

# Associations of Children's Externalizing Behavior Disorder and Maternal Mental Health

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# Background



**Children with a parent who suffers from mental illness are at significant risk for disruptions in development:**

- **Neurological**
- **Physical**
- **Social**
- **Emotional**

(Propper, Rigg, & Burgess, 2007; Rutter et al., 1984)



# Maternal Mental Health

- Approximately 20% of women will be depressed at some point in their life.
- Childbearing age
- Lower-income women
- Difficulty managing illness while parenting
- Inattentive or Hostile Interactions toward their child



(Copple, 2012; Elgar, McGrath, Waschbusch, Stewart, & Curtis, 2004; Groh, 2007; Hobfoll, Ritter, Lavin, Hulsizer, & Cameron, 1995; Kessler et al., 1994; Mather, 2010; Mather & Adams, 2006; Murray, Hipwell, Hooper, Stein, & Cooper, 1996; Propper et al., 2007; Reupert & Maybery, 2007; Shonkoff & Phillips, 2000)

# Maternal Mental Health

## Treatment disparity

- **2/3 women with depression do not receive adequate treatment**
- **Minority Populations**
- **Lower educational attainment**
- **Low-income**



# Associations with child disorders

## Internalizing disorders

- Depression & anxiety

## Externalizing behavior disorders

- Attention-deficit/hyperactivity disorder, behavior-conduct disorders

## General psychopathology



# Externalizing behavior problems

**Characterized by outward expressions of negative or destructive behaviors**

**Violations of age-appropriate norms**

- **Impulsivity**
- **Aggression**
- **Hyperactivity**
- **Delinquency**

**Disorders:**

- **Attention-Deficit/Hyperactivity Disorder**
- **Oppositional Defiant Disorder**
- **Conduct Disorder**



# Etiology

## GENETIC FACTORS

Heritability:  
ADHD (61-91%)  
ODD (61%)  
CD (34-69%)

## ENVIRONMENTAL FACTORS

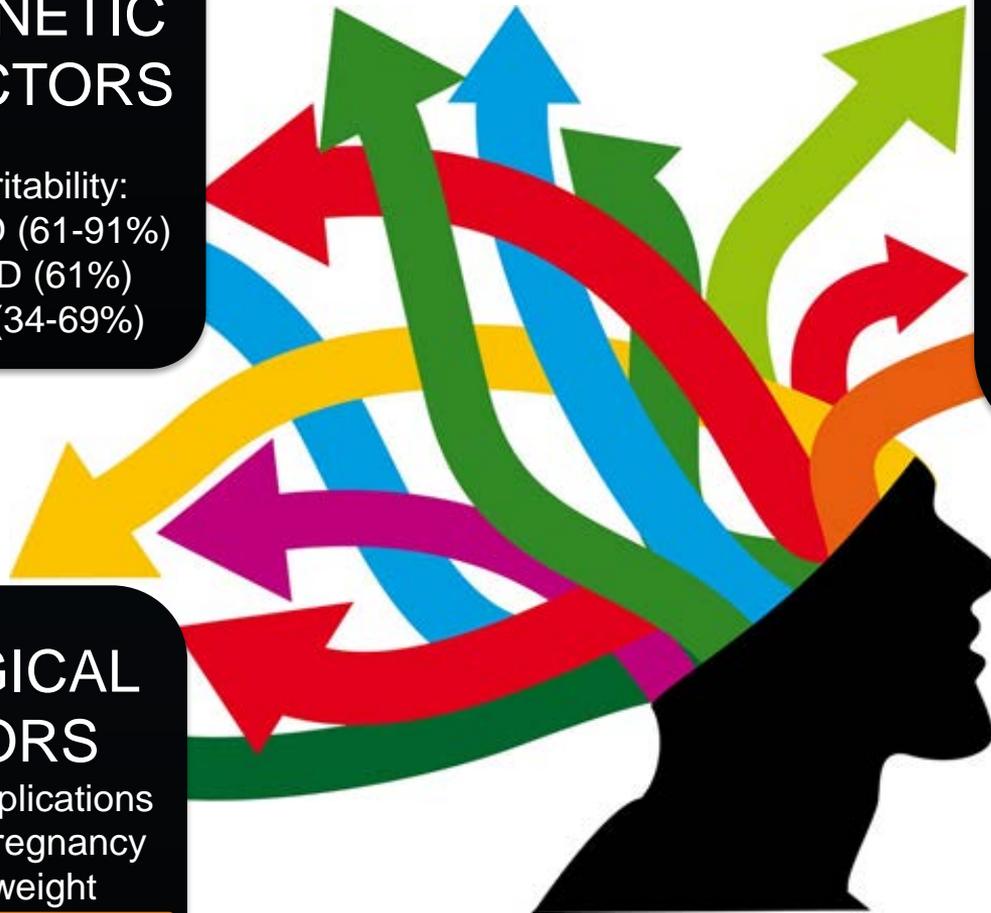
Poverty  
Social Disadvantage  
Community Violence  
Family Stress  
Child Maltreatment  
Harsh parenting

Parental Mental Illness\*

## BIOLOGICAL FACTORS

Perinatal complications  
Smoking in pregnancy  
Low-birth weight

Parental Mental Illness\*



(Bradshaw et al., 2012; Clarke et al., 2002; Coolidge et al., 2000; Curatolo et al., 2010; Franke et al., 2009; Hill, 2002; Laucht et al., 2001; Rockhill et al., 2006; Zandi et al., 2012)



# Aim & Methods

**Examine the association between maternal self-reported poor mental health and childhood externalizing behavior disorders**

- **Nationally (U.S.) Representative Sample:  
National Survey of Child Health 2011/12  
n = 66,870 (children < 12 years of age)**



# Measures & Data Analysis

## **Dependent variable:**

**Parent report of child  
diagnosed with  
Externalizing Behavior  
Disorder**

## **Independent variable:**

**Parent report of maternal  
mental health**

## **Covariates:**

- **Child Age**
- **Child Race/Ethnicity**
- **Child Gender**
- **Poverty Level**
- **Family Structure**



# Results

**Mothers with fair/poor mental health: 7.3%**

**Children diagnosed with Attention-Deficit/Hyperactivity Disorder: 7.7%**

**Children diagnosed with Behavioral Disorder: 3.6%**

- **Boys: 70.5%**

- **Mean age of initial diagnosis**

  - **Attention-Deficit/Hyperactivity Disorder: 5.95 years (2.2)**

  - **Behavioral Disorder: 5.21 years (2.4)**



	<i>Child diagnosed by physician with externalizing disorder (ADHD, ODD, or Conduct Disorder)</i>			
<b>Variable</b>	<b>Adjusted Odds Ratio</b>	<b>95% CI</b>	<b>Unadjusted Odds Ratio</b>	<b>95% CI</b>
<b>Maternal Mental Health</b>				
Excellent*	1		1	
Very Good	1.367**	(1.363-1.371)	1.474**	(1.470-1.478)
Good	1.746**	(1.740-1.752)	1.999**	(1.993-2.005)
Fair	2.908**	(2.896-2.921)	3.148**	(3.135-3.160)
Poor	5.365**	(5.324-5.407)	6.703**	(6.655-6.751)
<b>Age</b>				
1-3 years	0.107**	(0.106-0.108)	0.117**	(0.117-0.118)
4-6 years	0.312**	(0.311-0.313)	0.322**	(0.321-0.323)
7-9 years	0.728**	(0.726-0.730)	0.738**	(0.736-0.740)
10-12 years*	1		1	
<b>Race</b>				
White*	1		1	
Black	0.672**	(0.669-0.674)	0.935**	(0.933-0.938)
Hispanic	0.438**	(0.436-0.439)	0.590**	(0.588-0.592)
Other	0.617**	(0.614-0.619)	0.712**	(0.710-0.715)
<b>Sex</b>				
Male*	1		1	
Female	0.388**	(0.387-0.389)	0.407**	(0.406-0.407)
<b>Poverty Status</b>				
Above federal poverty level (>100% poverty level)*	1		1	
At or below federal poverty level (≤100% poverty level)	1.351**	(1.347-1.355)	1.410**	(1.407-1.413)
<b>Family Structure</b>				
Married*	1		1	
Cohabiting	1.534**	(1.528-1.540)	1.274**	(1.269-1.278)
Single	1.668**	(1.663-1.673)	1.788**	(1.783-1.792)
Other	1.570**	(1.538-1.602)	2.032**	(2.025-2.039)
Missing cases excluded from model				
* Reference Category				
** p<0.001				

# Discussion

- **The results confirm findings supporting the association between maternal mental health and child behavioral health**
- **The graded associations of the decline in maternal mental health status as they relate to the child being diagnosed with an externalizing behavior disorder are concerning**



# Discussion

- Often pediatric nurses view the child as their patient and do not assess the mental or physical health of the parent
- Care for the dyad: **Integrated & Intergenerational Healthcare**



# Limitations

- **Cross-sectional data**
- **Parent-reported data**



# Conclusions

- Programs and policies should focus on the health of the dyad; i.e. pediatric assessment should include the mental health of the caregiver and protocols for support and treatment
- Potential to intervene early to provide support for the mother and the child
- Nurses should focus of modifiable factors for the preservation of maternal mental health and the prevention and early intervention of externalizing behavior disorders.

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