The Relationship between Broad and Narrow Personality Traits and Self-Reported Grade Point Average of College Students

Amy B. Holmes

University Honors Program

University of Tennessee at Knoxville

Abstract

The purpose of this investigation was to corroborate recent research indicating that personality may be as significant as standardized test scores and high school grade point average (GPA) in determining collegiate success. This study examines the relationship between academic success as measured by college GPA, life satisfaction, and personality traits as identified by the Big Five model and more narrow traits, including aggression, career mindedness, emotional stability, sense of identity, optimism, self-directed learning, tough-mindedness, and work drive. A total of 522 college students were included in the study that used the Transition to College Assessment, including the Resource Associates Personal Style Inventory (PSI) and the Adolescent Personal Style Inventory (APSI), to assess personality traits and self-reported student GPA. Gender differences were also examined. Results revealed a significant correlation between GPA and life satisfaction, as well as work drive, optimism, and openness, among a number of personality traits. Data analysis of incremental validity in life satisfaction of college students attributable to personality traits above and beyond GPA also revealed significant findings. Clearly, this is evidence that such personality factors may be one of the keys to predicting academic success and satisfaction among college students and that more research is needed to investigate this relationship.

A Study of Broad and Narrow Personality Traits in Relation to Self-Reported GPA of College Students

The purpose of this study was to examine the relationship of broad and narrow personality traits to academic performance among college students. The prediction of academic success from individual differences variables has been the subject of much psychological research. Previous studies concentrated on cognitive predictors of academic performance, including intelligence, while more recent studies have implicated personality constructs as performance predictors.

In the past, much of the research on cognitive predictors of academic performance provided the impetus for assessing students' cognitive abilities using standardized testing and grades.

For a number of years, student grade point average (GPA) has been cited as the best measure of ability and achievement in the academic domain. GPA can also be used as a partial determinant of life satisfaction among students both in college and later in the workforce. In addition, there has been much documentation of the correlation between high school GPA and college GPA, as well as between standardized test scores (e.g. ACT or SAT) and college GPA (Paulos, 2001).

Consistent with these findings, most institutions of higher education review high school GPAs and ACT or SAT scores as part of their systematic approach to predict success of potential students. However, in 2001, the president of the University of California announced his decision to terminate the requirement of

SAT scores for entrance to the school in light of a study that determined that SAT I scores were poor predictors of success in college (*New SAT I Study Reveals Exam's Limitations,* 2001). Indeed, most studies find that only 10 to 20 percent of the variance in first year college GPA can be explained by SAT scores and that the correlation between them is weaker than once thought (Paulos, 2001). Other recent research has also revealed that standardized scores may not be the best predictors of academic success and satisfaction at the collegiate level and that other factors like personality may be at work (Shen & Comrey, 1997).

There are a vast number of studies documenting the development of human personality during the early childhood years preceding school enrollment. It follows that personality also precedes the establishment of a high school GPA and develops long before college-bound students take the ACT or SAT. As noted by Rothstein, Paunonen, Rush, & King, there are logical and empirical grounds for the prediction of academic performance from personality variables (1994). Therefore, personality may relate to academic efforts as measured by collegiate GPA and may be used to predict the likelihood of the academic success of future students.

To this end, a multitude of studies over the past years have evidenced a relationship between personality and academic achievement (Boyer & Sedlacek, 1988; Brown, 1994; Dollinger & Orf, 1991; Musgrave-Marquart, Bromley, & Dalley, 1997; Dyer, 1987; Okun & Finch, 1998: Omizo, Ward, & Michael, 1979; Pfeifer & Sedlacek, 1974; Rainey, 1985; Rothstein, et. al., 1994; Wolfe & Johnson, 1995). More recent research investigating the predictability of college

grades from personality has focused on traits identified in the Big Five model. The Big Five paradigm has been identified as an effective theoretical framework for measuring personality traits, specifically, Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. The construct validity and structure of this model has been verified in a variety of studies based on different individual characteristics and circumstances (Costa & McCrae, 1995; Lounsbury, et. al., 1999). In one specific study examining the relationship between academic success and the Big Five paradigm found that among younger students, Conscientiousness, Openness, and to a lesser degree, Extroversion, were positively correlated with GPA, and that among college students, there was a positive relationship between Conscientiousness and academic achievement, as well (Clark, 2000). Similar studies of the correlations between GPA and personality revealed a positive relationship between GPA, Conscientiousness, and Openness and found that Openness and Conscientiousness were predictive of exam performance and course grades (Musgrave, Marquart, Bromley, & Dalley, 1997; Dollinger & Orf, 1991; Paunonen & Ashton, 1997).

Further research examining the unique effects of personality constructs in predicting college grades noted that more unique variance was attributable to specific personality traits than to SAT scores (Wolfe & Johnson, 1995). A study by Shen and Comrey examining the ability to predict medical students' academic performance by their cognitive abilities revealed that the combination of several personality traits effectively increased prediction of medical school performance from 20 percent, as predicted by MCAT scores alone, to 51 percent (1997).

Similarly, other studies have investigated narrow personality traits in addition to those in the Big Five model, finding that narrow personality traits, particularly Aggression and Work Drive, can also add significant, incremental validity to those traits in the Big Five paradigm with relation to student GPA (Lounsbury, et. al., 2003). Lounsbury also found that Sense of Identity and Self-directed Learning were positively related to life satisfaction and academic performance among adolescents (2003).

In the present study, the researcher sought to corroborate previous research findings examining the relationship between GPA and personality traits, including those in the Big Five model, as well as more narrow personality traits including Aggression, Career Mindedness, Emotional Stability, Sense of Identity, Optimism, Self-directed Learning, Tough-mindedness, and Work Drive. Also considered was the relationship of GPA to Life Satisfaction of college students. Based on previous research and the theory that personality precedes other standard predictors of college GPA, thus evidencing the possibility of predicting academic success and life satisfaction from observable personality traits, the following questions were investigated:

(1) Are the Big Five personality traits of Agreeableness, Conscientiousness, Emotional Stability, Extraversion, and Openness significantly related to college student GPA?

(2) Are the narrow traits of Aggression, Optimism, Sense of Identity, Tough-Mindedness, and Work Drive significantly related to the GPAs of college students?

(3) Do narrow personality traits add incremental validity beyond the Big Five traits in predicting student GPA?

(4) What is the relationship between GPA and Life Satisfaction, and what is the relationship after controlling for personality traits?

(5) Are there any significant gender differences among personality correlates of GPA and Life Satisfaction?

Method

Subjects

This study was conducted on the University of Tennessee campus using a convenience sample of students from Psychology 110 classes, peer mentoring classes, and on-campus housing. 217 males and 333 female subjects participated in the study, for a combined total of 552 college students. For the purposes of this study and the aforementioned questions to be addressed, gender is the only pertinent variable, aside for measures of personality, satisfaction, and GPA. Permission was obtained from the International Review Board and the Resource Compliance Services at the University of Tennessee.

Apparatus/Measures

The materials used in this study consisted of personality inventories, a satisfaction scale, and student GPA, established in a user-friendly, computer format. Specifically, the personality measures used in this study were the Resource Associates Personal Style Inventory (PSI) and the Adolescent Personal Style Inventory (APSI) in the Transition to College Assessment (Lounsbury & Gibson, 2005).

*Personality:*PSI:

Industrial-organizational psychologists designed the PSI for use in personnel selection and career planning (Lounsbury & Gibson, 2000; Lounsbury, et. al., 2003; Lounsbury, et. al., 1999). Studies have shown that the PSI is related to job satisfaction and performance across a variety of business and industrial work environments. For this study, 120 items represented by verbally opposing statements on a five-point scale were included on the PSI. Brief descriptions of personality constructs measured by the PSI, which earlier were found to be significant predictors of performance in a job analysis-based, criterion-related validation study in a local manufacturing plant are as follows:

Agreeableness—being agreeable, participative, helpful, cooperative, and inclined to interact with others in a harmonious manner.

Conscientiousness—being conscientious, reliable, trustworthy, orderly, and rule following.

Emotional Stability—overall level of adjustment and emotional resilience in the face of stress and pressure, conceptualized as the inverse of neuroticism.

Openness—receptivity and openness to change, innovation, new experience, and learning.

Optimism—having an optimistic, hopeful outlook concerning prospects, people, and the future, even in the face of difficulty and adversity.

Work Drive—being hard working, industrious, and inclined to put in long hours and much time and effort to attain goals and achieve at a high level.

APSI:

To increase its utility and validity, the PSI was adapted for adolescents ages 11 and older, culminating in the development of the APSI (Lounsbury, et. al., 2003; Lounsbury, et. al., 2004). The body of research on the APSI shows that these constructs are convergent with other common personality inventories such as the Myers-Briggs Temperament Inventory, 16 PF, and the NEO-PI-R, are internally consistent, and significantly predict academic performance from middle school to college. In the present study, the APSI included 120 items in the form of statements with which respondents were asked to agree or disagree on a five-point Likert scale (e.g. 1=Strongly Disagree; 2=Disagree; 3=Neutral/Undecided; 4=Agree; 5=Strongly Agree). The following list provides a brief description of the personality traits measured by the APSI.

Aggression—an inclination to fight, attack, and physically assault another person, especially if provoked, frustrated, or aggravated by that person; the disposition to become angry and engage in violent behavior.

Agreeableness—being pleasant, equable, participative, cooperative, and inclined to interact with others harmoniously.

Conscientiousness—being reliable, trustworthy, orderly, dependable, organized, and rule following.

Emotional Stability—overall level of adjustment and emotional resilience in the face of stress and pressure (the inverse of neuroticism).

Openness—receptivity and openness to change, innovation, novel experience, and new learning.

Optimism—having an optimistic, hopeful outlook concerning prospects, people,

and the future, even in the face of difficulty and adversity as well as a tendency to minimize problems and persist in the face of setbacks.

Sense of Identity—knowing one's self and where one is headed in life, having a core set of beliefs and values that guide decisions and actions; having a sense of purpose.

Tough-Mindedness—appraising information and making decisions based on logic, facts, and data rather than feelings, sentiments, values, and intuition.

Work Drive—being hard working, industrious, and inclined to put in long hours and much time and effort to make good grades and achieve at a high level in school.

Satisfaction:

Life Satisfaction was assessed using a scale developed by Lounsbury and Gibson. (2005) based on measures previously constructed by Campbell, Converse, and Rodgers (1976) and Andrews and Withey (1976) (see the tech manual, available from the primary author). Items corresponded to areas including major, health, friends, fun, social life, and life in general, as well as 22 items specifically referring to college satisfaction.

Academic performance:

Grade point average:

Academic success, as determined by academic performance in college coursework was measured using self-reported GPA of students. Subjects reported their cumulative GPA on the standard 4.0 scale used by the university.

Procedure

Prospective subjects received printed or emailed invitations to participate in the study using list serves. The questionnaire was made available on the Internet. Data were collected during the spring of 2004. Permission from the Institutional Review Board was granted to conduct the study, and data collected from the subjects were kept confidential. Following data collection, a series of analyses were completed using SPSS software to examine correlations between variables and incremental validity of independent variables.

Results

Correlations between variables measured are displayed in Tables 1-3. The results of the data analyses indicated that certain broad and narrow personality traits were indeed significantly related to academic success and life satisfaction. Significant correlations between broad and narrow personality constructs and student GPA, and the incremental validity and variance resulting from narrow personality traits corroborates previous research suggesting the possibility of narrow traits adding greater value than broad traits in predicting academic success and life satisfaction.

Three of the APSI Big Five traits correlated significantly with student GPA: Agreeableness ($r = .18$, $p < .01$), Conscientiousness ($r = .14$, $p < .01$), and Openness ($r = .21$, $p < .01$). Eight of the narrow traits, including Career Mindedness, Emotional Stability, Sense of Identity, Optimism, Self-directed Learning, and Work Drive also correlated positively with GPA, ranging from a low of r=.16 (p<.01) for Career Mindedness to a high of r=.438 (p<.01) for Work Drive. Aggression was significantly related to GPA (r=-.17, p>.01) (see Table 1).

Controlling for gender revealed significant differences between males and females. For females, results indicated that GPA most highly correlated with Work Drive, followed by Optimism, Sense of Identity, Self-directed Learning, and Openness (see Table 2). Results for males were slightly different in that GPA correlated highest with Work Drive and Self-directed Learning, followed by Emotional Stability, Openness, and Optimism. Also noticeable was a more significant negative correlation between Aggression and GPA for college males (see Table 3).

Self-reported GPA also correlated significantly with Life Satisfaction ($r=.41$, $p<.01$). Controlling for gender indicated revealed a slightly higher correlation between GPA and Life Satisfaction among females ($r=.42$, $p<.01$) than among males ($r=.38$, $p<.01$) (see Table 1).

Examining the incremental validity of narrow personality traits above and beyond the broad traits identified in the Big Five framework in determining academic success, as well as personality variables above and beyond GPA in predicting college and life satisfaction necessitated a series of multiple regression analyses of independent variables. The results of these analyses are included in Tables 4-8. For the first set of analyses with student GPA as the dependent variable, all 12 personality traits were entered simultaneously to estimate the incremental validity of narrow personality traits above and beyond the set of Big Five traits. The narrow traits of Work Drive, Optimism, and to a lesser extent, Aggression, were found to be the best predictors of GPA, based on the following significant changes in the squared multiple correlation: 19.2% for

Work Drive and 3.3% for Optimism. Aggression and the Big Five trait, Conscientiousness, added a modest 1.6% (see Table 4).

In the second set of analyses evaluating the predictability of life satisfaction from both GPA and personality traits, the 13 variables were entered simultaneously to determine the incremental validity of personality traits above and beyond GPA. The following changes in the squared multiple correlation were observed: 31.9% from Emotional Stability, 13.0% from Sense of Identity, 6.4% from GPA, and a total of 3.0% from Career Decidedness, Work Drive, and Optimism (see Table 5).

The predictability of life satisfaction from personality traits alone was the subject of the third set of analyses, evaluating the incremental validity of narrow personality traits above and beyond traits in the Big Five framework. Changes in the squared multiple correlation were as follows: Emotional Stability accounted for 33.5%, Sense of Identity 11.7%, and Work Drive 3.8%, with an additional total of 3.7% from Career Decidedness, Optimism, Extraversion, and Agreeableness (see Table 6). Of interest was the fact that Work Drive accounted for more incremental validity than Career Decidedness when personality traits were assessed in isolation from GPA, but the opposite phenomenon was observed when GPA was a variable.

Conducting a series of hierarchical analyses of the predictability of life satisfaction from GPA and specific personality traits revealed similar results. Using GPA as the first step with the remaining 12 personality variables entered simultaneously as the second step resulted in a change of the squared multiple

correlation by 17.2% from GPA and 38.1% from personality traits (see Table 7). Specifically, when entering GPA as the first step, followed sequentially by Emotional Stability, Sense of Identity, Conscientiousness, Work Drive, Optimism, and Career Decidedness, the following changes in the squared multiple correlation occurred: 17.2% from GPA, 24.3% from Emotional Stability, 9.8% from Sense of Identity, and a total of 2.2% from the remaining four variables, implicating the importance of narrow personality traits in the variance of life satisfaction (see Table 8).

Discussion

The results of this experiment clearly support the hypotheses and corroborate previous findings indicating the significance of the relationship among personality traits, academic success, and college satisfaction. Several current studies have revealed a correlation between broad personality traits and academic success, suggesting the need to further investigate personality constructs in relation to academic and life success. More recent research has examined the relationship between narrow personality traits and academic success. The data from the present study, which investigated both broad and narrow personality traits, indicates a higher degree of significance between narrow traits and academic success as measured by GPA.

In answer to the question of whether traits identified in the Big Five framework are correlated to academic performance, Agreeableness, Conscientiousness, and Openness were identified as significantly correlated to self-reported college student GPA. Previous research findings have also noted

the significance of Conscientiousness as not only a correlate of academic performance, but as a significant contributor to incremental validity to the prediction of academic performance above and beyond cognitive ability (Furnham, Camorro-Premuzic, & McDougall, 2003). It follows from these research findings that Conscientiousness may be considered a universal predictor of academic performance, and its relationship to academic performance can be clearly accounted for by the theoretical specification of the construct. According to the conceptualization of the trait of Conscientiousness (e.g., De Raad, 2000; Hogan & Ones, 1997), students who are more conscientious are more likely to engage in the following behaviors: attend class regularly, take notes, organize study materials, prepare for tests in a disciplined manner, complete assignments on time, and generally strive to follow course guidelines and meet the teacher's expectations—behaviors which usually merit good grades and consequently a high GPA.

Fewer studies have evidenced a relationship between Agreeableness and academic performance, although in the present study, the correlation between Agreeableness and GPA was actually higher than between Conscientiousness and GPA. In a collegiate setting where class participation and collaborative learning and discussion are often integral parts of the courses and grading rubrics, it is possible that more agreeable students are more likely to excel at these activities, studying cooperatively and providing assistance to others, and may be treated more favorably by teachers in terms of attention, encouragement, and grading (see Wentzel, 1999). The significance of Openness, as well, may

indicate the greater likelihood that open-minded students are more receptive to new ideas, new learning experiences, and subsequently, are more inclined to learn new material building on those ideas and experiences.

It is noteworthy that all eight narrow personality traits were correlated with GPA, and that five of these constructs correlated more highly with GPA than the three significant traits listed in the Big Five framework. Most notable were the constructs of Work Drive, Self-Directed Learning, Optimism, Sense of Identity, and Emotional Stability. Indeed, upon examining the descriptions of these constructs, students who achieve at a high level often exhibit characteristics such as industriousness, diligence, and persistence, and are goal-driven, intrinsically motivated, and innovative thinkers. These results corroborate previous research findings by Lounsbury indicating that Work Drive can add significant, incremental validity to the Big Five traits in relation to GPA and that Sense of Identity and Self-Directed Learning were positively related to life satisfaction and academic performance among adolescents (Lounsbury, et. al., 2003; Lounsbury & Gibson, 2003).

With regard to the incremental validity of narrow personality traits above and beyond the Big Five traits in predicting academic success as measured by student GPA, Work Drive and Optimism again attributed for more variance than did other variables. These results are convergent with other indicators across various personality inventories, indicating that narrow traits add validity beyond the Big Five broad personality traits to the prediction of a variety of criteria.

While cognitive ability remains the overall best predictor of academic performance, it is implicit in the current research trends that personality variables only add to the predictability of academic success and that narrow personality traits display incremental validity above and beyond even broad traits such as those identified in the Big five paradigm. In the present study, the broad personality traits of Openness, Agreeableness, and Conscientiousness correlated with student GPA, validating other research findings indicating that Conscientiousness, and to a lesser degree Openness and Agreeableness, may be used as predictors of academic performance (Furnham, Camorro-Premuzic, & McDougall, 2003). Further, the current results corroborate previous studies recognizing the incremental validity of narrow personality traits above and beyond broad personality traits (e.g., Ashton, 1998; Paunonen & Ashton, 2001). Using narrow personality constructs such as Work Drive, Self-Directed Learning, Sense of Identity, Emotional Stability, and Optimism to predict academic success is still relatively a new concept, and consequently, due to the paucity of research in this area, much more study is needed to investigate these relationships. Currently, perhaps the best assessments for predicting academic performance would be a combination of general measures of cognitive ability or intelligence as well as personality inventories comprised of both broad and narrow personality traits. Nevertheless, the problem remains of which narrow personality traits should be included in these assessments because of the scarcity of research in this area.

The implications of this suggest a need for more investigation of the relationship between personality and academic achievement. Future studies could examine the incremental validity of other narrow and broad personality traits in predicting academic performance, as well as investigate specific populations other than gender to determine similarities or differences according to race, ethnicity, age, religion, orientation, or cultural background. Using actual GPA, rather than self-reported GPA, of college students could also be investigated. One way to extend the application of this research and continue collecting and analyzing data would be to implement the use of personality measures as one of the many types of screening conducted by college admissions boards. These could serve as supplements to the more traditional entrance exams, essays, recommendations, and interviews and would provide a more in-depth understanding of the applicant as a student, rather than as just another statistic.

With regard to the correlation of personality traits and GPA to life satisfaction, as well as the incremental validity that personality traits add to GPA in predicting life satisfaction, the present research findings indicate that personality constructs play an important role in determining a student's success in college and beyond. While success in the collegiate setting may be defined as academic achievement and performance, this is a determinant of satisfaction and success later in life. Since personality constructs combine to account for an additional 38.1% of the variance in life satisfaction above and beyond the 17.2%

attributable to GPA, the implications for addressing personality differences in the academic setting is worthy of further research and study.

Within the early childhood, elementary, and secondary education environments, there has been a trend towards individualizing instruction and accommodating individual differences in ability, personality, areas of giftedness, and instructional needs. Howard Gardner's Theory of Multiple Intelligences is often cited as one of the progenitors of this trend, with his emphasis on the varying types of giftedness and ways of learning among students (1985, 1991, 1993). Similarly, more theoretical research and practical accommodation in the field of education should emphasize personality traits as an important part of the success of students in the classroom and their satisfaction with their academic achievement and life in general. In the domain of higher education, even less emphasis is placed on identifying individual differences among students, much less personalizing instruction to accommodate these different needs.

The current study and the recent research it substantiates highlight the importance of studying personality factors when examining predictors and correlates of academic success and satisfaction in the collegiate domain and subsequently the workplace. The implications of such findings are certainly far-reaching, with application to college admissions committees and human resources departments. With the increasing trend in education towards a more diversified community of learners with individual interests, needs, abilities, and learning styles, more research addressing the relationship of personality traits to success and satisfaction is clearly essential to continue this progress towards a

greater understanding of the student as an individual in attempts to provide a learning environment promoting success and satisfaction for all learners.

References

Ashton, M. C. (1998). Personality and job performance: The importance of narrow traits. *Journal of Organizational Behavior, 19*, 289-303.

Boyer, S. P. & Sedlacek, W. E. (1988). Noncognitive predictors of academic success for international students: A longitudinal study. *Journal of College Student Development*, *29* (3), 218-223.

Brown, N. W. (1994). Cognitive, interest, and personality variables predicting first-semester GPA. *Psychological Reports*, *74* (2), 605-606.

Clark, L. (2000). A review of research on personality characteristics of academically talented college students. Teaching and Learning in Honors, 7-20. Ames, IA: National Collegiate Honors Council.

Costa, P. T., Jr., McCrae, R. R., & Kay, G. G. (1995). Persons, places, and personality: Career assessment using the Revised NEO Personality Inventory. *Journal of Career Assessment*, *3* (2), 123-139.

Costa, P. & McCrae, R. (1992). *The NEO Personality Inventory (NEO-PI-R) and the NEO Five -Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.

De Raad, B. (2000). *The Big Five personality factors: The psycholexical approach to personality*. Seattle, WA: Hogrefe & Huber.

Dollinger, S. J. & Orf, L. A. (1991). Personality and performance in "personality": Conscientiousness and openness. *Journal of Research in Personality*, *25* (3), 276-284.

Dyer, E. D. (1987). Can university success and first-year job performance be predicted from academic achievement, vocational interest, personality and biographical measures? *Psychological Reports, 61* (2), 655-671.

Furnham, A., Chamorro-Premuzic, T., & McDougall, F. (2003). Personality, cognitive ability, and beliefs about intelligence as predictors of academic performance. *Learning and Individual Differences, 14*, 49-66.

Gardner, H. (1993). *Multiple Intelligences: The theory in practice.* New York: Basic Books.

Gardner, H. (1991). *The Unschooled Mind: How children think and how schools should teach.* New York: Basic Books.

Gardner, H. (1983). *Frames of Mind: The theory of multiple intelligences.* New York: Basic Books.

Hogan, J. & Ones, D. S. (1997). Conscientiousness and integrity at work. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 849-870). San Diego, CA: Academic.

Lounsbury, J.W. & Gibson, L.W. (2005*). Personal Style Inventory: A work-based personality measurement system.* Knoxville, TN: Resource Associates.

Lounsbury, J. W., Sundstrom, E., Loveland, J. M., & Gibson, L. W. (2003). Intelligence, "Big Five" Personality Traits, and Work Drive as Predictors of Course Grade. *Personality and Individual Differences*, 35, 1231-1239.

Lounsbury, J. W., Tatum, H. E., Chambers, W., Owens, K.S., & Gibson, L.W. (1999). An investigation of career decidedness in relation to "Big Five"

personality constructs and life satisfaction. *College Student Journal*, 33, 646-652.

Musgrave-Marquart, D., Bromley, S. P., & Dalley, M. B. (1997). Personality, academic attribution, and substance use as predictors of academic achievement in college students. *Journal of Social Behavior and Personality*, *12* (2), 501-511.

"New SAT I Study Reveals Exam's Limitations." (2001). Fair Test Examiner.

Okun, M. A. & Finch, J. F. (1998). The Big Five personality dimensions and the process of institutional departure. *Contemporary Educational Psychology*, *23* (3), 233-256.

Omizo, M. M., Ward, G. R., & Michael, W. B. (1979). Personality measures as predictors of success in a counselor education Master's program. *Educational and Psychological Measurement, 39* (4), 947-953.

Paulos, J. A. (2001). Predicting Success: Range of Variables Affect How SAT Correlates to College GPA. ABC News.

Paunonen, S. V. & Ashton, M. C. (2001). Big five predictors of academic achievement. *Journal of Research in Personality*, *35*, 78-90.

Pfeifer, C., M. & Sedlacek, W. E. (1974). Predicting black student grades with non-intellectual measures. *Journal of Negro Education*, *43* (1), 67-76.

Rainey, D. W. (1985). The JAS-T and Type A in students: A replication note. *Journal of Personality Assessment*, *49* (5), 528-529.

Rothstein, M. G., Paunonen, S. V., Rush, J. C., & King, G. A. (1994). Personality and cognitive ability predictors of performance in graduate business school. *Journal of Educational Psychology*, *86* (4), 516-530.

Shen, S. & Comrey, A.L. (1997). Predicting Medical Students' Academic Performances by Their Cognitive Abilities and Personality Characteristics. *Academic Medicine*, 72, 781-786.

Wentzel, K. R. (1999). Social-motivational processes and interpersonal Relationships implications for understanding motivation at school. *Journal of Educational Psychology*, *91*(1), 76-97.

Wolfe, R. N. & Johnson, S. D. (1995). Personality as a predictor of college performance. *Educational and Psychological Measurement*, *55*, 177-185.

Table 1

Correlations

	gpa	Life sat	agree	aggress	Career	Conscien	Emot Stab	Extra	Sense of ID	Open	Optim	SD Learn	Tough	Work
gpa	1	.414(**)	.177(**)	-.172(**)	.155(**)	.141(**)	.197(**)	.052	.226(**)	.209(**)	.251(**)	.263(**)	-.078	.438(**)
Life satisfaction		1	.285(**)	-.214(**)	.406(**)	.259(**)	.579(**)	.262(**)	.547(**)	.156(**)	.531(**)	.277(**)	-.038	.318(**)
agreeableness			1	-.510(**)	.118(**)	.278(**)	.216(**)	.039	.281(**)	.136(**)	.252(**)	.043	-.348(**)	.148(**)
aggression				1	-.077	-.160(**)	-.163(**)	.017	-.177(**)	-.144(**)	-.209(**)	-.062	.193(**)	-.123(**)
career mindedness					1	.194(**)	.206(**)	.098(*)	.551(**)	.048	.222(**)	.146(**)	-.024	.211(**)
conscientiousness						1	.117(**)	.056	.353(**)	.072	.240(**)	.213(**)	-.077	.401(**)
Emotional stability							1	.178(**)	.392(**)	.060	.541(**)	.280(**)	.180(**)	.087(*)
Extra								1	.329(**)	.035	.315(**)	.014	-.314(**)	.006
Sense of identity									1	.137(**)	.598(**)	.197(**)	-.191(**)	.249(**)
Openness										1	.241(**)	.369(**)	-.170(**)	.367(**)
Optimism											1	.259(**)	-.116(**)	.186(**)
Self-directed learning												1	.086(*)	.468(**)
Tough-mindedness													1	-.139(**)
Work drive														1

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 2

Correlations

	gpa	lifesat	agree	aggress	Career	Consci	Emot Stab	Extra	Sense of ID	Open	Optim	SD Learn	Tough-Mind	Work Drive
gpa	1	.381(**)	.113	-.204(**)	.045	.085	.192(*)	.035	.149	.158(*)	.152(*)	.284(**)	-.013	.418(**)
lifesat		1	.266(**)	-.294(**)	.309(**)	.184(**)	.569(**)	.267(**)	.514(**)	.168(*)	.536(**)	.279(**)	-.004	.235(**)
agreeableness			1	-.471(**)	.034	.168(*)	.157(*)	-.114	.199(**)	.151(*)	.182(**)	-.031	-.343(**)	.102
aggress				1	-.010	-.096	-.210(**)	.125	-.211(**)	-.237(**)	-.261(**)	-.061	.106	-.117
Career decidedness					1	.093	.143(*)	.132	.538(**)	.033	.169(*)	.108	.008	.163(*)
Conscien-tiousness						1	.051	.001	.266(**)	-.002	.198(**)	.151(*)	.058	.359(**)
Emotional Stability							1	.204(**)	.319(**)	.056	.514(**)	.302(**)	.175(**)	.060
Extraversion								1	.334(**)	.057	.270(**)	.069	-.225(**)	.009
Sense of Identity									1	.039	.483(**)	.131	-.152(*)	.194(**)
Openness										1	.202(**)	.387(**)	-.239(**)	.301(**)
Optimism											1	.231(**)	-.017	.123
Self-Directed Learning												1	.015	.444(**)
Tough-Mindedness													1	-.138(*)
Work Drive														1

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 3

Correlations

	gpa	lifesat	agree	aggress	Career	Consci	Emot Stab	Extra	Sense of ID	Open	Optim	SD Learn	Tough-Mind	Work Drive
gpa	1	.422(**)	.157(*)	-.098	.191(**)	.148(*)	.229(**)	-.002	.251(**)	.228(**)	.310(**)	.250(**)	.017	.432(**)
Life Satisfaction		1	.290(**)	-.154(**)	.454(**)	.303(**)	.601(**)	.242(**)	.564(**)	.147(**)	.523(**)	.282(**)	-.005	.362(**)
Agreeableness			1	-.498(**)	.133(*)	.319(**)	.326(**)	.051	.324(**)	.116(*)	.308(**)	.122(*)	-.198(**)	.143(**)
Aggression				1	-.088	-.158(**)	-.179(**)	.028	-.122(*)	-.062	-.161(**)	-.076	.113(*)	-.094
Career decidedness					1	.248(**)	.264(**)	.030	.564(**)	.062	.262(**)	.183(**)	.070	.230(**)
Conscien-tiousness						1	.202(**)	.010	.384(**)	.078	.226(**)	.258(**)	-.007	.396(**)
Emotional Stability							1	.225(**)	.499(**)	.091	.620(**)	.268(**)	.122(*)	.133(*)
Extraversion								1	.257(**)	-.048	.299(**)	-.023	-.200(**)	-.068
Sense of Identity									1	.170(**)	.662(**)	.246(**)	-.096	.250(**)
Openness										1	.214(**)	.354(**)	-.055	.390(**)
Optimism											1	.273(**)	-.089	.183(**)
Self-Directed Learning												1	.144(**)	.490(**)
Tough-Mindedness													1	-.036
Work Drive														1

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 4

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.438(a)	.192	.190	1.398	.192	99.488	1	418	.000
2	.474(b)	.225	.221	1.371	.033	17.620	1	417	.000
3	.483(c)	.234	.228	1.365	.009	4.707	1	416	.031
4	.491(d)	.241	.233	1.360	.007	3.904	1	415	.049

a Predictors: (Constant), Work Drive
b Predictors: (Constant), Work Drive, Optimism
c Predictors: (Constant), Work Drive, Optimism, aggress
d Predictors: (Constant), Work Drive, Optimism, aggress, Conscientiousness
Dependent Variable: gpa

Table 5

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.565(a)	.319	.317	.68353	.319	195.762	1	418	.000
2	.670(b)	.449	.446	.61556	.130	98.401	1	417	.000
3	.716(c)	.513	.509	.57947	.064	54.561	1	416	.000
4	.727(d)	.529	.525	.57035	.016	14.408	1	415	.000
5	.733(e)	.537	.532	.56602	.008	7.374	1	414	.007
6	.738(f)	.544	.537	.56272	.006	5.874	1	413	.016

a Predictors: (Constant), Emotional Stability
b Predictors: (Constant), Emotional Stability, Sense of Identity
c Predictors: (Constant), Emotional Stability, Sense of Identity, gpa
d Predictors: (Constant), Emotional Stability, Sense of Identity, gpa, Career decidedness
e Predictors: (Constant), Emotional Stability, Sense of Identity, gpa, Career decidedness, Work Drive
f Predictors: (Constant), Emotional Stability, Sense of Identity, gpa, Career decidedness, Work Drive, Optimism
Dependent Variable: life sat

Table 6

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.579(a)	.335	.334	.66985	.335	276.613	1	549	.000
2	.672(b)	.452	.450	.60851	.117	117.259	1	548	.000
3	.700(c)	.491	.488	.58733	.038	41.247	1	547	.000
4	.709(d)	.503	.499	.58075	.012	13.459	1	546	.000
5	.717(e)	.515	.510	.57445	.012	13.034	1	545	.000
6	.722(f)	.522	.516	.57081	.007	7.989	1	544	.005
7	.726(g)	.528	.521	.56772	.006	6.940	1	543	.009

a Predictors: (Constant), Emotional Stability
b Predictors: (Constant), Emotional Stability, Sense of Identity
c Predictors: (Constant), Emotional Stability, Sense of Identity, Work Drive
d Predictors: (Constant), Emotional Stability, Sense of Identity, Work Drive, Career decidedness
e Predictors: (Constant), Emotional Stability, Sense of Identity, Work Drive, Career decidedness, Optimism
f Predictors: (Constant), Emotional Stability, Sense of Identity, Work Drive, Career decidedness, Optimism, Extraversion
g Predictors: (Constant), Emotional Stability, Sense of Identity, Work Drive, Career decidedness, Optimism, Extraversion, agreeableness
Dependent Variable: life sat

Table 7

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.414(a)	.172	.170	.75378	.172	86.688	1	418	.000
2	.744(b)	.553	.539	.56179	.381	28.878	12	406	.000

a Predictors: (Constant), gpa
b Predictors: (Constant), Extraversion, Conscientiousness, Career decidedness, Openness, aggress, Emotional Stability, Tough-Mindedness, Self-Directed Learning, agreeableness, Optimism, Work Drive, Sense of Identity
Dependent Variable: Life Sat

Table 8

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.414(a)	.172	.170	.75378	.172	86.688	1	418	.000
2	.644(b)	.414	.412	.63456	.243	172.833	1	417	.000
3	.716(c)	.513	.509	.57947	.098	84.046	1	416	.000
4	.727(d)	.529	.525	.57035	.016	14.408	1	415	.000
5	.733(e)	.537	.532	.56602	.008	7.374	1	414	.007
6	.738(f)	.544	.537	.56272	.006	5.874	1	413	.016

a Predictors: (Constant), gpa
b Predictors: (Constant), gpa, Emotional Stability
c Predictors: (Constant), gpa, Emotional Stability, Sense of Identity
d Predictors: (Constant), gpa, Emotional Stability, Sense of Identity, Career decidedness
e Predictors: (Constant), gpa, Emotional Stability, Sense of Identity, Career decidedness, Work Drive
f Predictors: (Constant), gpa, Emotional Stability, Sense of Identity, Career decidedness, Work Drive, Optimism
Dependent Variable: Life sat