

Honors Students' Characteristics, Perceived Locus of Control and Attributions

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## Abstract

Recent literature has sought to identify variables which can positively affect at-risk student populations when students start college. In conjunction with high school achievement, motivational variables such as locus of control and goal orientation are strong predictors of student success at a university. Students with a strong internal locus of control and reported goals towards mastering content tend to view themselves as responsible for their work and do well academically. Little research has examined the presence of these variables in high-achieving populations. Although it would seem that students would maintain their attributions for their own success throughout school, locus of control and goal orientation is considered to be fluid and, thus, capable of changing.

To understand the experiences of high achieving students, 54 freshmen and senior honors' college students were surveyed during the 2015 spring semester. Participants were questioned about their perceived academic competence by responding to a survey that contained the Academic Locus of Control (ALC) and Academic Goal Orientation-Revised (AGO-R), Perceived Stress Scale (PSS), and the Multidimensional Scale of Perceived Social Support (MPSS). Students' scores were grouped according to gender and year in school and later analyzed to understand whether demographic variables could influence scores. Analyses suggested that while slight differences existed within groups, the sample was mostly uniform and not impacted by demographic differences. Future research should analyze the role of merit-based scholarships on student well-being.

### Honors Students' Characteristics, Perceived Locus of Control, and Attributions

Recent data from the Bureau of Labor Statistics (2014) has found that American universities welcomed two million high school graduates to their first year of college in 2013. Although college attendance has risen at a historic rate, college retention and graduation rates have not. Many students that drop out of university cause a drain on institution resources and students lose the benefits and training that higher education provides. As a result, researchers and higher education administrators have created complex models and theories trying to predict college student success and understand characteristics of successful students (Senko, Hulleman, & Harackiewicz, 2011). Institutions commonly understand student success to be academic achievement, retention, high GPA, and the proportion of individuals to graduate within six years. Most educational research has focused on predictors of student attrition and have noted that motivation, goal setting, and measures of support were large predictors of student success (Grant & Dweck, 2003). In particular, a students' academic locus of control, goal orientation, along with their perceived stress and social support can all influence academic achievement.

### **Motivation Theory**

There are many different models of motivation which impact overall student performance and success. Student motivation is best measured through the use of specific instruments to examine different aspects of motivation. Of particular interest are sources of motivation such as (1) locus of control and (2) goal types as analyzed in goal orientation theory.

**Locus of Control**

A measure of motivation, locus of control, articulates that expectations are developed when one's behavior appears to be controlled by the self or external forces such as chance. Originally developed by Julian B. Rotter (1966), individuals with an internal locus of control view achievement and the results of different experiences as controllable and stable according to the effort and choices they make. Individuals with an external locus of control, on the other hand, believe that forces such as environmental factors, circumstances, and other individuals have agency to affect one's achievement in pursuit of different goals. Another theorist, Bernard Weiner (1985), also inferred that attributing achievement to others would decrease self-efficacy and the student's perceived ability to influence their resulting grades. Students can either use locus of control to assess the likelihood of success for a particular task or utilize an external locus of control to avoid having to strategize or rethink their study skills. However, Weiner's assertion was not supported by recent research conducted by Hasan & Khalid (2014) who noted that students who attributed success to teachers, friends, and family, a concept defined as social attribution, was linked to positive outcomes.

**Increased Effort from Internal Locus of Control.** Acknowledging social support is not necessarily detrimental to student success. Attributing outcomes to controllable causes such as effort increases motivation and perseverance; however, the belief that outcomes are determined by persistent and uncontrollable causes can increase feelings of helplessness (Grant & Dweck, 2003). For college students, outcomes are perceived in relation to their academic achievement (Trice, 1985).

Among a sample of 3,000 freshmen entering college, those with a high internal locus of control had significantly better GPAs than students with an external locus of control. Students who had high GPAs were more likely to continue into their second year of college (Gifford, Briceno-Perriott, & Mianzo, 2006). Another study using college freshmen in an honors program revealed that interest in an area of study was positively related to their assessment of skill in that area. (Siegle, Rubenstein, Pollard, & Romey, 2010) Attributed effort and ability were the main causes that students reported for their successes and failures suggesting that effort and ability act in harmony to cause academic success.

Similarly, another study demonstrated that psychology graduates with a high internal academic locus of control were more likely to pursue a graduate degree (Sandler & Lakey, 1982). This may be explained by Nordstrom & Segrist's, (2009) theory that graduates with an internal locus of control could understand the connection between their efforts and consequences, which causes them to do well in a competitive program. For this reason, locus of control acted as a greater motivator to pursue further education than GPA. This explanation was limited due to the study's focus on female, Psychology majors (Sandler & Lakey, 1982). In a different study, researchers measured locus of control with a sample of honors students and a comparison group of students on academic probation. Park & Kim (1998) noted that honors students were more likely to have an internal locus of control and attribute successes to personal effort.

**Vulnerable Student Populations.** Student populations that are vulnerable to attrition due to external disadvantages, such as first generation college students, may be less likely to form an internal locus of control due to doubt and lack of support. These

students are considered at-risk for attrition and low academic achievement. Since locus of control is used by individuals to gauge the likelihood of their future successes, researchers acknowledge that locus of control functions as an assumption about the future; not an attribution for the past (Hasan & Khalid, 2014). Most notably, when students expect to fail and are proven correct, they normally do not think critically about their failure beyond an already perceived or established reason.

More recent data implies locus of control may impact not only student attributions, but heavily influence freshmen success as well. For example, continuing generation freshman students are prone to attribute their academic success to luck while first generation students are more likely to attribute their success to talent and effort. An internal locus of control helped with college adjustment and moderately correlated to a higher GPA. An external locus of control, on the other hand, lowered GPA and was usually related to poorer college adjustment (Aspelmeier, Love, McGill, Elliot, & Pierce, 2012). Researchers posited that students who were highly internally motivated but had doubts about their own self-efficacy may experience performance apprehension. To offset these risks, attributional retraining was developed as an interventional program to help failure prone students and can be easily adapted into classes (Perry, Hall & Ruthig, 2005).

**Gender Differences in Locus of Control.** Using a measure of academic locus of control, Hasan & Kahlid's (2014) study analyzed high and low achieving students and the relationship between locus of control and achievement, observing that women were more likely to have a higher external locus of control compared to men. This trend is not unchallenged by other studies although gender differences are continually observed in

locus of control research. A New Zealand study of teenagers found that females attribute their successes to personal effort more than males. (McClure, Meyer, Garisch, Fischer, Weir & Walkey, 2010).

### **Goal Theory**

Goal theory appears in much of the research about student success. Achievement goal theory is both a respected and well-researched theory of motivation with a theoretical background dating back over thirty years. A recent literature review by Senko, et al., (2011) noted that several revisions have been made to achievement goal theory, reflecting the ongoing debate between researchers that mastery goals are better than performance goals. One model that has come into increasing prominence in goal setting research is the concept of goal orientation.

According to goal orientation, motivated individuals who wish to master content and truly learn are mastery driven. Those who want the glory and acclaim that is associated with success are performance driven (Elliot, 1999). Performance oriented individuals are intensely aware of how their performance measures up compared to others. Grant & Dweck (2003) theorized that those who internalize a performance orientation and choose to avoid new learning opportunities in order to avoid appearing incompetent, are performance avoidance oriented. In contrast, individuals who desire to demonstrate competency relative to their peers are pursuing a performance approach goal orientation (Elliot, 1999).

Mastery driven individuals may also have either approach or avoidance goals. Students who want to understand the academic task and ultimately learn material because of their own personal interest are mastery approach goal setters. Mastery avoidance goal

setters are determined to avoid misunderstanding information. In other words, mastery avoidance goal setters want to avoid making mistakes when learning new content and work hard to keep their current abilities from declining (Elliot & Harackiewicz, 1996; Elliot, 1999).

**Factors affecting goal orientation.** Similar to locus of control and other theories of intelligence, goal orientation can correlate to how an individual learns, and perceives their capabilities. This appears to be a crucial predictor of student success. Students who are motivated to learn and mastery oriented have high home and peer support (Strom & Savage, 2014).

Performance avoidance, on the other hand, is correlated to harder school adjustment periods among a sample of at-risk teens (Jowkar, Kojuri, Kohoulat, & Hayatt, 2014). The way that students view their intelligence plays a large role on how students are motivated to succeed (Perry, et al., 2005). At present, many researchers have noticed that low-performing students fail to set attainable goals and struggle to focus and make progress on goals. High-achieving students, researchers extrapolate, would approach learning differently by setting goals that are attainable (Russell, 2012).

Similarities were found in performance approach and performance avoidance; however, differences were found across different age groups and countries such as Korea where locus of control and individuality was valued more than in collectivistic countries such as China (Park & Kim, 1998). It can be reasonably assumed that high achieving students are motivated to achieve. In keeping with Elliot's Academic Goal theory, students who achieve have a cogent internal understanding which provides a satisfactory explanation for their personal academic achievement (Elliot & Harackiewicz, 1996).

Bjornbeck, Diseth & Ulricksen (2013) noticed a strong relationship between all indicators of academic achievement in a longitudinal study which evaluated students four times throughout their freshman year. Trying to avoid failure was correlated equally with performance and mastery avoidance goals. Self-efficacy was positively correlated with success and suggests that motives are rather stable, at least throughout the school year. Similarly, freshmen who were measured throughout the school year reported decreased work avoidance behavior and increased mastery goal setting (Meier, Rinaldi, Grassinger, Berner, & Dresel, 2013).

**Goal Orientation as a Personality Variable.** Student success is heavily predicted by goal orientation however it is unclear whether this orientation is a permanent personality trait or just a state of being. If a stable trait, students will succeed regardless of the task's difficulty. As a state, goal orientation would be flexible event. In other words, an individual's goals would be subject to change as they progressed through school and had different requirements of varying difficulty from classes. A recent literature review by Bernard Weiner (2014) observed that much research notes that interventions and awareness of one's personality can influence attributions and grades but many factors are measured in achievement theory. Historically, controlling for methodology and isolating single variables has been difficult.

**Goal Orientation and Locus of Control.** In addition to the uncertainty with personality, there also appears to be an interaction with goal orientation and locus of control. Although a small sample size (N=23) was used after screening a class of introductory psychology students, a study which analyzed high performing students' academic locus of control and goal setting using a quasi-experimental method reported

that increased awareness and intervention increased scores on academic locus of control scores (Russell, 2012).

Sometimes goal orientation and locus of control together can predict student success. A sample of undergraduate education majors with mastery approach goal orientation reported high academic achievement. A high internal locus of control played a role in mastery; however, external locus of control played a role in avoidance goal orientations. One limitation of this study is that there was not an examination of overall grades or GPA (Bulus, 2011).

**Gender differences and current limitations.** These results imply that mastery orientation may cause students to consider learning as incremental and changed by ability and effort (McClure et al, 2010). Addressing assumptions that interest in a subject would assist performance, researchers created a study using honors students as participants. Traditionally noted gender differences with ability attributions were present: males attributed effort to success and females were the reverse, perceiving natural ability as a greater predictor of success.

Much research has examined freshman success, but little research has truly looked at the locus of control and academic orientation of students who have continued their studies. Studies that have focused on locus of control or academic goal orientation generally gather data from students in introductory psychology courses which is a randomized sample of students with different ability levels and school experiences. One current gap in literature is the lack of research analyzing high achievers by themselves; let alone comparing the presence goal orientation and locus scores in a sample.

A recent meta-analysis conducted in 2012 found over 7,000 English-language articles which analyzed research domains including psycho-social influences, motivational factors, self-regulatory learning strategies, personality traits, and students' approach to learning. Highest correlates for student success were found in performance self-efficacy, high school GPA, ACT scores and grade goal. Only medium sized correlations were found in high school GPA and standardized test scores. Researchers have admitted a lack of agreement as to the relationship between measures and concepts of academic success (Richardson, et al., 2012).

### **Other Characteristics Determining Academic Success**

#### **Stress**

When discussing characteristics of successful students, the role of stress cannot be excluded. Stress is often correlated with college adjustment and has been noted as a predictor of both college adjustment and student retention (Pritchard, Wilson & Yamintz, 2007). Students find a situation stressful when they have both inadequate resources and find a situation challenging or overwhelming (Cohen, Kamarck, & Mermelstein, 1983; Sari & Handayani, 2014).). College students seem prone to stress and, when responding to a total of 40 different stressful situations, they reported daily hassles as accounting for 67.2% of academic stress. Other sources of stress, besides academics were intrapersonal, environmental, and interpersonal (Ross, Niebling, & Heckert, 1999). Naturally, educational research often focuses on stress variables to better understand the magnitude of stress on college success.

Studies note that the freshman year is the most difficult, particularly for retention rates. Many freshman have difficulty adjusting to the demands and unique environment

offered at college (DeBerard, Scott, Spelmans & Julka, 2004). Freshman and sophomores also have more intense reactions to stress than juniors and seniors. This seemed to be explained by upper classmen's superior confidence and time management (Misra & McKean, 2000). Most successful freshmen have a healthy self-esteem which helps them pursue reasonable goals (Meier et al, 2013). In addition, high-performing students seem to do better and longitudinal studies following students throughout their freshmen year identified social support, coping, and mental health as predictors of achievement (DeBerard et al, 2004).

Other research has identified individual and gender differences in stress levels. Females as a whole have better persistence rates and also use their time more effectively (Richardson, et al., 2012; McClure, et al., 2010). On the other hand they also experience more academic stress than males. Multivariate analysis found that time management seems to be predictive of academic stress, however, and time management was determined using measures which have subscales for goal setting, and planning (Misra & McKean, 2000).

However, another study noted that students who reported high levels of perfectionism as well as students who had negative coping tactics, were susceptible to poor physical health and alcohol use. Having taken their cue from research noting the college adjustment period that law students undergo, researchers conducted a longitudinal study surveying undergraduate freshmen at the beginning and end of their first year of college. Students were asked questions about their health, alcohol, stress, self-esteem, and other personality variables. The study also noted that optimism and self-esteem was indicative of better psychological outcomes (Pritchard, Wilson, & Yamintz, 2007).

**Social Support**

Social support acts as a huge buffer against stress, particularly among students with poor mental health. Social support also has a positive influence on well-being and acts as another contributing variable to undergraduate student success. Just last year, research conducted at an Indonesian University noted that social support and self-esteem were both negatively correlated with stress. Students' perceived stress, self-esteem, and social support accounted for 44.2% of the variance of psychological well-being (Sari & Handayani, 2014). Particularly noted among at-risk students is a clear model existing between familial and peer support in affecting commitment to graduate. Social support can be obtained from one's family, friends, or a special person who act as anchors for the student (Dennis, Phinney, & Chuateco, 2005).

Some opposing views exist as to the role of familial support and the role of peers. Past and present research has noted that students' generally identify their family of origin as family. This gives parents significant influence in the lives of their children, and parental support and expectations play an important role in determining stress (Strom & Savage, 2014; DeBerard et al., 2004). One study administered a questionnaire at the beginning and end of the school year and noted initial support from family was positively linked to initial commitment for graduation; similarly, reinforced support was positively linked to commitment and persistence intentions (Dennis, Phinney, & Chuateco, 2005).

**Peer support.** In addition to familial support, researchers have also noted that having supportive peers can also be important for academic achievement and retention. As a result, social support, when contextualized at university campuses is generally noted as a being comprised of family, peers, and other significant persons who may support the

students (Zimet et al, 1988; Sari & Handayani, 2014). Possibly partially responsible for different stress responses in gender are the help seeking behaviors that different genders engage in. Females seem to find academically similar peers more easily, are more likely to engage in help-seeking behaviors, and participate in tutor sessions (Caldwell, Pearson, & Chin, 1987).

Altogether, much research has tried to measure student success; however, little research has attempted to link more than two variables together (Richardson et al, 2012). In an attempt to discover the characteristics of successful high achieving populations, a study was conducted. To facilitate detection of the sample's beliefs, several scales and measures were utilized to do a confirmatory analysis and address the existence of certain researched successful behaviors in a high-achieving student population. It is not unreasonable to assume that college students who voluntarily choose additional coursework and continually attempt to maintain a competitively high grade point average would be hardworking, studious, and strongly motivated. Research has still been unable to identify how students contextualize their success as resulting from internal effort or external circumstances and what the student reports as their goal orientation. To better understand the characteristics of the sample, measures of stress and social support were also administered.

### **Hypotheses**

1. There will be a statistically significant difference in stress between freshman and seniors in the honors program.
2. There will be a statistically significant difference in social support between freshmen and seniors in the honors program.

3. There will be a positive correlation between low social support and higher amounts of stress, regardless of school classification.
4. There will a statistically significant difference in a sample of freshman and senior honors students; freshmen will have higher mastery approach goal orientation scores.
5. There will be a difference in locus of control orientation between seniors and freshmen; freshmen will be primarily external while seniors will have more internal locus of control scores.
6. There will be a gender difference in locus of control orientation; females will have higher internal locus of control scores than males.

### **Method**

#### **Participants**

This survey was conducted at a private, evangelical university and data were gathered during the spring semester of the 2015 academic school year. Since all participants were university undergraduates, students were between 18-25 years of age. The Honors Program from which students were recruited requires that its members meet several requirements before receiving admittance to the program. Applicants who apply from high school must (a) have at least a 3.5 high school GPA; (b) have a minimum 29 ACT score or a 1270 SAT score; (c) write an essay for admittance and (d) complete an application form. Limited spots are available as the Honors program may only make up 5% of the residential population. Students can transfer into the Honors program so long as they have fewer than 60 credits and have a high college GPA, preferably a 4.0. Freshman participants are defined as first-year students who self-report as freshman.

Senior students are defined as students who have one year or less of undergraduate school remaining and self-report as seniors.

Continued membership in the Honors Program is conditional; students must keep at least a 3.5 GPA, complete honors coursework each semester, and, in their final semester, write an undergraduate thesis. Students are rewarded with a \$2,000 scholarship each semester that they are members of the Honors program. As a result, all Honors Program students benefit from their continued enrollment in the Honors Program (Liberty University Honors Program, 2014).

### **Materials**

**Perceived stress scale (PSS).** The PSS is a 10-item measure that is one of the most widely used scales to measure the perception of stress (Cohen et al., 1988). Scores range from 0-40. The perceived stress scale has predictive validity for determining how unpredictable, uncontrolled or overwhelmed respondents find their lives. The scale is not diagnostic, and as such, can only be used when compared with others in a sample. Large normative U.S. data samples have demonstrated good reliability for anticipating negative biological responses associated with stress (Misra & McKean, 2000). Individuals are asked to respond to questions on the PSS about how often they feel a certain way in the last month, e.g. "In the last month, how often have you been upset because of something that happened unexpectedly?" Answers are on a 5-point Likert scale ranging from Very Often to Not Often.

**Multidimensional scale of perceived social support (MSPSS).** The measure evaluates the amount of social support one receives from friends, family, and significant others. Created in 1988 to "assess perceptions of social support adequacy," the measure

had strong factorial validity, reliability, and good construct validity (Zimet et al, 1988). Test-retest reliability conducted with college student populations was also good. The MSPSS asks participants to respond to a set of 12 questions on a 7-point Likert scale. The scale has a subscale for friends, family members, and significant others. Questions are straightforward, e.g. "I get the emotional help and support I need from my family" and "There is a special person with whom I can share my joys and sorrows."

**Academic locus of control (ALC).** First created by Trice, the Academic Locus of Control (ALC) was developed to significantly address queries about locus of control in student academic achievement (1985). Questions are answered either true or false and gauge internal locus of control. Higher scores indicate a more external locus of control with a maximum score of 28. Certain items were reverse coded to maintain integrity in the scale. The test had a test-retest reliability at .90 and good construct validity. Some sample questions are: ["I sometimes feel that there is nothing I can do to improve my situation," "I consider myself highly motivated to achieve success in life."]

**Academic goal questionnaire-revised (AGQ-R).** The Academic Goal Questionnaire (AGQ) was conceived in 1996 and posits that students are motivated to either learn in order to master content, (Mastery-oriented) or to enjoy the feelings associated with performing well or Performance-oriented (Elliot & Harckiweicz, 1996). Subsequent analyses resulted in the development of The Academic Goal Questionnaire-Revised (Elliot & Murayama, 2008).

### **Procedure**

Prior to receiving IRB approval, contact was made with the director of the Honors' program to solicit permission to have the Honors program distribute a

recruitment email with a URL link to the survey. After receiving IRB approval, survey questions were entered into Qualtrics, an electronic survey generator, and distributed. The survey was completed by freshmen and senior students in the honors program. There was no direct benefit for students who responded to the survey; however the high volume of senior responses to the survey suggests that students may have had feelings of empathy towards the researcher or anticipated feelings of satisfaction from participating.

Additionally, the Honors program email list of freshman and seniors allowed data collection to be gathered using a purposive, volunteer sample of student participants. In the electronic notification students were made aware that there were no negative ramifications for refusing to participate in the survey. The data was quantitative, using demographic data and four different inventories were utilized to assess characteristics of the sample. Specific criterion was observed to determine whether the data given from the student was included in the study, ascertaining that (a) the individual was currently enrolled in the Honors program (b) the student was either a freshman or senior and (c) students were at least 18 years of age. In addition, descriptive data was gathered by obtaining the demographics of (a) gender (b) current college GPA; (c) age and (d) number of years at college.

### **Results**

The study was made available to all senior and freshmen honors students, a population of 315 students. Only 54 students actually responded (15% of the population). Data were then entered into the statistical analysis program, SPSS. Preliminary data screening was conducted to check for extreme outliers or missing values. Five students reported as sophomores or juniors and were removed from analysis. Descriptive statistics

revealed that the participants were comprised of more seniors (69%) than freshmen (31%). The population lacked diversity, 98% of the participants were White, the remaining 2% were Latino, and the majority of participants were women; (Females =32, Males =17). Normality was assumed for the three major variables; stress, social support and locus of control. Stress and locus of control were roughly normally distributed and social support displayed a slight left skew.

The results were analyzed to aid in understanding whether the overall study was supported. A between-groups independent sample  $t$  test was performed to assess whether mean stress scores were different for a sample of freshmen and senior honors' students. A test for homogeneity of variance was test using the Levene's test,  $F= .048, p= .827$ ; this indicated that equal variances can be assumed and analysis could be conducted. Mean stress scores did not differ significantly,  $t(28) = 1.137, p= .265$ . Mean stress for freshmen ( $M_1 = 32.86, SD_1 = 3.85$ ) was not significantly different from the mean stress score for the senior group ( $M_2 = 31.48, SD_2= 4.0$ ). The 95% CI for the difference between sample means  $M_1$  and  $M_2$  had a lower bound of -1.11 and an upper bound of 3.87.

Social support was also relatively similar between a sample of Honors program freshmen and seniors. Results from a Levene's test for homogeneity,  $F= .278, p =.601$ , allowed equal variance to be assumed. Mean scores were not statistically different,  $t(46) = -.183, p=.856$ , two tailed. Means for freshmen ( $M_1 = 70.5$ ) and seniors ( $M_2 = 71.1$ ) were not statistically significant. The 95% CI for the difference between the two sample means was -7.4 for the lower and 6.2 for the upper.

A Pearson correlation was completed to examine whether levels of stress were related to levels of social support. The scores of all of the respondents, regardless of year

classification, were used. The correlation was not statistically significant,  $r(49) = -.253$ ,  $p = .073$  (two-tailed).

To continue exploring the existence of any differences in sample of freshmen and senior honors' students, the fourth hypothesis was also evaluated with an independent sample  $t$  analyses. Mastery approach scores were insignificantly different among the sample of Honors College freshmen and seniors. After running Levene's test for homogeneity,  $F = 2.003$ ,  $p = .164$ , equal variance was assumed. Mean scores were still statistically similar,  $t(46) = .151$ ,  $p = .881$ , two tailed. Means for freshmen ( $M_1 = 3.93$ ) and seniors ( $M_2 = 3.9$ ) were alike. The 95% CI for the difference between the two sample means was  $-.424$  for the lower and  $.493$  for the upper.

Locus of control was also relatively similar between a sample of Honors College freshmen and seniors. After running Levene's test for homogeneity,  $F = 1.849$ ,  $p = .18$ , equal variance was assumed. Mean scores were closely related,  $t(46) = .310$ ,  $p = .758$ , two tailed. Means for freshmen ( $M_1 = 11.73$ ) and seniors ( $M_2 = 11.39$ ) were alike. The 95% CI for the two sample means was  $-1.9$  for the lower and  $2.5$  for the upper.

Table 1  
*Descriptive Statistics between freshmen and Seniors*

		Mean	SD
Stress	Freshmen	32.86	3.85
	Seniors	31.48	4.0
Social Support	Freshmen	70.45	12.7
	Seniors	71.1	9.9
Goal Orientation	Freshmen	3.93	.84
	Seniors	3.9	.68
Locus of Control	Freshmen	11.73	4.1
	Seniors	11.39	3.2

After using an independent sample  $t$  test, the sample suggested that locus of control was not influenced by gender differences. After running Levene's test for homogeneity,  $F = .066$ ,  $p = .799$ , equal variance was assumed. Mean scores were still statistically similar,  $t(46) = -.142$ ,  $p = .887$ , two tailed. Means for men ( $M_1 = 11.35$ ) and women ( $M_2 = 11.5$ ) were alike. The 95% CI had a lower bound of  $-2.2$  and an upper bound of  $1.9$ .

### Discussion

Of the six different hypotheses, none of them were statistically significant as analyzed by the collected sample data. These results suggest that although literature has marked gender differences in locus of control these were not expressed in a sample of high achieving students. Likewise, there were no significant differences in stress or social support when students were divided into groups based on their year in school. The college experiences of high achieving students were quite similar in the sample; the students' scores were not different regardless of classification. Overall, significance may have been achieved if there was a bigger sample size. Although descriptive analyses provided generally normal distributions for locus of control, stress, and social support scales, the small sample size diminished statistical power. To obtain an ideal sample with a statistical power of 80%,  $\alpha = .05$ , and an effect size of  $.3$  would have required a sample of 102 participants, equally split between freshmen and seniors (Faul, Erdfelder, & Buchner, 2007).

The data for this survey were collected in the spring around the time when midterm exams were being administered and when many other students were preparing to graduate and working on their own honors assignments. Stress seemed to be felt

regardless of academic classification, and similar stress was reported by both groups. Likewise, social support only slightly differs between the two groups, assisting the portrayal that successful students have a good social support network.

The goal of this research was to confirm the presence of different variables which are thought to be present in successful students. The absence of external locus of control among college seniors even in the presence of stress suggests that internal locus of control plays a bigger role in determining college persistence than previously understood. Results indicated that external locus of control was marginally more present among freshmen than seniors. Since the study was limited by its small sample size, the locus of control results could not be fully investigated. It is possible that the results may have inadvertently shown a characteristic which determines burnout. Any students who have an external locus of either drop out of the honors program prior to obtaining senior status or have a lower GPA than those with an internal locus of control.

Results from this study were only partially supported by previous literature. With regards to gender differences, it was true that women were slightly more internally motivated. Literature had suggested that freshmen had trouble adjusting to college, particularly if they do not have strong social support and have overwhelming stress levels. However, this study overemphasized the possible differences between freshmen and senior students. Both groups were similar so that college freshmen are already prepared with the necessary mindset and characteristics to succeed (Gifford et al., 2006; Hasan & Khalid, 2014).

This research could help develop a model of what differences, if any, exist among high achieving students. High achieving students are thought to be driven and motivated

by their own desire for facts. Although it seems intuitive that high-achieving students would exhibit behaviors associated with success, the intensity of these attitudes is suspect. This study can be used to better understand how high achieving students view themselves and other high achieving students.

### **Limitations**

While it was helpful that 15% of the analyzed population responded without receiving any financial compensation or academic credit, the usual reimbursements offered to college students, the small size also impacted overall statistical power. Students may have opted out of responding due to busy schedules or a lack of interest. In addition, the reported stress scores of the students may be impacted by the timing of the survey. Ironically, it was seniors, students who are generally working on their own senior project or thesis, who provided more than twice of the responses compared to freshmen. This could possibly be a result of empathy on the part of the senior students.

As data were entirely self-reported, respondents may respond inaccurately or attempt to select a socially desirable response. The participants had full knowledge that collected data would be gathered and used to describe the honors population. Although the different measures, the MSPSS in particular, reported little social desirability interference, students might have been sensitive to questions. Another limitation of the sample distribution is the cross-sectional nature of the study which hampers any conclusive claim for goal orientation existing as a trait or state characteristic.

Other external events could impact student stress and their decision to remain in the Honors population. Another possible skew influencing results may have been the amount of financial aid students were receiving for their continued membership in the

honors' program. Students who had exceptional standardized test scores on the SAT (Scholastic Aptitude Test) received either free tuition or a full ride in return for their continued participation in the Honors program; a factor which would make grades extremely important to them. The purposive gathering of the sample did not attempt to isolate full-ride tuition honors students from those only receiving a scholarship of \$2,000 a semester for their continued performance and enrollment in the honors program. The study also lacked a comparison group of non-honors students to compare descriptive and demographic results. A comparison group could have eliminated some of the confounding variables associated with the specific demographics of the sample. Likewise, a sample of at-risk students or honors students who had dropped out of the honors program would have provided a basis of comparison for the stress, social support and locus of control scales.

A key limitation of the overall research design is that the exact relationship between student characteristics and academic achievement cannot be causally inferred by this study. The researcher could not eliminate confounding variables or determine temporal precedence. The different constructs involved are complex and the study was only able to give descriptive information about the sample. The exact characteristics which decide student success cannot be confirmed by one sample alone; going forward, future research should identify what experiences can cause students to formulate or reconsider their attributions. In particular, data may have difficulty generalizing to honors or high achieving populations with less external reinforcements. Continued research should try to examine locus of control and goal orientation as predicting college adjustment. Research should also be done at large, public universities'; providing a more

diverse pool of participants than those at the previously described private university. A longitudinal study, for instance, would greatly clarify what predicts burnout and the fluidity of student locus of control and goal orientation. Research could also benefit by researching goal orientation for high achieving students who are not receiving any scholarship and are not asked to complete additional assignments.

### **Conclusion**

The current study aimed to evaluate the presence of established markers of student success in a competitive, high achieving cohort of college students. High-achieving undergraduate seniors and freshmen have similar stress levels and levels of social support. There have been researched differences in students who maintain an external locus of control compared to students who keep an internal locus of control. The study attempted to determine the role of Internal Locus of Control and mastery approach goal setting as being important for student success and retention among a high-achieving group of students.

Although stress and social support results were nonsignificant, continued research should examine the influence of academic behaviors on reported stress. For now, it seems, successful students already have preexisting tools for success. The practical significance of these findings should be analyzed. In particular, universities could use current understandings of gender, goal orientation, and locus of control in interventions for high achieving college students who struggle to adjust to college rigor. College professionals, in particular, as well as achievement theorists, could utilize data samples to direct their research towards the traits that describe a well-adjusted, high achieving

student and, inversely, the traits that hurt students and harm one's chances of persistence and achievement.

To date, many researchers have identified different programs such as attributional retraining (AR) to help students at-risk and teach them to visualize their ability and prospective outcomes differently. These same programs might be useful for performance-driven students. A competitive campus culture may place undue pressure on students to perform well and can encourage students to drop-out or rethink their post-secondary goals. Research can examine how innate these beliefs are and what social factors can contribute to poor social support and stress. Then, researchers can continue to use university funds to benefit vulnerable student populations.

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