The Relation Between Academic Performance and Self-Esteem Depends…

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Acknowledgements

This research is supported in part by NICHD Grant #R01 HD33437 awarded to Jacquelynne S. Eccles and Arnold J. Sameroff and in part by a grant from W. T. Grant awarded to Jacquelynne S. Eccles. The original data collection was supported by funding from the MacArthur Research Network on Successful Adolescent Development in High Risk Settings, chaired by Richard Jessor.

We gratefully acknowledge the contributions of the following people to this project (listed alphabetically): Elaine Belansky, Celina Chatman, Diane Early, Kari Fraser, Katie Jodl, Ariel Kalil, Linda Kuhn, Karen Macarthy, Rob Roeser, Arnold Sameroff, Sherri Steele, Cynthia Winston, and Carol Wong.
Background

- Academic Achievement – Esteem relation
  
  - Hansford & Hattie (1982): $r = .22$
  
  - Hoge, Smit, & Crist (1995): $r = .23$
  
MADICS: Maryland Adolescent Development in Context Study

Family Income in PG County

- Whites
- Blacks

Income Bins:
- < $15,000
- $15-$30,000
- $30-$50,000
- $50-$70,000
- > $70,000

Bar Charts:
- Percentage of income distribution
  - U.S.
  - Maryland
  - Sample

Pie Charts:
- Whites
- Blacks

Prince George's County

Sample: 0 10 20 30 40 50 60 70 80
Esteem Study Sample

Total Sample Size: 777 families

Gender:  
- 50% Males
- 50% Females

Race:  
- 66% Black
- 34% White

Age of target youth (at Wave 1):  
Mean=12.7 years, range 11 to 16

Family Structure:  
- Intact: 60%  
- Step: 14%  
- Live in: 4%  
- Single-sep/div: 16%  
- Single-never married: 6%
**Family Income:**

Mean: $52,987  
St. dev: $25,407  
Range: $3,500 to > $150,000

**Highest Level of Education**

High school degree or below: 30%  
Some college: 29%  
College degree: 22%  
Advanced degree: 18%

**Highest Occupational Level:**

Unemployed 2%  
Semi-skilled 20%  
Skilled 40%  
White collar professional 34%  
Advanced professional 4%
Self-Esteem Scale

- How often do you wish you were different than you are?
- How often would you like to change lots of things about you if you could?
- How often are you pretty sure about yourself?
- How happy are you with your life now?
- How happy are you with the kind of person you are?

Cronbach’s Alpha: Wave 1 (.72) & Wave 3 (.80)
Academic Performance

• **Grade Point Average** *(School Records)*
  – Final English Grade
  – Final Science Grade
  – Final Math Grade
  – Final Health Grade

Cronbach’s Alpha: Wave 1 (.88) & Wave 2 (.88)
Full Sample GPA-Esteem Correlations & Crosslags

- T1 Esteem: T1 GPA = 0.09
- T3 Esteem: T3 GPA = 0.08
- T1 GPA: T3 Esteem = 0.09
- T3 GPA: T1 Esteem = 0.14
Full Sample GPA-Esteem Structural Equation Model Estimates

Standardized SEM Path Coefficients

- T1 Esteem → T3 Esteem: 0.64 (0.58)
- T1 Esteem → T3 GPA: 0.08 (0.09)
- T3 Esteem → T1 GPA: -0.02 (0.08)
- T3 Esteem → T1 Esteem: 0.16 (0.14)
- T3 GPA → T1 Esteem: 0.02 (0.09)
- T3 GPA → T1 GPA: 0.77 (0.78)
**Males**

(n = 388)

- Standardized SEM Path Coefficients
- (Bivariate Correlations in parentheses)

**Females**

(n = 389)

- Standardized SEM Path Coefficients
- (Bivariate Correlations in parentheses)
White Males
(n = 127)

T1 Esteem  →  T1 GPA  
0.20 (.17)  

T1 GPA  →  T3 Esteem  
0.53 (.49)  

T3 Esteem  →  T3 GPA  
0.02 (.10)  

T3 GPA  →  T1 Esteem  
0.30 (.26)  

White Females
(n = 142)

T1 Esteem  →  T1 GPA  
0.13 (.08)  

T1 GPA  →  T3 Esteem  
0.66 (.59)  

T3 Esteem  →  T3 GPA  
0.03 (.13)  

T3 GPA  →  T1 Esteem  
0.09 (.14)  

-0.08 (.15)  

T1 Esteem  →  T3 GPA  
0.73 (.74)  

T3 GPA  →  T1 Esteem  
0.74 (.73)  

(n = 127)

(n = 142)
Levels of Academic Importance

• Youth Importance of Academic Skills
  – e.g., Compared to other kids your age, how important [is Math] to you?
    • 1=much less important to me than to other kids
    • 7=much more important to me than to other kids
  – Alpha’s = .74 (Wave 1) & .81 (Wave 3)
  – “High Importance” = 6 or higher at both waves
  – “Low Importance” = 4 or lower at both waves
Levels of Academic Importance

**High**
(n = 224)

- T1 Esteem to T1 GPA: 0.63 (.56)
- T1 Esteem to T3 Esteem: -0.02 (.08)
- T1 Esteem to T3 GPA: -0.04 (.03)
- T1 GPA to T3 Esteem: 0.20 (.11)
- T1 GPA to T3 GPA: 0.75 (.77)

**Low**
(n = 136)

- T1 Esteem to T1 GPA: 0.56 (.52)
- T1 Esteem to T3 Esteem: -0.03 (.01)
- T1 Esteem to T3 GPA: -0.02 (-.07)
- T1 GPA to T3 Esteem: -0.00 (-.02)
- T1 GPA to T3 GPA: 0.20 (.03)

**Med**
(n = 387)

- T1 Esteem to T1 GPA: 0.65 (.56)
- T1 Esteem to T3 Esteem: 0.06 (.08)
- T1 Esteem to T3 GPA: 0.02 (.10)
- T1 GPA to T3 Esteem: 0.06 (.13)
- T1 GPA to T3 GPA: 0.11 (.16)
- T3 Esteem to T3 GPA: 0.77 (.77)
Patterns of Importance Across Domains

Compared to other things you do, how important are each of the following activities to you?

<table>
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<tr>
<th>Importance Level</th>
<th>Math or other school subjects?</th>
<th>Sports?</th>
<th>Playing a musical instrument or doing some other...art?</th>
<th>Being good looking?</th>
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<tbody>
<tr>
<td>1</td>
<td>Much Less Important To Me Than Other Things</td>
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Much More Important To Me Than Other Things
7th Grade Youth Value Patterns

Mean

Aca Only | Aca+All | Looks | Sports | Arts

- Classes Imp
- Appearance Imp
- Sports Imp
- Music/Arts Imp

7th Grade Youth Value Patterns
GPA & Esteem
for Academic v. Social Value Patterns

Aca Only
(n = 182)

Aca+All
(n = 223)

Appearance
(n = 93)

(n = 182)
Why is there no strong reciprocal relation between GPA and Esteem?

• Perhaps there is something about our sample?  
  – not likely; our results are similar to others’…

• Perhaps we have not identified the right subgroup?  
  – possibly; we did find variation across subgroups

• Perhaps it’s a Brunswik symmetry issue?  
  – likely; global esteem and GPA exist at different levels
Full Sample relations between GPA and Academic Ability Self-Concept

- GPA to Ability (T1): 0.51 (0.44)
- Ability to GPA (T3): 0.76 (0.78)
- GPA to Self-Concept (T1): 0.44 (0.42)
- Self-Concept to GPA (T3): 0.08 (0.29)
- Ability to Self-Concept (T1): 0.02 (0.34)
- Self-Concept to Ability (T3): 0.27 (0.38)
Black Males
(n = 257)

Black Females
(n = 243)
White Males
(n = 124)

White Females
(n = 142)
Effect of Domain-Specific Self-Concepts on Global Self-Esteem (at 7th Grade)

Predictors:
- 5thG CAT
- Acad Ability
- Sports Ability
- Good Looking
- Pos Rel w/PCG

Standardized Beta Coefficients

Full Model w/ Ach

Full Model w/o Ach
Effect of Domain-Specific Self-Concepts on Global Self-Esteem (by Race x Sex)

Predictors
- Acad Ability
- Sports Ability
- Good Looking
- Pos Rel w/PCG

- Black Males
- Black Females
- White Males
- White Females

Standardized Beta Coefficients
Effect of Domain-Specific Self-Concepts on Global Self-Esteem Varies by Value Groups

Value Group

Academic

Appearance

Athletics

Self-Concepts

- Acad Ability
- Sport Ability
- Good Looking
- Pos Rel w/PCG

Standardized Beta Coefficients
Effect of Domain-Specific Self-Concepts on Global Self-Esteem for the Academic Value Group (by Race x Sex)

Standardized Beta Coefficients

Predictors
- Acad Ability
- Sports Ability
- Good Looking
- Pos Rel w/PCG

White Males
- Black Males
- Black Females
- White Females
Effect of Domain-Specific Self-Concepts on Global Self-Esteem after 8th Grade

Predictors

- Acad Ability
- Sports Ability
- Good Looking
- Pos Rel w/PCG

Standardized Beta Coefficients

- Full Sample
- Black Males
- Black Females
- White Males
- White Females
Effect of Domain-Specific Self-Concepts on Global Self-Esteem at 7th & 8th Grade

Predictors
- Acad Ability
- Sports Ability
- Good Looking
- Pos Rel w/PCG

Standardized Beta Coefficients

Bar chart showing the impact of different predictors on global self-esteem for 7th and 8th grade students.
Conclusions

• The relation between GPA & Esteem depends…on…
  – the population (or subpopulation) of interest
    • The relation is generally small at the sample level
    • The relation can be modest for specific subgroups
  – the context in which the relation is examined
    • Esteem depends largely on things other than GPA, like relationships with family and peers
  – the time of measurement
    • The GPA - Esteem relation changes over time
Thank You
(the end)

Please see the following web page for more info:
http://www.rcgd.isr.umich.edu/garp/