



The Association between Self-Esteem and Agreeableness among Adolescent Males and Females

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INTRODUCTION

- Self-esteem is associated to positive attributes of the Big Five dimensions of personality. Specifically, high levels of self-esteem are shown to have a positive association with extraversion, emotional stability, conscientiousness, openness, and agreeability (Zeigler-Hill et al., 2015).
- Self-esteem has varying degrees of association with agreeableness across sources, while associations of self-esteem and the other Big Five dimensions of personality remain more consistent (Mlacic et al., 2007) (Amirazodi et al. 2011).
- Additionally, adolescent boys and girls have been shown to record significantly different levels of self-esteem as well as experience different levels of association between self-esteem and personality dimensions (Fickova 1999).
- In depth analysis of the association between self-esteem and agreeableness, focused through the lens of biological sex is currently lacking, and remains to be explored.

RESEARCH QUESTIONS

- Are high levels of self-esteem associated with high levels of agreeableness, controlling for a participant's sex?
- Does the association between self-esteem and agreeableness differ when agreeableness is judged by a participant's self-assessment versus examining evidence of their temperament?

METHODS

Sample

- Respondents (n=6503) were drawn from the 1995 U.S. National Longitudinal Study of Adolescent Health (Add Health), a nationally representative sample of English-speaking adolescents, grades 7-12 in the United States.

Measures

- Self-esteem was assessed using a scale of -3 to 2. Scores ranged from -11 (low self-esteem) to 9 (high self-esteem). This construct was built from a combination of the following questions:
 - How often were these true in the past week?
 - You felt that you were just as good as other people
 - You thought your life had been a failure
 - You felt that people disliked you
 - You like yourself just the way you are
 - You feel like you are doing everything just about right
- External agreeableness was assessed similarly with scores ranging from -10 (disagreeable) to 7 (agreeable). This construct was built from a combination of the following questions:
 - Since school started this year, how often have you had trouble getting along with your teachers?
 - Since school started this year, how often have you had trouble getting along with other students?
 - Have you had a serious argument with your mother about your behavior in the past four weeks?
 - Have you had a serious argument with your father about your behavior in the past four weeks?
 - How many times in the past 12 months have you gotten into a physical fight?
- Self-reported agreeableness was assessed using a scale from -2 to 2, and scores ranged from -6 (disagreeable) to 6 (agreeable). This construct was built from a combination of the following questions:
 - How much do you agree with the following statements?
 - You never argue with anyone
 - You never criticize other people
 - You usually go out of your way to avoid having to deal with problems in your life
- Total agreeableness was assessed using the sum of external agreeableness and self-reported agreeableness. Self-reported agreeableness was scaled up by a factor of 2.5 to account for the difference in number of questions between the two categories.
- Sex was coded dichotomously.

RESULTS

Univariate

- 48.4% of respondents are male, 51.6% of the respondents are female

Bivariate

- A Pearson correlation test performed between self-esteem and the three variations of agreeability showed that:
 - the correlation between **self-esteem** and **total agreeableness** is -0.067 (p-value = $3.2e-7$), suggesting that only 0.4% (the correlation value squared) of the variance in the agreeableness scores can be explained by a participant's level of self-esteem.
 - the correlation between **self-esteem** and **self-reported agreeableness** is -0.17 (p-value < $2.2e-16$), suggesting that only 3% (the correlation value squared) of the variance in the self-reported agreeableness scores can be explained by a participant's level of self-esteem.
 - the correlation between **self-esteem** and **external agreeableness** is 0.15 (p-value < $2.2e-16$), suggesting that only 2% (the correlation value squared) of the variance in the external agreeableness scores can be explained by a participant's level of self-esteem.

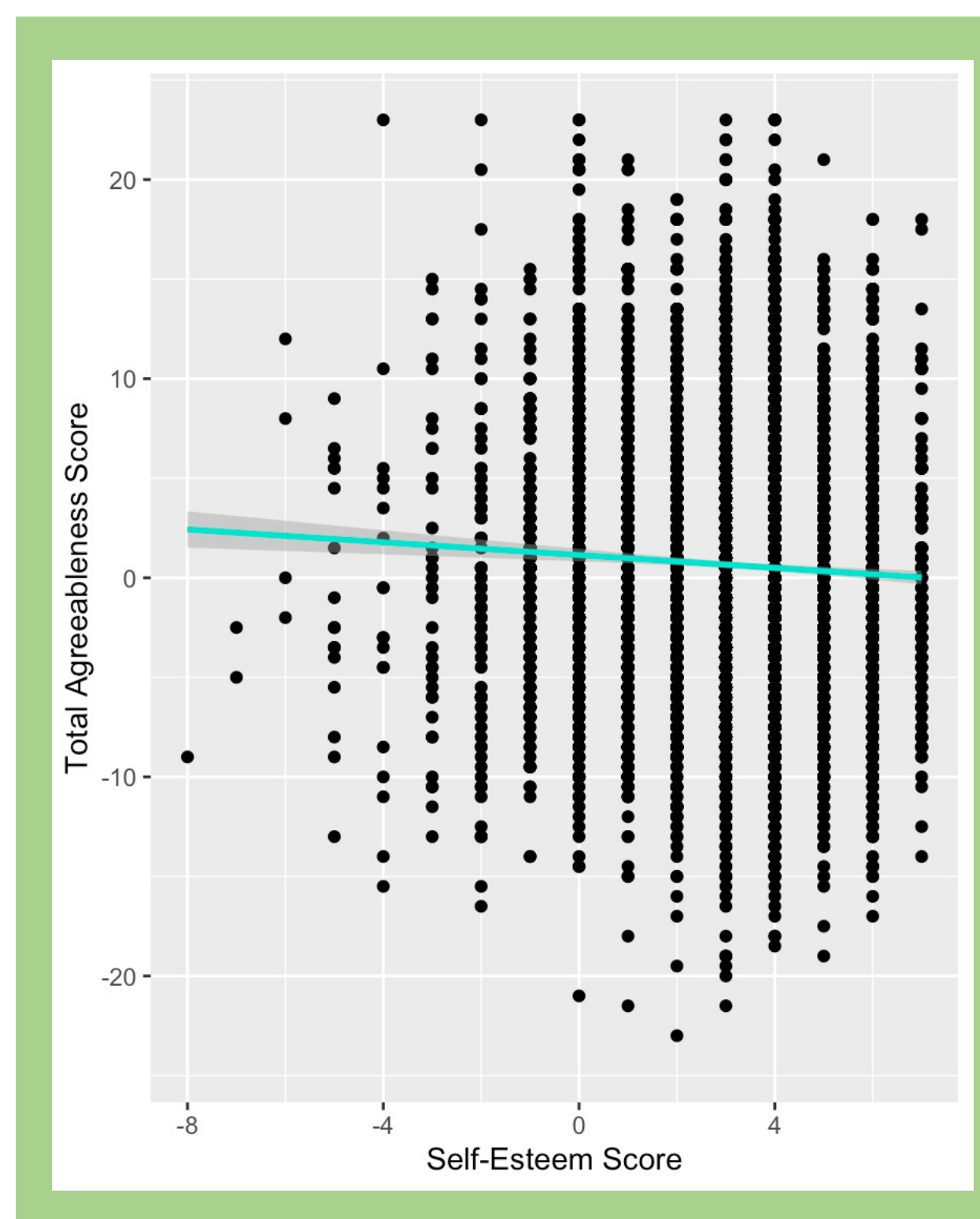


Figure 1. Total Agreeableness Score vs. Self-Esteem Score

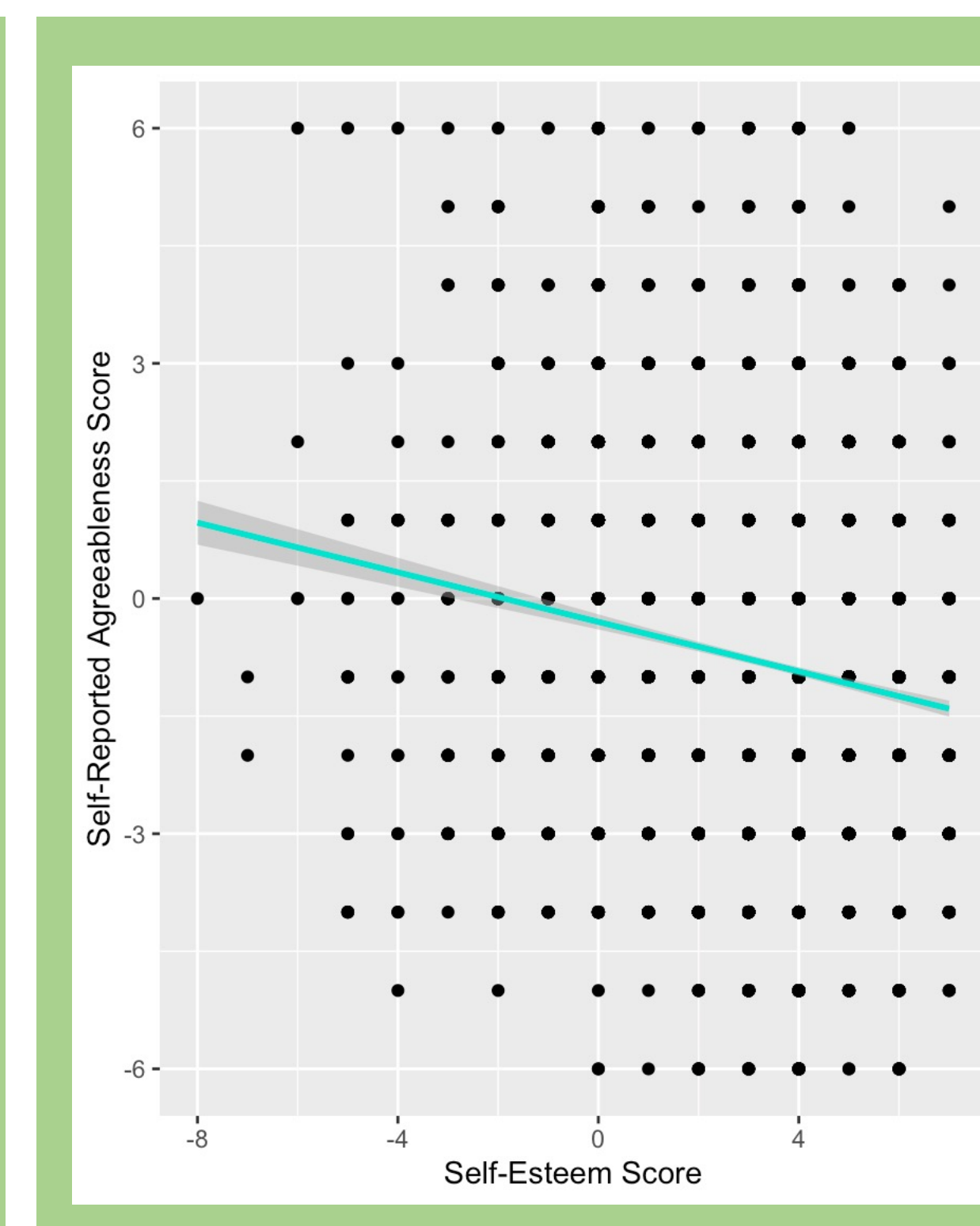


Figure 2. External Agreeableness Score vs. Self-Esteem Score

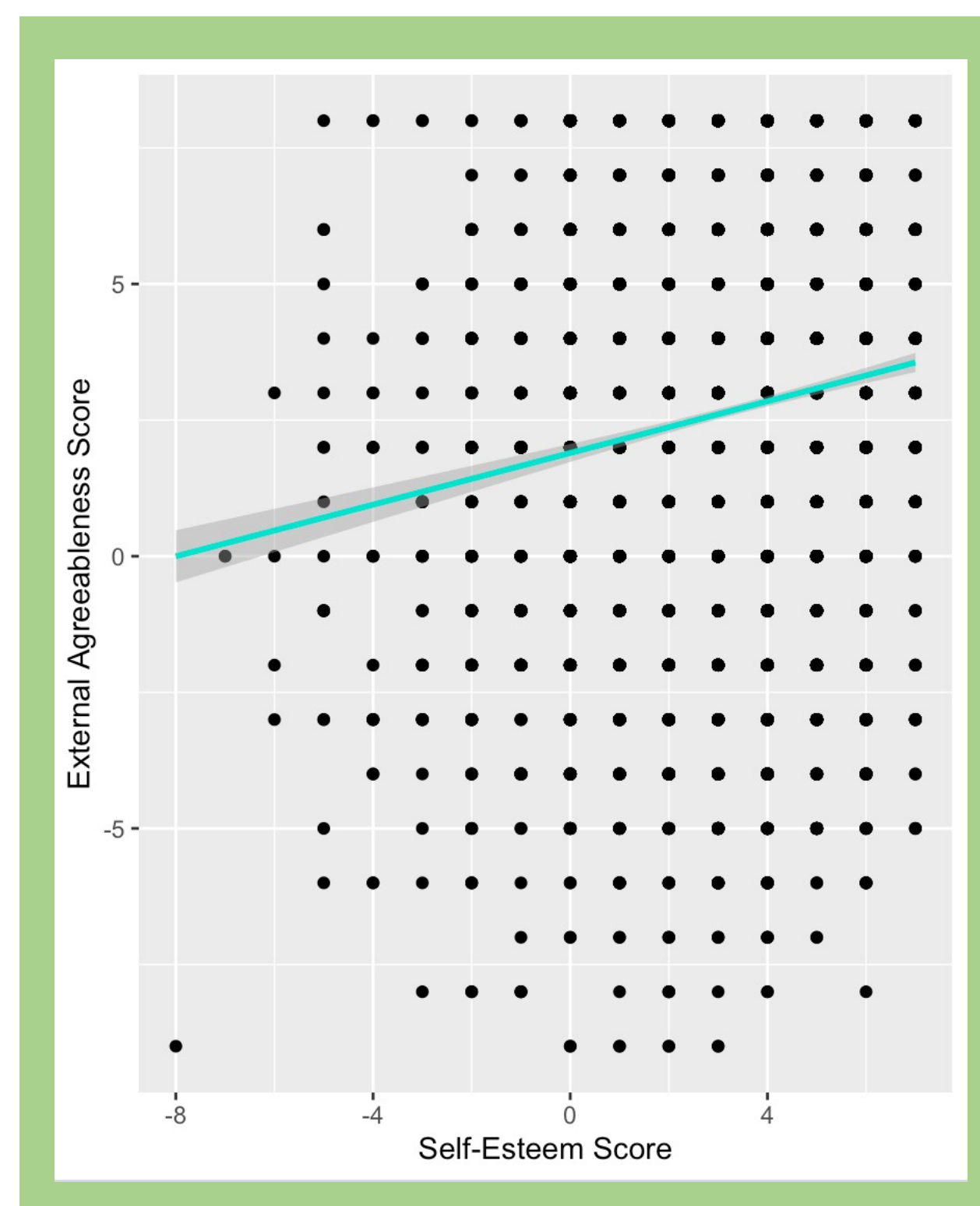


Figure 3. Self-Reported Agreeableness Score vs. Self-Esteem Score

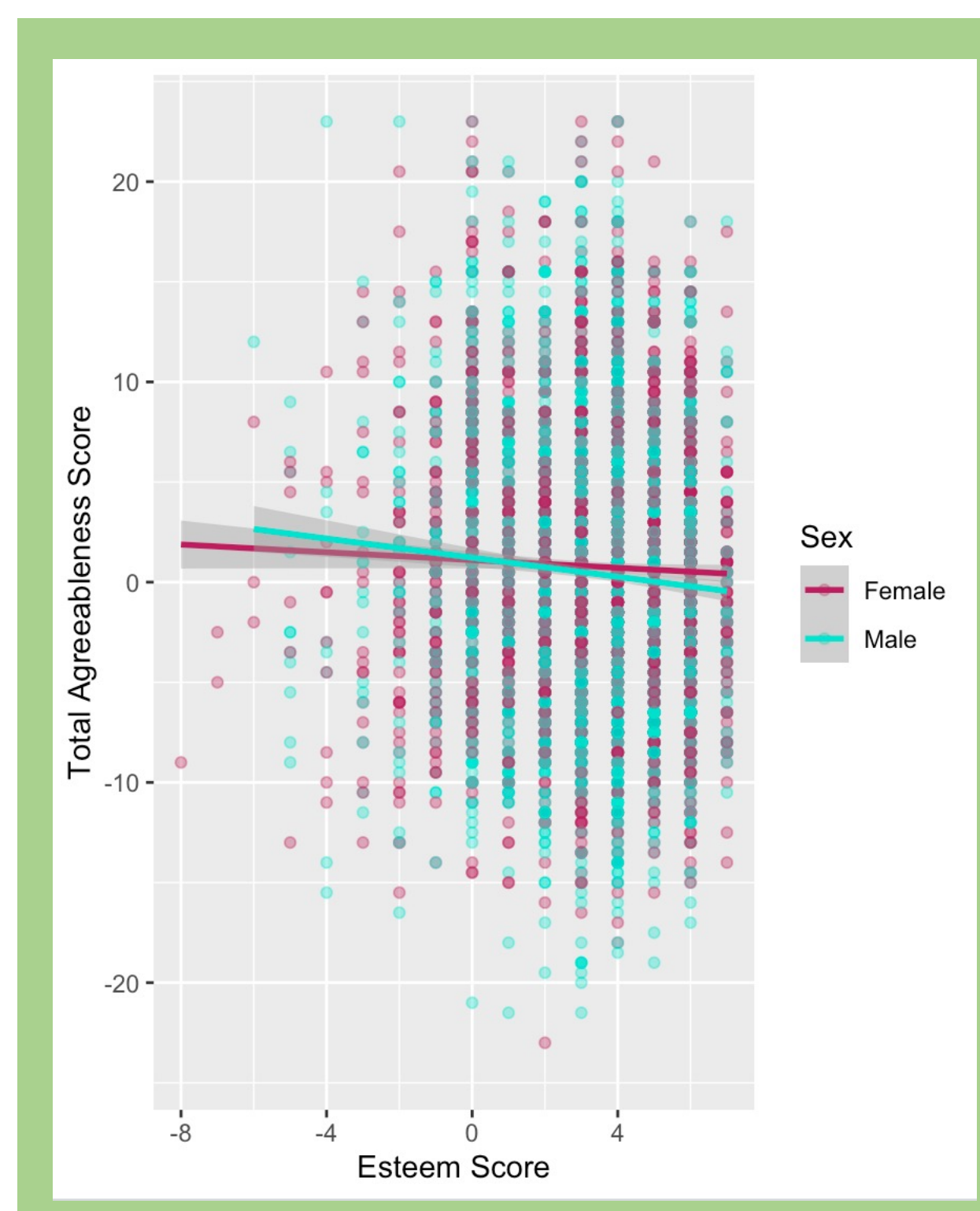


Figure 4. Total Agreeableness Score in Males and Females vs. Self-Esteem Score

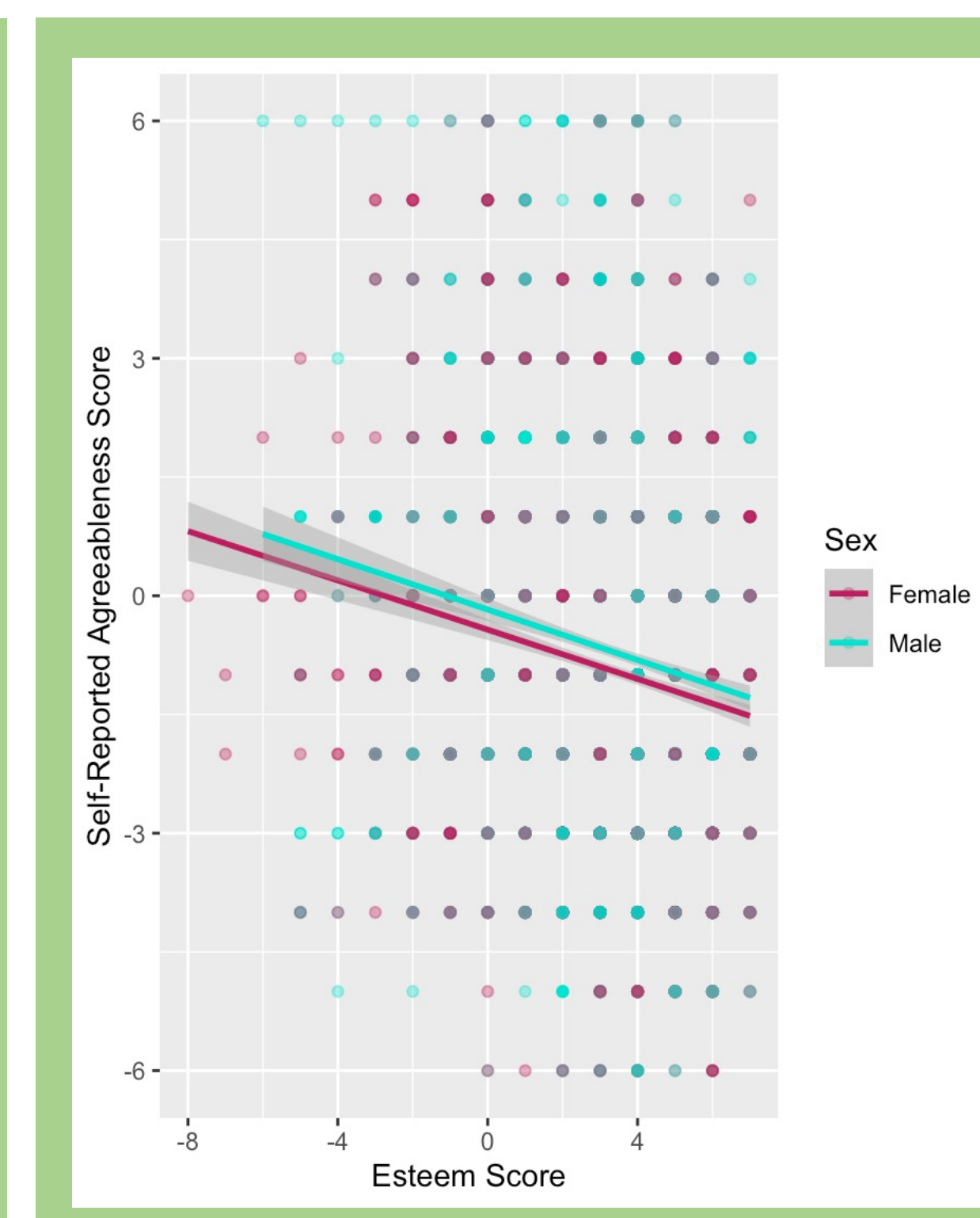


Figure 5. External Agreeableness Score in Males and Females vs Self-Esteem Score

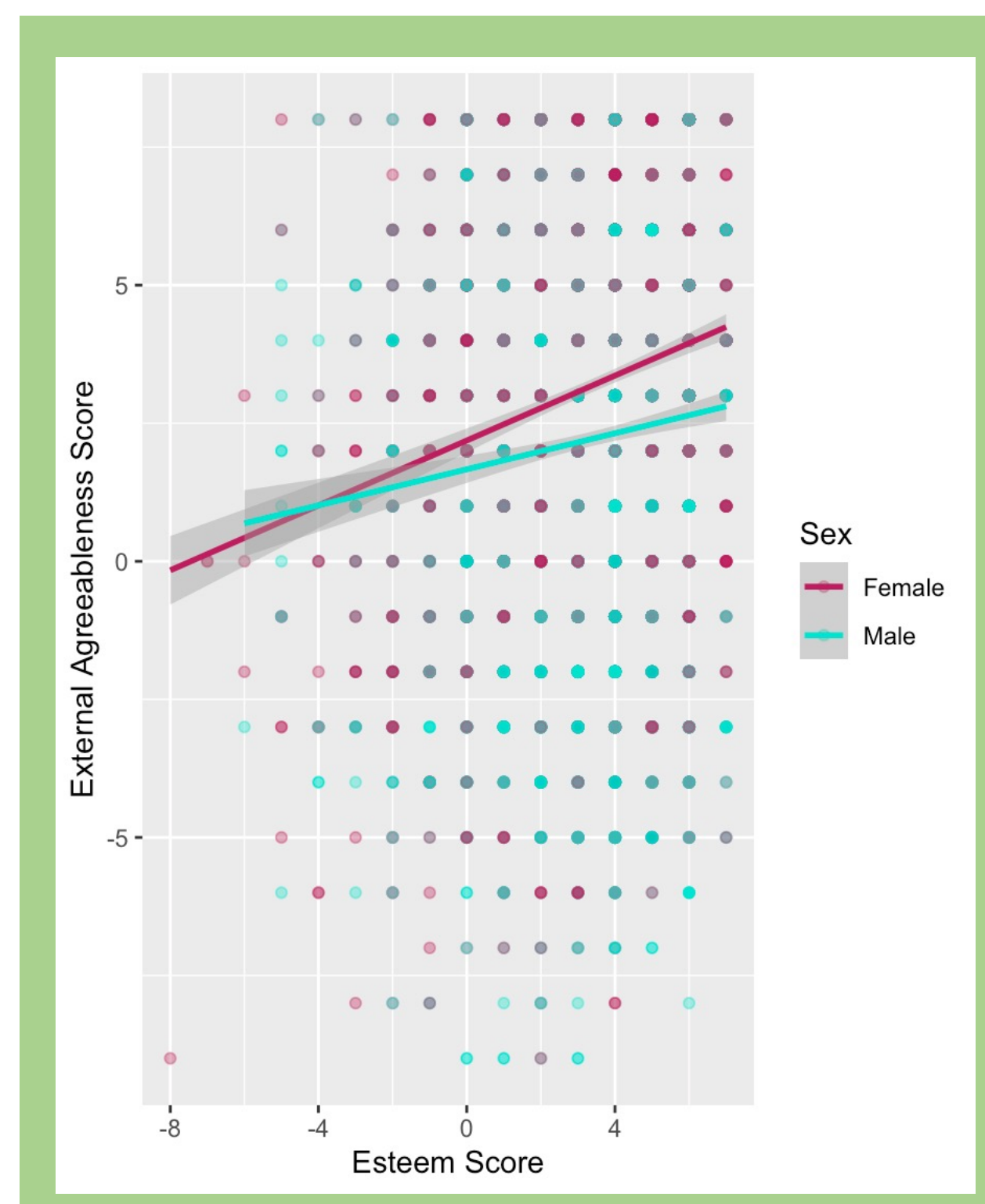


Figure 6. Self-Reported Agreeableness Score in Males and Females vs Self-Esteem Score

Multivariate

- Self-esteem** (Beta=-0.16, CI -0.24, -0.08, $p = 5.60e-05$) is significantly and negatively associated with a participant's **total agreeableness score** after controlling for sex. On average, students are expected to score 0.16 fewer points on the self-esteem scale for each additional point scored on the agreeableness scale. Sex (Beta = 0.36, CI 0.01, 0.70, $p = 0.042$) is significantly associated with agreeableness in the model stated above (Figure 4).
- Self-esteem** (Beta=-0.16, CI -0.18, -0.13, $p = 2e-18$) is significantly and negatively associated with a participant's **self-reported agreeableness** score after controlling for sex. On average, students are expected to score 0.16 fewer points on the self-esteem scale for each additional point scored on the agreeableness scale. Sex (Beta = -0.24, CI -0.34, -0.14, $p = 7.2e-06$) is significantly associated with agreeableness in the model above (Figure 5).
- Self-esteem** (Beta=0.23, CI 0.19, 0.27, $p < 2e-16$) is significantly and positively associated with a participant's **external agreeableness** score after controlling for sex. On average, students are expected to score 0.21 more points on the self-esteem scale for each additional point they scored on the agreeableness scale. Sex (Beta = 0.96, CI 0.78, 1.14, $p < 2e-16$) is significantly associated with agreeableness in the model above (Figure 6).

DISCUSSION

- Sex may affect an adolescent's correlation between their level of self-esteem and their level of agreeableness.
- Regardless of sex, there is a possible difference between the correlation of self-esteem and self-reported agreeableness, and the correlation of self-esteem and external agreeableness.
- School counselors and families might use this information to investigate possible causes of aggressive behavior and create systems within school districts and at home to address indicators of low self-image as an effort to support mental health.
- Further research is needed to investigate the correlation between self-esteem and both self-reported and external agreeableness in both adults and adolescents. Additionally, further research is required to determine the best methods of intervention and self-esteem rehabilitation.