

“EARLY CONNECTIONS” INTERVENTION FOR DEPRESSED MOTHERS AND INFANTS:



PROGRAM DESCRIPTION AND OUTCOMES

**Ruth Paris, Ph.D., Rendelle Bolton, M.A.
& M. Katherine Weinberg, Ph.D.**

Boston University School of Social Work

SRCD, April 4, 2009

(rparis@bu.edu)

ACKNOWLEDGEMENTS

- ❖ **Staff (Eda Spielman and Peggy Kaufman) and clients of the Early Connections Program, Jewish Family and Children's Service of Greater Boston**
- ❖ **Office of the Provost, Boston University**
- ❖ **Silberman Fund, New York Community Trust**
- ❖ **Wellesley Centers for Women, Wellesley College, Stone Primary Prevention Initiatives Grant Program**

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).**

EARLY CONNECTIONS INTERVENTION

- ❖ 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 w/ 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%

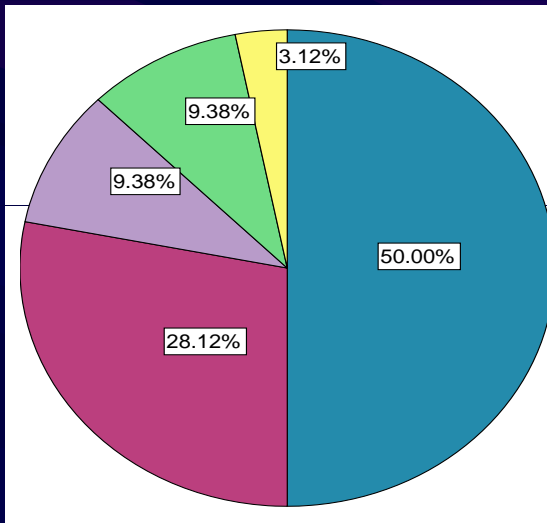
❖ Marital Status

Married/Partnered=91%

Single=9%

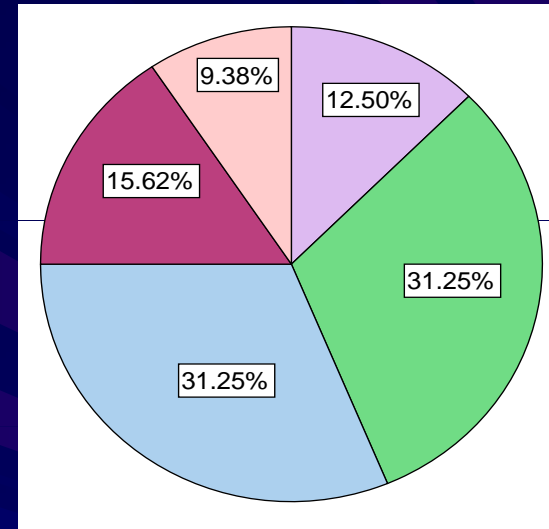
INFANT AND MATERNAL AGE

Baby age at intake



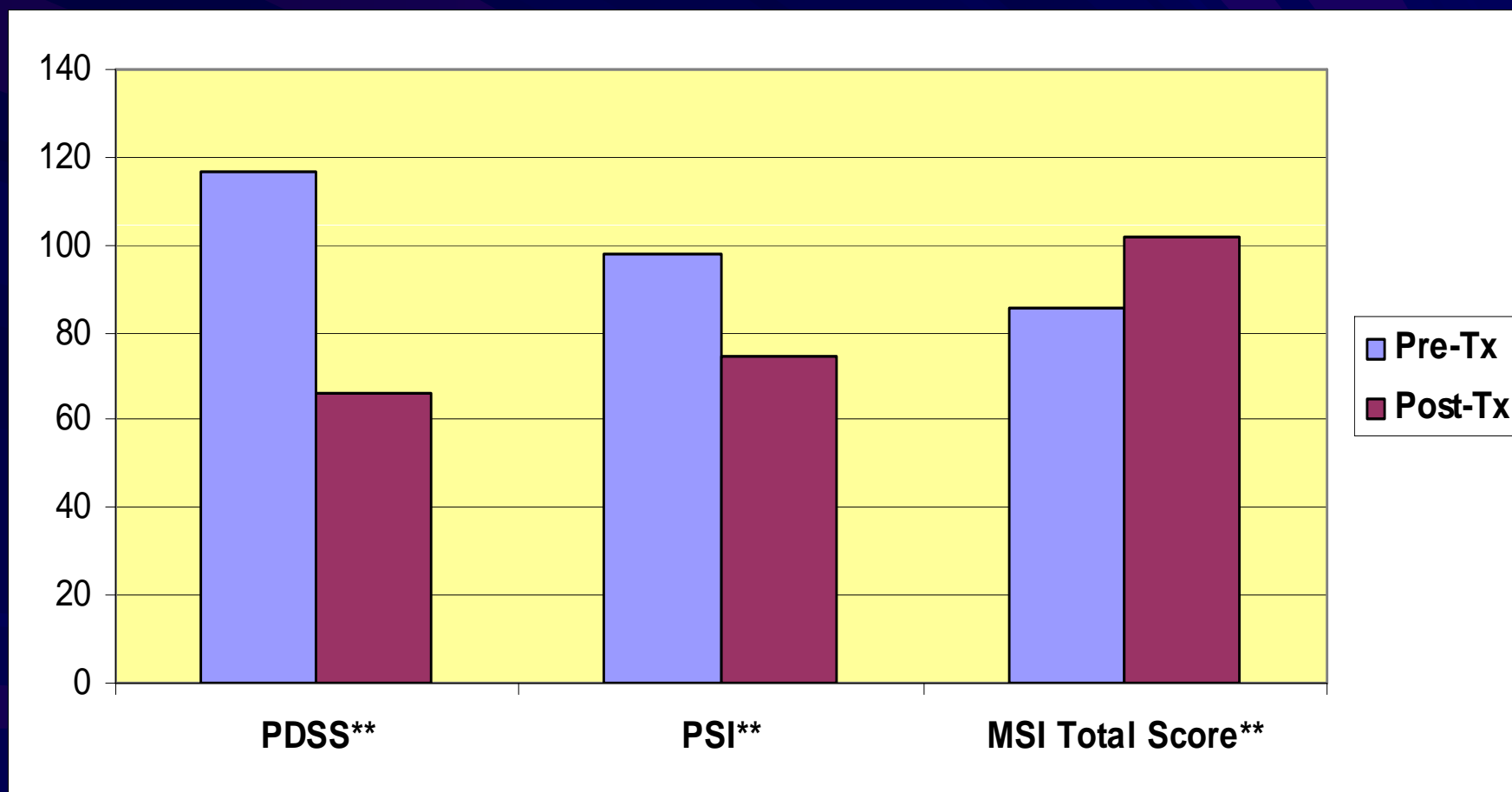
- 0-12 weeks
- 13-24 weeks
- 25-36 weeks
- 37-48 weeks
- 49-63 weeks

Maternal age at intake



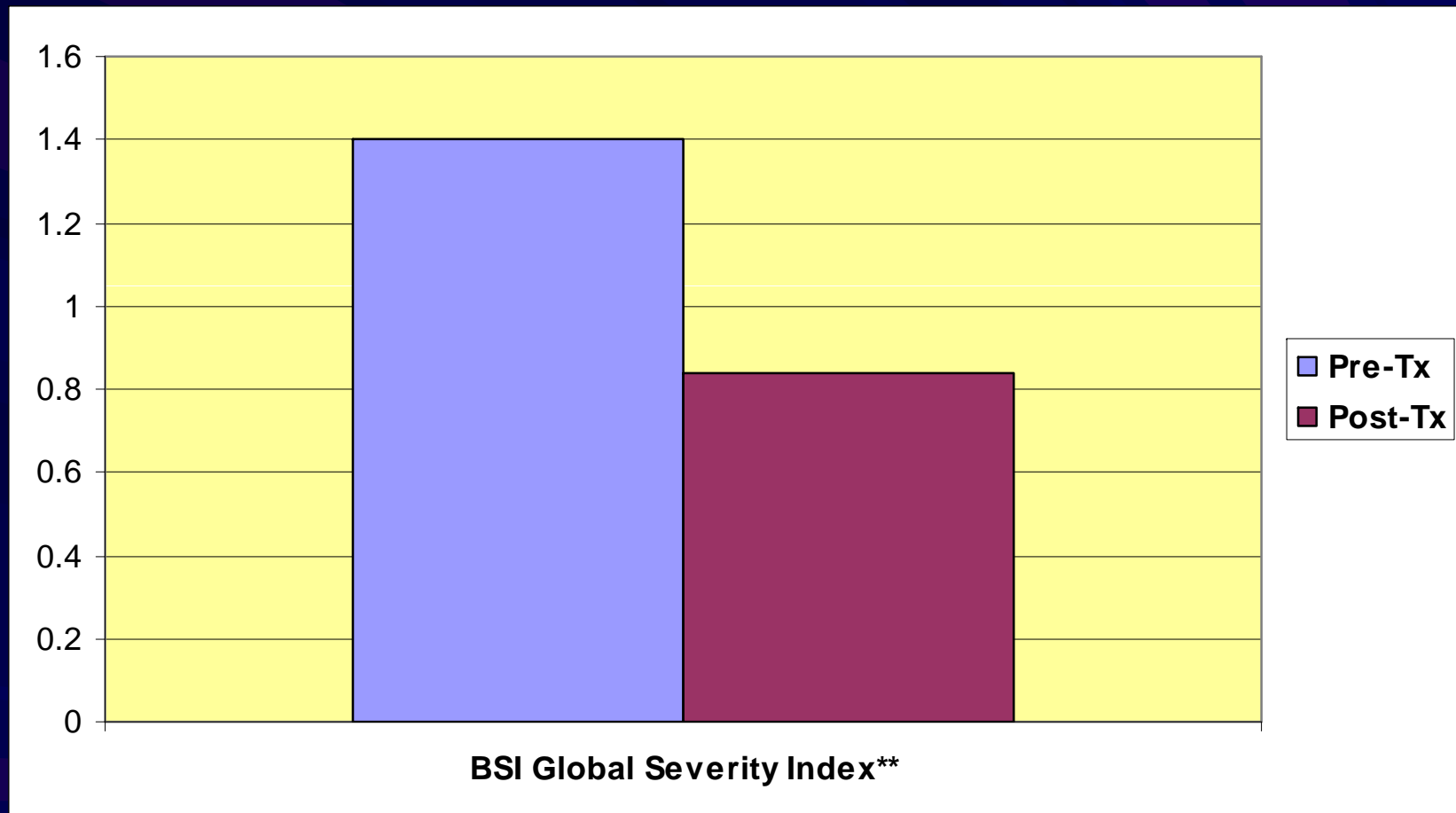
- 20-25 years
- 26-30 years
- 31-35 years
- 36-40 years
- 41-45 years

CHANGES BETWEEN PRE AND POST-TREATMENT PDSS, PSI, AND MSI



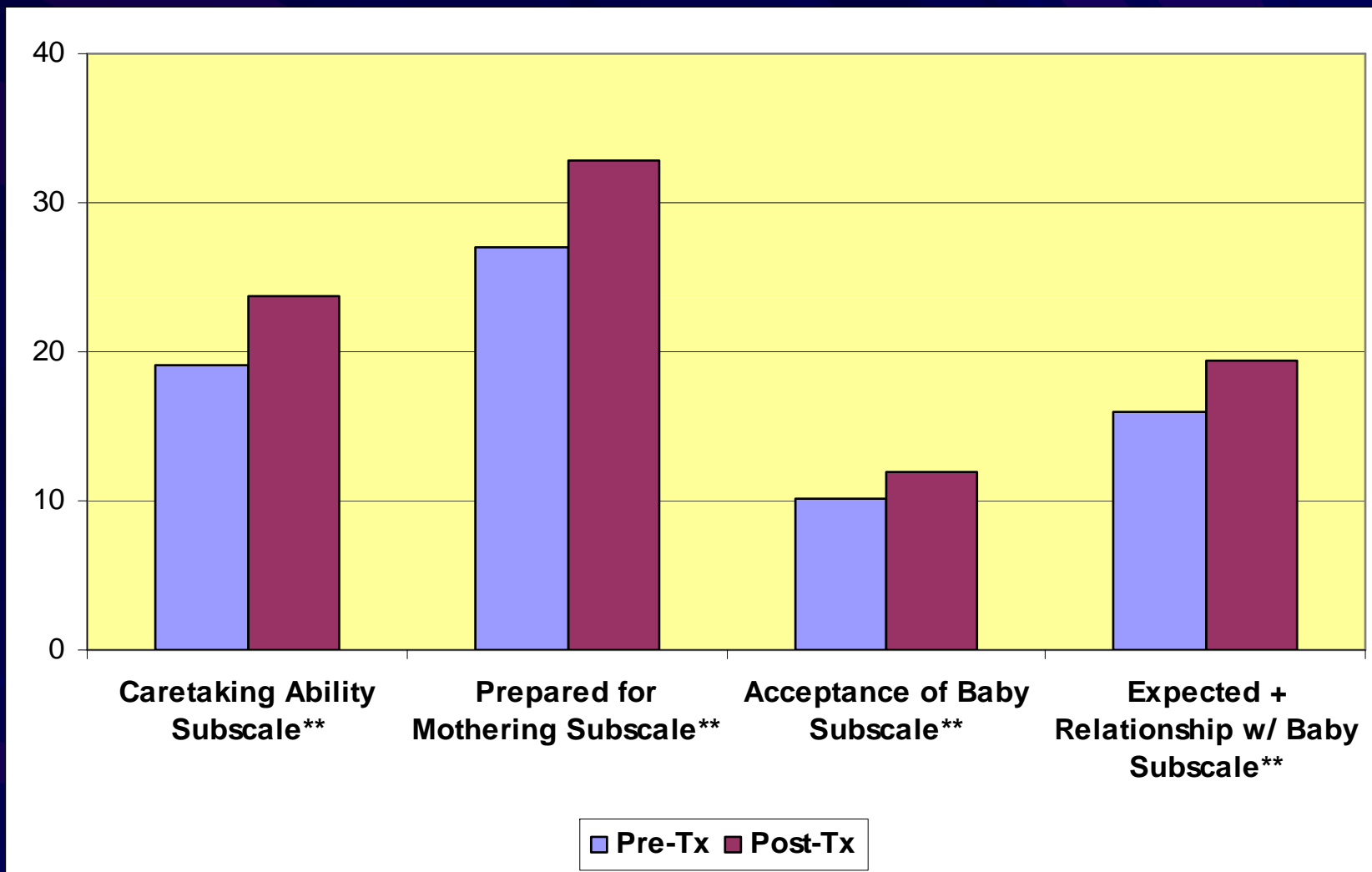
n=24, **= $p \leq .01$

CHANGES BETWEEN PRE AND POST-TREATMENT BSI GLOBAL SEVERITY INDEX



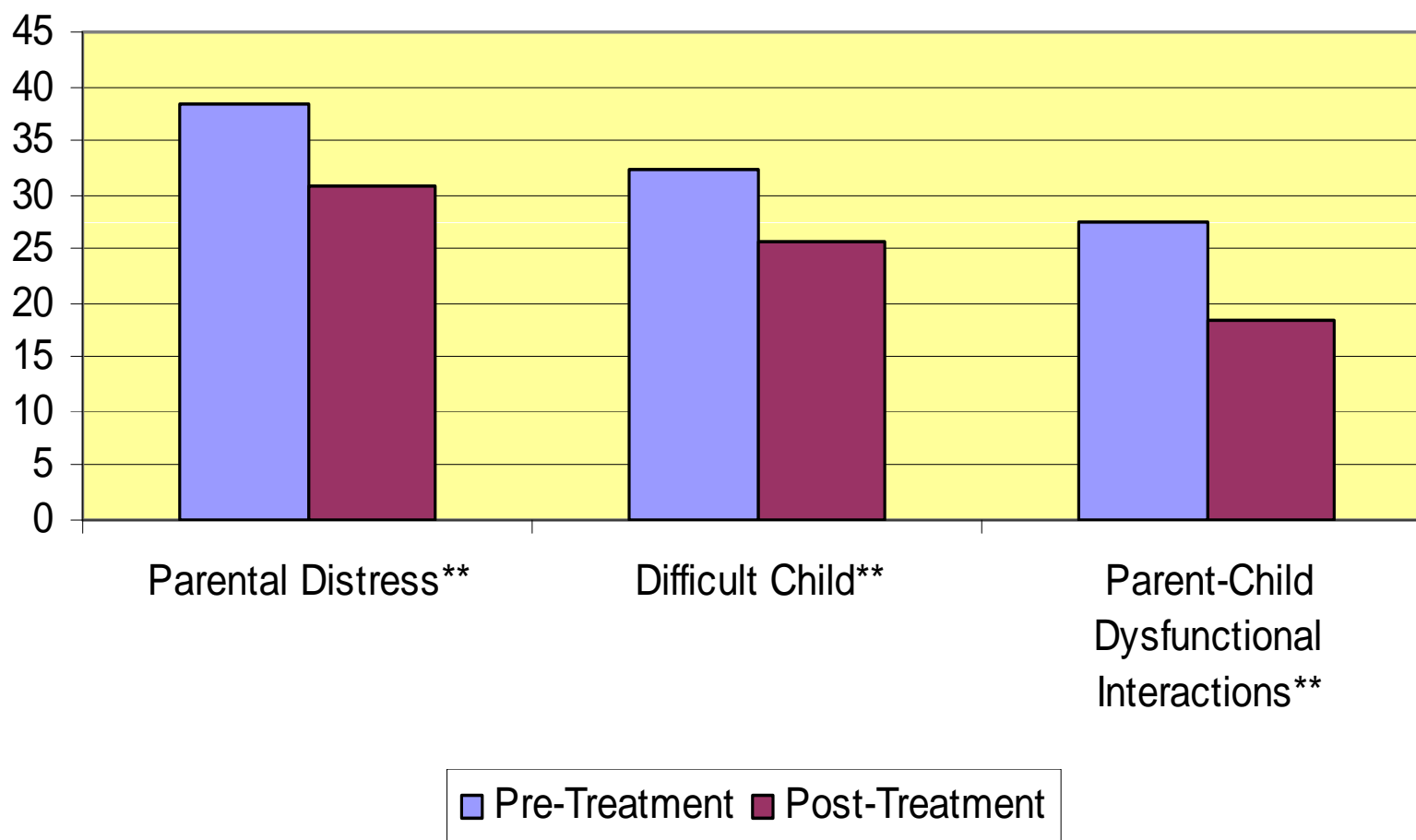
n= 24, **= $p \leq .01$

CHANGES BETWEEN PRE AND POST-TREATMENT MSI SUBSCALES



n=24, **= $p \leq .01$

CHANGES BETWEEN PRE AND POST-TREATMENT PSI SUBSCALES



n=24, **= $p \leq .01$

CHANGES BETWEEN PRE AND POST-TREATMENT OBSERVER RATINGS OF MOTHER-INFANT INTERACTIONS

	Pre-Tx	Post-Tx	
CIB Composite	x (sd)	x (sd)	t
Sensitivity & Responsivity			
Structured	3.8 (.66)	4.1 (.69)	-1.9 ^t
Unstructured	3.8 (.58)	4.2 (.56)	-2.3*
Infant Positive Affect			
Structured	3.0 (1.1)	3.7 (1.3)	-2.8**
Unstructured	2.7 (1.3)	4.0 (.87)	-4.3**
Infant Involvement			
Structured	2.9 (.89)	3.7 (1.0)	-3.6**
Unstructured	2.8 (1.1)	3.8 (.83)	-4.4**

PARTIAL CORRELATIONS BETWEEN CHANGE IN SELF REPORT MEASURES AND CHANGE IN MATERNAL SENSITIVITY AND RESPONSIVITY DURING MOTHER-INFANT INTERACTIONS

Self-Report Measure	Maternal Sensitivity & Responsivity	
	Structured	Unstructured
PDSS Total Score	.07	-.09
BSI Global Severity Index	-.01	-.04
PSI Total Score	-.27	-.28^t
Dysfunct. Interaction	-.25	-.25
MSI Total Score	.36*	.42*
Caretaking	.45**	.44*
Acceptance of Baby	.26	.41*
Expected Relationship	.15	.32^t

All analyses control for baby age. n=25, * $p \leq .05$, ** $p \leq .01$

PARTIAL CORRELATIONS BETWEEN CHANGE IN SELF REPORT MEASURES AND CHANGE IN INFANT INVOLVEMENT AND POSITIVE AFFECT DURING MOTHER-INFANT INTERACTIONS

Self-Report Measure	Infant Involvement & Positive Affect	
	Structured	Unstructured
PDSS Total Score	.20	-.28
BSI Global Severity Index	.18	-.02
PSI Total Score	-.14	-.34*
Dysfunct. Interactions	-.41*	-.52**
MSI Total Score	.17	.36*
Caretaking	.22	.42*
Acceptance of Baby	.28 ^t	.45**
Expected Relationship	.16	.34*

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 !