Impact of Parental Psychopathology on Children’s Development

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Objectives

- Review the proposed Mechanisms of How Parental Psychopathology effects Children
- Recognize the physical and cognitive effects that encompass fetal alcohol spectrum disorders
- Review the limited evidence of prenatal exposure of other substances and psychiatric outcomes in childhood
- Review the normal psychosocial, psychosexual, cognitive, and moral developmental theories of childhood
- Recognize the impact of borderline personality disorder on the parent/child dyad
- Recognize the impact of depression on the parent/child dyad.
- Discuss how the treatment of parental psychopathology can benefit childhood pathology
Percentage of adults ages 18 and older who have ever had a biological child: 2000

SOURCE: National Health Interview Survey, 2000
It really is all about your mother...
At least for this lecture 😊
A word on Fathers...
Proposed Mechanisms of How Parental Psychopathology affects Children

• Genetic Transmission
• Development of dysfunctional neuroregulatory mechanisms prenatally
• Exposure to the parent’s maladaptive affect
• Contextual stressors associated with the parental illness

Some Definitions

- Internalizing Problems
  - Anxiety
  - Depression
  - Self Esteem

- Externalizing Problems
  - ADHD
  - Oppositionality
  - Conduct Problems
  - Aggression
Maternal vs. Paternal Psychopathology

- Difficult to study; studies often contradict
- Gender of the parent and offspring may play a role
- Societal Expectations
- Putting it all together: Most results suggest the presence of disorders in mothers and fathers present equal risks for offspring with 2 exceptions:
  1) Depression in mothers was found to be more closely related to children’s internalizing (but not externalizing) problems than depression in fathers
  2) Alcoholism and substance abuse disorders in mothers were more closely related to externalizing (but not internalizing) problems than were such disorders in fathers.

But remember

• Confounders
  – Genetics
  – Age of offspring & parents
  – Educational/Cognitive Level
  – Socioeconomics
  – Lack of parental models
• We’ve been wrong before
• “Parent bashing” is not helpful
In this lecture…

• Maternal Substance Use and In-utero exposures
  – Fetal Alcohol Exposure and Sequela
  – Tobacco, Marijuana and Cocaine

• Psychopathology that effects attachment & parent-child relations
  – Borderline Personality Disorder
  – Depression
Substance abuse in Pregnancy

- 20-30% of women use tobacco
- 15% use alcohol
- 3 to 10% use cannabis
- 0.5-3% cocaine

- Frequently multiple drugs are being used

Drug-affected babies in Maine, 2005-13

According to DHHS, the total count of babies exposed to or affected by drugs in the womb has increased fivefold since 2005.

Current Substance Use Among Pregnant Women Aged 15-44, by Age, 2008-2009 Combined

Source: SAMHSA, NSDUH, 2010

* Notifications received from Jan. 1, 2013, to June 20, 2013

BDN GRAPHIC BY MICHELLE PELLETIER
SOURCE: Maine Department of Health and Human Services
Novel Detection Methods

• In Spain:
  – N=107 mother-child dyads
  – Self report questionnaire was not reliable 😊 as a screening tool for substance use in mothers
  – Meconium and maternal hair samples
  – N=17 positive cases (15.9%) for
  – Hair was more sensitive than meconium especially in detecting cannabis abuse in 3rd trimester

How about in WV?

- In WV sample in 2010 out of CAMC, used umbilical cord sampling and 19.2% were positive for either drugs or alcohol. (146 of 759 samples)
- Frequently multiple drugs being used.

Prenatal Alcohol Exposure

• Adverse effects known for centuries
• Jones and Smith set forth diagnostic criteria in 1973 for fetal alcohol syndrome
• Today we consider in-utero exposure to convey a spectrum of fetal alcohol effects
Epidemiology of FAS

- Identified in all Racial and Ethnic groups
- Birth Prevalence of FAS in U.S. is 0.5-2 per 1000 births
- Birth Prevalence for fetal alcohol spectrum disorders (FASD) is estimated at 9-10 per 1000 of live births (approaching 1%)
- Huge economic impact
- Rates are considered epidemic in some areas
  - South Africa FAS 39.2-26.4 per 1000 births

Manning and Hoyme. Neuroscience and Biobehavioral Reviews 31 (207) 230-238.
IOM Diagnostic Categories within FASD

- FAS with confirmed maternal alcohol exposure
- FAS without confirmed exposure
- Partial Fetal Alcohol Syndrome with confirmed exposure (PFAS)
- Alcohol Related Birth Defects (ARBD)
- Alcohol Related Neurodevelopmental Disorders (ARND)
Screening for Misuse
T-ACE

- **Tolerance**: how many drinks does it take to make you feel high?
  - 2 points for at least 6 drinks or a bottle of wine
- **Annoyance**: Have people ever annoyed use by criticizing your drinking?
- **Cut Down**: Have you ever felt you ought to cut down on your drinking?
- **Eye-Opener**: Have you ever had a drink first thing in the morning to steady your nerves?

Physical Effects

- Epicanthal folds
- Flat nasal bridge
- Small palpebral fissures
- "Railroad track" ears
- Upturned nose
- Smooth philtrum
- Thin upper lip
Physical Effects
Lip-Philtrum Guide

Physical Effects
Physical Effects Criteria for Diagnosis

- Short palpebral fissures (<10%)
- Thin vermilion border (score 4 or 5)
- Smooth philtrum (score of 4 or 5)
- Height and/or weight <10%
- Structural Brain Abnormalities
- Head Circumference <10%
Cognitive/Behavioral Effects

Several studies report 87-97% chance of at least one Axis I diagnosis in children with prenatal alcohol exposure.

Significant effects on frontal lobes (executive function, sustained attention) and HPA axis are felt to contribute.

Cognitive/Behavioral Effects
Increased Rates of:

- Insecure Attachment
- Mood and Anxiety
- ADHD, ODD, and Conduct
- Suicide
- Substance Abuse
- Learning and Language Problems

DSM5: Proposed Criteria

Neurobehavioral Disorder Associated With Prenatal Alcohol Exposure

A. More than minimal Exposure to alcohol during Gestation

B. Impaired Neurocognitive Functioning
   - Impairment in global intellectual performance (i.e. IQ)
   - Impairment in executive functioning (planning, organization, inflexibility, difficulty with behavioral inhibition)
   - Impairment in learning
   - Memory impairment
   - Impairment in visual-spatial reasoning

C. Impaired Self-Regulation
   - Impairment in Mood or behavioral regulation
   - Attention deficit
   - Impairment in impulse control

D. Impaired Adaptive Functioning

E. Onset of Disorder in Childhood

F. Causes significant Distress
FAS and Foster Care/Adoption

- Lots in the news about psychotropic use in Foster Care populations reaching alarming levels. Average 4-5 psychotropic meds per some reports.
- Russian orphanage and Eastern European adoptees by Families in Sweden showed 29-68% of children showed severe alcohol related damage
- Recent review suggests of kids in care of child well fare system:
  - 6.0% had fetal alcohol syndrome
  - 16.9% had a fetal alcohol spectrum disorder

Fetal Alcohol Spectrum Disorders are:

100% Preventable
A word about other drugs…

DRUGS ARE BAD ... MMM KAY?
Tobacco

• Strong Association data as clear risk for Development of ADHD in multiple studies
• >10 cigarettes a day increases risk
Marijuana

• 3 longitudinal studies
  – Ottawa Prenatal Prospective Study (1970s)
  – Generation R Study (2001)
• Findings in Child behaviors
  – OPPS (age 6) and MHPCD (age 6 and 10) higher rates of impulsivity, hyperactivity, and delinquency. Some evidence of impaired executive functioning
  – Awaiting the Generation R study with neuropsychological testing results.

Huizink, 2013 Prenatal Cannabis Exposure and Infant outcomes, Progress in Neuropsychopharmacology and Biological Psychiatry
Marijuana and IQ


Abstract

OBJECTIVE: This is a prospective study of the effects of prenatal marijuana exposure on the intelligence test performance of 648 children at a 6-year follow-up.

METHOD: Women were interviewed about the amount and frequency of their marijuana use at 4 and 7 months of pregnancy and at delivery. Participants were light to moderate users of marijuana and represented a lower income population. Children were assessed with the Stanford-Binet Intelligence Scale by examiners blind to exposure status. Multiple regression was applied to examine the effects of prenatal marijuana exposure on children's intelligence after partialing out the effects of other significant predictors.

RESULTS: There was a significant nonlinear relationship between marijuana exposure and child intelligence. Heavy marijuana use (one or more cigarettes per day) during the first trimester was associated with lower verbal reasoning scores on the Stanford-Binet Intelligence Scale. Heavy use during the second trimester predicted deficits in the composite, short-term memory, and quantitative scores. Third-trimester heavy use was negatively associated with the quantitative score. Other significant predictors of intelligence included maternal IQ, home environment, and social support.

CONCLUSIONS: These findings indicate that prenatal marijuana exposure has a significant effect on school-age intellectual development.

6-8 IQ points, on average difference
Marijuana and Depression


Abstract: Studies of the consequences of prenatal marijuana use have reported effects predominantly on the behavioral and cognitive development of the children. This study examines the relations between prenatal marijuana exposure (PME) and child depressive symptoms at 10 years of age. Data are from the 10-year follow-up of 633 mother-child dyads who participated in the Maternal Health Practices and Child Development Project. Maternal prenatal and current substance use, measures of the home environment, demographic status, and psychosocial characteristics were ascertained at prenatal months four and seven, at delivery, and at age 10. At age 10, the children also completed the Children's Depression Inventory (CDI) [M. Kovacs. The Children's Depression Inventory, Multi-Health Systems, Inc., North Tonawanda, NY, (1992).], a self-report measure of current depressive symptoms. Multivariate regressions were used to test trimester-specific effects of marijuana and their associations with the CDI total score, while controlling for significant prenatal predictors and significant current covariates of childhood depression. PME in the first and third trimesters predicted significantly increased levels of depressive symptoms. This finding remained significant after controlling for all identified covariates from both the prenatal period and the current phase at age 10. These findings reflect an association with the level of depressive symptoms rather than a diagnosis of a major depressive disorder. Other significant correlates of depressive symptoms in the children included maternal education, maternal tobacco use (prenatal or current), and the child's composite IQ score. These findings are consistent with recent reports that identify specific areas of the brain and specific brain functions that are associated with PME.
Crack Baby Scare?
Cocaine

• Prenatal Cocaine Exposure (PCE) increases risk of needing an Individualized education plan (IEP)

• Review article of effects of PCE in school-age children:
  – Through 6 years no long term direct effects on physical growth, developmental test scores, or language outcomes and all attenuated by environmental variables.
  – But Significant negative associations with sustained attention and behavioral self-regulation

• Studies show a similar trend into Adolescence
  – Yale study showed lower gray matter volumes in key brain regions involved in emotion, reward, memory and executive function in PCE brains

Psychopathology and special Education enrollment in children with PCE. J Dev Behav Pediatric 2012: June; 33(5): 377-86
Every hour, 1 BABY is born suffering from opiate withdrawal.

Average length or cost of hospital stay:
- With NAS: 16.4 days, $53,400
- Without NAS (w/o NAS): 3.3 days, $9,500

NAS and maternal opiate use on the rise:
- Newborns suffering from opiate withdrawal
- Maternal opiate use

Rate per 1000 hospital births:
- 2000: 2, 3
- 2003: 3, 4
- 2006: 4, 5
- 2009: 5, 6

Source: Patrick et al., JAMA 2012
"I’ll have an ounce of prevention."
The parent/child dyad
Psychosocial Development - Erikson

- **Basic Trust v. Mistrust**
  - *Will I be Cared for?*
- **Autonomy v. Shame & Doubt**
  - *Can I do things for myself?*
- **Initiative v. Guilt**
  - *Am I good or bad?*
- **Industry v. Inferiority**
  - *Am I competent?*
- **Identity v. Role Confusion**
  - *Who am I?*
- **Intimacy v. Isolation**
  - *Am I wanted?*
Psychosexual Development - Freud

- Oral
- Anal
- Oedipal
- Latency
- Genital
Cognitive Development - Piaget

- Sensorimotor Intelligence
- Preoperational Thought
- Concrete Operations
- Formal Operations
Moral Development - Kohlberg

• Level I- Pre-conventional Morality
  – Stage 1- Obedience and Punishment Orientation
  – Stage 2- Indivdualism and Exchange

• Level II- Conventional Morality
  – Stage 3- Good Interpersonal Relationships
  – Stage 4- Maintaining the Social order

• Level III- Post-conventional Morality
  – Stage 5- Social Contract and Individual Rights
  – Stage 6- Universal Principals
Figure 2 - Moral stage as a function of age

From Gleitman [2], p. 600
Parental Pathology that Effects Attachment/Development

- Borderline Personality Disorder
- Depression
- Bipolar Disorder
- PTSD
- Anxiety Disorders
- Eating Disorders
- Thought Disorders
- Autism
- Cognitive Disorders
- Substance Dependence
- Physical Limitations
## Characteristics of Secure Attachment

<table>
<thead>
<tr>
<th>As Children:</th>
<th>As Adults:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Able to separate from parent.</td>
<td>1. Have trusting, lasting relationships.</td>
</tr>
<tr>
<td>2. Seek comfort from parents when frightened.</td>
<td>2. Tend to have good self-esteem.</td>
</tr>
<tr>
<td>3. Return of parents is met with positive emotions.</td>
<td>3. Comfortable sharing feelings with friends and partners.</td>
</tr>
<tr>
<td>4. Prefers parents to strangers.</td>
<td>4. Seek out social support.</td>
</tr>
</tbody>
</table>
Borderline Personality Disorder
DSM IV Criteria

A pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:

- 1. frantic efforts to avoid real or imagined abandonment.
- 2. a pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation.
- 3. identity disturbance: markedly and persistently unstable self-image or sense of self.
- 4. impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating).
- 5. recurrent suicidal behavior, gestures, or threats, or self-mutilating behavior
- 6. affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days).
- 7. chronic feelings of emptiness
- 8. inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights)
- 9. transient, stress-related paranoid ideation or severe dissociative symptoms
Facts about BPD

• Reported to effect 2-5.9% of population
• According to psychoanalysis pathology rooted in pre-oedipal disturbances; Has been characterized as a disorder of
  – 1) Attachment
  – 2) Self-Development
  – 3) Self-Regulation
• High rates of childhood abuse and trauma in BPD patients
• patients themselves often have disorganized attachment and chaotic family environments
• 8-10% with commit suicide and 70-90% have attempted suicide or engaged in physically harmful behavior
Parenting Styles of Patients with Borderline Personality Disorder

- Splitting between extreme idealization and devaluation of others can be directed toward the child
- Treat the child as a “need gratifying object”
- Mothers with BPD often are anxious, estranged, confused and overwhelmed by their infants and have difficulty validating the child’s emotional experience
- Anger outburst increase likelihood of children becoming victims of verbal/physical abuse
- “Intrusively Insensitive” style
- Parent-child Role Reversal
Development in Children whose mothers have BPD

• Up to 80% of infants can show disorganized attachment
  – The experience of maltreatment
  – Mother’s unresolved experience of loss or trauma
  – Disrupted affective communication because of a helpless/hostile state of mind

• Children have much higher numbers of psychiatric diagnoses especially:
  – Impulse Control Disorders
  – Attention problems/Disruptive Behaviors
  – Mood Disorders
  – Borderline Tendencies of their own
  – PTSD

• Lower cognitive testing scores
• Increased cortisol levels
Research findings

- At 2 months: more dazed looks, looks away from mother more, less responsive
- 13 months: 80% show evidence of disorganized attachment
- Toddlers: role reversal occurs and does not develop autonomy
- Preschool: More emotional and behavioral self-regulation issues
- Adolescents: mood swings, angry outburst, impulsive risky behaviors, unstable sense of self, & unstable relationships; parents behave in overprotective style
- Across childhood: Higher rates of exposure to multiple changes in school, more changes in household composition, removal from the home, exposure to parental substance abuse; and more likely to have witnessed a suicide attempt

Lamont. Graduate Student Journal of Psychology. 2006; Vol 8 p39-44
Findings from the Narrative Story-Stem Measure

• Comparison Study
  – 30 controls vs. 30 children whose mother had BPD
  – Controlled for effects of MDD

• low SES, children age 4-7

• Story Themes:
  – Child spills juice at dinner
  – Child falls off rock and hurts knee
  – Monster in the bedroom
  – Parents leaving for a trip then reuniting (2 separate stories)
  – Parent’s arguing over mom’s lost keys
  – Child burns hand when trying to taste gravy
  – Competition between children to see who gets to ride a horse
  – A lost dog
  – Parents send child to their room to play so they can have time alone

Macfie and Swan; Dev Psychopathol. 2009; 21(3): 993-1011
Findings from the Narrative Story-Stem Measure

- Narrative Coding
  - Role reversal
  - Fear of abandonment
  - Parent-child expectations (for both parents)
  - Self-representations
  - Reality/fantasy confusion
  - Self/fantasy confusion
  - Fantasy proneness
  - Traumatic material
  - Narrative coherence

Macfie and Swan; Dev Psycholapthol. 2009; 21(3): 993-1011
Findings from the Narrative Story-Stem Measure OUTCOMES

• For children with mother’s of BPD stories showed more themes of:
  – Role reversal
  – Fear of Abandonment
  – Negative parent-child expectations (for BOTH PARENTS!)
  – Self representations as more shameful and incongruent; but not negative
  – Harder time distinguishing reality from fantasy
  – Less coherence in resolving conflicts
  – Marginally more likely to bring in traumatic themes

Macfie and Swan; Dev Psycholapthol. 2009; 21(3): 993-1011
MY BABY SAVED ME

The reality star opens up about a childhood scarred by addiction, abuse and neglect

EXCLUSIVE!
Megan Fox wedding album!

MISSING BOY CASE
WHAT DOES THE STEPMOM KNOW?

BETHENNY FRANKEL'S
SHOCKING PAST

ONLY IN People
## Major Depression

**TABLE 1. Depression symptoms**

<table>
<thead>
<tr>
<th>Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depressed mood or irritable most of the day, nearly every day, as indicated by either subjective report or an observation made by others</td>
</tr>
<tr>
<td>Diminished ability to think or concentrate or indecisiveness</td>
</tr>
<tr>
<td>Fatigue or loss of energy</td>
</tr>
<tr>
<td>Feelings of worthlessness or excessive or inappropriate guilt</td>
</tr>
<tr>
<td>Insomnia or hypersomnia</td>
</tr>
<tr>
<td>Markedly diminished interest or pleasure in all or almost all activities most of the day, nearly every day</td>
</tr>
<tr>
<td>Significant weight loss when not dieting, weight gain, or decrease or increase in appetite</td>
</tr>
<tr>
<td>Psychomotor agitation or retardation</td>
</tr>
<tr>
<td>Recurrent thoughts of death, recurrent suicidal ideation without a specific plan, a suicide attempt, or a specific plan for committing suicide</td>
</tr>
</tbody>
</table>

Data from American Psychiatric Association.\(^7\)
SEVERITY

CHRONICITY

THE TIMING OF EXPOSURE

Brennen, et al. Devel Psychol 2000: (36) 6 ;759-766
Effects of Parental Depression on Parenting

- Increased psychosocial stressors
- More critical attitude toward the offspring
- Lower frustration tolerance
- Less emotional availability
- Ineffective Behavior Management practices
- Unpredictable responses in parental affect
- “Depression-Distortion” hypothesis
- Reverse Causation--?????????

Brennen, et al. Devel Psychol 2000: (36) 6 ;759-766
Longitudinal Studies

• Queensland, Australia
  – N=4953 mothers followed from pregnancy to 5 years; 70% retention.
  – Assessed in pregnancy, postpartum, 6 months, 5 years

• 20 year follow up study
  – N=151, offspring of mod-severely depressed parents vs. non-psychiatrically ill comparisons
  – 4 interviews over a 20 year span of childhood-adolescence-adulthood

Brennen, et al. Devel Psychol 2000: (36) 6 ;759-766
Developmental Effects on Offspring

- Infancy/postpartum: Increase in insecure attachment
- Preschoolers: Increase in behavioral disorders and decrease in vocabulary scores, increase in anxiety
- Adolescence: Highest incident of MDD especially in females, increase in substance use
- Entering Middle Age: Increase in medical problems and mortality
- Over a lifetime: 3x the risk of anxiety disorders, major depression and substance dependence when compared to the offspring of non-depressed parents
- Social Impairment also greater across a lifetime


- No parent with major depressive disorder (N=50)
- One or more parents with major depressive disorder (N=101)

Cumulative proportion of offspring with major depressive disorder vs. age at onset (years).

- Female (N=58)
- Male (N=43)
### TABLE 3. Physical Illnesses Reported at 20-Year Follow-Up by Offspring of Depressed and Nondepressed Parents

<table>
<thead>
<tr>
<th>Condition in Offspring</th>
<th>Offspring Having One or More Parents With Major Depressive Disorder (N=101)</th>
<th>Offspring Having No Parent With Major Depressive Disorder (N=50)</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>3</td>
<td>2</td>
<td>0.84</td>
<td>0.1–5.4</td>
<td>0.85</td>
</tr>
<tr>
<td>Cardiovascular disease</td>
<td>11</td>
<td>1</td>
<td>5.75</td>
<td>0.8–40.0</td>
<td>0.08</td>
</tr>
<tr>
<td>Dermatologic disorder</td>
<td>21</td>
<td>9</td>
<td>1.24</td>
<td>0.5–3.0</td>
<td>0.62</td>
</tr>
<tr>
<td>Endocrine-related illness</td>
<td>4</td>
<td>0</td>
<td>1.10</td>
<td>0.3–3.5</td>
<td>0.87</td>
</tr>
<tr>
<td>Gastrointestinal illness</td>
<td>15</td>
<td>7</td>
<td>1.19</td>
<td>0.3–4.9</td>
<td>0.81</td>
</tr>
<tr>
<td>Genital-urinary disorder</td>
<td>7</td>
<td>3</td>
<td>1.59</td>
<td>0.4–6.2</td>
<td>0.51</td>
</tr>
<tr>
<td>Hematologic disorder</td>
<td>9</td>
<td>3</td>
<td>0.35</td>
<td>0.04–1.5</td>
<td>0.15</td>
</tr>
<tr>
<td>Infectious disease</td>
<td>0</td>
<td>0</td>
<td>0.87</td>
<td>0.2–3.5</td>
<td>0.85</td>
</tr>
<tr>
<td>Metabolic illness</td>
<td>3</td>
<td>4</td>
<td>2.43</td>
<td>1.0–6.1</td>
<td>0.06</td>
</tr>
<tr>
<td>Musculoskeletal disorder</td>
<td>6</td>
<td>3</td>
<td>1.08</td>
<td>0.4–3.3</td>
<td>0.89</td>
</tr>
<tr>
<td>Neuromuscular disorder</td>
<td>36</td>
<td>10</td>
<td>1.23</td>
<td>0.6–2.5</td>
<td>0.57</td>
</tr>
<tr>
<td>Respiratory illness</td>
<td>22</td>
<td>11</td>
<td>2.61</td>
<td>1.2–5.7</td>
<td>0.01</td>
</tr>
<tr>
<td>Systemic illness</td>
<td>34</td>
<td>15</td>
<td>0.40</td>
<td>0.2–0.9</td>
<td>0.02</td>
</tr>
<tr>
<td>Any physical illness</td>
<td>79</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overweight</td>
<td>51</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a* Analyses were based on logistic regression with a statistical adjustment of age at the interview and sex of offspring. Adjustment for nonindependence of observations due to more than one offspring in the same family was made, when cell sizes were adequate, by using generalized estimating equation (GEE) procedures.

*b* Total on which percents were based varied because of missing data for some subjects.

*c* Positive infinity.
Does Treating Maternal MDD help children?

- STAR*-D Child Study Design

Results

- 70% of mom’s eventually remitted
- Child symptoms improved in the first 6 months and leveled off
- C-GAS scores improved in the first 6 months
Results STAR*D Child Study

- Reverse Causation Unlikely
- Children with early remitting mother’s did better. But even those late remitters did better than those that did not remit.
- Children’s anxiety and depressive symptoms improved but disruptive behavior disorders were less likely to improve (but ADHD included).

STAR*D Study-1 year follow-up

Depressed mothers completed baseline assessments (N=151)

Completed at least one follow-up evaluation (N=127⁰)

Early Remitters
Remission by 3 months (N=36)
Assessed every 3 months
Follow-up ends 1 year after remission of maternal depression

Late Remitters
Remission after 3 months but by ~12 months (N=28⁰)
Assessed every 3 months

Nonremitters
No remission in first 12 months (N=16⁰)
Assessed every 3 months
Follow-up ends 2 years after baseline assessment

Child of Depressed Mothers 1 Year after Remission of Maternal Depression from STAR*D Child Study”
Am J Psychiatry 2011 June; 168 (6): 593-602
STAR*D Study-1 year follow-up

• During post-remission year, children of early remitting mothers showed improvement on all outcome measures
• Externalizing behaviors decreased in both early and late remitting mothers.
• Functioning improved only in early remitting mothers
• Externalizing behaviors increased in non-remitting mothers
So......

TRICKLE DOWN

PSYCHIATRY WORKS
Questions....