



Predictors of Depressive Symptoms in Preschoolers with ADHD

Genery Booster, M.Ed.
Lehigh University

Introduction

* Comorbidity of ADHD and depression

- 20-30% (Andersen et al., 1987; Biederman & Newcorn, 1990).
- Poorer functional outcomes (Biederman et al., 1996).

* Nature and course of comorbidity

- “True” depression or “demoralization”? (Biederman et al., 1998; Pliszka, 2000)
- Time of onset (Karaustis et al., 2000; Biederman et al., 1995; Cunningham & Boyle, 2002)

* Predictors

- Social functioning (Karaustis et al., 2000)
- Severity of ADHD symptoms (Connor et al., 2003)
- ODD symptoms (Harada et al., 2002; Cunningham et al., 2002)

Present Study

* Purpose:

- Examine the comorbidity of ADHD and depressive symptoms in preschool aged children

* Hypothesis:

- Depressive symptoms will be associated with poor social functioning, higher severity of ADHD symptomatology, and ODD symptoms.

Participants

- * Project Achieve - 150 children ages 3-5
- * Inclusion criteria
 - ADHD
 - English speaking parent
- * Exclusion criteria
 - MR
 - Neurological damage
 - Significant motor or physical impairments
 - Autism spectrum disorder
 - Conduct disorder

Measures

* ADHD severity

- Diagnostic Interview Schedule for Children (DISC; Shaffer et. al., 1998)
- Conners' Rating Scales-Revised (CRS-R; Conners, 1997)

* Social Skills

- Social Skills Rating System (SSRS; Gresham & Elliot, 1990)

* ODD symptoms

- Diagnostic Interview Schedule for Children (DISC; Shaffer et. al., 1998)

* Depressive symptoms

- Child Behavior Checklist (CBCL; Achenbach, 1994)

Procedures

- * Referral
- * Parent interview and teacher packet
- * Child assessment
- * Questionnaire packets

Statistical Analyses

* Hierarchical Regression

- Step 1
 - Age, gender, SES, and ethnicity
- Step 2
 - Parent and teacher reports of social skills
- Step 3
 - Parent and teacher reports of ADHD symptoms
- Step 4
 - Parent report of ODD symptoms

Results

- * Hypothesis was fully supported for the Affective Problems subscale of CBCL
- * Hypothesis partially supported for all other internalizing subscales

Hierarchical Regression Analysis Summary for Withdrawn/Depressed

| Variable | β | R^2 | ΔR^2 |
|--------------------------------------|-----------|-------|--------------|
| Step 1 | | NS | NS |
| Age | 0.138 | | |
| Gender | -0.042 | | |
| Parents' highest level of occupation | -0.243 | | |
| Parents highest level of education | -0.013 | | |
| Ethnicity | 0.140 | | |
| Step 2 | | | |
| Age | 0.238* | | |
| Parents' highest level of occupation | -0.237* | | |
| Parent reported social skills | -0.392*** | 0.220 | 0.137*** |
| Teacher reported social skills | -0.215* | 0.264 | 0.044* |
| Step 3 | | 0.303 | 0.039* |
| Age | 0.204* | | |
| Parent reported social skills | -0.333** | | |
| Parent reported Conners T score | 0.221* | | |
| Teacher reported Conners T score | -0.144 | | |
| Total number of ADHD symptoms | 0.005 | | |

Hierarchical Regression Analysis Summary for Anxious/Depressed

| Variable | β | R^2 | ΔR^2 |
|--------------------------------------|----------|-------|--------------|
| Step 1 | | NS | NS |
| Age | 0.148 | | |
| Gender | 0.025 | | |
| Parents' highest level of occupation | -0.232 | | |
| Parents highest level of education | -0.011 | | |
| Ethnicity | 0.075 | | |
| Step 2 | | NS | NS |
| Parent reported social skills | -0.111 | | |
| Teacher reported social skills | -0.100 | | |
| Step 3 | | 0.203 | 0.115*** |
| Parent reported Conners T score | 0.368*** | | |
| Teacher reported Conners T score | -0.160 | | |
| Total number of ADHD symptoms | 0.108 | | |
| Step 4 | | NS | NS |
| Total number of ODD symptoms | 0.090 | | |

*** $p < .001$

Hierarchical Regression Analysis Summary for Affective Problems

| Variable | β | R^2 | ΔR^2 |
|--------------------------------------|-----------|-------|--------------|
| Step 1 | | NS | NS |
| Age | -0.003 | | |
| Gender | 0.072 | | |
| Parents' highest level of occupation | -0.235 | | |
| Parents highest level of education | -0.105 | | |
| Ethnicity | 0.006 | | |
| Step 2 | | 0.188 | .148*** |
| Parent reported social skills | -0.408*** | | |
| Teacher reported social skills | -0.174 | | |
| Step 3 | | 0.259 | .071** |
| Parent reported social skills | -0.366** | | |
| Parent reported Conners T score | 0.293** | | |
| Teacher reported Conners T score | -0.090 | | |
| Total number of ADHD symptoms | -0.001 | | |
| Step 4 | | 0.299 | .040* |
| Parent reported social skills | -0.298** | | |
| Parent reported Conners T score | 0.303** | | |
| Total number of ODD symptoms | 0.215* | | |

* $p < .05$ ** $p < .01$ *** $p < .001$

Hierarchical Regression Analysis Summary for Internalizing Problems

| Variable | β | R^2 | ΔR^2 |
|--------------------------------------|----------|-------|--------------|
| Step 1 | | NS | NS |
| Age | 0.138 | | |
| Gender | 0.140 | | |
| Parents' highest level of occupation | -0.375** | | |
| Parents highest level of education | -0.123 | | |
| Ethnicity | 0.090 | | |
| Step 2 | | 0.211 | 0.101*** |
| Age | -0.215* | | |
| Parents' highest level of occupation | -0.353** | | |
| Parent reported social skills | -0.336** | | |
| Teacher reported social skills | -0.165 | | |
| Step 3 | | 0.314 | .103*** |
| Parents' highest level of occupation | -0.274* | | |
| Parent reported social skills | -0.285** | | |
| Parent reported Conners T score | 0.343*** | | |
| Teacher reported Conners T score | -0.117 | | |
| Total number of ADHD sympoms | 0.073 | | |

Discussion

- * Early identification
- * Early intervention
- * Need for longitudinal research
- * Lack of significant results for teacher ratings

Limitations

- * Low rates of depressive symptoms in sample
- * Method variance
- * Measures