

The image shows the cover of a spiral-bound notebook. The cover is a light beige or tan color with a fine, woven fabric texture. A silver metal spiral binding is visible along the left edge. The text is centered on the cover in a black, serif font.

Young Children with Disruptive Behavior:
Contributions of Behavioral and Home Variables to Predicting
Concurrent Verbal Ability

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The Preschool Years

- Often exhibit behavior that is challenging to parents and teachers
- A time for children to learn basic academic and social skills:
 - Positive social interactions
 - Follow class rules
 - Basic building blocks of academics
- Children that have trouble acquiring these skills may be hindered in their current and future academic performance

(American Psychiatric Association, 2000; Spira & Fischel, 2005)



Behavioral Contributions

- May have difficulty sustaining attention to teacher instruction and classroom activities
- Are at greater risk for academic difficulties and may exhibit below average expressive language skills
- High rates of noncompliance and aggression
- Difficulty creating healthy peer relationships

(Bain, 2001; Barkley, 2006; Cole, Usher, & Cargo, 1993; DuPaul & Stoner, 2003; Hinshaw, 1992)

Home Environmental Contributions

- Academic development is a joint function of capabilities created by behavioral tendencies and the experiences and opportunities afforded by the environment
- Factors that impact the home environment:
 - Socio economic status (SES)
 - Parental occupation and level of education
 - Quality and quantity of stimulation and support

(Davis-Kean, 2005; Duncan et al., 1994; Gottfried et al., 1998; Hart & Rislet, 1995; Klebanov et al., 1994; Lerner, 1986 ; Mundfrom et al., 1993; Reynold & Lee, 1991; Sameroff & Seifer, 1983)

Purpose and Hypothesis

- To determine the relative contributions of behavioral and home environmental variables on concurrent verbal ability among preschoolers with challenging behaviors
- It is hypothesized that both will account for significant variance

Participants

- 55 preschoolers exhibiting challenging behaviors
 - as identified through Kids in Development
 - between the ages of 18 and 48 months
 - must also show high levels of challenging behaviors or multiple risk factors
- Power analysis
 - Total sample size of 48 is needed

Dunlap, Fox, Smith, & Strain, 2002)

Measures

- **Child Behavior Checklist (CBCL)** (Achenbach, 1994)
 - Designed to assess social competence and behavioral problems in children
- **Early Childhood Home Inventory** (Caldwell & Bradley, 1984)
 - Measures teaching interactions between parent and child
- **Four Factor Index of Social Status** (Hollingshead, 1975)
 - Used to measure SES on the basis of parental occupation and monthly income
- **Pre-school Language Scale-4** (Zimmerman et al., 1979)
 - Assesses early childhood language skills
 - Auditory Comprehension Subscale
 - Expressive Communication Subscale

Procedure

- Participants obtained through referrals
 - Local pediatricians, physicians, day care and preschool teachers, and parents
- Parents are asked to describe behavior or risk factors, provide age, sign informed consent
- Parents were asked to complete the CBCL
- Trained examiner completed the HOME and interviewed parent
 - SES and level of education
- Each child was tested on the PLS by a trained examiner

Analyses: Hierarchical Multiple Regression

Home variables	-----→ PLS Auditory
Behavioral variables	Comprehension Subscale
Home variables	-----→ PLS Expressive
Behavioral variables	Communication Subscale
Behavioral variables	-----→ PLS Auditory
Home variables	Comprehension Subscale
Behavioral variables	-----→ PLS Expressive
Home variables	Communication Subscale

Results

- Descriptive statistics
 - Means of the CBCL externalizing and HOME total score were in the high average range
 - Means of SES and both PLS-4 subscales were in the average range
- Univariate correlations
 - Out of nine possible, six were statistically significant
 - The CBCL was not significantly correlated with any criterion measure

Results

- Hypothesis #1 (home variables contribute to verbal ability)
 - Generally, was supported
 - The model including HOME and SES predicted expressive communication
 - HOME was a significant predictor of expressive communication
- Hypothesis #2 (behavioral variables contribute to verbal ability)
 - Was not supported

Results – Predicting Expressive Communication

Variable	B	SEB	β	R ²	ΔR^2
Step 1				.004	
CBCL	-.07	.15	-.06		
Step 2				.246**	.242**
CBCL	.121	.14	.11**		
HOME	.91	.36	.36**		
SES	.17	.08	.254**		

*p<.05

**p<.01

***p<.001

Results – Predicting Expressive Communication

Variable	B	SEB	β	R ²	ΔR^2
Step 1				.24***	
HOME	.83	.34	.32***		
SES	.15	.08	.25***		
Step 2				.25**	.01**
HOME	.91	.36	.36**		
SES	.16	.08	.25**		
CBCL	.12	.14	.11**		

*p<.05

**p<.01

***p<.001

Discussion

- The home environment is a powerful factor in shaping a child's performance in school
- Extends the findings of Hart and Risley (1995)
 - Importance of social support and academic stimulation in the home environment
 - The HOME accounted for more variance than SES
 - Accounted for the influence of child behavior
- The HOME is an important and useful measure

Discussion

- Implications for practice
 - Early intervention should emphasize the home environment
 - The HOME may be used to identify targets for intervention
- Limitations
 - Small sample size, geographically limited, lack of diagnostic criteria, data collection from one source
- Future research
 - Determine long-term outcomes, treatment utility of the HOME, and additional factors that may influence language development