Factors Associated with Mental, Behavioral, and Developmental Disorders Among Children Aged 2–8 Years

Rebecca Bitsko, PhD

22nd Annual Rosalynn Carter Mental Health Forum

May 12, 2017

The findings and conclusions in this presentation have not been formally disseminated by the Centers for Disease Control and Prevention and should not be construed to represent any agency determination or policy.
Acknowledgements

- Lara R. Robinson, PhD, MPH
- Joseph R. Holbrook, PhD, MPH
- Jennifer W. Kaminski, PhD
- Reem Ghandour, DrPH
- Camille Smith, EdS
- Georgina Peacock, MD, MPH
- Sophie A. Hartwig, MPH
- Akilah Heggs, MA
- Coleen A. Boyle, PhD
Background

- Mental, behavioral, and developmental disorders (MBDDs) can affect life-long health and well-being.
- Sociodemographic factors and environmental influences in early childhood have been demonstrated to have significant impact on development, mental health, and overall health throughout the lifespan.
- Nurturing, enriched environments help children reach their full potential.
Objective

- To identify specific factors associated with mental, behavioral, and developmental disorders (MBDDs) among US children aged 2-8 years

  - Sociodemographic, family, community, and healthcare factors
  
  - MBDDs included:
    - ADHD
    - Anxiety
    - Autism spectrum disorder
    - Behavioral or conduct problems
    - Developmental delay
    - Depression
    - Intellectual disability
    - Learning disability
    - Speech or language problems
    - Tourette Syndrome
Methods

- Children aged 2-8 years (n = 34,535)
- Parent report of provider-diagnosed MBDD
- Studied sociodemographic, family, community and healthcare factors associated with increased risk for MBDDs among children
Parent Report of Mental, Behavioral, and Developmental Disorders (MBDD) in Children 2-8 Years Old

Prevalence of MBDDs by Parent Report among U.S. Children 2-8 years old, by Demographic Characteristics
Family Factors Associated with Parent Reported MBDDs among U.S. Children 2-8 years old

- Parent with fair or poor mental health
- Income difficulty
- Child care problems*

Percent with each factor

- Children with any MBDD
- Children with no MBDD

Children 2-3 years old only

*Child care problems: Children who report any difficulty with child care arrangements.
Neighborhood Factors Associated with Parent Reported MBDDs among U.S. Children 2-8 years old

- Lacks amenities
- Poor condition
- Lacks support

Percent with each factor:
- Children with any MBDD
- Children with no MBDD
Healthcare Factors Associated with Parent Reported MBDDs among U.S. Children 2-8 years old

Inadequate insurance

Lacks a medical home

Percent with each factor

Children with any MBDD

Children with no MBDD
Findings

- Family, neighborhood, and community factors were associated with MBDDs in young children in the US.
- The factors most strongly associated with MBDDs were:
  - fair or poor parental mental health
  - difficulty getting by on the family’s income
  - child care problems (among parents of children aged 2–3 years)
  - lacking a medical home.
- Efforts to prevent the onset of MBDDs, and improve outcomes of children with these disorders, may benefit from collaborative activities that target these factors.
Prevalence of Family, Neighborhood, and Healthcare Factors in Georgia Compared to the US

**Family Factors**
- Parent with fair/poor mental health
- Income difficulty
- Child care problems*

**Neighborhood Factors**
- Lacks amenities
- Poor condition
- Lacks support

**Healthcare Factors**
- Inadequate insurance
- Lacks a medical home

*Children 2-3 years old only, **p<0.001
Characterizing by Rural Status

Objective: Describe how the same family, neighborhood, and healthcare factors are associated with MBDDs among children ages 2-8 years in different types of communities
Methods

- Children aged 2-8 years (n = 34,535)
- Parent report of provider-diagnosed MBDD
- Describe how specific factors were associated with increased risk for MBDDs among children in rural compared to urban communities
Rural Status

- Rurality (small, large, and isolated) defined by Rural Urban Commuting Area (RUCA) codes
  - Census tract–based classification system
  - Daily commuting information

Differences by Rural Status

- Children in all rural areas more often
  - Lived in a neighborhood in poor condition
  - Lived in a neighborhood that lacked amenities

- Children in small rural and large rural areas compared with children in urban areas more often
  - Lived in families with financial difficulties
Strengths of Isolated Rural Communities

- Children in isolated areas less often
  - Lived in an unsafe neighborhood
    (also small rural)
  - Lived in a neighborhood lacking social support
  - Lacked a medical home
  - Had a parent with fair or poor mental health
Children with MBDDs

- In urban and the majority of rural subtypes more often than children without an MBDD
  - Lacked a medical home
    - Urban, small and isolated rural
  - Had a parent with poor mental health
    - Urban, small/large/isolated rural (all)
  - Lived in families with financial difficulties
    - Urban, small and large rural
  - Lived in a neighborhood lacking physical and social resources
    - Urban, small and large rural
Differences by Rural Status and MBDD

- Higher prevalence of children with at least one MBDD in small rural areas (18.6%) than in urban areas (15.2%)

- Children in rural areas with an MBDD more often than urban children with these same conditions
  - Had a parent with fair or poor mental health
  - Lived in families with financial difficulties
  - Lived in a neighborhood with limited amenities
  - Lived in a neighborhood in poor condition

*After adjusting for race/ethnicity and poverty, the only factor that was no longer associated with rurality was financial difficulties*
Study Limitations

- Parent report of MBDD diagnoses not confirmed
- Unable to assess causal associations
- Neighborhood definitions may vary
- Rural urban coding based on 2000/2004 data
- Changes in residence cannot be accounted for
- Independent contributions of rurality and poverty may be difficult to determine
- Nonresponse bias may affect outcomes
Take-Home Messages

- Children with MBDDs and their families face personal, financial, and neighborhood challenges more often than those without these disorders.
- Children in rural areas with MBDDs
  - face certain family and community challenges more often than children in urban areas with the same disorders.
  - may need additional support.
- All children with MBDDs could benefit from better access to mental and behavioral health care, programs that support parents and caregivers, and opportunities to learn, play, and socialize.
https://www.cdc.gov/mmwr/volumes/65/wr/mm6509a1.htm


Questions or Comments?
For more information, contact Rebecca (Becky) Bitsko
4770 Buford Highway, Chamblee, GA 30341
Email: rbitsko@cdc.gov   Web: www.cdc.gov