Adolescence and Psychology:
Genes, the Environment & Self-Esteem
Genetics and Self-Esteem

Outline

• Background
• Hypotheses
• Results
  – H1, H2, H3
• Conclusions
Self-Esteem?
Intersection between genes and environment?

NO studies out there!
Testing 3 Hypotheses:

H1) 5HTTLPR $\leftrightarrow$ Self-Esteem

H2) Bad Environment $\rightarrow$ Low Self-Esteem

H3) Gene X Environment $\leftrightarrow$ Self-Esteem
The People

• 1199 adolescents
  white 60%, black 17%, Lat/Hispanic 16%, Asian 7%

• Avg age
  – Wave I: 14.9 (SD = 1.6)
  – Wave II: 16.5 (SD = 1.7)
  – Wave III: 21.8 (SD = 1.7)
Hypothesis 1

• Does the Serotonin transporter gene (5HTTLPR) influence self-esteem?
Effect of 5HTT on self-esteem across 3 waves

Between subjects effect (mean SE) p<.01

(F = 3.16, p <.02)
Self-Esteem Variable

**5-point scale extent individuals agree or disagree with the following statements**

- You have a lot of good qualities
- You have a lot to be proud of
- You like yourself just the way you are
- You feel like you are doing everything just about right
Parenting?
Maltreatment or Neglect?
Environmental Risk

Environment measurement model
    Wave I and II

$\chi^2 = 906.29$, df = 517,
  CFI = .945, RMSEA = .044 (.039-.048)
Housing & Neighborhood Conditions
Interviewer Ratings (score 1-4):

1. How well kept is the building in which the respondent lives?
2. How well kept are most of the buildings on the street?
Self-Esteem from Adolescence to Early Adulthood

Wave I
15 years

Wave II
16.5 years

Wave III
22 years

SE1

.578

SE2

.360

SE3

.220

ENV1

.110

.796

ENV2

.134

SES1

.641

SES2

.082
Self-Esteem from Adolescence to Early Adulthood

Do Environmental effects differ by 5HTT genotype?

Wave I
15 years

Wave II
16.5 years

Wave III
22 years

χ² = 6505.28, CFI = .85, RMSEA = .046 (.044 -.048)
SES latent variable x 5HTTLPR
Wave III Self-Esteem

Home and Neighborhood Quality During Adolescence

Self-Esteem Factor Score
Wave III - Adulthood

1/2 SD -   1/2 SD +

Low SES
High SES
Self-report is less effective
Home and Neighborhood Quality During Adolescence

Self-Esteem Factor Score

Wave III - Adulthood

1/2 SD - 1/2 SD +

Look Familiar??
Caspi et al. 2003
MONEY!!  
Will be your greatest contribution!!