

# The Longitudinal Relationship between Early Language Ability and Prosocial Behavior in Elementary School in a High-Risk Sample

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## BACKGROUND INFORMATION

### PROSOCIAL BEHAVIOR

- Recent shift in focus away from negative factors in a child's life toward more **positive factors**
- Prosocial behavior is defined as a
  - "**Voluntary action intended to benefit another**" (Garner, 2006).
- In previous literature prosocial behavior has been linked with **positive academic outcomes**
  - Higher GPA
  - Increased literacy achievement for school-aged children (Wentzel, 1993; Miles & Stipek, 2006).
- Cross situational stability**
  - Only moderate stability in different settings (Eisenberg & Fabes, 1998; Graziano & Eisenberg, 1997).
    - Children have different motivations for their behavior in different situations.
    - Therefore, prosocial behavior rated by a **parent and teacher** may represent different behaviors for the same child.

### LANGUAGE AND PROSOCIAL BEHAVIOR

- Language ability in school age children is also related to their social interactions
  - Language ability → Peer acceptance (Horowitz, et al., 2003; Asher, Olden, & Gottman 1977; Asher & Renshaw, 1981).
- However, there is an overall **gap in the literature** when discussing the longitudinal link between early language skills and prosocial behavior in elementary school.

### AT RISK POPULATIONS

- Prenatal exposure to cocaine can have a negative impact on social-emotional development in early childhood
  - Poor self-regulation
  - Low frustration tolerance
  - More disruptive behavior than non-exposed peers (Dennis, Bendersky, Ramsay, & Lewis, 2006).

## METHOD

### CURRENT STUDY

- The relationship between early language ability and prosocial behavior was explored in a high-risk sample of children using structural equation modeling.
- Hypothesis**
  - Early language ability will facilitate prosocial behaviors, such that language ability at age 3 will predict prosocial behavior in 1st and 2nd grade.



### Participants

- 77, 6 to 8 year-old children
- Prenatally exposed to cocaine
- Primarily African American
- Low SES

## PROCEDURE

### MEASURES:

- 3 Year Measures**
  - Reynell Developmental Language Scale (RDLS) (Reynell & Gruber, 1990)
    - Language at age three, both receptive and expressive scales
  - Bayley Scales of Infant Development (BSID-II) (Bayley-II; Bayley, 1993)
    - Cognitive ability at age three
  - Adaptive Social Behavior Inventory (ASBI) (Hogan, Scott, Bauer, 1992)
    - Prosocial behavior at age three,
- 6 Year Measures**
  - Social Skills Rating System (SSRS; Gresham & Elliot, 1990)
    - Parent and Teacher forms questionnaire on child behavior
  - Behavior Assessment System for Children (BASC; Reynolds & Kamphaus, 1992).
    - Parent and Teacher forms, questionnaire on child behavior

### PROPOSED STRUCTURAL MODEL

#### Indicators:

- The proposed model included control indicators of
  - Gender
  - Cognitive Ability at age 3
  - Prosocial behavior at age 3
- The model also included the language indicators
  - Expressive Language ability at age 3
  - Receptive Language ability at age 3

#### Latent Factors

- Two latent factors of prosocial behavior were created due to the different cross-situational motivation of children in different contexts.

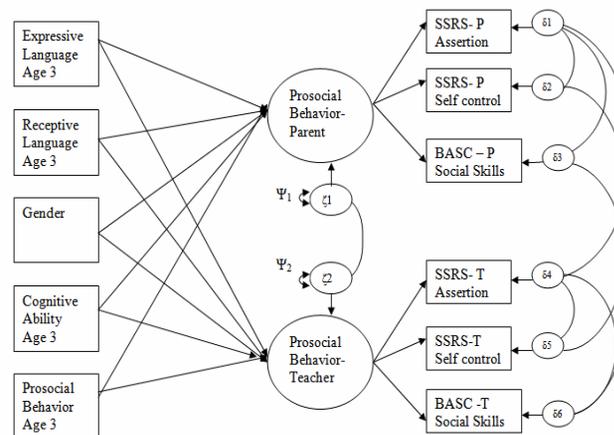
#### Latent Factor of Parent –Reported Prosocial Behavior

- Social Skills subscale of the BASC
- Assertion subscale of the SSRS
- Self-Control subscale of the SSRS

#### Latent Factor of Teacher –Reported Prosocial Behavior

- Social Skills subscale of the BASC
- Assertion subscale of the SSRS
- Self-Control subscale of the SSRS

### Proposed Model

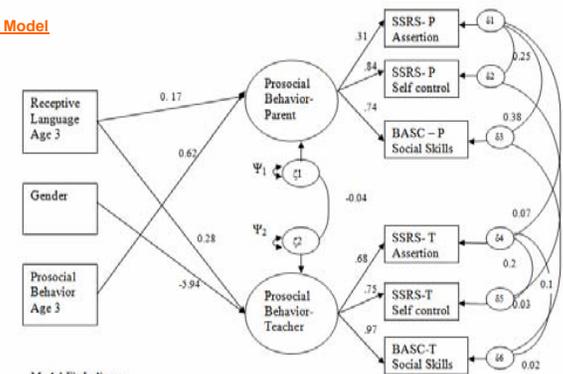


## RESULTS

### MODEL FIT

- The **Chi Square Test of Model Fit** yielded good model fit ( $\chi^2(26) = 35.53, p = .10$ )
  - CFI = .96
  - Root Mean Square Error of Approximation (RMSEA) = .07
  - Standardized Root Mean Square Residual (SRMR) = .05.
- Significant Predictors of **Teacher** Report of Prosocial Behavior
  - Receptive language ( $b = .28, p < .05$ )
  - Gender ( $b = -5.94, p < .01$ )
- Significant Predictors of **Parent** Report of Prosocial Behavior,
  - Receptive language ( $b = .17, p < .05$ )
  - Prosocial behavior at age three ( $b = .62, p < .05$ )

### Final Model



Model Fit Indices:  
 $\chi^2(21) = 30.6, p = .08, CFI = 0.96,$   
 RMSEA = 0.08, SRMR = 0.05

\* Model controls for Expressive Language and Cognitive Ability

## DISCUSSION

### INFLUENCE OF LANGUAGE ON PROSOCIAL BEHAVIOR

- The current study illuminates the importance of early language ability on later social interaction
- Language skills as early as age 3 impact both teacher and parent reported prosocial behaviors such as sharing and cooperation in elementary school

### STABILITY OF PROSOCIAL BEHAVIOR

- Preschool behavior is also an important predictor of parent reports of later prosocial behavior suggesting a continuity of prosocial behavior from as early as age 3 into elementary school

### GENDER AND PROSOCIAL BEHAVIOR

- Possible gender specific pathways for the development of prosocial behavior
- Perhaps there is a reporter bias favoring girls,
  - Which has been documented in previous research (Hastings, Rubin, & DeRose, 2006; Ostrov, Crick, & Keating, 2005).

- Overall These findings support the necessity for high quality literacy and social experiences for preschool children and the influence of early experiences on later development.

### LIMITATIONS AND FUTURE RESEARCH

- This study was restricted to questionnaire report on child behavior.
- Future studies should include direct observation of child behavior to further support the finding that early language ability influence behavior in elementary school
- Further research is needed to explore other possible antecedents of school age prosocial behavior in this high-risk population.

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