

The Association Between General Self Esteem and Self Perceived Intelligence among Adolescents

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Introduction

- Higher levels of self esteem have been associated with greater academic performance (Newbegin, 1996; Schmidt, 2003; Ross, 2008).
- However, discussion over the construct of self esteem is often made more difficult thanks to the existence of multiple distinct theoretical definitions of the concept:
 - Newbegin measures self esteem using a series of questions related to math esteem and verbal esteem ("academic esteem").
 - Schmidt measures self esteem using a series of questions solely related to general self esteem.
 - Recent studies have found the presence of a negative relationship between general self esteem and academic performance despite the positive relationship between academic self esteem and academic performance (Pullmann, 2008), further complicating discussion.
- Little research has been done examining the relationship between general self esteem and any form of self perceived intelligence.

Research Questions

- Is general self esteem associated with self perceived intelligence among adolescents?
- Does the association between general self esteem and self perceived intelligence differ for individuals based on their recent academic performance?

Methods

Sample

- Respondents (n=6504) were drawn from Wave 1 of the National Longitudinal Study of Adolescent Health, a nationally representative sample of adolescents between grades 7-12 in the United States.

Measures

- General self esteem was assessed using the average of four questions that resembled questions from the scale Schmidt used to measure general esteem (eg. "I feel that I have a number of good qualities"). Each response was coded on a scale of 1 to 5, then averaged. Scores ranged from 1 (lowest self esteem) to 5 (highest self esteem).
- Self perceived intelligence was assessed using the question "Compared with other people your age, how intelligent are you?", with responses ranging from 1 (moderately below average) to 6 (extremely above average).
- Recent academic performance was assessed using each participant's unweighted GPA, only taking into account their grades from the most recent grading period.

References

- Newbegin, I., & Owens, A. (1996). Self-Esteem and Anxiety in Secondary School Achievement. *Journal of Social Behavior and Personality*, 11(3), 521-530
- Pullmann, H., & Allik, J. (2008). Relations of academic and general self-esteem to school achievement. *Personality and Individual Differences*, 45(6), 559-564. <https://doi.org/10.1016/j.paid.2008.06.017>
- Ross, C. E., & Broh, B. A. (2000). The Roles of Self-Esteem and the Sense of Personal Control in the Academic Achievement Process. *Sociology of Education*, 73(4), 270-284. <https://doi.org/10.2307/2673234>
- Schmidt, J. A., & Padilla, B. (2003). Self-Esteem and Family Challenge: An Investigation of Their Effects on Achievement. *Journal of Youth and Adolescence*, 32(1), 37-46. <https://doi.org/10.1023/a:1021080323230>

Results

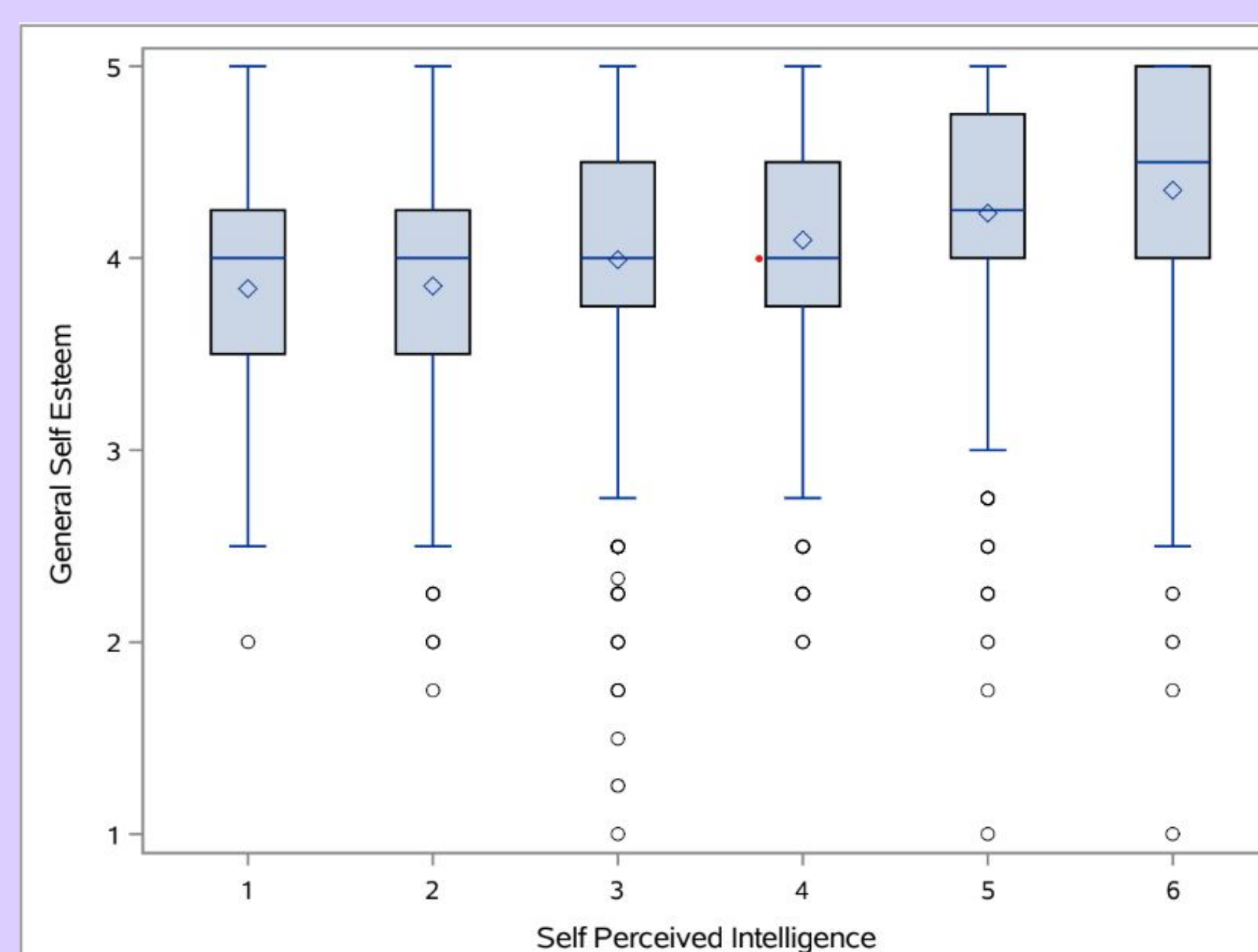
Univariate

- 68.3% of respondents had a general self esteem value of at least 4
- 55.2% of respondents believed that they were at least slightly more intelligent compared to other people their age
- 48.9% of respondents had a GPA of at least 3.0

Bivariate

- ANOVA analysis showed that there is a significant association between **general self esteem** and **self perceived intelligence** ($F(5, 6463) = 58.39, p < 0.0001$, Figure 1).
- Additionally, a Pearson correlation test showed that **general self esteem** was significantly and positively associated with **recent academic achievement** ($r = 0.14, p < 0.0001$).

Figure 1. General Self Esteem and Self Perceived Intelligence

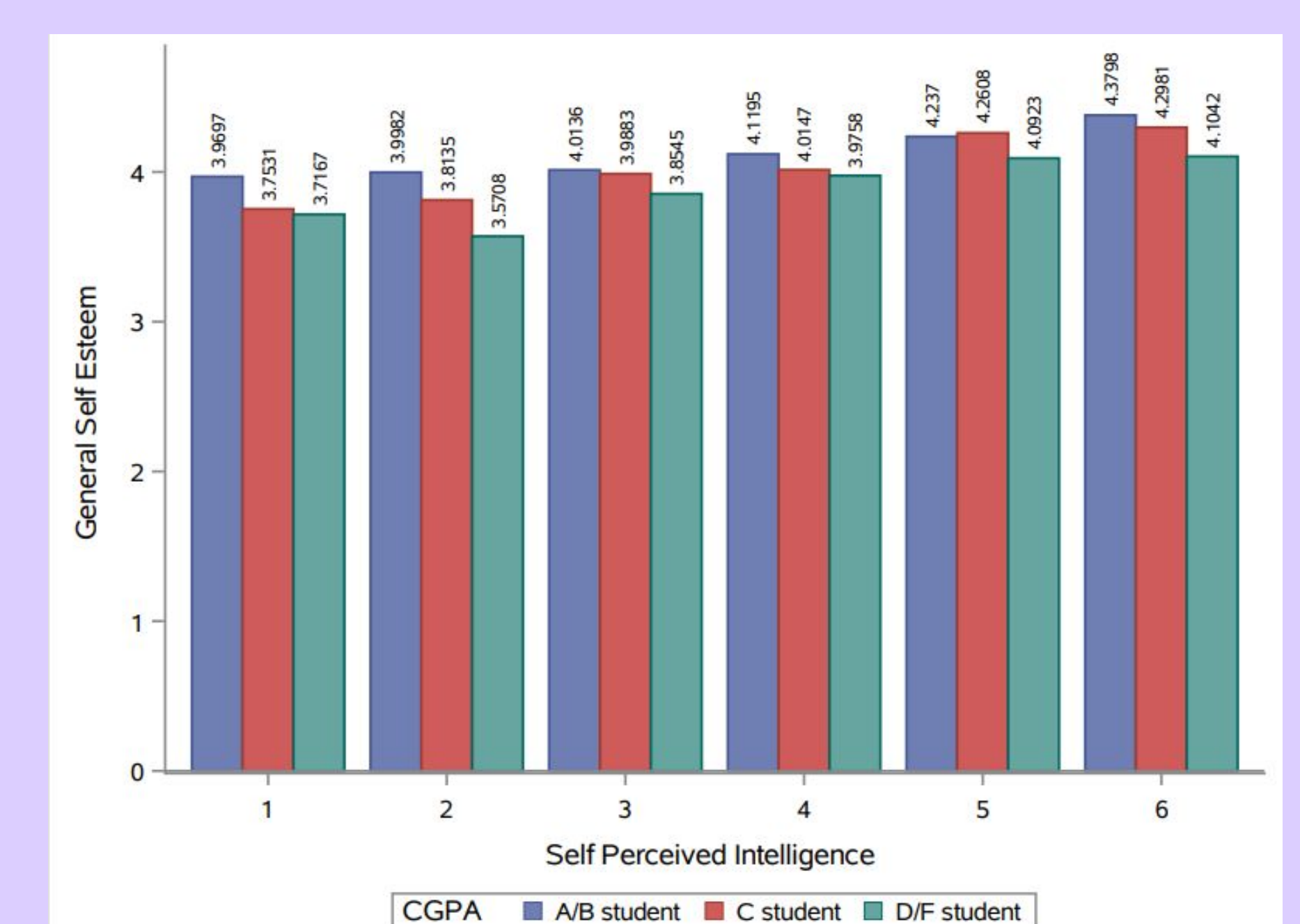


- After the ANOVA analysis, post hoc comparisons revealed that participants associated with each level of self perceived intelligence (except for the two lowest levels) reported significantly higher mean values of general self esteem compared to participants associated with each lower level of self perceived intelligence.

Multivariate

- Recent academic achievement is not a moderator for the association between general self esteem and self perceived intelligence (Figure 2).
- Comparing each level of self perceived intelligence to the lowest level, each other level (except for the second lowest level) is significantly and positively associated with general self esteem after controlling for age, biological sex, and recent academic performance ($F(5) = 34.95, p < 0.0001$).

Figure 2. General Self Esteem and Self Perceived Intelligence by Recent Academic Achievement



Discussion

- Higher self perceived intelligence appears to be associated with higher general self esteem for students regardless of their recent academic performance.
- Educators and teachers might use this information to substantiate the importance of cultivating high self perceived intelligence within public and private schooling, with high self perceived intelligence allowing students to feel more confident with their academic work and intellectual work overall.
- Additionally, educational psychologists might use this information to gain a better understanding of the distinction and association between two similar concepts that have been labeled and treated similarly in earlier research.
- Further research is needed to determine whether high self perceived intelligence precedes high general self esteem, high general self esteem precedes high self perceived intelligence, or the two both precede each other.