“EARLY CONNECTIONS” INTERVENTION FOR DEPRESSED MOTHERS AND INFANTS:

PROGRAM DESCRIPTION AND OUTCOMES

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TODAY’S PRESENTATION

- Brief review of PPD, treatment approaches, and impact on mother-infant relationship
- Description of Early Connections intervention
- Description of our study methods, analyses and findings
- Share some thoughts about the implications of our work
POSTPARTUM DEPRESSION

- **PPD** is a devastating condition that can affect up to 19% of mothers, yet it is under-diagnosed and under-treated (Gavin et al., 2005).
- **Symptoms of PPD** can include sadness, low energy, irritability, poor concentration, suicidality, low maternal self-esteem, limited self-efficacy in parenting, and shame (Kendall-Tackett, 2005).
IMPACT OF PPD

- Within the mother-infant relationship PPD can impact *reciprocity* including:
  - Negative affect, disengagement, and lack of sensitivity by the mother; distortion of maternal perceptions (Lovejoy et al., 2000)
  - Fewer signs of initiation and less positive affect by the infant (Field, 2008)
- The above problems can strain attachment processes and impair relational learning/development and interfere with the infant’s ability for self regulation (Brockington, 2004).
TREATMENT APPROACHES FOR WOMEN WITH PPD

- Psychopharmacologic interventions
- Interpersonal Therapy (IPT)
- Cognitive Behavioral Therapy (CBT)
- Psychodynamic/Supportive counseling
BEST PRACTICES TO ADDRESS DIFFICULTIES IN MOTHER-INFANT RELATIONSHIP

- Individual therapies with mothers show improvement in PPD symptoms (O’Hara et al., 2000)

- However, they show no associations with better child outcomes, improvements in mother’s negative view of infant or mother-infant relationship in the long-term (Forman et al., 2007).

- Interventions for mothers with PPD must begin early and address parenting directly (e.g. Gelfand et al., 1996; McDonough, 1992; Slade et al., 2005).
In response to needs of women with PPD, community agency developed short-term therapy.

Foci include: reducing maternal depression/anxiety and strengthening maternal competence and parent-child relationship (Spielman, 2002).

Early Connections
- Dyadic intervention for mothers with PPD and their infants (average 12 sessions).
- Home-based program with clinicians trained in Infant Mental Health.
- Based on relational models of mother-infant treatment, infant observation, family systems theory, theories of reflective function, and neuro-developmental research.

(Cowan et al., 1985; Fraiberg, 1980; Fonagy et al., 1998; Lieberman & Pawl, 1993; McDonough, 1992; Siegel, 1999; Slade et al., 2005)
EARLY CONNECTIONS continued

Treatment Goals:

- Provide mother secure relationship with clinician
- Increase mother’s sensitivity and attunement to infant
- Address mother’s depression, losses, trauma etc.
- Reduce mother’s anxious preoccupations with infant
- Facilitate connections and pleasure between mother and infant (mother can see infant as individual and experience herself as competent parent)
EARLY CONNECTIONS continued

- **Therapeutic techniques**: active listening, encouraging emotional expression, exploring historical events relevant for parenting, focusing on mother baby interactions, link mother’s feelings/beliefs with infant’s behavior and maternal-infant interactions

- **Dialogue**: moves between mother’s past and present relationship with infant, always keeps the baby in mind
HELPFUL PROCESSES IN MOTHER-INFANT TREATMENT

- The therapeutic alliance
- Collaboration and mutuality
- Empathy
- Clinician’s warmth and openness
- Presence of the infant--increasing maternal sensitivity to his/her signals
- Connecting maternal experience and infant behavior

(Cramer, 1998; Jordan, 1999; Martin et al., 2000; Slade et al., 2005)
STUDY QUESTIONS

- Analyzing **pre and post treatment data** from multi-method evaluation:
  1. Do self-reported maternal depression, overall psychological distress, and parenting stress decrease, and maternal self-esteem increase over the course of treatment?
  2. Do observer ratings of mother-infant interactions improve, specifically mother’s sensitivity with her infant and infant’s affect and involvement with his/her mother over the course of treatment?
  3. Are improvements in self-reported mood and maternal perceptions associated with improvements in mother-infant interactions?
METHOD

- Design: Single group pre and post-test
- Self-report questionnaires
  - Postpartum Depression Screening Scale (PDSS, Beck & Gable, 2000)
  - Brief Symptom Inventory (BSI, Derogatis, 1975)
  - Parenting Stress Index/Short Form (PSI, Abidin, 1995)
  - Maternal Self-Report Inventory (MSI, Shea & Tronick, 1988)
- Pre and Post-treatment mother-infant videos
  - Coding Interactive Behavior (CIB, Feldman, 1998) (maternal sensitivity and responsiveness, infant positive affect, infant initiation/involvement-structured/unstructured)
ANALYSIS

- **Question #1**: t-tests to assess differences between pre and post-treatment scores on self-report measures
- **Question #2**: t-tests to assess differences between pre and post-treatment mother-infant interactions
- **Question #3**: partial correlations to assess associations between change in mood, maternal perceptions and mother-infant interactions (controlling for baby age)
SAMPLE

- **Ethnicity**
  - Caucasian=78%
  - Black/Hispanic/Asian=22%

- **Family Income**
  - $0-$25,000=17%
  - $25,001-$75,000=38%
  - >$75,000=45%

- **Education**
  - Non-college grads=19%
  - College grads=22%
  - Post-grad=59%

- **Marital Status**
  - Married/Partnered=91%
  - Single=9%

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INFANT AND MATERNAL AGE

Baby age at intake:
- 0-12 weeks: 9.38%
- 13-24 weeks: 50.00%
- 25-36 weeks: 25.12%
- 37-48 weeks: 9.38%
- 49-63 weeks: 3.12%

Maternal age at intake:
- 20-25 years: 15.62%
- 26-30 years: 31.25%
- 31-35 years: 12.50%
- 36-40 years: 9.38%
- 41-45 years: 31.25%
- 49-63 weeks: 9.38%
CHANGES BETWEEN PRE AND POST-TREATMENT PDSS, PSI, AND MSI

n=24, **=p<.01
CHANGES BETWEEN PRE AND POST-TREATMENT BSI GLOBAL SEVERITY INDEX

- Pre-Tx: 1.6
- Post-Tx: 1.2

n = 24, ** = p < .01
CHANGES BETWEEN PRE AND POST-TREATMENT MSI SUBSCALES

n=24, **=p<.01
CHANGES BETWEEN PRE AND POST-TREATMENT PSI SUBSCALES

Parental Distress**

Difficult Child**

Parent-Child Dysfunctional Interactions**

n=24, **=p<.01
## Changes between Pre and Post-Treatment Observer Ratings of Mother-Infant Interactions

<table>
<thead>
<tr>
<th>CIB Composite</th>
<th>Pre-Tx</th>
<th>Post-Tx</th>
<th>t</th>
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<tbody>
<tr>
<td></td>
<td>x (sd)</td>
<td>x (sd)</td>
<td></td>
</tr>
<tr>
<td><strong>Sensitivity &amp; Responsivity</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Structured</td>
<td>3.8 (.66)</td>
<td>4.1 (.69)</td>
<td>-1.9&lt;sup&gt;t&lt;/sup&gt;</td>
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<tr>
<td>Unstructured</td>
<td>3.8 (.58)</td>
<td>4.2 (.56)</td>
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<td></td>
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<td>3.7 (1.3)</td>
<td>-2.8&lt;sup&gt;**&lt;/sup&gt;</td>
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<tr>
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<td>3.7 (1.0)</td>
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n = 24 , t = p< .10; * = p< .05; ** = p< .01
PARTIAL CORRELATIONS BETWEEN CHANGE IN SELF REPORT MEASURES AND CHANGE IN MATERNAL SENSITIVITY AND RESPONSIVITY DURING MOTHER-INFANT INTERACTIONS

<table>
<thead>
<tr>
<th>Self-Report Measure</th>
<th>Maternal Sensitivity &amp; Responsivity</th>
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<td><strong>BSI Global Severity Index</strong></td>
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<tr>
<td><strong>PSI Total Score</strong></td>
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<tr>
<td>Dysfunct. Interaction</td>
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<tr>
<td><strong>MSI Total Score</strong></td>
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<tr>
<td>Caretaking</td>
<td>.45**</td>
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<tr>
<td>Acceptance of Baby</td>
<td>.26</td>
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<tr>
<td><strong>Expected Relationship</strong></td>
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All analyses control for baby age. n=25, * p<.05, ** p<.01
PARTIAL CORRELATIONS BETWEEN CHANGE IN SELF REPORT MEASURES AND CHANGE IN INFANT INVOLVEMENT AND POSITIVE AFFECT DURING MOTHER-INFANT INTERACTIONS

<table>
<thead>
<tr>
<th>Self-Report Measure</th>
<th>Infant Involvement &amp; Positive Affect</th>
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<td>Expected Relationship</td>
<td>.16</td>
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</table>

All analyses control for baby age. n=25, * p < .05, ** p < .01
SUMMARY

- After Early Connections treatment mothers reported feeling less depressed, psychologically distressed, and stressed from parenting, and more self-esteem as mothers.
- In addition, after treatment observers rated mothers as more sensitive and responsive in interactions with their infants; infants displayed more positive affect and involvement in interactions with their mothers.
SUMMARY continued

- Improvements in depression and psychological distress were not associated with increased maternal sensitivity or infants’ initiation, involvement and positive affect with his/her mother.
- Improved perceptions of oneself as a mother, specifically one’s caretaking ability, and perceived acceptance of one’s baby, was associated with greater maternal sensitivity.
- Improvements in mother’s perception of her own mothering and stress in parenting were associated with more infant initiation, involvement, and positive affect.
CONCLUSION

- Over the course of Early Connections dyadic treatment mothers felt better psychologically and demonstrated improved parenting.
- Although mood was improved, only measures of parenting perceptions were associated with actual change in behavior on the part of the mother and the infant.
IMPLICATIONS

- Immediate postpartum screening and dyadic intervention are crucial to ameliorate the negative impact of PPD on the early mother-infant relationship.

- More dyadic treatments are needed where mothers mood and relationship with her baby can be directly addressed.
LIMITATIONS/FUTURE DIRECTIONS

- Small sample size, limited power
- No control/comparison group of non-depressed mothers or alternative treatment
- Limited ability to generalize given specified community sample

- Development of treatment manual
- Randomized controlled trial of Early Connections
- Disseminate intervention and test in other community agencies
THANK YOU!