Parental Influence on Academic Outcomes: Do Race and SES Matter?

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General Issue

• Strong connection between family SES and child outcomes

• WHY?
Various Family Process Models

• Some are based on the influence of SES on parental mental health and behaviors to child outcomes (e.g., Conger and McLoyd)
Basic Parental Affect Model

Parental SES → Economic Pressures → Parental Affective Response → Family Behaviors → Child Outcomes
Various Family Process Models

- Others on the influence of SES on parental beliefs and behaviors (e.g., Brody and Eccles)
But What is Family SES?

• Moving beyond social address models to more nuanced view of characteristics such as Family Social Class
Reviews of the Importance of a More Nuanced View of Family Social Class

  - Distal factors have differential influence on proximal parent factors
  - Parents efficacy and developmental goals are important mediators academic success of the child

- Corwyn and Bradley (2002):
  - SES variables such as income, education, and occupation vary on the influence they have on various child outcomes
  - this varies to some degree by race (in some studies, but not others)
  - maternal education had the most consistent influence on child outcomes.

- Hoffman (in press)
  - Parent education may be “carrying the effect” in the home by facilitating parents’:
    - ability and willingness to seek out expert advice,
    - parents’ knowledge of the needs of their children,
    - parents’ verbal abilities, and
    - perhaps even parents’ general sense of efficacy as parents.
Modified Model of Family Process

- Family Income
- Parent Education
- Prior Achievement
- Parent Efficacy
- Parental Education Expectations
- Perceived Rule Structure
- Educational Activities
- Achievement
Hypothesis

Based on both previous findings and family process theory the following hypothesis were tested:

- Parental educational expectations and global efficacy will mediate the influence of SES indicators (income and parent education) on parent behaviors and child achievement.

- The pathways that lead to achievement outcomes in families will differ by race.
MADICS: Maryland Adolescence Development in Context Study

1990 Family Income in PG County

- < $15,000
- $15-$30,000
- $30-$50,000
- $50-$70,000
- > $70,000

Blacks

- 白人
- 黑人

Whites

- 白人
- 黑人

Below Poverty

U.S.

Prince George's County

Marlyand

PGC Sample
Collaborators and Funders

• We thank the following people for their support of this project (listed alphabetically): Elaine Belansky, Todd Bartko, Nick Butler, Diane Early, Kari Fraser, Ariel Kalil, Linda Kuhn, Sarah Lord, Karen McCarthy, Steve Peck, Arnold Sameroff, Sherri Steele, and Cindy Winston.

• Data reported here come from grants to Jacquelynne S. Eccles and Arnold J. Sameroff from the MacArthur Network on Successful Adolescent Development in High Risk Settings (Chair: R. Jessor) and the National Institutes for Child Health and Human Development.
Sample

- Longitudinal Sample Size = 755
  - (5th to 11th grade)
- 66% Black
- 50% Female
- Ages 11 – 16 (mean = 12.7)
- 60% intact marriages; 14% step; 4% live-in; 23% single
- Family SES characteristics differ only slightly between African Americans and European Americans
Model of Family Process to be Tested

Income

Parent Education

Prior Achievement (5th Grade)

Parent Efficacy

Perceived Rule Structure

Educational Activities

Wave 1

Wave 3
Methods

- Data were collected from interviews and surveys administered in the home to the parents and target adolescent at the beginning of 7th grade (1991) and at the end of 8th grade (1993).

- School record data was obtained in 1991 and 1993 (which included the 5th grade CAT scores).
Family SES Variables

- Parent Income (Family)
  - Mean: $52,987
  - St. dev: $25,407
  - Range: $3,500 to > $150,000

- Parent Education (Highest)
  - High school degree or below: 30%
  - Some college: 29%
  - College degree: 22%
  - Advanced degree: 18%
Parent Beliefs

• Academic Efficacy (alpha = .79)
  • e.g., How much can you do to get your 7th grader... to do (his/her) homework?
    (1=nothing; 2=a little; 3=some; 4=a lot)

• Educational Expectations (single item)
  • …how far do you think (7th grader) will actually go in school?
    (e.g., 3 = Graduate from high school; 9 = MD, Law, PhD or other doctoral degree)
Parent Behavior

• Family Structure (alpha = .65)
  • e.g., Do you have family rules or expectations for your 7th grader about... doing homework?
    (1 = No; 2 = Yes)

• Educational Activities
  • How often have you or your spouse/partner... helped your 7th grader do homework or a school project?
    (1 = never; 6 = daily, more than 1 hour)
Youth Achievement

- **Academic Achievement - Grade 5**
  - California Achievement Test (Total Scale Score)
- **Academic Achievement - Grade 8**
  - Maryland Functional Test (Total Math Score)
- **Grade Point Average - Grade 8**
  - Final English Grade
  - Final Science Grade
  - Final Math Grade
  - Final Health Grade
  - *(Scale based on school records data)*
Analysis Plan

1. Specify a Family Process Model
2. Test for Race differences
3. Test for Mediation between SES and Achievement
Model of Family Process to be Tested

- Income
- Parent Education
- Prior Achievement (5th Grade)
- Parent Efficacy
- Parental Education Expectations
- Perceived Rule Structure
- Educational Activities
- Achievement

Wave 1
Wave 3
Test of the Structural Models

Structural model: Are there differences by Race?

- Multigroup:
  - $\chi^2 = 408.421/ \text{df}(268)$ constrained
  - $\chi^2 = 346.623/ \text{df}(229)$ unconstrained
  - $\chi^2_{(\text{diff})} = 61.798/ \text{df}(39); p = .03$

Theoretical model: Is the mediation model a better model than the direct effects?

- Mediation
  - $\chi^2 = 451.228/ \text{df}(237)$ constrained
  - $\chi^2 = 346.623/ \text{df}(229)$ unconstrained
  - $\chi^2_{(\text{diff})} = 104.64/ \text{df}(8); p < .001$
## Descriptives

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*Note:* Correlations above .08 are significant at the p < .05 level.
Process Model for African-American

Fit Statistics:
\( \chi^2/df = 1.5 \)
CFI = .95
RMSEA = .03
N = 512
Process Model for European-American

Fit Statistics:
$\chi^2/df = 1.5$
CFI = .95
RMSEA = .03
N = 266
Summary

• The relation of SES to Achievement varies
  • by Race
  • as a function of family process variables
• There was no effect of income for whites
• The effect of education on achievement was mediated primarily by educational expectations and in-home activities
Conclusions

• It is important to look at the role of family processes separately for race, especially in a normative sample.

• Parental beliefs and behaviors have important effects on the relation between SES and achievement, even though some of these effects vary by race.
  • Parent education is always important
Thank you.

For More Information:

http://www.rcgd.isr.umich.edu/garp