

## MOTIVATION, SELF-CONFIDENCE, AND EXPECTATIONS AS PREDICTORS OF THE ACADEMIC PERFORMANCES AMONG OUR HIGH SCHOOL STUDENTS

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The recent interest in high school students' levels of achievement has led to greater examination of the predictors that facilitate such performances. Colleges and universities have become more selective in student admissions, not only examining high school academic records, but also student participation in extracurricular activities. This study examined the relationships among students' academic performances, expectations, motivations, and self-confidence during a summer orientation at a large southeastern university ( $n = 4,012$ ). The effects of parental education levels on students' performances were also studied. Significant positive correlations were found among all variables. These variables were also all significant predictors of students' academic performances. Gender had statistically significant effects on students' expectations and self-confidence levels. These results are consistent with previous studies and provide additional pathways for future research.

The increasing attention given to understanding the characteristics that promote high levels of academic performance and expectations among high school students has led researchers to look beyond the confines of individual thought and examine the *macrosocial* influences that affect individual performances. Thus, more outside predictors of individual scholastic performances, such as parental encouragement, should be studied in addition to an individual's own motivations and expectations. After all, many factors outside a student's control can influence his or her academic performances. These external predictors, jointly with the individual's own characteristics, should significantly affect a student's performances and expectations, thereby demonstrating to be strong predictors of his or her academic successes.

Several studies have focused solely on examining the external predictors of students' academic successes, such as the roles of parental encouragement and involvement in their children's academic performances. These studies have shown that the parental attitudes displayed towards their children have significant impacts on their children's behaviors relating to school achievement (Epstein, 1995; Finn & Rock, 1997; Halle, Kurtz-Costes, & Mahoney, 1997; Moss & St. Laurent, 2001; Stevenson & Baker, 1987). Moreover, according to Stevenson & Lee (1990), parents who believe that their children's performances are determined by their abilities tend to participate less frequently in their children's school careers than those parents who believe their children's performances are determined by effort. Miller (1995) discussed the role of parents as supporters of their children's academic success, and indicated that parental attributions towards their children's academic performances are established early in the children's school careers. Furthermore, according to Kelly & Michela (1980), *attribution theory*, the study of perceived

causation, suggests that parent and teacher attributes towards their children's performances affect their development, abilities, and capabilities to a great extent. Therefore, the positive signs of parental and teacher encouragement displayed toward their children have significant positive impacts on their children's successes, and are vital to enhance and maintain positive growths and levels of academic performances (Bell, Allen, Hauser, & O'Conner, 1996; Cutrona, Cole, Colangelo, As-souline, & Russell, 1994; Finn & Rock, 1997; Hoffman & Weiss, 1987; Moss & St. Laurent, 2001; Peng, 1994).

However, in order to understand the functions of parental actions, it is important to consider the key components within the family. Parental education levels have been found to be significant predictors of their children's academic successes, with higher levels of degree attainments (i.e., High School, Associates, Bachelors, Master's, Doctoral) by parents leading to higher levels of academic performances among their children (Kohn, 1969; Majoribanks, 1979; Stevenson & Baker, 1987). This level of degree attainment also impacts the socioeconomic status (SES) of these families, often creating additional opportunities for these children to receive several types of aids (i.e., tutors, computers, calculators) to enhance their performances both in and out of school.

Levels of students' internal characteristics, such as motivation and self-confidence, also strongly influence their achievements during their high school careers; however, little is known concerning the extent to which each of these factors affects academic performances and expectations. According to Georgiou (1999), researchers have linked performances to two major areas: what the student *can do* and what the student *actually does* in an academic environment. These two areas allow researchers to assess student abilities and capabilities, creating a more descriptive measure of performance. However, Georgiou (1999) indicated that the level of an individual's internal motivation is considered the most critical component in the attempt to gain knowledge of how the student is performing. Many students are capable of producing higher academic performances (i.e., better grades, greater involvement in academic events, or greater interaction with teachers); however, for at least *some* of these students, the influence of significant others on their performances may be weak (Georgiou, 1999). For these students, internal constructs may play the determining roles in their performances. According to House (1997), perceiving oneself as competent positively influences one's self-concept, whereas perceiving oneself as lacking competence negatively influences one's self-concept. These levels of competence and self-concept have been found to be significantly related to students' academic performances. For example, these feelings often affect students' perceptions of themselves. Boys are more prone to identify self-enhancing patterns in their self-descriptions of their aptitudes and achievements while girls are more prone to demonstrate self-derogating patterns in their self-descriptions of their aptitudes and achievements (Burgner & Hewstone, 1993; Furnham & Rawles, 1995; Stipek & Gralinski, 1991).

Through the vast amount of influences students receive throughout their academic educations, it is no wonder that there are so many predictors affecting their school performances. Along with the internal motives and desires they have for themselves, there are many others from influential characters such as parents and

teachers. The constant information provided to them about their academic characteristics from outside sources, along with their own beliefs and feelings suggest a multitude of internal and external predictors of success.

This study described relationships among academic performances, motivations, self-confidence, and expectations among high school students. It was designed to extend current research by employing a large, representative sample, as well as adding external factors such as parental characteristics, to a set of academic variables. Gender differences across factors were explored based on significant findings in prior research (Brandon, 1991; Burgner & Hewstone, 1993; Furnham & Rawles, 1995; Stipek & Gralinski, 1991). The identification of such predictive measures could be instrumental in impacting students' academic performances by helping them perform at higher levels during post-secondary school. Studies have also suggested that social structural variables influence individuals' perceptions, which in turn influence behaviors related to performance outcomes (Connell & Wellborn, 1991; Patterson, 1988). Therefore, it appears that these variables have both direct and indirect effects on children's educational outcomes and should be examined.

### *Method*

#### *Participants*

This university archive comprised 4,012 surveys of students aged 17 years and older. Participant mean age was 19 years ( $SD = 1.83$ , Median = 18). Their ethnicities were: European American (77%), African American (9%), Hispanic (7%), Asian American (4%), and Other (3%) racial groups. There were 1,813 males (45%) and 2,199 females (55%). Fifty percent of the participants were Protestant, 24% were Catholic, 4% were Jewish, 12% reported an "Other" religion, and 10% had no religious preference.

#### *Measures*

Data was collected during Freshman Orientation at one large southeastern university. The Freshman Survey Instrument, developed by the Cooperative Institutional Research Program (CIRP, 1995), was used to collect information from all participating students. This forced-choice survey was used to better understand the influences of academic ability on school performances. The CIRP assessment examines a wide variety of measures including student characteristics and beliefs, parental education, and student expectations. In particular, variables that were of interest were academic performances, motivations, self-confidence, expectations, parental encouragement, and parental education levels. Based on prior research, these factors have shown consistent relationships with one another, and were examined further.

#### *Variables*

The dependent variable used was a composite factor that incorporated:

*Academic Performance.* The response ratings from items concerning students', (a) average grade in high school and (b) perceived level of academic ability were meas-

ured. For the item concerning student's average high school grade, students chose from 1-A/A+, 2A, 3B+, 4B, 5B, 6C+, 7C, and 8-D. Current perceived academic ability was measured using an ordered scale: 1-Above Average, 2-Average, and 3-Below Average.

The independent variables used were also composite factors including:

*Expectations.* The response ratings from items concerning the (a) chance of making at least a "B" average and (b) graduating with honors were examined. Variables were measured using a four-point scale: 1-Very Good Chance, 2-Some Chance, 3-Very Little Chance, and 4-No Chance.

*Motivation.* The response ratings from items based on the students' (a) level of leadership ability and (b) drive to achieve, which were also measured using a recoded, ordered scale: 1-Above Average, 2-Average, and 3-Below Average. Students rated their perceived leadership abilities and drives to achieve compared to the *average student*.

*Self-confidence.* This incorporated (a) intellectual self-confidence and (b) social self-confidence. These variables were measured using a recoded, ordered scale analyzed as: 1-Above Average, 2-Average, and 3-Below Average. Questions asked the students to rate their self-confidence as compared to the *average student*.

*Parental Education Level.* These items addressed (a) the father's and (b) the mother's highest educational degree. Parental education levels were analyzed as: 1-Less Than High School, 2-High School, 3-College, 4-Some Graduate School, and 5-Graduate School.

### *Procedure*

This study set out to create a small group of factors to examine the relationships and interactions among a large set of variables. An exploratory factor analysis was performed to provide variable parsimony. A five-factor design was the most appropriate solution for these variables, accounting for 69% of the total variance explained. Since factors in this study would tend to be intercorrelated, an oblique rotation was used to analyze the findings.

Data were analyzed through several procedures. First, Pearson product-moment correlation coefficients were calculated among all variables and factors. The results indicated several positive, significant correlations. Independent sample t-tests were also completed to examine gender differences across factors. Lastly, a series of multiple regression analyses were conducted to investigate the relationships between the independent and dependent variables.

### *Results*

Factor 1, Academic Performance, comprised items relating to students' perceived academic abilities and their average grades in high school. Factor 2, Expectations, incorporated variables relating to students' perceptions of their chances of graduating with honors, and their expectation of earning at least a B grade average. Factor 3, Motivation, contained students' perceived drives to achieve and their perceived leadership abilities. Self-confidence, factor 4, included both students' intellectual and social self-confidences. Parental Education, factor 5, related to the

father's and mother's educational levels. The separation of variables into factors closely resembled the conceptual literature. Factor loadings can be seen in Table 1.

TABLE 1  
*Factor Pattern Matrix*

Variables	Factors				
	Academic Performance	Expectations	Motivation	Self-Confidence	Parental Education
1. Academic Ability	<b>.48</b>	.08	-.05	.21	.08
2. Drive to Achieve	.18	.08	<b>.27</b>	.10	-.01
3. Leadership Ability	.01	-.01	<b>.72</b>	.02	.10
4. Self-Confidence (I)	-.15	.04	-.05	<b>.70</b>	.12
5. Self-Confidence (S)	-.17	.00	.27	<b>.59</b>	-.07
6. High School GPA	<b>.62</b>	.06	.08	-.08	-.06
7. Grad. with Honors	-.15	<b>.88</b>	-.01	-.02	-.04
8. Make a B Average	.12	<b>.37</b>	-.02	.08	.06
9. Father's Education	.28	.02	-.01	-.05	<b>.74</b>
10. Mother's Education	-.11	.00	.06	.05	<b>.52</b>

*Note:* Largest loadings are bolded.

Pearson product-moment correlation coefficients among predictor factors are presented in Table 2. A list-wise deletion controlled for all missing values. The correlation between motivation and self-confidence was .50, demonstrating a moderate, positive relationship between students' motivation to succeed and their personal intellectual and social confidence. Academic performance had a positive, statistically significant correlation with students' expectations, leading to the conclusion that as levels of academic performance rise, so in fact do expectations relating to these performances. Academic performance was also significantly correlated with students' motivation, self-confidence, and encouragement. This leads to the assumptions that when levels of motivation, self-confidence, and encouragement among parents and mentors increase, so do the levels of students' performances. Student expectations were found to be significantly correlated with motivation, thereby indicating that when students' levels of motivation increase, there tends to also be an increase in their expectations of academic success. The statistically significant relationship found between students' expectations and their self-confidence demonstrates that the higher the level of self-confidence a student perceives, the higher the level of expectations he or she will portray. Lastly, parental encouragement was significantly related to academic performance, showing that the higher the levels of educational attainment by the students' parents, the higher the levels of their own academic performances.

TABLE 2  
*Correlations Among Factors*

	1	2	3	4	5
Academic Performance	1.00				
Expectations	.67**	1.00			
Motivation	.11**	.27**	1.00		
Self-Confidence	.17**	.32**	.50**	1.00	
Parental Education Level	.16**	.39**	.25**	.34**	1.00

\*Pearson  $r$  correlation is significant at the 0.05 level (2-tailed).

\*\*Pearson  $r$  correlation is significant at the 0.01 level (2-tailed).

Independent samples  $t$  test results are shown in Table 3. These yielded statistically significant gender differences for expectations, self-confidence, and parental education, similar to previous findings (Eccles, Wigfield, Flanagan, Miller, Reuman, & Yee, 1989; Findley & Cooper, 1983). This shows that there are, in fact, differences between the levels in which males and females characterize themselves. For example, these results show a statistically significant difference between males and females with respect to their reported self-confidence levels. Particularly, this study indicates that males have a significantly higher level of perceived self-confidence than females, both intellectually and socially. However, although statistically significant gender differences were found among these factors, the  $t$  values indicate that the differences were small.

TABLE 3  
*Independent Samples  $t$  Test For Gender Differences*

Predictor Factors	Male		Female		$t$	$df$	p-value
	X	SD	X	SD			
Academic Performance	-.03	.96	.03	.94	-1.43	2247	.152
Expectations	-.07	.79	.06	.79	-3.90	2247	<.001
Motivation	.03	.80	-.02	.81	1.42	2247	.155
Self-Confidence	.11	.79	-.08	.88	5.30	2247	<.001
Parental Education	.04	.81	-.03	.80	2.27	2247	.023

Note. All values are based on standardized scores.

Results from the series of multiple regression analyses on academic performance are shown in Table 4. The overall model  $R^2$ , reflecting the overall strength of relationship between the independent and dependent factors, was statistically significant,  $F_{(4, 3247)} = 3.32$ ,  $p < .01$ , and the model explained 25% of the variance in academic performance. All four predictor factors significantly entered the model,

with expectations entering the model first as the most significant predictor factor, followed by parental education level, motivation, and self-confidence. All predictor factors that entered the model were statistically significant. Gender, however, did not enter the model, demonstrating a very small and non-significant net effect on students' academic performances.

Table 4 also shows standardized effect estimates and *t* values for each predictor as it entered the model. The effect estimates reflect standardized unit changes in academic performances for every standardized unit change in a predictor, controlling for other factors. Expectations and parental education level most greatly affected students' academic performance. Motivation and self-confidence also significantly impacted academic performance.

TABLE 4  
*Multiple Regression Summary on Expected Academic Performance<sup>a</sup>*

Model	Beta	<i>t</i>	R <sup>2</sup>	Adj. R <sup>2</sup>	F
1			.50	.50	554.03**
Expectations	.72**	37.76**			
Parent Educational Level	.22**	10.70**			
Motivation	.09**	3.83**			
Self-Confidence	.02**	.68**			

\* Significant at the 0.05 level (2-tailed).

\*\* Significant at the 0.01 level (2-tailed).

<sup>a</sup> Dependent Variable: Academic Performance.

### *Discussion*

The rising attention to predictors of academic performances in the mainstream public reflects its increasing value as an important area to be examined. Consequently, the results of this study provide insight into some of the most pertinent predictors of academic successes among high school students. This research examines the (a) relations among academic performances, motivations, self-confidences, and encouragements (b) relations between parental education levels and their children's academic performances, and (c) and gender differences across the predictor factors and academic performances. Many results are consistent with prior literature in that beliefs and actions taken by students do impact their performances. This research finds and examines several important predictors of students' performances that will be useful in supporting and improving student beliefs and goals: expectations, motivations, self-confidences, and parental education levels.

Students' expectations, parental education levels, motivations, and self-confidences all emerge as significant predictors of their academic performances. Expectations are the strongest predictors of students' performances in school, implying that if students have strong beliefs that they will accomplish a particular skill or goal, they are more likely to succeed in that attainment. Motivation levels are also strong predictors of student performances. Motivation is the energy that is

innate within all individuals, and high levels directed toward a particular situation results in greater amounts of energy expended on that task. Therefore, greater desire and higher levels of energy targeted at accomplishing a goal should result in higher levels of performance. These results are in accordance with House's (1997) conclusions that students' academic performances and motivations are significantly related to one another. Furthermore, students' self-confidences were significant predictors of academic performances. Although weaker predictors of academic performances when compared to students' expectations and motivations, these measures are still statistically significant. Findings from Levitt, Guacci-Franco, & Levitt (1994), suggest that higher levels of students' self-confidence should result in higher levels of their academic performance. These results are supported by this study, demonstrating a strong relationship between students' self-confidences, both intellectually and socially, and academic performances.

Relations between academic performances and parental education levels were also examined and the results resembled prior studies (Riggio, Watring, & Throckmorton, 1993; Robbins, Lese, & Herrick, 1993; Zea, Jarama, & Bianchi, 1995). Parental education levels, as well as parental involvement, significantly impacts their children's performances. This pattern is consistent with prior research on the educational achievements. For example, the importance of parental education levels and encouragements on students' academic performances has been discussed (Georgiou, 1999; Riggio, Watring, & Throckmorton, 1993). Many studies have suggested that parental education levels and encouragements transmit certain beliefs concerning the importance of an education and success during their school careers (Robbins, Lese, & Herrick, 1993; Zea, Jarama, & Bianchi, 1995). Parental education levels may not always directly affect their children's performances; however, it does tend to play a strong indirect role in how the children are raised. According to Georgiou (1999), parents with higher education degrees are typically more involved in their children's academic careers, thereby placing more emphasis on academics than those parents with lower education degrees and less involvement in their children's education.

Gender differences are also examined in order to reveal any variances between sexes. According to the literature, there are relatively no significant sex differences in academic performances, motivations, or expectations (Fass & Tubman, 2002; House, 1997). However, gender differences have been seen in self-confidence levels (Eccles, Wigfield, Flanagan, Miller, Reuman, & Yee, 1989; Findley & Cooper, 1983). Males typically have higher levels of self-confidence than females in professional and social situations. Accordingly, this study finds significant, but small sex differences in the areas of self-confidence and expectations. Compared with prior literature, finding significant sex differences among these factors suggests that additional research in these areas is needed. In this study, males and females do have different levels of self-confidence and levels of expectations. Further investigation is needed to assess why these findings have occurred, and how sex differences can be minimized. Self-confidence, an area that has seen much gender differentiation in the literature, agrees with prior findings: males have more intellectual and social self-confidence than females.

Results from this study have clarified some of the predictors of academic success. However, although this study has aided in providing additional knowledge and insight into some of the key predictors of academic performance, there are limitations that should be acknowledged. This study, although utilizing a large, representative sample of students accepted to a southeastern university, has limits in generalization. Individuals entering a large, well-recognized, very competitive university most likely have different value systems from the general population. Therefore, the students in this study may have traits that differ from the high school student population that will not or has not attended college. These results pertain to students who are about to begin college and who have achieved moderate to high levels of academic performance. In addition, obtaining students from numerous universities, both public and private, would aid in the ability to generalize the findings to the national student public attending higher educational institutions. Findings in this study show that expectations, motivations, self-confidences, and parental education levels influence student academic performances; however, no information was collected to *validate* student assumptions. Gathering data on students after they have attended a university for one year, or multiple years, would help validate student predictions of academic successes and accomplishments. Therefore, additional research is needed to examine these students after some college experience. In addition, this study relies on self-reported data. Information regarding students' high school grades may have been more valid if they were received using the students' high school registrar's office; however, this process would have taken much time due to the large case base in this study. Also, studies have shown high correlations between self-reported grades and grades obtained from school registrars' offices (Rabow, Radcliffe-Vasile, Newcomb, & Hernandez, 1992).

This research set out to explore some of the many factors that affect students' academic performances. It was shown that students' academic performances are impacted by their levels of expectations, motivations, and self-confidences. Also, parental education levels are shown to have strong relationships with students' academic performances. Higher levels of positive student beliefs and parental education levels were associated with higher levels of academic performances. Students with higher levels of expectations, motivations, and self-confidences tend to have higher levels of academic successes. Although there are statistically significant gender differences, regression results were similar for males and females. Expectations, motivations, self-confidences, and parental education levels are predictors of academic performances for both sexes.

Through the findings in this research, parents, teachers, and advisors can recognize and understand some of the factors that influence their children's and students' desires for success. Furthermore, results of this study show similar predictive relationships for male and female students. These findings are consistent with results of prior research and provide a number of directions for additional study.

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