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Emotional Intelligence and Academic Performance of College Honors and Non-Honors Freshmen

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A positive freshman year experience is critical for student persistence and long-term success in college (Tinto, 1975; Tinto & Goodsell, 1993). Recently, institutions have begun to recognize that student factors beyond demographics, academic records, and standardized test scores influence the likelihood of a positive freshman year experience (Levitz & Noel, 1989). "Emotional intelligence" is one such factor which is instrumental in situations that call upon students to adjust successfully from one environment to another (Hettich, 2000). While there is some data on the personality characteristics of college Honors students (Grangaard, 2003), to our knowledge no data have been collected on their emotional intelligence. Therefore, we designed this study to investigate two hypotheses. First, we wondered whether Honors college freshmen differed from their non-Honors peers in emotional intelligence. Second, we were interested in determining whether measures of emotional intelligence were predictive of first-semester college GPAs in addition to traditional predictors such as SAT scores and high-school GPAs.

EMOTIONAL INTELLIGENCE (EI)

Our study follows the research of Salovey and Mayer (1997) who define EI as "the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in the self and others" (p. 10). There is a fairly substantial body of literature which suggests that as a measured construct, EI is predictive of performance in educational as well as industrial/organizational settings (Goleman, 1995; 2001; Tett, Fox, & Wang, manuscript submitted for publication).

EI AND THE ACADEMICALLY TALENTED

Some researchers have argued that academically gifted children tend to have increased social and emotional difficulties (Winner, 2000), and that these difficulties may occur due to stereotyping of giftedness (Yewchick & Jacoby, 1991). Research also suggests that behavioral problems for gifted and high ability students can be

exacerbated by unchallenging curricula, as well as educator and peer myths (Callahan, 2001; Garland & Zigler, 1999; Johnson, 2000). Some of these myths include negative stereotyping such as the “nerd,” “know-it-all,” and “teacher’s pet” (Moulton, Moulton, Housewright, & Bailey, 1998). Accordingly, one might expect these negative stereotypes to increase levels of emotional and behavioral maladjustment leading to lower levels of measured EI.

In contrast, another line of research suggests that there are multiple intelligences and that intellectual and emotional intelligence may go hand in hand (Gardner, 1993). In proposing the construct of “emotional giftedness,” Mayer and his colleagues (2000) claim that giftedness comes in many forms, and that high ability in one area (e.g., regulating one’s emotions) can positively affect the performance in another area (e.g., academic achievement). As evidence for this, other researchers (Schutte et al. 1998) have found that EI scores of college freshmen were correlated with first-year college GPAs.

Further research is needed to explicate the two opposing views on the emotional intelligence of the academically talented (e.g., the “nerd” versus the emotionally gifted). Indeed, previous researchers (Clark, 2000; Grangaard, 2003; Palmer & Wohl, 1972) have noted the dearth of data regarding the personality characteristics of academically talented students. Moreover, there have been no studies that have reported on their emotional intelligence. Therefore, under Hypothesis 1 of the present study we compared the EI scores of Honors college freshmen with their non-Honor peers.

EI AND THE FRESHMAN-YEAR EXPERIENCE.

Effective managing of the emotional, social, and academic challenges associated with the “freshman experience” is needed to transition successfully from high-school to the university environment (Tinto, 1975). Indeed, the aforementioned study by Schutte et al (1998) corroborated the relationship between emotional functioning and freshman GPA. However, to our knowledge there are no studies that have determined whether emotional intelligence might be predictive of Honors students’ GPA in college. Specifically, for Hypothesis 2, the present study undertook a regression analysis to determine whether EI as well as traditional measures of academic performance (e.g., high-school GPA and SAT scores) would be predictive of first-semester college GPA. We performed separate regression analyses on both Honors students and their non-Honors peers. This type of analysis proves useful when researchers want to determine the degrees to which variables (e.g., high-school GPA) are predictive of some outcome (e.g., college GPA). Separate analyses were undertaken on Honors and non-Honors students to determine whether different sets of predictors might exist for these groups. This outcome seemed likely because each group might react differently to the academic and social expectations placed upon them as they transition from high-school to college (Yewchuk & Jacoby, 1991).

THE MAYER-SALOVEY-CARUSO EMOTIONAL INTELLIGENCE TEST (MCSEIT)

The present study used the MSCEIT (Mayer, Salovey, & Caruso, 2000) which is the first standardized test developed by researchers to measure EI. According to the test developers, MSCEIT possesses high internal inconsistency ($r = .92$) and good test-retest reliability ($r = .86$). Moreover, a confirmatory factor analysis supported the test developers' intent to organize the MSCEIT around a four-branch model of emotional functioning (Mayer, Salovey, Caruso, & Sitarenios, 2003):

Perception of Emotion (Branch 1): The ability to be open to feelings, and to modulate them in oneself and others as to promote personal understanding and growth.

Emotional Facilitation of Thought (Branch 2): The ability to generate, use and feel emotion as necessary to communicate feelings or employ them in other mental processes.

Understanding Emotion (Branch 3): The ability to understand emotional information such as how emotions progress through relationship transitions, and to reason about such emotional meanings.

Managing Emotion (Branch 4): The ability to be open to feelings, to modulate them in oneself and others to promote personal understanding and growth.

There are also two main area scores assessed by the MSCEIT: Area 1 which is an Emotional Experiential (EE) score and Area 2 which is an Emotional Reasoning (ER) score. The EE score is a combined score of branch 1 and 3 scores while the ER score is a combined score of branch 2 and 4 scores. These area scores are then combined with the branch scores, and together they constitute a total EI score. The area scores are defined as follows (Mayer et. al. 2000, p. 47).

EE score (Area 1): A person's ability to perceive, respond and manipulate emotional information- without necessarily understanding it. It also indexes how accurately a person can "read" and express emotion, and how well a person can compare emotional stimulation to other sorts of sensory experiences (e.g., colors or sounds).

ER score (Area 2): A person's ability to understand and manage emotions-without necessarily perceiving it well or fully experiencing feelings. It indexes how accurately a person understands what emotions signify (e.g., that sadness typically signals a loss) and how emotions in him/herself and others can be managed.

In sum, emotional intelligence is seen as the "ability to perceive accurately, appraise and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" (Mayer et al. 2000, p. 23).

METHOD

SAMPLE

The 300 Honors and 230 non-Honors sampled in the present study were all first-semester freshmen attending a large metropolitan research university in the Southeastern United States. Table 1 shows the demographic and academic performance data of these two groups as a function of gender.

Table 1 Means (Standard Deviations) for all variables as a function of student group and gender.

	Honors Students		Non-Honors students	
	Female (n = 156)	Male (n = 144)	Female (n = 145)	Male (n = 85)
Total EI	104.55(14.64)	96.88 (17.49)	99.44 (12.83)	95.37 (16.29)
College GPA (1 st semester)	3.47 (.61)	3.32 (.70)	3.28 (.67)	3.18 (.64)
High School GPA	4.36 (.35)	4.22 (.38)	3.76 (.55)	3.51 (.69)
SAT Total	1273.67 (80.22)	1309 (84.73)	1073.15 (115.72)	1121.52 (124.04)
Age (yrs.)	17.95 (.42)	18.04 (.46)	18.40 (.90)	18.63 (1.30)
Branch 1 Score	105.91 (14.43)	101.28 (15.97)	100.85 (13.66)	101.99 (13.29)
Branch 2 Score	101.84(12.55)	96.61 (15.81)	99.97 (13.79)	96.57 (15.54)
Branch 3 Score	106.42(15.09)	100.90 (18.44)	100.93 (14.47)	95.14 (18.73)
Branch 4 Score	101.94(14.20)	94.33 (16.37)	99.09 (15.93)	94.71 (18.47)
Area 1 Score	104.91 (14.06)	98.48 (16.28)	100.18(12.97)	98.99 (13.73)
Area 2 Score	104.66(15.13)	97.21 (18.05)	99.92 (15.49)	94.12 (19.56)

Table 1 shows that the mean high-school GPA and mean SAT scores of incoming Honors students are considerably higher than for non-Honors freshman. In fact, the mean SAT score for our sample of Honors students ($M = 1291$) is over 100 points higher than the overall mean reported for our university ($M = 1167$).

MEASURES

The MSCEIT takes approximately 30 to 45 min. to complete, and is self-paced. Four branch scores, two main area scores, and a total EI score are derived from the MSCEIT. The test developers encourage the reporting of total EI scores because this composite score has a face validity similar to IQ scores (which are also composites and have a mean normed value of 100 points). In addition, first-semester college GPA, High School GPA, and Scholastic Aptitude Test (SAT) scores were obtained from the university registrar.

PROCEDURE

The MSCEIT was distributed in booklet form to a class of Honors students during their required attendance at an Honors freshman symposium. It was given to the non-Honors group in booklet form and via Internet test form during class, as a method to obtain extra credit in a General Psychology class. Both groups were instructed to take it at their convenience, and to bring the completed response sheets back within a week.

RESULTS

GROUP COMPARISONS

Table 1 shows mean age, GPA (high school and college) and MSCEIT scores as a function of group (Honors and non-Honors) and gender. MSCEIT scores that were analyzed included: Total Score, Area 1 and 2 Scores, Branch 1, 2, 3, and 4 scores. Separate completely randomized 2 (Honors vs. non-Honors) x 2 (male vs. female) Analyses of Variance (ANOVAs) were used in making all group comparisons. All statistically significant values were beyond $p < .05$ (dfs may vary as a function of missing values).

SAT SCORES AND HIGH-SCHOOL GPA

As expected, Honors students had higher high-school GPAs ($M = 4.28$) compared to non-Honors students ($M = 3.67$), $F(1, 543) = 229.19$. Honors students had higher total SAT scores ($M = 1291.39$) compared to non-Honors students ($M = 1089.91$), $F(1, 520) = 460.78$.

FIRST-SEMESTER COLLEGE GPA

Honors students ($M = 3.40$.) had higher first-semester GPAs compared to non-Honors students ($M = 3.25$), $F(1, 543) = 58.09$. Additionally, women ($M = 3.38$) had higher first-semester GPAs than men ($M = 3.27$), $F(1, 543) = 4.86$.

TOTAL EI SCORES

A 2 x 2 ANOVA revealed that Honors students had higher total EI scores ($M = 100.86$) than non-Honors students ($M = 97.94$), $F(1, 528) = 5.83$. Furthermore, women ($M = 102.08$) had higher total scores than men ($M = 96.32$), $F(1, 528) = 18.36$.

AREA 1 SCORES (EMOTIONAL EXPERIENCE)

The only significant effect was for gender. Specifically, women had higher Area 1 scores ($M = 102.26$) than men ($M = 98.67$), $F(1, 532) = 7.21$.

AREA 2 SCORES (EMOTIONAL REASONING)

Women displayed higher Area 2 scores ($M = 102.37$) compared to men ($M = 96.06$, $F(1, 528) = 19.34$). In addition, Honors students ($M = 101.07$) had higher scores than non-Honors students ($M = 97.77$), $F(1, 528) = 6.77$.

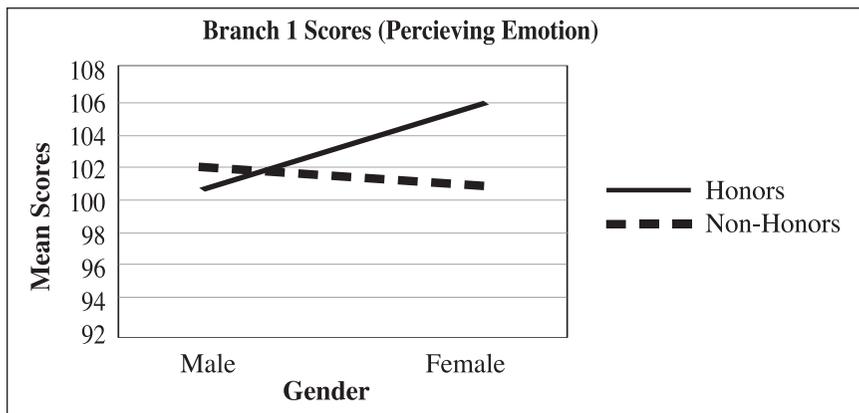
BRANCH 1 SCORES (PERCEIVING EMOTION)

A 2 x 2 ANOVA revealed no main effects. However, a significant group x gender interaction was obtained, $F(1, 534) = 4.97$. Fisher's Least Significant Difference (LSD) Test indicated that female Honors students had higher Branch 1 Scores than the other three groups which did not differ from each other, $t_{LSD} = 3.04$. This interaction can be seen in Figure 1.

BRANCH 2 SCORES (EMOTIONAL FACILITATION OF THOUGHT)

The only significant effect obtained was for gender. Specifically, women had higher Branch 2 Scores ($M = 100.94$) than men ($M = 96.60$), $F(1, 532) = 11.37$.

Figure 1 Branch 1 Scores (Perceiving Emotion) as a function of group and gender.



BRANCH 3 SCORES (UNDERSTANDING EMOTION)

Honors students ($M = 103.73$) had higher Branch 3 Scores than non-Honor students ($M = 98.79$, $F(1, 531) = 14.50$). Moreover, women ($M = 103.77$) had higher scores than men ($M = 98.79$), $F(1, 531) = 14.63$.

BRANCH 4 SCORES (MANAGING EMOTION)

No main effects were found for either group or gender. However, there was a significant two-way interaction, $F(1, 529) = 17.50$. Fisher's LSD Test revealed that Honors' women had higher scores than non-Honors women while the Branch 4 scores of Honors men and non-Honors men did not differ, $t_{LSD} = 2.00$. This interaction can be seen in Figure 2.

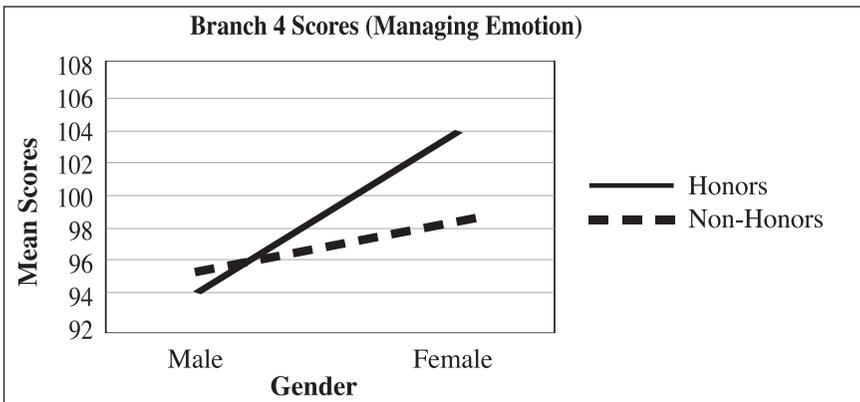
CORRELATIONAL ANALYSES

Separate correlational analyses were performed for Honors and non-Honors students using all of the variables shown in Table 1. We were most interested in determining whether any variables would correlate with first-semester college GPA. It turns out that four variables were correlated with first semester GPA when Honors students are considered. These variables were: high-school GPA [$r(170) = +.47$], Branch 2 scores [$r(168) = +.22$], Area 1 scores [$r(168) = +.16$], and Total MSCEIT scores [$r(165) = +.16$].

When non-Honors students are considered, only two variables were correlated with first-semester college GPA: high-school GPA [$r(177) = +.39$] and SAT Total scores [$r(169) = +.20$]. For non-Honors students, none of the MSCEIT measures correlated with their college academic performance.

Finally, it should be noted that when all student data were included in a correlational analysis, a positive correlation was found between total MSCEIT scores and total SAT Scores [$r(321) = +.17$]. This analysis also found that total MSCEIT scores were correlated with first-semester college GPA [$r(334) = +.13$]. While the strength of this correlation may appear low, it is similar in magnitude to that found between total SAT scores and first-semester college GPA [$r(335) = +.12$].

Figure 2 Branch 4 Scores (Managing Emotion) as a function of group and gender.



MULTIPLE REGRESSION

Based on the first two correlational analyses reported above, separate multiple regression analyses with a forward stepping solution were undertaken for Honors and non-Honors students. In each analysis, first-semester college GPA was treated as the dependent variable and any other variables that were correlated with first-semester college GPA were entered as the independent variables. A step-wise multiple regression analysis for Honors students revealed that high-school GPA (R^2 change = .21) and Branch 2 scores (R^2 change = .02) were predictive of first-semester college GPA, $F(1, 286) = 42.42$. A similar analysis for non-Honors students revealed that only high-school GPA ($R^2 = .15$) was predictive of their first-semester college GPA, $F(1, 226) = 39.75$.

DISCUSSION

Regarding Hypothesis 1 of the present study, we were able to dispel the notion that high academic performance and emotional difficulties are associated. In fact, the results found here support the notion that academically talented college freshmen exhibit higher levels of EI than their non-Honors peers. In line with the results reported by Schutte et al (1998), we also found that women had higher overall levels of EI than men. When Hypothesis 2 is considered, we found that one EI subscale (Branch 2 scores—Emotional Facilitation of Thought) was predictive of first-semester college GPA for Honor students. In contrast, none of the EI measures was predictive of first-semester college GPA in non-Honors students. It was also the case that for both groups of students, high-school GPA was a reliable predictor of first-semester college GPA.

We believe that the pattern of results reported here convey three important lessons for Honors students and their instructors. First, regardless of the negative stereotyping (e.g., the “nerd”) that may exist toward the academically talented, Honors students should take heart. The fact is that Honors students function at a higher level of emotional intelligence than their non-Honors peers.

Second, the predictiveness of Branch 2 scores for academic performance in Honors students was small albeit significant. This suggests that Honors students are able to effectively use their emotions (Branch 2 scores) in ways that promote academic success. Thus, compared to their non-Honor peers, when Honors students experience negative emotions (e.g., test anxiety), they are better able to re-channel the negative thoughts and feelings associated with these emotions into adaptive behaviors (e.g., spending more time on test preparation). As a consequence, this adaptive behavior is likely to produce higher academic performance. This suggests that this relationship between EI and academic performance is a characteristic of Honors students, but not their non-Honors peers. Future research is needed to replicate this relationship and to determine whether it is a characteristic of high achievers in other domains such as the arts, sports, and business.

Third, we are not advocating that Honors educators use EI measures as a means for predicting academic performance in their students. Rather, we would prefer that the results of our study reinforce the view that Honors instructors should approach

their students in a holistic fashion. That is, instructors should not only consider their students' high levels of intellect, but also their emotional intelligence in the promotion of academic and personal excellence. From an institutional perspective, Honors programs that have freshman orientation seminars and residence life activities should take advantage of their students' high level of emotional intelligence when fostering an Honors sense of identity and community.

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