



Dabrowski's Overexcitabilities, The Big Five, and GPA

Stephanie L. Dorn & Catya von Károlyi

University of Wisconsin – Eau Claire



H₁ GPA is positively correlated with Intellectual, Imaginational, and Emotional Overexcitabilities (OEs), but not with Psychomotor and Sensual OEs.

H₂ GPA is positively correlated with the Conscientiousness and Openness to Experience Factors of the Big Five, but not with Neuroticism, Agreeableness, or Extraversion.

BACKGROUND

According to Dabrowski, some individuals display *Overexcitabilities*, or intensities, in up to five dimensions: Intellectual, Imaginational, Emotional, Psychomotor, and Sensual (Mendaglio & Tillier, 2006). Reviews of the literature reveals both a relationship between high intelligence and specific Overexcitabilities – Intellectual, Imaginational, and Emotional (Mendaglio & Tillier) and a relationship between intelligence and specific *Big Five* factors - Conscientiousness and Openness to Experience but not to Neuroticism, Extraversion, Agreeableness (Asendorpf & Van Aken, 2003). We conducted a study to test these assertions.

METHODS

The present study included 71 undergraduate students (7 male, 64 female). Data was collected via an online survey, made up mostly of Likert-type scales. In addition, some demographic information was collected and students reported their GPA ranges.

OEs ~ GPA

	β	p
Intellectual *	.394	.032
Emotional *	.375	.025
Imaginational	<i>ns</i>	<i>ns</i>
Psychomotor *	-.329	.015
Sensual **	-.629	.001

Big 5 ~ GPA

	β	p
Conscientiousness	-.348	.007
Openness to Experience	<i>ns</i>	<i>ns</i>
Neuroticism	<i>ns</i>	<i>ns</i>
Extraversion	<i>ns</i>	<i>ns</i>
Agreeableness	<i>ns</i>	<i>ns</i>

RESULTS

Using SPSS, we ran separate multiple regressions for GPA on the OEs and the Big Five factors (using the Enter method). Because the hypotheses were directional, we used one-tailed *t-tests* for the partial analyses.

GPA and OEs

Multiple regression revealed a significant linear relationship between GPA and OEs ($R^2 = .222$, $F(5,65) = 3.718$, $MSE = 1.482$, $p = .005$). Consistent with our prediction, the partials, shown in the OE ~ GPA table, revealed significant linear relationships between GPA and Emotional OE and GPA and Intellectual OE. GPA and Imaginational OE were not significantly related, but the analysis revealed a non significant trend. However, contrary to our prediction, there was a *negative* relationship between GPA and Sensual OE and between GPA and Psychomotor OE. Thus our first hypothesis was partially supported and partially refuted.

GPA and The Big Five

A second multiple regression revealed a significant a linear relationship between GPA and the Big Five ($R^2 = .170$, $F(5,65) = 2.658$, $MSE = 1.582$, $p = .030$). Consistent with our prediction, analysis of partials, shown in the Big 5 ~ GPA table, revealed no significant relationships between GPA and Extraversion, Neuroticism, and Agreeableness. Contrary to our prediction, GPA and Openness to Experience, were not related. Surprisingly, we found a *negative* relationship between GPA and Conscientiousness. Thus our second hypothesis was only partially supported.

DISCUSSION

GPA and OEs

With the exception of Imaginational OE, our findings are consistent with the literature pertaining to intelligence and OEs. Psychomotor and Sensual OEs turned out to be strongly and *negatively* related to GPA. Perhaps OEs are only found beyond some threshold of intelligence. As has been found in the literature, we found higher intelligence (as measured by GPA) associated with higher Intellectual and Emotional OEs.

GPA and The Big Five

Consistent with our predictions based on our reviews of the literature, we found no relationship between GPA and Neuroticism, Extraversion, and Agreeableness. Contrary to our hypothesis, and inconsistent with the literature, we found no relationship between GPA and Openness to Experience . Perhaps there are characteristics of individuals at a Midwest University that make them less likely to display this trait. Also inconsistent with our hypothesis and the literature, we found a *negative* association between GPA and Conscientiousness. Thus, results both support and fail to support our second hypothesis.

Conclusion

The inconsistencies between our findings and the literature reviews may have been due to the nature of our sample. Perhaps our sample size was too small or too homogenous. Perhaps it did not represent a wide enough range of intellectual ability. In conclusion, for the most part , our study confirms the literature pertaining to intelligence and OEs and partially confirms the literature pertaining to intelligence and the Big Five. Future studies might examine under which conditions non-intellective factors influence undergraduate GPA and whether those factors can be influenced to the benefit of student academic performance.