

PERCEIVED PARENTAL PRESSURE AND INTERNALIZING SYMPTOMS IN
YOUNG ADULTS FROM HIGH-ACHIEVING SCHOOLS

By

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Perceived Parental Pressure and Internalizing Symptoms in
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Under the Supervision of Dr. Mary Beth Leibham

Adolescent depression and anxiety rates have been rising over the last decade. One suspected factor underlying these increasing rates is achievement pressure, including the pressures stemming from parental academic expectations and the competitive culture in high-achieving schools (HAS). The current study extends existing research on adolescent well-being by examining the associations among attending a high-achieving school, perceived parental academic pressure, and current psychological well-being in college students. Using an online survey, 197 undergraduates at a Midwest university reported where they went to high school, their perceptions of parental academic pressure during high school, and their current anxiety- and depression-like symptoms. High schools were categorized as either high-achieving or not high-achieving based on standardized test scores. It was hypothesized that anxiety- and depression-like symptoms would be positively associated with both HAS attendance and perceived parental academic pressure. Findings indicated that reported internalizing symptoms and perceived parental academic pressure did not differ between those who attended HAS and those who did

not attend HAS. There was a small correlation between internalizing symptoms and perceived parental academic pressure. Further research is needed to fully understand the factors contributing to the increasing rates of adolescent depression and anxiety.

Thesis Advisor (Signature)

Date

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CHAPTER I: INTRODUCTION

Anxiety and depression disorders are among the most common mental health disorders in the United States, particularly within the college-student population (Auerbach et al., 2018, Emmerton et al., 2023). Anxiety disorders are characterized by excessive worry and fearful expectations about daily life. Clinical depression is characterized by pervasive sad or hopeless mood and loss of interest in activities. Both anxiety and depression cause functional impairment and can be debilitating, especially at severe levels (American Psychiatric Association, 2022). These two mental health disorders tend to be co-morbid, meaning that individuals who experience symptoms of one disorder are at an increased risk of experiencing symptoms of the other disorder. Specifically, up to 60% of people who report symptoms of anxiety will also report symptoms of depression and up to 60% of people who report symptoms of depression will also report symptoms of anxiety (Salcedo, 2018). A recent study of college student mental health reported that 41% of college students screened positive for moderate or major depression and 36% percent of students screened positive for an anxiety disorder (Eisenberg et al., 2023). Emmerton et al. (2023) also reported that college students' mental health issues have been increasing over time. Specifically, college students' self-reported ratings of depression, anxiety, and stress have significantly increased from 2013 (depression = 10.7%, anxiety = 15.0%, and stress = 11.5%) to 2021 (depression = 17.3%, anxiety = 20.5%, stress = 15.4%). According to the Healthy Minds Study, between 2020 and 2022, over 60% of college students met the criteria for one or more mental health disorders including anxiety and depression (Lipson et al., 2022).

One of the potential contributing factors to depression and anxiety is achievement pressure, particularly the pressure to perform at exceptionally high levels in school-related activities. Academic achievement, the pressure to succeed, high demands from teachers, and

post-graduation plans, have been reported as some of the top sources of stress for both high school and college students. These academic stressors have also been associated with anxiety and depression (Beiter et al., 2015; Emmerton et al., 2023, Steare et al., 2023). Despite decreasing mental health stigma, college students report several barriers to accessing mental health support including worrying about what others think, not having enough time, and limited availability in university counseling centers (Lipson, et al., 2019; Reid et al., 2021).

There are numerous sources of achievement pressure (e.g., self-imposed, media, peers, teachers), but a commonly examined source is parental pressure. Parental achievement pressure has been associated with adolescent maladjustment in numerous studies (Ciciolla et al., 2017; Curran & Hill, 2022; Luthar & Barkin, 2012; Randall et al., 2015). More specifically, perceived parental achievement pressure has been linked with higher internalizing problems (e.g., anxiety and depression), decreased intrinsic motivation, and lower self-esteem (Ciciolla et al., 2017; Randall et al., 2015). Experiencing parental pressure in general is especially common among youth who attend high-achieving schools (Luthar et al., 2020).

To fully understand and address the current rates of adolescents' and college students' reported anxiety and depression disorders, it is important to identify the potential correlates of these disorders. Understanding the various factors that are associated with anxiety and depression may increase the likelihood of early intervention and possibly prevent internalizing symptoms from reaching debilitating levels. Therefore, the current study will examine two factors that may be associated with college students' reported anxiety and depression symptoms, namely perceived parental academic pressure, and high school achievement culture.

Review of Literature

Current Adolescent Mental Health Concerns

College students' mental health has been a growing concern for many years, even prior to the recent pandemic. Anxiety and depression rates among adolescents and college students have been increasing over the last two decades and recent studies indicate that up to 60% of late adolescents (including college students) screen positive for at least one mental health disorder (Auerbach et al., 2018; Emmerton et al., 2023; Eisenberg et al., 2023; Lipson, 2022; Terlizzi & Villarroel, 2019). At severe levels, anxiety and depression can lead to debilitating functional impairment, and can have deleterious effects on college students' academic performance (APA, 2019; Salcedo, 2018).

There are various suspected factors underlying the current mental health concerns of adolescents. Social media poses potential risk to youth mental health, particularly in early adolescence (APA, 2023). The COVID-19 pandemic and corresponding school closures and isolation also may have contributed to the recent increase in anxiety and depression rates. Specifically, for young adults between 18-35 years old, there were increased reports of loneliness, depression, anxiety, alcohol use, binge drinking, frustration, boredom, sleep problems, and hopelessness between 2019 to 2020 (Nails et al., 2023). Other potential contributing factors include societal issues (e.g., climate change), current events (e.g., school shootings), and peer conflict.

A final factor that has been associated with youth mental health is academic pressure. Steare et al. (2023) described academic pressure as stress stemming from school, studying, exams, parents, grades, self-expectations, and workload. They found that academic pressure is linked with adolescent mental health problems, particularly depressive symptoms.

Parenting Practices and Youth Development

In addition to the previously mentioned factors, parenting behaviors have also been associated with adolescent mental health. Numerous studies have suggested that authoritarian, overprotective, overinvolved, and neglectful parenting styles are related to anxiety in children and adolescents, specifically when parents are, unresponsive, rejecting, punitive, or overcontrolling (Rose et al., 2016; Schiffrin & Liss, 2017; Yaffe, 2021). Another factor that has been linked with youth mental health is parental anxiety. Children of anxious parents are twice as likely to have anxiety problems as children of non-anxious parents (Lawrence, Murayama, & Creswell, 2019). Anxious parents may discuss their own worries with their children and children, in turn, may internalize their parents' worries as their own.

Parenting practices that are associated with optimal development include authoritative parenting practices, autonomy support, monitoring, unconditional positive regard, and a moderately structured home environment (Kreski et al., 2023; Piquart, 2017; Rose et al., 2016). When adolescents perceive their parents as more supportive and have more positive interactions with them, they tend to use more adaptive coping strategies, like strategizing and seeking comfort, that foster relationship development (Zimmer et al., 2023). Parental engagement and involvement are associated with increased motivation and achievement, and decreased internalizing symptoms (Cheung & Pomerantz, 2015; Grolnick & Pomerantz, 2022; Kreski et al., 2023). However, excessive parental pressure is associated with increased internalizing symptoms (e.g., anxiety and depression) when it is controlling, negative, and includes too high of expectations, particularly in affluent communities (Curran & Hill, 2022; Randall et al., 2015). More negative interactions between parents and children tend to contribute to adolescents' use of more disengaged coping strategies, like concealment and escape (Zimmer et al., 2023). With that, the relationship between parental control and anxiety may be curvilinear. In other words,

both overcontrolling parenting practices and lack of structure and control are associated with youth anxiety symptoms (Bogels & Brechman-Toussaint, 2006). Similarly, authoritarian and neglectful parenting were found to be associated with similar elevated levels of internalizing symptoms in adolescents (Pinquart, 2017).

Persistent and excessive parental achievement pressure, coupled with overvaluing children's achievements is also a risk factor for maladjustment and mental health issues (Ciciolla et al., 2017). Just as experiencing violence or food insecurity can contribute to chronic stress, so can experiencing persistent stress, overextension, and pressure to be the best (Luthar et al., 2020). While high achievement expectations and academic pressure can stem from various sources such as school or peers, parental achievement expectations are a significant source of pressure particularly in affluent communities and high-achieving schools (Randall et al., 2015; Steare et al., 2023).

Parental Academic Pressure

Excessive parental academic pressure may be related to the development of internalizing symptoms. Kaynak et al. (2021) described three dimensions of perceived parental academic pressure. One dimension is psychological control, and this has been defined as being intrusive and overcontrolling in a harsh and manipulative way, using conditional love, guilt, and shame (Loeb et al., 2021; Pinquart, 2017). It is associated with elevated levels of anxiety and depression (Pinquart, 2017). Further, perceived psychological control or pressure by parents at age 13 was associated with long-term negative effects, such as lower academic attainment, observed support, and the likelihood of being in a romantic relationship (Loeb et al., 2021). In an academic context, parental psychological control or pressure is defined as the emotional effects felt by children or adolescents, such as fear, anxiety, feeling overwhelmed, from feeling pressured academically.

Blaming, conditional positive regard, and social comparison are common techniques used by parents exerting psychological control. Restriction of non-academic activities is the second dimension under perceived parental academic pressure. It is more behavioral in nature, where parents actively limit, or force activities, are perceived to facilitate high academic achievement. The third dimension is having expectations that are too high and unrealistic for the child to achieve (Kaynak et al., 2021). Unattainable expectations can be detrimental to a child or adolescent when parental support is contingent on meeting their standards (Grolnick & Pomerantz, 2022).

High expectations and criticism from parents are positively associated with heightened levels of internalizing and externalizing problem behaviors in adolescents (Stiles et al., 2020). Similar associations were found in middle school students, who showed higher internalizing and externalizing behaviors, and lower self-esteem, when they perceived their parents as valuing academic achievement more than prosocial behavior (Ciciolla et al., 2017). While high achievement expectations are beneficial for youth outcomes (Bogels & Brechman-Toussaint, 2006; Cheung & Pomerantz, 2015), unrealistically high expectations have been associated with decreased self-esteem and overall life satisfaction (Haspolat & Yalcin, 2023).

High-Achieving Schools

Academic or achievement pressure is not only experienced in the home, but may also be experienced at school, especially those schools that have been characterized as high-achieving schools (HAS). HAS are schools that consistently have high standardized test scores, a vast array of extracurricular activity options, ample college-level course offerings, and many students who matriculate at highly competitive or elite universities after graduation. The schools are often located in affluent communities where parents earn in the top 20-25% of national incomes.

Youth attending high-achieving schools consistently experience intense parental pressure, self- and other-imposed excessively high standards, and perfectionism (Luthar et al., 2020). This mirrors the definition of academic pressure provided by Steare et al. (2023), who explained that academic pressure involves a “fear of failure, concerns about the future, chronic stress about workload and exams, worries about parental expectations, and competition with peers for grades.”

Luthar et al. (2020) reported that attending a HAS is one of the top four high-risk environments for adjustment problems, following exposure to poverty, trauma, and discrimination. Specifically, students in HAS are at risk of experiencing excessive pressure to excel from their environment, including parents, peers, adults at school, and society at large. Consequently, students at HAS report clinically significant levels of adjustment problems, such as substance use, internalizing symptoms (e.g., depression and anxiety symptoms), and externalizing symptoms at higher rates than the general population of youth (Luthar et al., 2020; Luthar & Barkin, 2012; Luthar & Latendresse, 2005; Lyman & Luthar, 2014).

Alongside increased internalizing symptoms, HAS youth tend to experience increased parental criticism and expectations. In some cases, high parental expectations and criticism increase the likelihood that children tie their self-worth to their achievement and when the expectations are unattainable self-worth decreases due to feelings of inadequacy (Curran & Hill, 2022). Additionally, affluent youth tend to internalize their parents' criticism and high expectations and consequently they end up having high personal standards or perfectionistic strivings themselves, which are also associated with higher depression, anxiety, and substance use (Luthar & Latendresse, 2005).

Studies of affluent youth emphasize that family wealth is not a direct contributor to the adjustment problems they are at risk of developing, but it is more of a systemic issue of living in the pressured culture of affluence (Luthar & Barkin, 2012; Luthar & Latendresse, 2005; as cited in Luthar & Barkin, 2013). Luthar et al. (2020) explained that pressure to ‘be the best’ is exacerbated by the constant comparison with others through technology, decreases in leisure time due to increased competitiveness and monitoring in structured extracurricular activities, and the emphasis on achievement modelled by parents, peers, and adults at school. Regarding close relationships, peers in HAS tend to be constant sources of comparison while adults at school also expect high academic achievement. Importantly, parents are also subject to achievement pressures in high-achieving or affluent communities, often overextending themselves and excessively worrying about their children’s future (Luthar et al., 2020; Randall et al., 2015). Youth from affluent families tend to experience more isolation from adults, both literally and emotionally, as more parents work or attend to other obligations (Luthar & Latendresse, 2005).

Current Study

Given the importance of addressing the increasing rates of youth mental health disorders, specifically anxiety and depression, the aim of the current study was to explore the associations among internalizing symptoms, perceived parental academic pressure, and high school culture, specifically high-achieving and non-high-achieving high schools. While many of the studies exploring the associations among internalizing symptoms, perceived parental pressure and high-achieving schools have focused on youth currently attending high-achieving high schools, this study focused on college-age students’ self-reported internalizing symptoms, and their *retrospective* reports of perceived parental academic pressure while they were in high school. Of

particular interest was whether the associations among internalizing symptoms, perceived parental academic pressure, and high-achieving high schools linger into the college years.

Specifically, this study addressed three research questions:

- (1) Are there differences in self-reported internalizing symptoms between college students who attended high-achieving high schools and those who did not?
- (2) Are there differences in self-reported perceived parental academic pressure during high school between college students who attended high-achieving high schools and those who did not?
- (3) Are college students' self-reported internalizing symptoms associated with their self-reported perceptions of parental academic pressure in high school?

It was hypothesized that college students who attended HAS would report higher levels of internalizing symptoms and perceived parental academic pressure than college students who did not attend HAS. It was also hypothesized that self-reported internalizing symptoms and perceptions of parental academic pressure would be positively correlated with each other.

CHAPTER II: METHODS

Subjects

Participants included 197 undergraduates at a Midwestern, mid-sized, public university. Of those individuals, 137 were female, 53 were male, and 4 preferred not to answer with their sex, and 3 did not answer the question. Most students were between 18 and 22 years old ($M = 19.8$), and 10 students were older than 22. Most (89%) of the participants were Caucasian/White, 5% were Asian/Pacific Islander, 4% were Hispanic, 3% were Black, 2% were two or more races, and 1% were Native American/American Indian. Participants were able to select multiple options, hence the percentage totaling over 100. Almost half (42%) of participants were in their

first year of college, 22% in their second year, 17% in their third year, 15% in their fourth year, and 3% in their fifth year or more.

Procedures

Participants were recruited through the Psychology Department online participation pool (SONA) and the inclusion criteria included being at least 18 years of age and having attended a high school in the United States.

Participants completed this study online via a secure Qualtrics web link. They read an informed consent document and consent was implied by agreeing to continue to the next page. All data was aggregated, confidential, and anonymous.

Materials

Data for this study was collected through a Qualtrics online survey. The survey was comprised of two scales (41 items) and eight experience and demographic questions. On average, it took participants approximately 5-10 minutes to complete the survey.

To assess internalizing symptoms, participants responded to 21 items from the Depression Anxiety Stress Scale-21 (DASS-21; Lovibond & Lovibond, 1995a). The DASS-21 has demonstrated sound psychometric properties and assesses adults' and adolescents' general psychological distress over the last week (i.e., negative affect; Henry & Crawford, 2005; Szabó, 2010). This scale has been used in both clinical and non-clinical populations of adults, and all three subscales (depression, anxiety, and stress) are moderately inter-correlated (Antony et al., 1998; Crawford & Henry, 2003; Henry & Crawford, 2005). The first subscale included seven items that assessed participants' depression symptoms (e.g., "I felt that I had nothing to look forward to."), seven items assessed participants' anxiety symptoms (e.g., "I felt I was close to panic."), and seven items that assessed participants' stress symptoms (e.g., "I found myself

getting agitated.”). Using a 4-point Likert scale, participants indicated the degree to which each statement applied to them, ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much*) (see Appendix A). To assess depression, anxiety, and stress symptoms in a clinical setting, the DASS-21 item responses are added together in each subscale, multiplied by two, and categorized as Normal, Mild, Moderate, Severe, and Extremely Severe. Higher scores represent higher levels of negative emotional states or emotional disturbance over the past week. (Psychology Foundation of Australia, 2023).

Next, participants completed the 20-question Perceived Parental Academic Pressure Scale (PPAPS; Kaynak et al., 2021). This scale was designed to assess perceived parental academic pressure and for the current study, the original directions were modified to prompt participants to think about their experiences in high school. In other words, rather than assessing participants’ current perceived parental academic pressure, the modified items assessed participants’ perceptions of their parents’ academic pressure when they were in high school. This scale included three subscales. Specifically, seven items assessed perceived parental pressure (e.g., “My parents compare my school success with others.”), six items assessed perceived parental expectations (e.g., “My parents have no tolerance for failure.”) and seven items assessed perceived parental restrictions (e.g., “What I want to do outside of studying is limited by my parents.”). All items utilized a 5-point Likert scale, ranging from 1 (*absolutely inappropriate*) to 5 (*absolutely appropriate*) (see Appendix C).

In addition to completing the DASS-21 and PPAPS scales, participants were also asked to report the high school they attended for the longest amount of time, what city and state it was in, and what their GPA was upon graduating high school (see Appendix B). Finally, participants answered five demographic questions (see Appendix D).

CHAPTER III: RESULTS

The aim of the current study was to explore the associations among internalizing symptoms, perceived parental academic pressure, and high school culture, specifically high-achieving and non-high-achieving high schools.

Categorizing High-Achieving Schools

Based on Luthar et al.'s (2020) description of high-achieving schools, a high school was coded as high achieving (HAS) if its' 2022-2023 achievement score was in the 75th percentile or above. Schools that scored in the 74th percentile or lower were coded as non-high-achieving schools (non-HAS). The achievement score is a multi-year summary of school performance on the state assessment in English language arts and mathematics. It ascribes partial points for scoring in the basic range and extra points for the advanced range. Participants were only included in the analyses comparing HAS and non-HAS if they attended high school in the specific state that reported these scores. Consequently, 82 participants (41.6%) were not included in the analyses comparing HAS and non-HAS because they attended high school in a state that did not report achievement scores. Among those participants who attended high school in the state that reported school achievement scores, 46 (23.4%) attended a HAS, and 69 (35.0%) attended a non-HAS.

Internalizing Symptoms

All Participants

Across all participants, including those who were excluded from the HAS and Non-HAS analyses, the mean DASS-21 composite score was 1.1 ($SD = 0.6$). For the depression subscale, the mean score was 0.9 ($SD = 0.7$). For the anxiety subscale, the mean score was 0.9 ($SD = 0.7$). For the stress subscale, the mean score was 1.2 ($SD = 0.6$). All values are reported in Table 1.

Females' mean DASS-21 composite score ($M = 1.1$, $SD = 0.6$) was significantly higher than males ($M = 0.9$, $SD = 0.6$), $t(183) = 1.98$, $p = .050$. We used an alpha level of .05 for all statistical tests. At the subscale level, mean depression scores between females ($M = 0.9$, $SD = 0.7$) and males ($M = 0.8$, $SD = 0.8$) were not significantly different $t(187) = 0.50$, $p = .62$. However, females reported a statistically higher mean anxiety score ($M = 0.9$, $SD = 0.7$) than males ($M = 0.7$, $SD = 0.6$), $t(186) = 2.14$, $p = .033$. Females also reported a statistically higher mean stress score ($M = 1.3$, $SD = 0.6$) than males ($M = 1.0$, $SD = 0.6$), $t(186) = 2.71$, $p = .017$.

Table 1. Mean Internalizing Symptoms Scores from the DASS-21

	Overall	Female	Male	HAS	Non-HAS
Depression	0.9 (0.7)	0.9 (0.7)	0.8 (0.8)	0.9 (0.6)	0.9 (0.7)
Anxiety	0.9 (0.7)	0.9 (0.7)	0.7 (0.6)	0.8 (0.7)	1.0 (0.7)
Stress	1.2 (0.6)	1.3 (0.6)	1.0 (0.6)	1.3 (0.6)	1.3 (0.6)
Composite	1.1 (0.6)	1.1 (0.6)	0.9 (0.6)	1.1 (0.6)	1.1 (0.6)

Cumulative (i.e., summed) scores were also calculated to interpret symptoms of the study sample compared to norms. For the depression subscale, the mean cumulative score was 6.1 ($SD = 4.8$). For the anxiety subscale, the mean cumulative score was 6.0 ($SD = 4.7$). For the stress subscale, the mean cumulative score was 8.5 ($SD = 4.4$) (see Table 2).

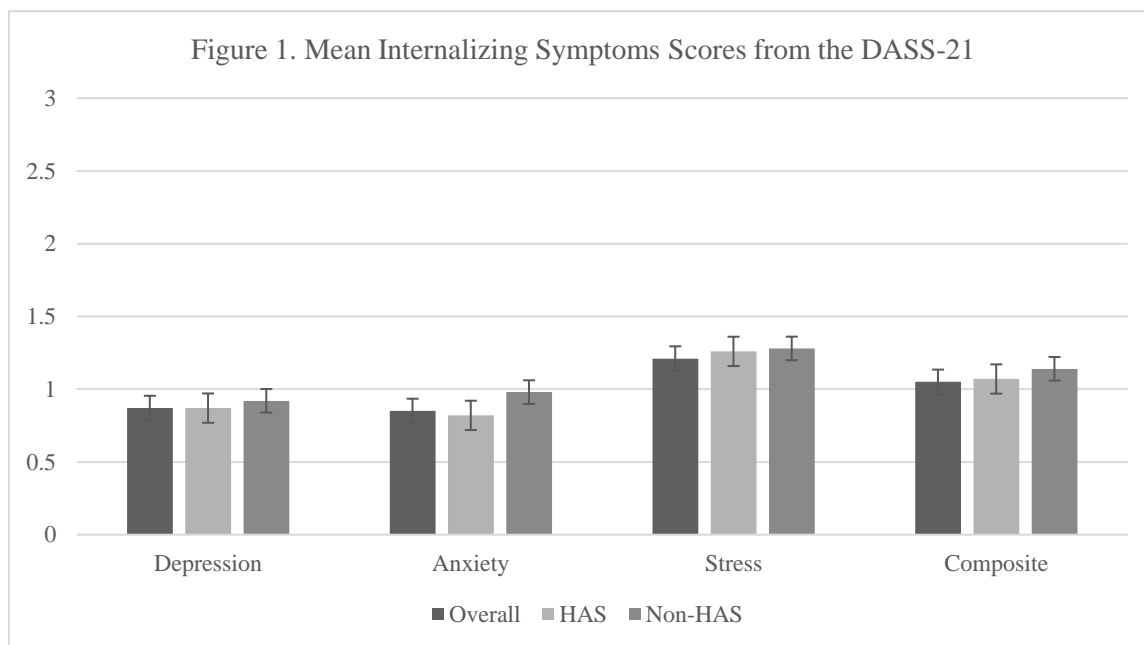
Table 2. Cumulative Internalizing Symptoms Scores from the DASS-21

	Overall	Female	Male	HAS	Non-HAS
Depression	6.1 (4.8)	6.2 (4.6)	5.8 (5.4)	6.1 (4.3)	6.4 (5.0)
Anxiety	6.0 (4.7)	6.4 (4.8)	4.8 (4.4)	5.7 (4.6)	6.8 (4.7)
Stress	8.5 (4.4)	9.0 (4.2)	7.1 (4.4)	8.8 (4.1)	8.8 (4.1)

Differences between HAS and non-HAS Students

It was hypothesized that participants who attended HAS would report higher levels of internalizing symptoms compared to those who attended non-HAS. However, the DASS-21 composite scores did not differ between HAS students ($M = 1.1$, $SD = 0.6$) and non-HAS students ($M = 1.1$, $SD = 0.6$), $t(111) = -0.63$, $p = .531$. Similarly, the mean depression subscale

scores did not differ between HAS students ($M = 0.9$, $SD = 0.6$) and non-HAS students ($M = 0.9$, $SD = 0.7$), $t(112) = -0.35$, $p = .73$, nor did the mean anxiety subscale score did not differ between HAS students ($M = 0.8$, $SD = 0.7$) and non-HAS students ($M = 1.0$, $SD = 0.7$), $t(113) = -1.27$, $p = .208$. The mean stress subscale score also did not differ between HAS students ($M = 1.3$, $SD = 0.6$) and non-HAS students ($M = 1.3$, $SD = 0.6$), $t(112) = -0.12$, $p = .906$. This means all students rated their current internalizing symptoms similarly, regardless of the type of high school they attended.



Perceived Parental Academic Pressure

All Participants

Across all participants, including those who were excluded from the HAS and Non-HAS analyses, the mean PPAPS composite score was 2.5 ($SD = 0.9$). For the pressure subscale, the mean score was 2.5 ($SD = 1.1$). For the restriction subscale, the mean score was 1.9 ($SD = 0.9$). For the expectations subscale, the mean score was 3.0 ($SD = 1.0$). All values are reported in Table 1.

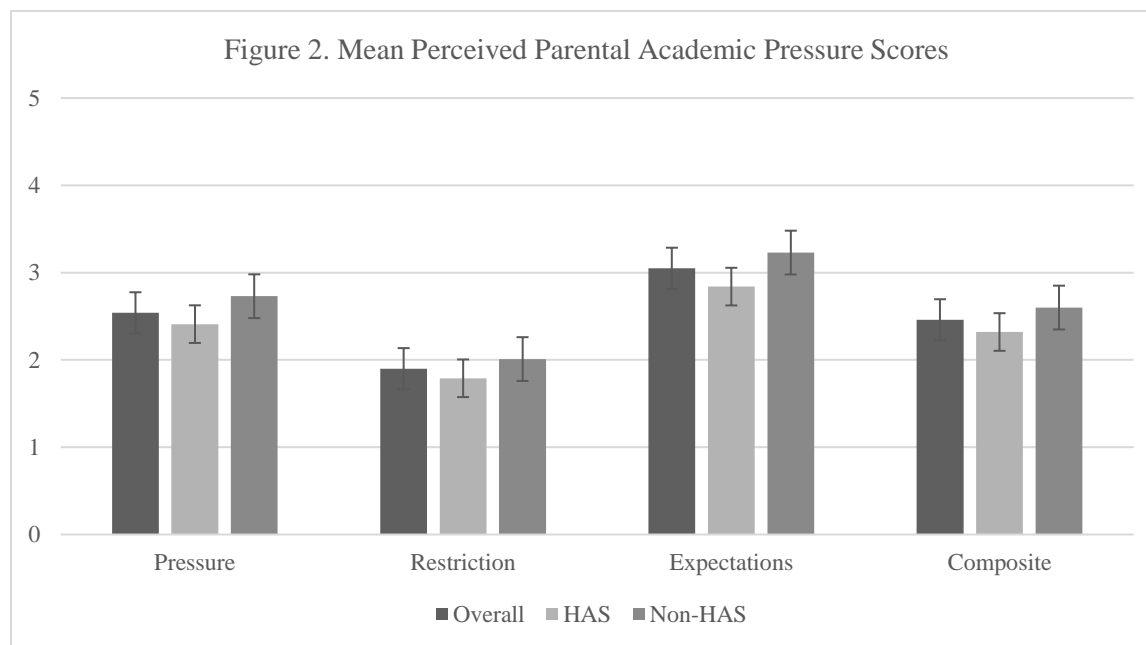
Sex differences were analyzed for all participants as well. There were no statistically significant differences on the PPAPS composite score between females ($M = 2.5$, $SD = 0.9$) and males ($M = 2.4$, $SD = 0.8$), $t(184) = 0.51$, $p = .611$. Additionally, no statistically significant differences were found between sexes on any subscale. Values are reported in Table 3.

Table 3. Mean Perceived Parental Academic Pressure Scores

	Overall	Female	Male	HAS	Non-HAS
Pressure	2.5 (1.1)	2.6 (1.1)	2.5 (1.0)	2.4 (1.1)	2.7 (1.1)
Restriction	1.9 (0.9)	1.9 (0.9)	1.8 (0.8)	1.8 (0.8)	2.0 (0.9)
Expectations	3.0 (1.0)	3.1 (1.1)	3.0 (0.9)	2.8 (1.0)	3.2 (1.0)
Composite	2.5 (0.9)	2.5 (0.9)	2.4 (0.8)	2.3 (0.9)	2.6 (0.9)

Differences between HAS and non-HAS Students

It was hypothesized that there would be higher levels of mean internalizing symptoms in the group of participants that attended high-achieving high schools. Contrary to the hypothesis, the PPAPS composite score for HAS students was slightly lower ($M = 2.3$, $SD = 0.9$) than non-HAS students ($M = 2.6$, $SD = 0.9$), although this difference was not statistically significant, $t(111) = -1.61$, $p = .111$. HAS students indicated no significant difference on the pressure subscale ($M = 2.4$, $SD = 1.1$) compared to non-HAS students ($M = 2.7$, $SD = 1.1$), $t(112) = -1.53$, $p = .129$. HAS students indicated no significant difference on the restriction subscale ($M = 1.8$, $SD = 0.8$) compared to the non-HAS students ($M = 2.0$, $SD = 0.9$), $t(113) = -1.33$, $p = .186$. HAS students indicated no significant difference on the expectations subscale ($M = 2.8$, $SD = 1.0$) compared to non-HAS students ($M = 3.2$, $SD = 1.0$), $t(112) = -1.96$, $p = .053$. This means all students perceived parental academic pressure similarly, regardless of the type of school they attended.



Associations between Internalizing Symptoms and Perceived Parental Academic Pressure

It was hypothesized there would be a positive association between reported internalizing symptoms and perceived parental academic pressure. A bivariate correlational analysis revealed a small and positive association between the DASS-21 composite score and the PPAPS composite score, $r(186) = .24, p < .001$. Additionally, the DASS-21 composite score was positively correlated with the PPAPS pressure, $r(188) = .30, p < .001$, and restriction, $r(189) = .25, p < .001$, subscales, but not the expectations subscale, $r(187) = .13, p = .071$. The PPAPS composite score was also positively associated with the DASS-21 depression, $r(190) = .20, p = .005$, anxiety, $r(188) = .20, p = .005$, and stress, $r(188) = .23, p = .002$, subscale.

Small, positive correlations between DASS-21 and PPAPS subscales were found as well. The DASS-21 depression subscale was correlated with the PPAPS pressure, $r(192) = .24, p < .001$, and restriction, $r(192) = .21, p = .004$, subscale, but not the expectations subscale, $r(191) = .11, p = .114$. Similarly, the DASS-21 anxiety subscale was positively correlated with the PPAPS pressure, $r(190) = .25, p < .001$, and restriction, $r(192) = .25, p < .001$, subscale, but

not the expectations subscale, $r(190) = .09, p = .244$. The DASS-21 stress subscale was positively correlated with all three PPAPS subscales: pressure, $r(190) = .29, p < .001$; restriction, $r(191) = .21, p = .003$; and expectations, $r(190) = .15, p = .041$.

Table 4. Correlations Among Internalizing Symptoms and Perceived Parental Academic Pressure Scores

<i>PPAPS</i>	Pressure	Restriction	Expectations	Composite
<i>DASS-21</i>				
Depression	.24**	.21**	.11	.20**
Anxiety	.25**	.25**	.08	.20**
Stress	.29**	.21**	.15*	.23**
Composite	.30**	.25**	.13	.24**

* $p < .05$; ** $p < .01$

CHAPTER IV: DISCUSSION

This study examined the associations between college students' reports of internalizing symptoms and retrospective reports of perceived parental academic pressure. Further, the differences between those who attended HAS and non-HAS were analyzed. It was hypothesized that college students who attended HAS would report higher levels of internalizing symptoms compared to those who did not attend a HAS, but this hypothesis was not supported. That is, there were not significant differences in internalizing symptoms between those college students who attended HAS and those who attended non-HAS. This contrasts with previous research that found students who attend HAS tend to report higher levels of internalizing symptoms than national norms (Luthar & Latendresse, 2005; Lyman & Luthar, 2014). Of course, a key difference between the current study and previous research in this area is that this study assessed college students' current internalizing symptoms after they were no longer attending the HAS or non-HAS, and the previous research assessed internalizing symptoms of students while they were enrolled in a HAS or non-HAS.

A pertinent finding in this study, however, was the general level of internalizing symptoms reported by all participants. When interpreted using cumulative scores (Lovibond &

Lovibond, 1995b, as cited in DASS-21 Scoring Template and Interpretation), the overall levels of reported depression and stress were in the mild range. Using Crawford and Henry's (2003) norming data in a non-clinical sample of adults, depression and stress scores in the mild range correspond to the 78th to 87th percentile compared to a non-clinical, adult sample. Specifically, a raw score of 12 on the depression subscale equates to the 86th percentile, while a raw score of 17 on the stress subscale equates to the 85th percentile. The overall level of anxiety was slightly higher and in the moderate range, which corresponds to the 87th to 95th percentile. Specifically, a raw score of 12 on the anxiety subscale corresponds to the 93rd percentile. While many norming studies were conducted with adults, it is important to note that the DASS-21 was developed with a lower age limit of 17 years (Psychology Foundation of Australia, 2023).

These interpretations indicate that college students in this sample are experiencing more severe depression, anxiety, and stress symptoms than the average adult population. This information mirrors recent data that suggests college students are experiencing more depression, anxiety, and stress symptoms over time (Emmerton et al., 2023) and that over half meet criteria for one or more mental health disorder, such as anxiety and depression (Lipson et al., 2022). However, symptoms reported by participants in this study are still below the severity level that would warrant seeking help, though anxiety levels are slightly closer to that need. Since internalizing disorders typically exist on a continuum, it is helpful to categorize levels of disturbance, even though the DASS-21 is not directly related to clinical diagnosis (Psychology Foundation of Australia, 2023). Additionally, while these heightened levels of internalizing symptoms in college students were present before the COVID-19 pandemic, they may have been exacerbated in the subsequent years. More research is warranted to identify possible contributors to these levels, including the pandemic.

An additional relevant finding was the differences between male- and female-reported internalizing symptoms. Females reported higher average anxiety and stress symptoms than males. This is consistent with data that suggests adult women are more likely to experience any level of anxiety symptoms than men (Terlizzi & Villarroel, 2020). Similarly, within the college student population, females tend to report more significant mental health concerns (Nails et al., 2023), especially anxiety and stress (Emmertson et al., 2024). Thus, given the generally heightened internalizing symptoms in college students, it may be relevant to further explore the contributors to the differing experiences of anxiety symptoms between males and females. Females might experience the same sources of stress differently from males or experience different sources of stress entirely.

It was also hypothesized that there would be higher levels of perceived parental academic pressure in the group that attended HAS. However, the hypothesis was not supported. In fact, while not statistically significant, students from non-HAS reported experiencing more perceived parental academic pressure than students from HAS. This contradicts past research that states youth who attend HAS often experience intense parental pressure, self- and other-imposed excessively high standards, and perfectionism (Luthar et al., 2020).

Overall mean levels of perceived parental academic pressure were at the midpoint of the scale or below. This suggests that students, on average, reported that they did not perceive their parents as exerting excessive pressure, restriction, and expectations on them in high school. In other words, their average ratings of statements were *inappropriate* or *neutral*, indicating most statements did not apply to them much. At the subscale level, average ratings of expectations were higher than pressure and restriction, but only by half of a point and one point, respectively. The implications of these findings are positive, knowing that realistic academic expectations

from parents can be beneficial for students when support is not conditional or based on performance (Cheung & Pomerantz, 2015; Grolnick & Pomerantz, 2022). However, some studies that found correlations between maladaptive strategies (e.g., perfectionistic discrepancy, and performance approach and avoidance) and overparenting also had reports of helicopter parenting behaviors below the midpoint of the scale (Schiffrin & Liss, 2019). Therefore, it may be relationships between scales (e.g., parenting behaviors and youth mental health) that are more revealing than the relative scores on specific scales.

The third hypothesis stated there would be a positive association between reported internalizing symptoms and perceived parental academic pressure. This hypothesis was supported for all correlations except between perceived parental academic expectations and depression, anxiety, and the DASS-21 composite score. Results suggest there are small correlations between overall perceived parental academic pressure, pressure, and restriction with depression, anxiety, and stress. As expected, the perceived parental academic pressure composite was also correlated with the three internalizing symptom subscales. These results mirror previous research that found positive associations between internalizing symptoms in youth and academic pressure, especially high expectations and criticism from parents (Ciciolla et al., 2017; Steare et al., 2023; Stiles et al., 2020).

Implications for Practice

Although previous studies found that students in HAS reported higher levels of internalizing symptoms than students in non-HAS, this study indicates that those differences may not linger into the college level. It is important to note, however, that those who attend college were likely high achieving, successful high school students regardless of the type of high school they attended. In other words, while a large proportion of students in HAS pursue four-year

college degrees, the smaller proportion of students in non-HAS who pursue four-year college degrees are likely high-achieving students. Consequently, at the college level, those who attended HAS may be more similar to those who did not attend HAS, than they would have been at the high school level, when the comparison group of non-HAS students would have included a more variable group in terms of achievement. Even though there were no significant differences in reported internalizing symptoms between HAS and non-HAS participants, the levels of internalizing symptoms across all participants are concerning because even mild to moderate levels of internalizing symptoms can impact students' performance and health if they are persistent and unaddressed.

Addressing the mental health concerns of adolescents and college students is of primary importance. Given the low but above normal levels of internalizing symptoms in this sample, identification of students who are experiencing distress may be warranted. If they do not present as having noticeable symptoms, as many high-achieving students often do, students may remain unidentified and not receive the mental health support they need. Therefore, internalizing symptom screening tools for high schools and college students could prove useful. This is recommended with caution, as the necessary support (e.g., mental health professionals and resources) for the rising mental health concerns in young people is limited and an area for continued growth. With that, additional mental health support in high schools and on college campuses is also warranted. While these systems exist in many places, helping students become more aware of available resources and making them more accessible would be beneficial.

Identifying sources of distress might aid in providing specific prevention and intervention strategies for students and families. This study provides more evidence for the relationship between internalizing symptoms and parental academic pressure. Specifically, this research

indicates that perceived parental academic pressure and restriction, as experienced in high school, is related to heightened levels of internalizing symptoms in college students. While a causal conclusion cannot be drawn and the correlations are small, the positive relationship between internalizing symptoms and perceived parental academic pressure reflect the increases in college students' reported internalizing symptoms (Emmert et al., 2023), as well as experiences of parental expectations and criticism (Curran & Hill, 2022). This suggests that parent relationships are valuable in relation to the mental health of their children. Emphasizing autonomy support, warmth, and prosocial values over criticism, unrealistic expectations, and restriction of activities are actions parents can take to maximize their children's mental health in high school and into college. Improving parent-child relationships in general, focused on providing unconditional support and warmth, can help children more easily access support and avoid the isolation that tends to coincide with internalizing symptoms.

Importantly, responsibility for action is not all on parents. Educators and mental health professionals raising awareness of the negative impacts of excessive criticism and unrealistic expectations could help to lessen the pressure youth and adults face, regardless of the types of schools they attend. This might be achieved through universal practices that support all parents and students. These practice can be extended into college as well. For example, universities might offer guidance on how to navigate parenting college students. Also, systemic change that takes priority off comparison and pressure to be better than others is also warranted. While there is no simple or direct way to achieve this, young people thrive when they have people who genuinely care about them, no matter how they perform in school or other arenas. Children need to know they matter beyond their achievements. Having parents, educators, friends, and family

consistently supporting youth's aspirations and best efforts is important to their overall functioning.

Limitations and Future Directions

There are several limitations to consider within the current study. First, since research suggests that HAS are identifiable by other factors than just high standardized test scores (Luthar et al., 2020), this study may not have operationalized HAS in a detailed enough way. Also, participants' attendance at a mid-size, Midwestern, public university may not provide the most representative sample of students who attended HAS, as another descriptor of HAS is elite college matriculation (Luthar et al., 2020). Additionally, the considerably greater number of females and White students in the sample than the general population is a demographic representativeness limitation. The way variables were measured may also be a limitation. For example, the nature of self-report and retrospective perceptions of parental pressure in high school may have impacted the validity of results. Finally, the PPAPS survey has not been widely validated and researched, and it was originally created in Turkish, which could present language and translation barriers.

Given these limitations, there are multiple suggestions for future research. Similar studies that include a larger and more representative sample of the general population and of HAS students would be beneficial to increase the validity and generalizability. For example, research could include students who attend elite colleges in different geographic regions, as well as students of more diverse racial and gender backgrounds. Future research might also include objective and observable measures of internalizing symptoms and perceived parental academic pressure from different sources than the participants themselves. For example, parents might report on children's internalizing symptoms and their own perceptions of academic pressure

exerted. Also, collecting data on present functioning and perceptions of parental academic pressure would be beneficial to reduce hindsight bias. Additional methods of examining such concepts are available and would be useful to substantiate and further analyze relationships among and between internalizing symptoms, perceived parental academic pressure, and attending a HAS. Finally, more validation of the PPAPS scale would also be beneficial for subsequent research.

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Appendix A

Internalizing Symptoms

Depression Anxiety Stress Scale-21 (Lovibond, S. H., & Lovibond, P. F., 1995)

Please read each statement and select a number of 0, 1, 2, or 3, which indicates how much the statements applied to you over the last week.

0 = Did not apply to me at all

1 = Applied to me to some degree, or some of the time

2 = Applied to me to a considerable degree, or a good part of time

3 = Applied to me very much, or most of the time.

1. I found it hard to wind down.
2. I was aware of the dryness of my mouth.
3. I couldn't seem to experience any positive feeling at all.
4. I experienced breathing difficulties (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion).
5. I found it difficult to work up the initiative to do things.
6. I tended to over-react to situations.
7. I experienced trembling (e.g. in the hands or legs).
8. I felt that I was using a lot of nervous energy.
9. I was worried about situations in which I might panic and make a fool of myself.
10. I felt that I had nothing to look forward to.
11. I found myself getting agitated.
12. I found it difficult to relax.
13. I felt downhearted and blue.

14. I was intolerant of anything that kept me from getting on with what I was doing.
15. I felt I was close to panic.
16. I was unable to become enthusiastic about anything.
17. I felt I wasn't worth much as a person.
18. I felt that I was rather touchy.
19. I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase).
20. I felt scared without any good reason.
21. I felt that life was meaningless.

Appendix B

High School Experience

1. What school did you attend for high school? (List the school you attended for the longest)
2. In what city and state was this high school?
3. What was your GPA when you graduated high school?
 - a. <2, 2-2.5, 2.5-3.0, 3.0-3.5, 3.5-4.0, >4.0

Appendix C

Perceived Parental Academic Pressure

Perceived Parental Academic Pressure Scale (Kaynak, Kocak, and Kaynak, 2021)

Think about when you were in high school. Then, with that time of your life in mind, please read and indicate the degree to which each statement applied to your life then.

1 = Absolutely inappropriate

2 = Inappropriate

3 = Neutral

4 = Appropriate

5 = Absolutely appropriate

1. My parents force me to be successful at school.
2. My parents think that I shouldn't do anything other than studying
3. My parents have very high expectations of me.
4. My parents have no tolerance for failure.
5. My parents restrict my activities other than studying.
6. My parents expect me to perform beyond my capacity.
7. My parents always make me feel that I have to be successful in school.
8. My parents don't want me to spare my time to anything other than my lessons.
9. My parents always want more from me in terms of school achievement.
10. My parents don't let me to meet with my friends having low school achievement.
11. If I can't get good grades, I am scared of my parents' reaction.
12. If I fail the exams, my parents accuse me of not studying enough.
13. My parents get angry with me when I take care of something except studying.

14. Because of my parents' pressure, I feel suffocated.
15. I get nervous when I talk to my parents about my exam results.
16. My parents set up rules to prevent me from spending my time for non-academic activities.
17. My parents want me to study constantly.
18. My parents put pressure on me to increase my pace of work.
19. My parents compare my school success with others.
20. What I want to do outside of studying is limited by my parents.

Appendix D

Demographic Information

1. What is your age?
2. What is your current major?
3. What is your current class level?
 - a. First Year, Second Year, Third Year, Fourth Year, Fifth Year (or more)
4. What is your sex?
 - a. Female, Male, Prefer not to answer
5. What is your ethnic background?
 - a. Caucasian/White, African/Black, Native American/American Indian,
Asian/Pacific Islander, Hispanic, 2 or more races, Other, Prefer not to answer