^c	-0.23 ^c	-0.23 ^c	-0.23 ^b	-0.23 ^b	-0.23 ^b	-0.20 ^a	-0.20 ^a	-0.20 ^a
Total R ²	0.18 ^c	0.18 ^c	0.18 ^c	0.14 ^c	0.14 ^c	0.14 ^c	0.12 ^c	0.12 ^c	0.12 ^c	0.16 ^c	0.16 ^c	0.16 ^c
Mom Att.	-0.18 ^c	-0.18 ^c	-0.18 ^c	-0.19 ^c	-0.19 ^c	-0.19 ^c	-0.12	-0.12	-0.12	-0.17 ^a	-0.17 ^a	-0.17 ^a
Dad Att.	-0.22 ^c	-0.22 ^c	-0.22 ^c	-0.21 ^c	-0.21 ^c	-0.21 ^c	-0.14	-0.14	-0.14	-0.14	-0.14	-0.14
Strain	0.28 ^c	0.28 ^c	0.28 ^c	0.22 ^c	0.22 ^c	0.22 ^c	0.12	0.12	0.12	0.16 ^c	0.16 ^c	0.16 ^c
Enjoy	-0.18 ^c	-0.18 ^c	-0.18 ^c	-0.18 ^c	-0.18 ^c	-0.18 ^c	-0.21 ^b	-0.21 ^b	-0.21 ^b	-0.28 ^c	-0.28 ^c	-0.28 ^c
HW	0.10 ^a	0.10 ^a	0.10 ^a	0.20 ^c	0.20 ^c	0.20 ^c	-0.07	-0.07	-0.07	0.01	0.01	0.01
Sleep	-0.03	-0.03	-0.03	-0.07	-0.07	-0.07	-0.13	-0.13	-0.13	-0.20 ^b	-0.20 ^b	-0.20 ^b
R ² Change	0.10 ^c	0.10 ^c	0.10 ^c	0.13 ^c	0.13 ^c	0.13 ^c	0.06 ^a	0.06 ^a	0.06 ^a	0.16 ^c	0.16 ^c	0.16 ^c
Total R ²	0.28 ^c	0.28 ^c	0.28 ^c	0.27 ^c	0.27 ^c	0.27 ^c	0.18 ^c	0.18 ^c	0.18 ^c	0.32 ^c	0.32 ^c	0.32 ^c
Mom Att.	-0.17 ^b	-0.18 ^b	-0.18 ^b	-0.18 ^c	-0.18 ^c	-0.18 ^c	-0.12	-0.12	-0.12	-0.14	-0.14	-0.11
Dad Att.	-0.21 ^c	-0.21 ^c	-0.21 ^c	-0.19 ^c	-0.19 ^c	-0.19 ^c	-0.11	-0.11	-0.11	-0.16 ^a	-0.16 ^a	-0.22 ^b
Strain	0.24 ^c	0.24 ^c	0.24 ^c	0.17 ^c	0.17 ^c	0.17 ^c	0.07	0.07	0.07	0.12	0.12	0.12
Enjoy	-0.19 ^c	-0.19 ^c	-0.19 ^c	-0.19 ^c	-0.19 ^c	-0.19 ^c	-0.22 ^b	-0.22 ^b	-0.22 ^b	-0.28 ^c	-0.28 ^c	-0.28 ^c
HW	0.08 ^a	0.08 ^a	0.08 ^a	0.17 ^c	0.17 ^c	0.17 ^c	-0.08	-0.08	-0.08	-0.02	-0.02	-0.04
Sleep	-0.04	-0.04	-0.04	-0.06	-0.06	-0.06	-0.13	-0.13	-0.13	-0.17 ^a	-0.17 ^a	-0.19 ^b
P: Parents	-	0.00	0.00	-	-	-	-	-	-	0.03	-	-0.07
P: Teachers	-	0.07	0.07	-	0.17 ^c	0.17 ^c	-	-	-	0.12	-	0.09
P: Coaches	-	0.04	0.04	-	-0.04	-0.04	-	-	-	0.13	-	0.00
P: Self	-	0.13 ^b	0.13 ^b	-	-	-	-	-	-	0.07	-	0.25 ^b
P: Friends	-	0.01	0.01	-	0.10 ^a	0.10 ^a	-	-	-	0.00	-	0.05
P: Total	0.17 ^c	-	-	0.19 ^c	0.19 ^c	0.19 ^c	0.22 ^b	0.22 ^b	0.22 ^b	0.18 ^b	-	-
R ² Change	0.03 ^c	0.03 ^b	0.03 ^b	0.03 ^c	0.04 ^c	0.04 ^c	0.05 ^b	0.05 ^b	0.05 ^b	0.06 ^a	0.06 ^a	0.07 ^b
Total R ²	0.30 ^c	0.31 ^c	0.31 ^c	0.30 ^c	0.32 ^c	0.32 ^c	0.22 ^c	0.22 ^c	0.22 ^c	0.35 ^c	0.35 ^c	0.39 ^c

Note. Values in italics appear to be due to suppressor effects, as the statistically significant beta weights are opposite in valence to those in parallel zero-order correlations; hence, they are not interpreted. P: T = Pressure Total, P: S = Pressure by Source.

^a $p < .05$, ^b $p < .01$, ^c $p < .001$

in Model 3 did not significantly predict Depression. For girls, however, the addition of Pressure variables in Model 3 accounted for 2% of the total variance ($R^2=.37, p<.001$). P: Teachers was significant in this third model ($\beta=.13, p<.01$).

For boys at School 2, the addition of the Pressure variables in Model 3 did not account for significant additional variance. For girls, the addition of the Pressure variables explained 6% of the total variance ($R^2=.36, p<.001$); however, none of the Pressure variables themselves were significantly predictive of Depression.

Anxiety. Table 5 presents the results of hierarchical regression analyses predicting to Anxiety. At School 1, Model 3 was significant for boys ($R^2=.18, p<.001$), and the addition of the Pressure variables accounted for 4% of the variance. Of these Pressure variables, P: Friends significantly predicted symptoms of Anxiety ($\beta=.10, p<.05$). For girls, Model 3 was also significant ($R^2=.26, p<.001$), and the addition of Pressure variables accounted for 6% of the variance. The following relationship variables were significant predictors for Anxiety: P: Teachers ($\beta=.15, p<.01$), P: Self ($\beta=.13, p<.01$), and P: Friends ($\beta=.09, p<.05$).

Within School 2, Model 3 was significant for boys ($R^2=.23, p<.001$), and the addition of the Pressure variables accounted for 9% of the variance. Both P: Teachers ($\beta=.22, p<.01$) and P: Self ($\beta=.23, p<.01$) were significant predictors of Anxiety. For girls, the addition of pressure variables in Model 3 accounted for 11% of the variance ($R^2=.23, p<.001$), and both P: Self ($\beta=.19, p<.05$) and P: Friends ($\beta=.16, p<.05$) were significant.

Rule Breaking. Table 6 presents results of hierarchical regression analyses predicting to Rule Breaking. For boys at School 1, Model 3 was not significant. However, for girls this model was significant, and the addition of the pressure variables accounted for 3% of the variance ($R^2=.24, p<.01$). Within the pressure variables, P: Teachers was significantly predictive of Rule Breaking ($\beta=.18, p<.01$).

At School 2, Model 3 was significant for boys ($R^2=.24, p<.01$), and the addition of the Pressure variables accounted for 10% of the variance. Within these Pressure variables, P: Self ($\beta=-.25, p<.01$) and P: Friends ($\beta=.18, p<.05$) were both significant predictors of Rule Breaking. For girls, Model 3 did not explain significant additional variance.

Substance Use. Table 6 presents results for hierarchical regression analyses predicting to Substance Use. For boys at School 1, the addition of the Pressure variables in Model 3 accounted for 3% of the variance, and the model was significant overall ($R^2=.06, p<.05$); however, only Commitment: Strain was significantly predictive of Substance Use in the third model ($\beta=.14, p<.01$). For girls, the addition of Pressure within Model 3 accounted for 3% of the variance ($R^2=.08, p<.01$). P: Teachers ($\beta=.13, p<.05$), P: Self ($\beta=-.12, p<.05$), and P: Friends ($\beta=.12, p<.05$) were all significant within this third model. At School 2, Model 3 was not significant for boys or girls, and the addition of the pressure variables did not account for any additional variance in these models.

Disengagement with School. Table 7 presents results of hierarchical regression analyses predicting to Disengagement with School, with pressure broken down by relationship. For boys at School 1, Model 3 was significant overall ($R^2=.31, p<.001$). The

addition of the pressure variables accounted for 3% of the variance, and P: Self was a significant predictor of Disengagement with School ($\beta=.13, p<.01$). For girls, Model 3 was significant as well ($R^2=.32, p<.001$), and the addition of pressure accounted for 4% of the variance. Both P: Teachers ($\beta=.17, p<.001$) and P: Friends ($\beta=.10, p<.05$) were significant within this third model.

For boys at School 2, the Pressure variables accounted for 6% of the variance in Model 3 ($R^2=.23, p<.001$); however, no specific relationships were significantly predictive of Disengagement with School. For girls, pressure accounted for 7% of the variance in Model 3 ($R^2=.39, p<.01$), and P: Self ($\beta=.25, p<.01$) was significant.

Discussion

With different dimensions of achievement pressures measured, results of this study reveal interesting nuances about this multifaceted construct in relation to the adjustment of youth in HAS settings. Considered as predictor variables were (1) pressure from different sources, (2) overextension across different activities (both strain and enjoyment for each), and (3) hours spent sleeping and working on homework. After including parent attachment as controls, regression analyses revealed, first, that the overall variance explained was generally much higher in predicting to depression, anxiety, and feelings of disengagement from school than in predicting to externalizing symptoms and substance use. Second, results for pressure measured by source suggest that considering multiple sources of pressure (parents, teachers, coaches, self, and friends) separately explained more variance in adjustment outcomes than the sum of pressure experienced by all sources combined (i.e., total pressure).

Third, with regard to predictors representing overextension (hours of sleep, homework time, commitment strain, and commitment overextension), findings showed that commitment strain was most consistently linked with depression, anxiety, and negative feelings about school; again, links with rule breaking and substance use were sporadic. Remarkably, commitment enjoyment significantly predicted negative feelings about school across each model examined; it was also linked with internalizing symptoms in several instances. Each of these results is discussed in turn.

Pressure in Relation to Internalizing Symptoms and Negative Feelings about School

In recent reviews of HAS students, excessive pressure to excel was identified as the principal cause of adjustment difficulties within this population. The present study sought to disentangle this relationship further by exploring sources that comprise subjectively-experienced academic pressure among HAS students. The results show that *total pressure*, when considered additively across sources, was significant in the majority of analyses predicting to both depression and anxiety. Specifically, total pressure was significant for seven out of eight relevant analyses (two schools by two genders by two internalizing symptoms). Further, total pressure was significantly linked with negative feelings about school in all four analyses (i.e., for both boys and girls at both schools).

When considered individually by *source*, findings showed few consistent links across analyses for any group of adults (parents, teachers, or coaches) or from peers; the only source to show links in multiple groups was pressure coming from the self. Specifically, self-pressure was significant in 50% of the 12 analyses predicting to girls' and boys' depression, anxiety, and negative feelings about school across both schools. It

makes sense for the self to be the most predictive of the various source variables, as self-pressure not only encompasses current self-imposed pressure, but also the internalized feelings of pressure from external sources. This is borne out by simple correlations in this study; pressure from the self was significantly linked with pressure from parents, teachers, and peers for both genders and both schools. This also aligns with a previous finding by Leonard and colleagues (2015), who identified that students report believing that much of the academic pressure they feel is largely self-imposed; however, this finding is in fact somewhat novel, as the extant research on self-imposed pressure is relatively limited.

Additionally, high intercorrelations indicate that, when considered together in regressions, the shared variance would have made it difficult for any one pressure source to consistently show unique links with diverse outcomes. Simple correlations showed that, in general, all sources of pressure (except coaches) were correlated among themselves, suggesting that kids who saw pressure as coming from one source also saw it coming from others. This is consistent with previous research suggesting that pressure comes from a number of external sources in addition to the self (e.g., parents, teachers; Deb et al., 2015; Song et al., 2015); it is not solely one person, but rather various relationships that simultaneously contribute to the link between felt pressure and adolescent well-being. The other conclusion suggested by these findings, of course, is that these links could be bidirectional. In other words, those adolescents who are depressed, anxious, or unhappy at school may generally perceive all sources around them as bringing pressure to achieve. This is a possibility worth exploring in future research.

From an intervention perspective, these present findings suggest the need for targeting conversations between adults (e.g., teachers) about limiting the pressure they place on adolescent students. At the same time, however, we must also help students understand the perils of placing too much pressure on themselves. It is imperative that we teach these high achieving students how to look out for themselves by limiting their experience of self-imposed pressure.

Interestingly, mean scores of pressure from friends were consistently lower than those for not just the self but also the two sets of adults (parents and teachers). These findings suggest that although envy and social comparisons may in fact be significant issues among HAS students (Lyman & Luthar, 2014), this is not experienced directly as pressure to excel academically. Thus, while there may be high levels of envy at these schools, and while this may lead to sadness about feeling less than one's peers, envy in itself might not be cause for feelings of academic pressure.

Overextension: Strain and Enjoyment in Relation to Internalizing Symptoms and Negative Feelings about School

Conceptually, pressure captures the expectations and demands placed upon individuals (in this case, HAS students). Another dimension, however, is *strain* associated with overextension across multiple academic and extracurricular activities. And yet another related dimension is *enjoyment* across multiple activities at school; the latter could in fact serve protective functions against pressure and strain.

All of these factors can vary greatly by activity. Take, for example, the challenge of walking 10,000 steps a day. While that can be a lofty goal for some and places

pressure on the individual aiming to complete it, it may simultaneously be an enjoyable activity and not cause much strain. Conversely, an activity such as playing tennis for the school team could be rated high in pressure and high in strain because of its competitive nature, but also rated high on enjoyment given the pleasure it brings to someone who loves the sport. There can also be activities such as working on the school's newspaper editorial team or annual play, which could bring high enjoyment and a sense of belonging without too much pressure.

Results of this study clearly show the value of including measures of commitment strain and enjoyment alongside pressure. In the eight analyses predicting to depression and anxiety by gender and school, commitment strain was a significant predictor in six instances. It was also linked with negative feelings about school in the public school but not the independent school. Among the most striking findings of this study were those related to enjoyment. Remarkably, commitment enjoyment was significant in predicting to feelings about school in all analyses, and the magnitude of links for commitment enjoyment was consistently greater than the links for total pressure. Moreover, beta coefficients were generally comparable to many of those associated with strain. In the independent school, they were in fact among the highest beta coefficients for both boys and girls – even higher than those linked with mom and dad attachment.

Collectively, these findings suggest that enjoyment of different activities might play a prominent role in protecting students from feelings of disengagement and isolation at school. Of course, the converse is possible again, with students who dislike school in general feeling low enjoyment from the activities they engage in. Either way, these

findings do suggest an opportunity for intervention. If students are helped to find activities they truly enjoy, this could help boost overall positive engagement at school, which in turn could benefit both mental health and academic performance.

Hours on Homework and Hours of Sleep in Relation to Internalizing Symptoms and Disengagement with School

The amount of time spent on homework was found to be significant in six out of eight analyses (in both genders at both schools predicting to both internalizing symptoms, depression and anxiety), but this variable showed few links with disengagement with school. The former set of findings again could reflect bidirectional links. Students who spend much time on homework can come to feel depressed and anxious, but these internalizing problems themselves are associated with problems concentrating, and hence longer time taken on homework.

Although hours of sleep are frequently discussed as being a significant problem among HAS youth, analyses in this study showed few unique links with internalizing outcomes. This construct was significantly associated in only three of the eight analyses predicting to depression and anxiety across school and gender. Thus, although lack of sleep is certainly a risk factor for depression and anxiety, these findings suggest that other aspects of pressure and overextension have stronger unique links with adjustment in HAS students.

Sources of Strain and Enjoyment: Comparative Levels

Descriptive analyses suggested that within the composite, summed strain variable, two sources of strain seem to be consistently elevated: AP courses and competitive

sports. Across genders and schools, scores on these were higher than those on other activities. These results suggest that AP courses and competitive sports may be the most crucial areas to address in future interventions, as they appear to be driving the link between commitment strain and well-being outcomes.

On the enjoyment front, clubs seemed to have the highest scores, followed by sports and volunteer work. In future analyses, it would be useful to examine the statistical significance of scores across domains on both strain and enjoyment. Specifically, repeated measures analyses of variance could illuminate the degree to which particular activities do in fact connote significantly higher levels of both strain and enjoyment, and among both girls and boys across school contexts.

Pressure Dimensions as Predictors of Externalizing Symptoms and Substance Use

Overall, in the models of externalizing symptoms and substance use, not much variance was explained by the addition of pressure variables. The only notable finding here is that there was a decent amount of variance explained for girls' externalizing symptoms in both schools; however, this seemed to be driven more by parent attachment than by any pressure variables, as these factors showed no consistent links across outcomes.

Conceptually, this makes sense. Pressure is more likely to be experienced first in the form of stress and distress, and perhaps this in turn would be linked with acting out and self-medication. The question of whether pressure leads to distress in the form of rule breaking and substance use would be valuable to pursue in future research. It would also

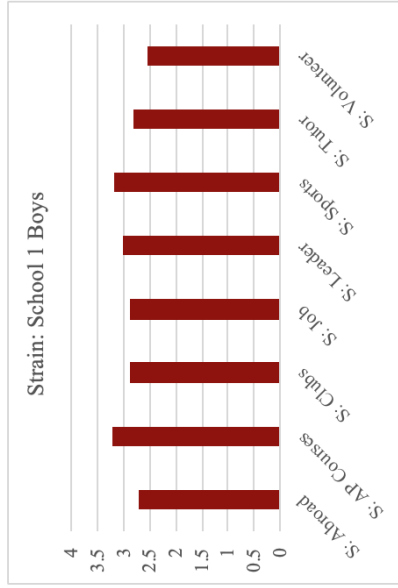


Fig 1. Illustrating the mean values for each source of strain for boys at School 1.

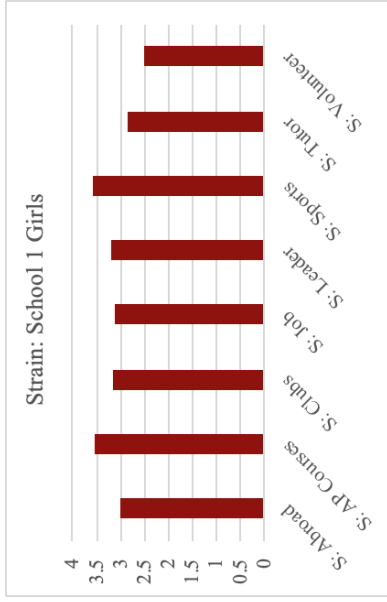


Fig 2. Illustrating the mean values for each source of strain for girls at School 1.

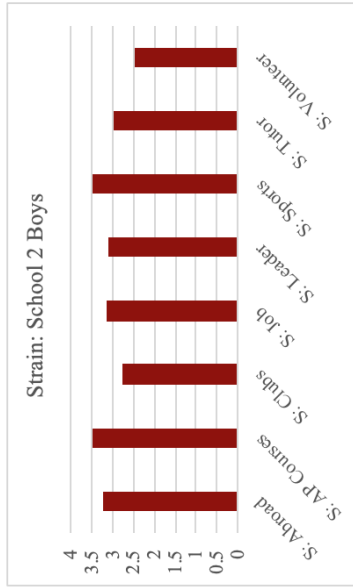


Fig 3. Illustrating the mean values for each source of strain for boys at School 2.

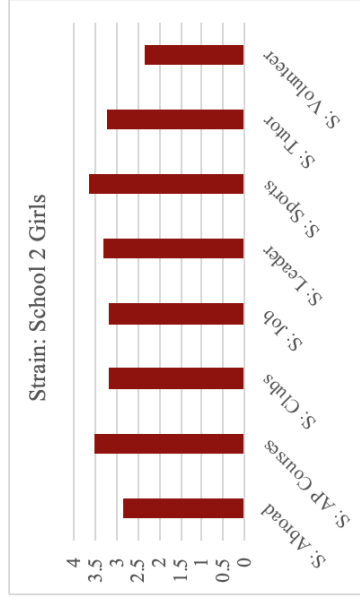


Fig 4. Illustrating the mean values for each source of strain for girls at School 2.

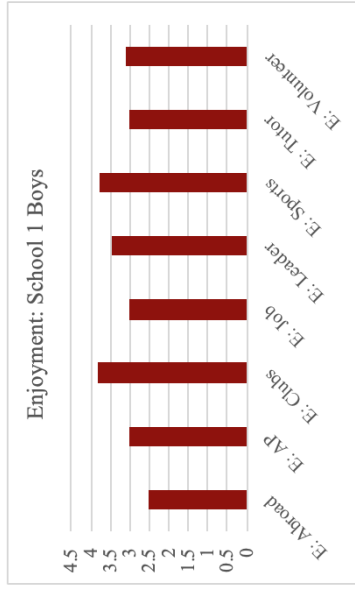


Fig 5. Illustrating the mean values for each source of enjoyment for boys at School 1.

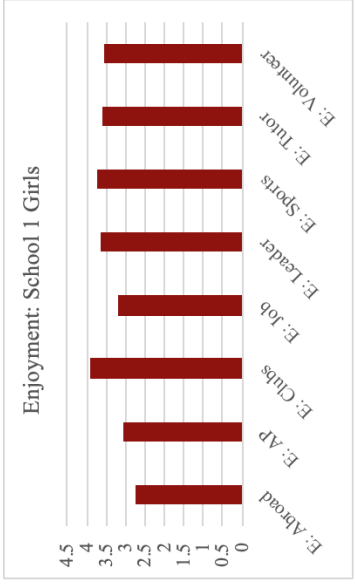


Fig 6. Illustrating the mean values for each source of enjoyment for girls at School 1.

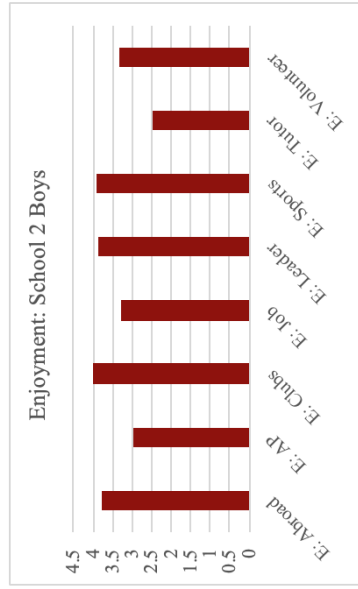


Fig 7. Illustrating the mean values for each source of enjoyment for boys at School 2.

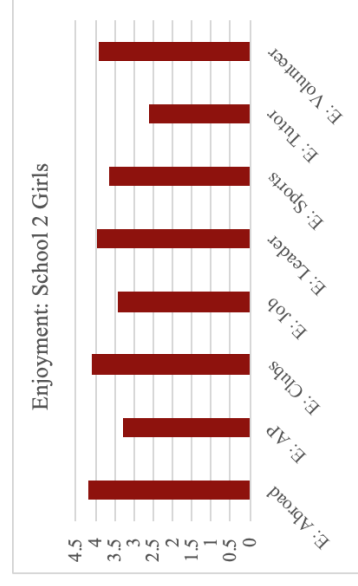


Fig 8. Illustrating the mean values for each source of enjoyment for girls at School 2.

be interesting to see if pressure is linked with specific rule-breaking behaviors relevant to academic achievement, such as frequency of cheating at school.

Mom and Dad Attachment

Parent attachment dimensions were included as control variables in this study to ascertain additional unique variance explained by pressure dimensions; however, there were a couple of interesting patterns within these variables that are worth noting. First, of course, these two variables accounted for most of the total variance explained in all equations for internalizing (depression, anxiety) and externalizing (rule breaking, substance use) outcomes. Interestingly, however, the parent block explained, on average, half or less of the variance in predicting to negative feelings about school. This makes sense conceptually; in addition to the various pressure variables examined here, it is likely that aspects of school climate (e.g., feelings of victimization or discrimination) would more strongly account for feelings of disengagement with school. Also interesting is that the beta values for mom and dad attachment were generally similar to one another in predicting to negative feelings about school but tended to differ in predicting to symptoms, where betas for moms were typically higher. This finding would be interesting to explore in future research.

Implications for Interventions

As noted previously, the present findings have several directions for intervention. While these findings indicate the need for adults to limit the pressure they place upon students, this issue has already been discussed in the literature. More novel is the finding

that suggests the importance of talking to students directly about better regulating the pressure that they place on themselves.

In an attempt to reduce students' feelings of pressure, schools can utilize the findings related to commitment strain and enjoyment. One actionable change that schools can make is to limit the strain they place on their students. There are schools that have decreased pressure related to advanced courses, either by removing them or limiting the number that students can take. Other sources of strain could be addressed in a similar fashion; for example, students could be restricted on the number of sports they can play at once or in a given year. At the same time, it could be useful to increase the number of activities available to students from which they get enjoyment, given the potential protective role commitment enjoyment may play within this population. Schools must find out what students enjoy, and make sure there is ample time and space for them to engage in such activities, without any major stakes involved (e.g., winning state championships).

Limitations and Future Directions

The most notable limitation of this study is that it uses only self-report data; however, it is important to note that this was intentional. Given that the point of this research is to tease apart which dimensions of *subjectively* experienced pressure to achieve might be most strongly related to this stress and that we are interested in the unique experiences of these students, self-report is the most relevant method of data collection.

It is also crucial to point out that this is a cross-sectional study, and as such causality cannot be assumed. As noted before, students who are more anxious and depressed might perceive people as pressuring them when they really are not, and these students may generally feel more strain and less enjoyment from the activities they are engaged in. In all likelihood, this is a bidirectional relationship; however, future longitudinal studies may utilize these findings to help further elucidate likely causal pathways within the context of pressure and overextension.

An additional limitation is the study sample size. The present study utilized data from one large public school and one much smaller independent school. These varied sample sizes should be kept in mind when interpreting the present findings, as well as their generalizability. In future research, it will be useful to examine more between-school differences on this broad construct of feeling the need to do ever more in academics and extracurriculars. It would be also useful to examine associations in other high achieving schools, both public and private, and in different parts of the country.

It could be beneficial in future research to examine differences in academic pressure by grade, as the felt pressures of students might differ depending on their stage in the college planning process. Knowing more about grade-level pressures could have important implications for intervention.

Conclusions

This study augments literature examining the negative impact of excessive pressure among youth in HASs by investigating the link between discrete aspects of overextension and pressure in a sample of adolescents in high-achieving communities.

The results of this study illustrate that overall pressure to achieve, added across multiple sources, is linked with anxiety and depression, and when different sources of pressure are considered, it is self-imposed pressure that shows unique links. At least as much as total felt pressure, students' feelings of strain across their various academic and extra-curricular activities were linked to anxiety and depression. In addition, reported levels of enjoyment across these activities showed robust links with feelings of engagement and belonging at school. Interventions that work to increase enjoyable activities and reduce the existence of multi-source pressure may help alleviate the negative impact of pressure on adolescent well-being.

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