

A Sibling Comparison Study of the Effects of Parenting Behaviors on Attention Deficit Hyperactivity Problems

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Introduction

- ADHD is a common childhood disorder that often results in poorer outcomes (Ramos-Olazagasti, Castellanos, Manuzza, & Klein, 2018)
- Traditional research has stated that ADHD is highly heritable; however, recent research has suggested that ADHD may be influenced by gene-environment interactions during development (Gould, Coventry, Olson, & Byrne, 2018)
- Recent research has established a link between parenting behaviors and ADHD (Einzinger et al., 2019)
- Previous research focused on parenting behaviors and ADHD has not controlled for genetic factors, thus making those findings only correlational (Collins et al., 2000)

Method

- United States Department of Labor National Longitudinal Survey of Youth 1979
 - Includes 4,937 mothers and 11,518 children
- HOME Inventory to measure parenting of child at ages 3-5
- Behavior Problems Index to measure ADHP at ages 6-9
- Covariates included family income, maternal smoking and drinking during pregnancy, birth order, maternal age at time of birth, child sex, child race/ethnicity, maternal highest level of school completed, maternal IQ, maternal delinquency, and ADHP at ages 4-5

Results

- Preliminary Correlational Analysis:
 - Parental Learning Stimulation, Harshness, and Responsiveness correlated with ADHP ($p < .01$)
- Between Variables (Population Model):
 - Parental learning stimulation associated with ADHP ($b = -.080$, $p = .001$)
- Sibling Comparison Model:
 - Parental learning stimulation associated with ADHP ($b = -.083$, $p = .006$)

Discussion

- Parental learning stimulation was associated with ADHP after controlling for genetic factors, making it harder to rule out a causal relationship
- The results of the sibling comparison analysis were consistent with previous research on parental learning stimulation, but not for parental harshness and responsiveness
- If future research were to support a relationship between parental learning stimulation and ADHD, preventative measures could be taken to reduce the risk of ADHD (e.g., reading more to children during development)

Objectives

- To examine the relationship between parenting and ADHD while controlling for genetic factors using a sibling comparison design
- To test links between Attention Deficit Hyperactivity Problems (ADHP) and three parenting behaviors :
 - Learning stimulation
 - Responsiveness
 - Harshness

Variable	Population Model			Sibling Comparison Model		
	B	SE	p	B	SE	p
ADHD 4-5	.747	.042	.000	.422	.019	.000
Par. Resp.	-.037	.058	.529	-.019	.020	.337
Par. Learn.	-.080	.025	.001	-.083	.030	.006
Par. Harsh.	.049	.074	.511	-.003	.021	.868
Birth Order	-.068	.048	.160	.038	.020	.063
Child Sex	1.585	1.615	.326	-.265	.025	.000
Mat. Age	-.007	.005	.198	-.014	.006	.017
Alc. Cons.	.002	.047	.963	.001	.034	.985
Cigs. Sm.	.071	.026	.006	.053	.042	.202
Mat. Del.	.029	.008	.001	-	-	-
Mat. IQ	.000	.001	.809	-	-	-
Hispanic	-.048	.030	.111	-	-	-
Black	-.005	.028	.861	-	-	-
Fam. Incm.	-.029	.013	.028	-	-	-
Highest Gr	.001	.004	.838	-	-	-

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