Resilient bonds: The impact of relational and contextual variables on the promotion and stability of security during infancy and toddlerhood in the face of adversity

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Overview of Presentation

• What is resilience and how is it related to infant mental health work?

• How is secure caregiver-infant attachment both a sign of and source of resilience?

• Overview of a prospective research study

• Emerging findings related to the promotion of attachment security and the stability of attachment security over time

• Discussion of case examples

• Implications for clinical work
What is Resilience?

• Defining Resilience:
  • “stress resistance” (Garmezy, Masten, & Tellegen, 1984)
  • “the process of, capacity for, or outcomes of successful adaptation despite challenging or threatening circumstances” (Masten et al., 1990)
  • “capacity of dynamic systems to withstand or recover from significant disturbances” (Masten, 2007)
  • “the capacity of a dynamic system to withstand or recover from significant threats to its stability, viability or development” (Masten, 2011)
History of Resilience Research

• Beginnings in the ‘60s and ‘70s with developmentalists studying etiology of mental illness (who were the kids at risk for illness who did ok later in life?)

• Many studies on individual differences in adaptation and competence followed (see Masten & Tellegen, 2012)

• Outcomes expanded beyond absence of illness to include social-emotional health, positive relationships, achievement of developmental milestones, physical well-being, etc…

• Most of the pioneers in resilience research were clinicians striving to understand how to understand, prevent, and treat emotional problems AND HERE WE ARE!
Types of Resilience

- Developing well in the context of risk history ("beating the odds")
- Functioning well in the context of current risk ("positive coping")
- Recovery to healthy functioning after adversity ("bouncing back, self-righting")
- Positive reorganization with improved functioning after adversity (e.g., "post-traumatic growth")
Levels of Resilience

• Resilience can occur at “multiple levels of analysis”
  – genes, individual traits, dyadic relationships, family systems, social networks neighborhoods, communities, schools, health care systems, cultural systems, etc.

• A growing appreciation for developmental trajectories that promote resilience and that resilience develops and changes over time
What is Resilience in Infancy?

- **Resilient Bonds** = Secure Caregiver-Infant Attachment in the Context of Risk or Adversity

  - **Attachment** (Bowlby, 1951, 1969, 1982)
    - “the construction of emotional bonds between the child and his mother or a significant other”
    - “an enduring emotional tie between one person and another specific individual”

  - **Attachment Behavioral System**
    - Serves the goal of receiving protection and care from another

  - **Security**
    - The child consistently and predictably receives care; develops ‘felt security’ and behaves in ways that elicit care and protection
Importance of Attachment Security

• A *sign of* resilience in the face of adversity

• A *source of* future resilience
  – Decreased risk for psychopathology
  – Higher self-esteem & confidence
  – Better peer & romantic relationships
  – Better caregiver to own children (transmission of security)
Stability of Attachment

- Originally posited to be stable (Bowlby, 1973)
  - Under “species typical conditions”
- Stability in middle-class samples (see Fraley, 2002)
  - Range from 53-96% over 1 year
- Stability in high-risk samples (see Fraley, 2002)
  - Range from 30-69% over 1 year
- Stability across 3-5 years 38-87%
  - Much higher rates in low-risk samples
- Significant environmental experiences may influence change in the quality of attachment
Variables that Promote Stability of or Movement toward Attachment Security

- Responsive, warm, consistent caretaking
  - Stability of maternal sensitivity (Belsky & Fearon, 2002)
- Stability of economic resources
- Minimal major life events (or additional positive life events)
- Absence of parental psychopathology and family conflict
- In general, conditions that allow for the individual’s influence on the environment
Variables that Promote Instability of Attachment or Movement toward Insecurity

- **Negative life events & economic hardship** (Vondra et al., 1999; Waters et al., 2000)

- **Family income & Domestic violence** (Zeanah et al., 1999; Levendosky et al., 2011)

- **Inconclusive results for maternal depression** (Edwards et al., 2004; Levendosky et al., 2011; Weinfield et al., 2004)

- **Problematic parenting** (Goldberg et al., 2003; Lyons-Ruth, Bronfman, & Parsons, 1999)
THE PRESENT STUDY
Aims of the Present Study

• Understand trajectories of attachment (in) security from age 1 to age 2 in a high-risk sample

• Identify factors that promote resilience (i.e., protective factors that explain stability of security and movement toward security)

• Identify factors that contribute to vulnerability (i.e., factors that explain stability of insecurity and movement toward insecurity)
The Parenting Project

Time 1
Pregnancy

Time 2
3-months postpartum

Phone interview
- n = 119
- Mother and infant health and wellbeing

Home interview
- n = 120
- Maternal representations of the child
- Questionnaires
  - Trauma history
  - Mental health symptoms
  - Early and current relationships

Home interview
- n = 114
- Infant attachment
- Maternal sensitivity
- Mother-infant free play
- Questionnaires
  - Parenting
  - Current IPV
  - Current relationships
  - Mental health symptoms

Time 3
Age 1

Home interview
- n = 99
- Maternal representations of the child
- Infant attachment
- Maternal sensitivity
- Mother-infant free play
- Questionnaires
  - Parenting
  - Current IPV
  - Current relationships
  - Mental health symptoms

Time 4
Age 2

Home interview
- n = 82
- Maternal sensitivity
- Adult attachment
- Mother-infant free play
- Child language
- Questionnaires
  - Current IPV
  - Mental health symptoms

Time 5
Age 2.5-3
Participants

• 120 pregnant women
• Age range: 18-42, $M = 26$, $SD = 5.7$
• 64% single/never married, 28% married, 4% divorced, 4% separated
• Median monthly family income = $1500
• 88% receive services from WIC
  • 90% have public health insurance
• 30% first time mothers
Race and Ethnicity

- Caucasian: 46.7%
- Biracial: 12.6%
- Asian American/Pacific Islander: 2.5%
- Native American: 1%
- Arab American: 1.7%
Types of Adversity

• Economic Adversity
  ◦ 88% WIC
  ◦ 62% food stamps
  ◦ 90% public health insurance
  ◦ 20% public supplemental income
  ◦ 84% at or near poverty level

• Family Adversity
  ◦ 14% mothers < 20 years old
  ◦ 32% 3+ children living in the home
  ◦ 24% cohabitating
Types of Adversity
• Exposure to Trauma
  ◦ Child Maltreatment Rates:
    ◦ Emotional Abuse (68%), Emotional Neglect (75%)
    ◦ Physical Abuse (58%), Physical Neglect (49%)
    ◦ Sexual Abuse (28%)
  ◦ Child Witness to Inter-Parental Violence:
    ◦ Physical (46%), Psychological (65%)
  ◦ Prenatal Intimate Partner Violence:
    ◦ Physical and/or Sexual (24%)
    ◦ Physical, Sexual, and/or Psychological (81%)
  ◦ 12.5% involved with Child Protective Services with current children (self-report)
Results

Aim 1: To understand trajectories of attachment (in)security from age 1 to age 2
Attachment Security

Assessed at 12 and 24 months

• Observer-rated Attachment Q-Set (AQS; Waters & Dean, 1985)

• 90 items sorted into 9 piles from most to least like the child
  – The sort is compared to the sort of a prototypical secure sort
    • Correlation indicating degree of security
Attachment Q-Set

**Items most like a secure child**
- When child finds something to play with, he carries it to mother or shows it to her from across the room (14)
- If held in mother’s arms, child stops crying and quickly recovers after being frightened or upset (71)
- Child uses mothers facial expressions as a good source of information when something looks risky or threatening (80)

**Items most like an insecure child**
- When something upsets the child, he stays where he is and cries (88)
- Child sometimes signals mother (or gives the impression) that he wants to be put down, and then fusses or wants to be picked back up (33)
- When something upsets the child, he stays where he is and cries (88)
Assessing Resilience

<table>
<thead>
<tr>
<th></th>
<th>Age 2 Secure</th>
<th>Age 2 Insecure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 1 Secure</td>
<td>Secure-Secure ($n = 32$)</td>
<td>Secure-Insecure ($n = 19$)</td>
</tr>
<tr>
<td>Age 1 Insecure</td>
<td>Insecure-Secure ($n = 17$)</td>
<td>Insecure-Insecure ($n = 18$)</td>
</tr>
</tbody>
</table>

Maintaining Security
- Secure-Secure
- Secure-Insecure

Promoting Security
- Insecure-Insecure
- Insecure-Secure
Aim 2: To identify factors that promote resilience (i.e., protective factors that explain stability of security and movement toward security)

Aim 3: To identify factors that contribute to vulnerability (i.e., factors that explain stability of insecurity and movement toward insecurity)
Use of Services

• The mother’s reported use of various services at the time of the interview
  – Assessed at age 1 and age 2
  – Yes or no – sum of the positive responses
## Use of Services

<table>
<thead>
<tr>
<th>Use of Services</th>
<th>Use of Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>• WIC</td>
<td>• Any infant related programs</td>
</tr>
<tr>
<td>• Protective services</td>
<td>• Mental health treatment</td>
</tr>
<tr>
<td>• Food stamps</td>
<td>• Substance use treatment</td>
</tr>
<tr>
<td>• Medicaid, Mi-Child, Medicare</td>
<td>• Psychiatric treatment</td>
</tr>
<tr>
<td>• SSI (Disability)</td>
<td>• Other</td>
</tr>
<tr>
<td>• Public cash assistance</td>
<td></td>
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<tr>
<td>• Unemployment compensation</td>
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</tbody>
</table>
Infant/Toddler Home Observation for Measurement of the Environment

Assessed at 12 months

• Caldwell & Bradley (1984; 2003)

• 6 subscales and a total

  1. Responsivity
  2. Acceptance
  3. Organization
  4. Learning Materials
  5. Involvement
  6. Variety
HOME: Responsivity

1. Parent permits child to engage in “messy” play. I
2. Parent spontaneously vocalizes to child at least twice. O
3. Parent responds verbally to child’s vocalizations or verbalizations. O
4. Parent tells child name of object or person during visit. O
5. Parent’s speech is distinct, clear, and audible. O
6. Parent initiates verbal interchanges with Visitor. O
7. Parent converses freely and easily. O
8. Parent spontaneously praises child at least twice. O
9. Parent’s voice conveys positive feelings toward child. O
10. Parent caresses or kisses child at least once. O
11. Parent responds positively to praise of child offered by Visitor. O

Important in promoting security
HOME: Organization

1. Child care, if used, is provided by one of 3 regular substitutes.  I

2. Child is taken to grocery store at least once a week.  I

3. Child gets out of house at least 4 times a week.  I

4. Child is taken regularly to doctor’s office or clinic.  I

5. Child has a special place for toys and treasures.  E

6. Child’s play environment is safe.  O

*Important in promoting security*
HOME: Involvement

1. Parent talks to child while doing household work.  \( I \)
2. Parent consciously encourages developmental advance.  \( I \)
3. Parent invests maturing toys with value via personal attention.  \( I \)
4. Parent structures child’s play periods.  \( I \)
5. Parent provides toys that challenge child to develop new skills.  \( I \)
6. Parent keeps child in visual range, looks at often.  \( O \)

*Important in promoting security*
HOME: Variety

1. Father provides some care daily.  I
2. Parent reads stories to child at least 3 times weekly.  I
3. Child eats at least one meal a day with mother and father.  I
4. Family visits relatives or receives visits once a month or so.  I
5. Child has 3 or more books of his/her own.  E

*Important in promoting security*
Knowledge of Infant Development

- Assessed at age 1
  - KIDI; MacPhee, 2002

- Mother’s self-reported knowledge of developmental processes and expectations
  - Infant norms and milestones
  - Principles
  - Parenting
  - Health and safety

**Accurate** knowledge of infant development is important in *promoting* and *maintaining* security
KIDI item examples

• Agree, disagree, not sure
  – The 2 year old’s sense of time is different from an adult’s
  – The more you soothe a crying baby by holding and talking to it, the more you spoil them
  – The way a child is brought up has little affect on how smart he (she) will be

• Agree, older, younger, not sure
  – Two year olds are able to reason logically, much like an adult would
  – Babbling ("a-bah-bah" or "bup-bup") begins around 5 months
  – Most children are ready to be toilet trained by one year of age
Maternal Sensitivity

- **Maternal behavior q-sort** (Pederson & Moran, 1995)
  - 25-item short version

- Items sorted into piles from most to least like the mother
  - The sort is compared to the sort of a prototypical sensitive mom
    - Correlation indicating degree of sensitivity

Important in *promoting* security
## Maternal Sensitivity

<table>
<thead>
<tr>
<th>Items most like a <strong>sensitive</strong> mother</th>
<th>Items most like an <strong>insensitive</strong> mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Responds accurately to signals of distress</td>
<td>• Content and pace of interaction set by mother rather than according to baby's responses</td>
</tr>
<tr>
<td>• Responds to baby's distress and non-distress signals even when engaged in some other activity</td>
<td>• Appears to tune out and not notice bids for attention</td>
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<tr>
<td>• Interactions revolve around baby's tempo and current state</td>
<td>• Non-synchronous interactions with baby, i.e., the timing of mother's behavior out of phase with baby's behavior</td>
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<tr>
<td>• Realistic expectations regarding baby's self-control of affect</td>
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</tbody>
</table>
Maternal Sensitivity

Observational code

• 10-minute mother-infant free play interaction
  – 1-5 with higher numbers indicating more maternal sensitivity

• Reliably coded by a team of graduate and undergraduate students

Important in *promoting* security at age 1
  – Coding at age 2 is currently underway
Maternal Sensitivity Coding Scheme

- Contingency
- Negative behaviors
- Positive behaviors
- Affect attunement and awareness
Maternal Anxiety Symptoms

Post-Traumatic Stress Disorder Checklist (PCL; Weathers et al., 1993)

• Total symptom count and 4 subscales:
  – Avoidance
  – Intrusion
  – Hypervigilence
  – Dysphoria

Brief Symptom Inventory – Anxiety (BSI-A; Derogatis, 1993)

• 6-items assessing feelings of anxiety in the past week
• Assessed at 1- and 2-years postpartum

Low anxiety symptoms are important in promoting security at 1-year postpartum
Summary of Results
Variables Important in Promoting Security

**Age 1**

- Home environment
  - Responsivity
  - Organization
  - Involvement
  - Variety
- Maternal sensitivity
- Accurate knowledge of infant development
- Low anxiety symptoms

**Age 2**

- Maternal sensitivity
Variables Important in Maintaining Security

**Age 1**
- Use of services
- Accurate knowledge of infant development
- Maternal sensitivity

**Age 2**
- Use of services
- Maternal sensitivity
Clinical Implications: Connecting Research to Practice
Objectives

• How do the previous research findings connect to infant mental health practices and interventions?

• Why is it important to have research support for the clinical work we do?

• Where can you find out more?
<table>
<thead>
<tr>
<th>Strategy</th>
<th>Tasks</th>
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</thead>
<tbody>
<tr>
<td>Building an Alliance</td>
<td>- Visits regularly in the home</td>
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<td>- Provides telephone support</td>
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<td>- Observes, listens, accepts, nurtures</td>
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<td></td>
<td>- Provides stable, consistent relationship</td>
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<td></td>
<td>- Identifies and meets material needs</td>
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<tr>
<td>Meeting Material Needs</td>
<td>- Facilitates access to community agencies</td>
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<td></td>
<td>- Provides transportation to services</td>
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<td></td>
<td>- Discusses safety issues</td>
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<tr>
<td>Supportive Counseling</td>
<td>- Observes, listens, feels, responds</td>
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<tr>
<td></td>
<td>- Identifies and reinforces feelings</td>
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<tr>
<td></td>
<td>- Sets limits for behavior</td>
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<tr>
<td></td>
<td>- Establishes expectation for change</td>
</tr>
<tr>
<td>Developing Life Coping Skills and Social Support</td>
<td>Helps parent to:</td>
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<tr>
<td></td>
<td>- resolve conflicts with family members</td>
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<tr>
<td></td>
<td>- understand need for social support and obligations involved</td>
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<td></td>
<td>- identify possible friends, community groups and services</td>
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<td></td>
<td>- use anticipatory role-play to rehearse use of social support</td>
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<tr>
<td></td>
<td>- models and teaches problem-solving and decision-making skills</td>
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<td></td>
<td>- supports parent in using skills</td>
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<tr>
<td>Developmental Guidance</td>
<td>Provides information about infant growth and development</td>
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<td>- uses formal assessment to show infant’s capacities and next steps</td>
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<td>- shares literature if appropriate</td>
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<td></td>
<td>Encourages parents to interact positively with infant</td>
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<td></td>
<td>- encourages observation and interaction</td>
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<td></td>
<td>- speaks for infant</td>
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<tr>
<td></td>
<td>- models, reinforces or shapes appropriate interaction</td>
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<td></td>
<td>- provides toys and books</td>
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<tr>
<td>Infant-Parent Psychotherapy</td>
<td>Observes patterns of interaction</td>
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<td></td>
<td>Defines issues of clinical concern</td>
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<td>Assists parents to:</td>
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<td></td>
<td>- identify feelings and put them into words</td>
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<td></td>
<td>- understand reactions, defenses and coping strategies</td>
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<td></td>
<td>- find words to understand, grieve, forgive and heal</td>
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<tr>
<td></td>
<td>- develop new, healthier patterns of interaction</td>
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</table>

Resources Related to the Measures Used in the Present Study

• **Attachment Q-Set & Maternal Sensitivity Q-Set**
  - [http://www.psychology.sunysb.edu/attachment/measures/measures_index.html](http://www.psychology.sunysb.edu/attachment/measures/measures_index.html)

• **Home Observation for Measurement of the Environment (HOME) Inventory**
  - [http://fhdri.clas.asu.edu/home/index.html](http://fhdri.clas.asu.edu/home/index.html)

• **Knowledge of Infant Development Inventory (KIDI)**
  - [http://www.excellenceforchildandyouth.ca/support-tools/measure-profile?id=401](http://www.excellenceforchildandyouth.ca/support-tools/measure-profile?id=401)
Evidence-Based Programs and Practices

• What are they?

• Why are they important?
Evidence-Based Home Visiting Programs in Michigan

• Early Head Start – Home-Based Option
  – http://www.ehsnrc.org/
  – http://www.acf.hhs.gov/programs/ohs

• Family Check-Up
  – http://pages.uoregon.edu/cfc/educa-training.htm

• Healthy Families America (HFA)
  – www.healthyfamiliesamerica.org

• Healthy Steps
  – http://www.healthysteps.org
Evidence-Based Home Visiting Programs in Michigan

• **Home Instruction Program for Preschool Youngsters (HIPPY)**
  - [www.hippyusa.org](http://www.hippyusa.org)

• **Nurse Family Partnership (NFP)**
  - [http://www.nursefamilypartnership.org/](http://www.nursefamilypartnership.org/)

• **Parents as Teachers (PAT)**
  - [www.parentsasteachers.org](http://www.parentsasteachers.org)
To Find Out More…

- Visit The U.S. Department of Health and Human Services Home Visiting Evidence of Effectiveness (HomVEE) website:
Other Interventions Aimed at Fostering Secure Attachment through Maternal Sensitivity, a Quality Home Environment, and Accurate Knowledge of Child Development

• Attachment and Biobehavioral Catch-Up (ABC; Mary Dozier)  
  – http://www.infantcaregiverproject.com/#!

• Child-Parent Psychotherapy (Lieberman & Van Horn)  

• Circle of Security (Cooper, Hoffman, & Powell)  
  – circleofsecurity.net/

• Interaction Guidance (Susan McDonough)

• Minding the Baby (Slade, Sadler, Close, & Mayes)  
  – mtb.yale.edu/

• Steps Toward Effective, Enjoyable Parenting (STEEP; Egeland & Erickson)  
  – http://www.cehd.umn.edu/ceed/inpersontrainings/steeptsibtraining.html
To Find Out More…


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www.emich.edu/psychology/parenting