



The Primacy of Relational Interactions in Early Childhood Dyadic Assessments

Ruth P. Newton, Ph.D.

Dyadic Therapy

Infant/Toddler/Parent/Clinician
Ages birth to 3

- **For Parent:** Increase stability, sensitivity, attunement, and synchrony that affects the security and neurobiology of the child.

Newton, 2008a, 2008b; Schore 1994, 2001a, 2001b, 2000, 2005; Schore & Newton, 2013

- **For Child:** Increase developmental integration toward emotional security and regulation through increased play, exploration, and parent-responsive soothing.

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"Biology is the least of what makes someone a mother."

--Oprah Winfrey

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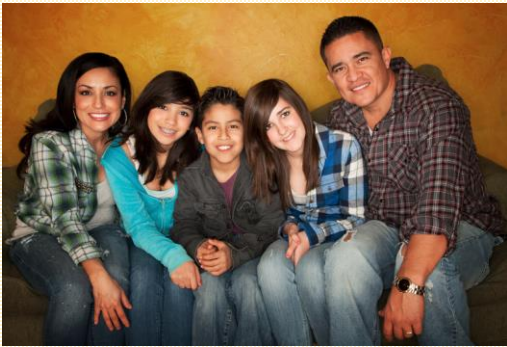
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“Who would have guessed that within minutes of his birth, I would give my life to protect 7 pounds of flesh.”

-- New father

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Primary Entrainment of Biology
Last Trimester of Pregnancy and the First Two Years of Life

- Evolutionary controlled biological process occurring within and shaped by early childhood attachment relationships.
- Occurs within a rich amalgamation of genetics, temperament, and lived experience resulting in an internal working model (or neurobiological organization) of how to be in relationships.


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Prenatal
Last Trimester




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Infants
Birth to 18 mo



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Toddlers
Age 18 mo to 3 y




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Right Hemisphere Sensitive Period



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Rita Carter

Right Hemisphere in sensitive period from last trimester of pregnancy to 2.5 y – 3 y (Chiron et al., 1997; Mento et al., 2010)

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Regulatory Centers

Right Hemisphere

Schore, 2001

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Infancy

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Third Trimester

- Fetuses begin reacting to auditory stimuli at 30 weeks gestation
- Fetal heart rate increases to mother's voice and decreases to stranger's voice
- Responses sustained for 4 min

Fetus can differentiate mother's voice from a stranger's voice

Kisilevsky et al., 2003

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Third Trimester



- 34 premature infants
- Gestational age 24-34 wks
- All tested at 35 wks
- Infants greater than 30 wks gestational age (but not before) showed right hemisphere activation to pitch

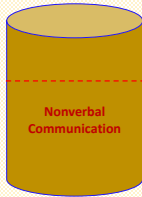
Mento et al., 2010

Right hemisphere activation to pitch at 30 wks gestational age

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Language of the Implicit *Bodyworld*



Nonverbal
Communication

Burgoon et al., 2010

- Facial expressions
- Eye contact
- Voice prosody
- Gestures
- Touch
- Body Posture
- Scent and Smell

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Typical Development

- Physical
- Cognitive
- Language
 - Receptive
 - Expressive
- Motor
 - Fine
 - gross
- **Socioemotional**
- **Adaptive Behavior**

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Interior World or the Implicit *Bodyworld* is Entrained by Genetics/Temperament/Lived Experience

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Lack of Synchrony at 4 mo predicted insecure-ambivalent and disorganized attachment at 12 mo

Beebe et al., 2010 & 2012

- 84 mother/infant dyads
- Communications at four months predicted insecure-ambivalent and disorganized attachment categories at 12 months using the Strange Situation
- Study included low-risk, ethnically diverse community sample of first time highly educated mothers and their infants
- 20% of the infants coded disorganized at 12 months

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Lack of Synchrony at 4 mo predicted insecure-ambivalent and disorganized attachment at 12 mo

Beebe et al., 2010 & 2012

- **Mothers of disorganized infants**
 - Were less likely to follow their infant's gaze
 - Were more likely to gaze away from infant's gaze
 - Had lower contingent engagement and coordination when infant was distressed
 - Showed more 'loom' interactions
 - Were less behaviorally predictable
 - Had lower touch coordination with infant
- Did not have a failure of empathy or a failure to read infant states but problems in contingently coordinating facial-visual behavior within a relationship with infant

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Lack of Synchrony at 4 mo predicted insecure-ambivalent and disorganized attachment at 12 mo

Beebe et al., 2010 & 2012

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- **Mothers of disorganized infants**
 - Were less likely to become 'facially positive' when their infants were facially and vocally positive
 - Were more likely to 'dampen their faces' when infant was distressed
 - Were more likely to have blank faces
 - Were more likely to show surprise or positive expressions when infant was distressed
- **Future disorganized infants at 4 mo**
 - Showed greater distress
 - Had discrepant affect (positive and negative within same second...smiling and whimpering)
 - Had less time in touch of any kind i.e., self, object, mother so lower self soothing abilities



Lack of Synchrony at 4 mo predicts insecure-ambivalent and disorganized attachment at 12 mo

Beebe et al., 2010 & 2012

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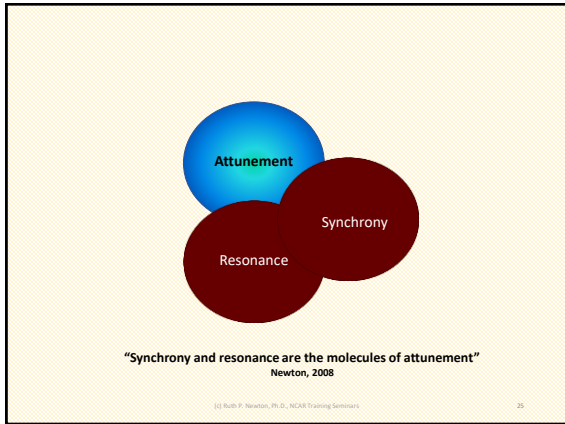
- **The proposed internal working models of disorganized infants could look like this:**
 - Emotional distress and the inability to receive comfort
 - They are 'opposed' by their mothers in times of distress
 - Difficulty in knowing what they feel or what mother feels, i.e., "emotional incoherence"
 - Not feeling "sensed" or "known"

Attunement, Resonance & Synchrony

- Attunement is the ability to feel, have good-enough understanding of, and respond to a person's inner-feeling world.
- That is, the inner **feeling self**
- Resonance is an amplification of feeling.
- Synchrony is coordinated movement so that two act as one.

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Synchrony

- **fMRI study**
- Mothers and children watched previously taken video of their positive and conflictual interactions filmed at home
- Videos coded for synchrony
- Behavioral synchrony increased high frequency gamma waves in the superior temporal sulcus (STS) of the right hemisphere

Levy, Goldstein, & Feldman, 2017

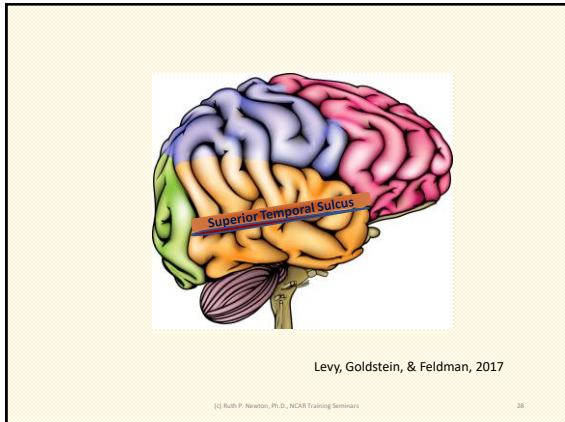
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Synchrony

- **fMRI study**
- Nonsynchronous moments and unfamiliar mother/child dyads did not increase gamma waves
- Gamma waves are associated with bonding
- STS is associated with multisensory processing for social perception
- "Such self-own-child neural synchrony implicates bottom-up processes at both the neural and the behavioral levels" p. 1043

Levy, Goldstein, & Feldman, 2017

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Infant Stages

Forming a Secure Attachment to parents

- Six infant stages of development
 - Puerperium – first two months – circadian rhythms
 - Four Month Old – anterior cingulate online
 - Six Month Old – facial referencing and anticipation
 - 9 Month Old – greater maturation of the cingulate – stranger anxiety

Based on Schore 1994, 2001a & 2001b; Newton, 2008

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Infant Stages

- 12 Month Old – orbital frontal connections, elation, high levels of SNS activation for exploration
- 18 Month Old – orbital frontal connections, inhibitory circuit, self development, beginning of "I" and simple theory of mind tasks

Based on Schore 1994, 2001a & 2001b; Newton, 2008

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Dyadic Therapy
Assessment of
1) child
2) parent
3) relationship

The Primacy of Dyadic Interactions
in Early Childhood Assessments

Always start with the child

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Toddler Stages

Agency, Exploring, Learning, and Sharing

- Emotional mood swings and easily frustrated
 - Drama as toddlers learn to share
 - Aggression, hitting, biting when frustrated
 - Pretend play
 - Parallel play
 - **Will imitate what he/she sees & hears**
 - Often their favorite words are "No" and "Mine"
 - Can speak in two to three-word sentences, pose questions, and offer additional details in conversation


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Toddler Stages

Protective factors for toddlers (and their parents):

- **Routines**
- **Redirects**
- **Matter-of-fact statements**

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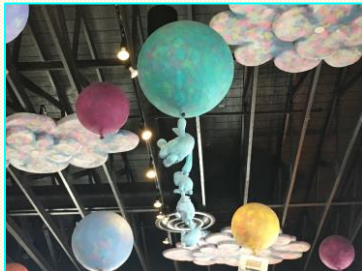
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Dyadic Therapy

Assessment of

- 1) child
- 2) parent
- 3) relationship

- Child Evaluation
 - Assessment tools e.g.
 - Child Developmental Questionnaire
 - Current Well-Child Medical Evaluation
 - Any Developmental Screenings
 - Ages & Stages Questionnaire – 3rd Edition (ASQ-3)
 - Ages & Stages Questionnaire – Social Emotional – 2nd Edition (ASQ-SE-2)
 - Clinical Evaluation

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Dyadic Therapy

Assessment of

- 1) child
- 2) parent
- 3) relationship

- Child Evaluation
 - NCAR Developmental Questionnaire
 - Additional questions on birth of child
 - Age of parents at baby's birth
 - Did baby stay longer at the hospital than parent
 - How many weeks gestation
 - Method of delivery
 - Weight of baby at birth
 - Is/was baby breast fed
 - Any jaundice and/or colic
 - Use of cigarettes, alcohol or drugs during pregnancy
 - Any depression or anxiety during pregnancy
 - Any postpartum depression

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Dyadic Therapy

Assessment of

- 1) child
- 2) parent
- 3) relationship

- Parent Evaluation
 - Reason for evaluation
 - Assessment tools e.g.
 - Adult Developmental Questionnaire
 - Edinburgh Postnatal Depression Scale (EPDS)
 - Generalized Anxiety Disorder 7 (GAD-7)
 - Patient Health Questionnaire (PHQ-9)
 - Beck Depression Inventory II (BDI-II)
 - Beck Anxiety Inventory (BAI)
 - Parent Stress Index IV SF (PSI-4)
 - **ACES Questionnaire**
 - Clinical Evaluation

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Adverse Childhood Experiences (ACE)

Felitti et al., 1998; Felitti & Anda, 2010. *The relationship of adverse childhood experiences to adult medical disease, psychiatric disorders and sexual behavior: Implications for healthcare.*

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Finding Your ACE Score

Which you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household often or very often swear at you, beat you, or scare you, or humiliate you?
Yes No If you enter 1
2. Did a parent or other adult in the household often or very often yell at you, or threaten you?
Yes No If you enter 1
3. Did an adult or person of authority in the household often or very often punish you or blame you for things that were not your fault?
Yes No If you enter 1
4. Did you often or very often feel that:
Your family did not love you as much as other families?
Your family did not love you as much as you love other families?
Yes No If you enter 1
5. Did you often or very often feel that:
Your family did not love you as much as other families?
Your family did not love you as much as you love other families?
Yes No If you enter 1
6. Were your parents ever separated or divorced?
Yes No If you enter 1
7. Was your mother or stepmother often or very often sad, depressed, or had something to worry about?
Sometimes, often, or very often (sad, depressed, or had something to worry about)
Ever regularly for at least a few minutes or throughout with or without you?
Yes No If you enter 1
8. Did you live with anyone who had a problem drinking or abusing or who used street drugs?
Yes No If you enter 1
9. Was a household member depressed or mentally ill, or did a household member attempt suicide?
Yes No If you enter 1
10. Did a household member go to prison?
Yes No If you enter 1

Now add up your "Yes" answers. This is your ACE Score.

continued

Dyadic Therapy

Assessment of

- 1) child
- 2) parent
- 3) relationship

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- Parent Evaluation
- NCAR Adult Questionnaire - Additional questions on childhood of parent
 - Who were you closest to as a child?
 - And now?
 - Who would you go to as a child when feeling sick? And now?
 - When scared? And now?
 - When showing an accomplishment? And now?
 - When you needed help? And now?
 - When sad? And now?
 - Did you every try to hurt yourself as a child?
 - Did you experience any childhood trauma?

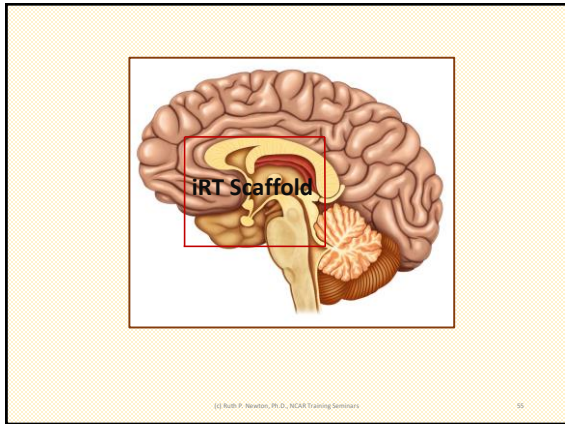
Dyadic Therapy

Assessment of

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- Parent Evaluation
- NCAR uses Integrative Regulation Therapy (IRT) with Child Parent Psychotherapy (CPP/IRT)
- IRT is a neurobiological limbic scaffold
- In IRT, clinicians make a probable map of the parent's neurobiological organization
- The Probable Map assesses seven key elements



Dyadic Therapy

Assessment of

- 1) child
- 2) parent
- 3) relationship

- Parent Evaluation
 - iRT – Parent’s Probable Neurobiological Organization created from
 1. Likely early attachment experience
 2. Current self concept
 3. Probable ANS arousal organization
 4. How currently trying to soothe
 5. Use of defenses
 6. Health of instinct
 7. Parent’s hopes & dreams and level of agency to realize dreams**weak, moderate, strong**

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Dyadic Therapy

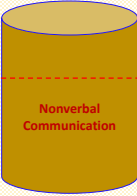
Assessment of

- 1) child
- 2) parent
- 3) relationship

- Relationship Evaluations
 - **Always start with the child**
 - Observe how child interacts with parent
 - Observe how child interacts with toys
 - Observe how child interacts with clinician
 - Observe parent’s use of implicit language
 - Observe parent’s attunement
 - Observe how parent attends to child
 - Notice if parent is able to reflect on child’s internal states
 - Record any ‘stand out’ comments about child’s nature, e.g., referring to her 3 month premature infant, mother states in frustration, “He always wants to be held.”

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Language of the Implicit *Bodyworld*



Nonverbal Communication

Burgoon et al., 2010

- Facial expressions
- Eye contact
- Voice prosody
- Gestures
- Touch
- Body Posture
- Scent and Smell

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Dyadic Therapy

Assessment of

- 1) child
- 2) parent
- 3) relationship

- Relationship Evaluation
 - NCAR uses the Early Relational Assessment (ERA), Clark, 1985 Abbreviated by Newton, 2012
 - The ERA evaluates separately infant, parent, and dyad on a 1 to 5 scale with scores 1 & 2 indicating areas of concern, score 3 indicating area of some concern, and scores 4 & 5 indicating areas of strength.

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Dyadic Therapy

Assessment of

- 1) child
- 2) parent
- 3) relationship

- Relationship Evaluation
 - ERA Infant
 - Expressed positive affect
 - Happy, pleasant/cheerful
 - Apathetic/withdrawn
 - Alertness/Interest
 - Avoiding, averting/resistance
 - Exploratory play
 - Eye contact
 - Passivity/lethargy
 - Soothability

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Dyadic Therapy
Assessment of
1) child
2) parent
3) relationship

- Relationship Evaluation
 - ERA Parent
 - Intrusiveness
 - Flexibility
 - Consistent/predictable
 - Harsh/rejecting/critical
 - Connectedness
 - Cheerful
 - Physical contact/Positive
 - Physical contact/Negative
 - Anxious mood
 - Depressed mood

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Dyadic Therapy
Assessment of
1) child
2) parent
3) relationship

- Relationship Evaluation
 - ERA Dyad
 - Anger, hostility
 - Flat, empty, constricted
 - Tension, anxiety
 - Enthusiasm, joyful, mutual enjoyment
 - Joint attention, activity
 - Reciprocity
 - Organization/regulation of interactions
 - State similarity

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Dyadic Therapy
Assessment of
1) child
2) parent
3) relationship

- Clinician requirements
 - In dyadic therapy, intervention starts within the assessment.
 - Must be able to read the implicit communications of infants/toddlers/parent **while** speaking with the parent about concerns.
 - Must be able to interrupt parent's dialogue in a natural way if clinician sees infant looking sad, frustrated, alone, flat and just as naturally return to parent.
 - For example speaking to the infant:
"Awh you look like you need something to play with? Clinician puts a toy in front of infant and looks up at mother."
"Mom what kind of infant toys do you have at home?"
 - Note how parent looks at infant during this redirect; clinician then moves back into dialogue with parent.

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Dyadic Therapy


Assessment of

- 1) child
- 2) parent
- 3) relationship

• Clinician requirements

- Or as clinicians are talking with parent and infant starts to smile at us. Breaking away from parent's narrative, the clinician acknowledges infant.
- For example, speaking to the infant in infant prosody:
"Hello Andrew, you hear we are talking to your mom about you." "You are just adorable with that smile."
- Mom will now look and smile too (almost every time).
- Clinicians model for parents how to use the implicit language of the bodyworld.
- They also model how to break away from narrative, attune to infant, and reconnect with narrative.

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• Relationship Evaluation

• ERA Infant

- Expressed positive affect
- Happy, pleasant cheerful
- Apathetic/withdrawn
- Alertness/Interest
- Avoiding, averting/resistance
- Exploratory play
- Eye contact
- Passivity/lethargy
- Soothability

| ERA | Area of Strength 5 | Area of Some Concern 4 | Area of Concern 3 | Area of Concern 2 | Area of Concern 1 |
|---------------------------|-----------------------|---------------------------|----------------------|----------------------|----------------------|
| Expressed Positive Affect | | | | | |

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• Relationship Evaluation

• ERA Infant

- Expressed positive affect
- Happy, pleasant cheerful
- Apathetic/withdrawn
- Alertness/Interest
- Avoiding, averting/resistance
- Exploratory play
- Eye contact
- Passivity/lethargy
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| ERA | Area of Strength 5 | Area of Some Concern 4 | Area of Concern 3 | Area of Concern 2 | Area of Concern 1 |
|---------------------------|-----------------------|---------------------------|----------------------|----------------------|----------------------|
| Expressed Positive Affect | | | | | |

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• Relationship Evaluation

- ERA Infant
 - Expressed positive affect
 - Happy, pleasant cheerful
 - Apathetic/withdrawn
 - Alertness/Interest
 - Avoiding, averting/resistance
 - Exploratory play
 - Eye contact
 - Passivity/lethargy
 - Soothability

| ERA | Area of Strength | | Area of Some Concern | | Area of Concern | |
|---------------------------|------------------|---|----------------------|---|-----------------|--|
| | 5 | 4 | 3 | 2 | 1 | |
| Expressed Positive Affect | | | | | | |

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• Relationship Evaluation

- ERA Parent
 - Intrusiveness
 - Flexibility
 - Consistent/predictable
 - Harsh/rejecting/critical
 - Connectedness
 - Cheerful
 - Physical contact/Positive
 - Physical contact/Negative
 - Anxious mood
 - Depressed mood

| ERA | Area of Strength | | Area of Some Concern | | Area of Concern | |
|----------------|------------------|---|----------------------|---|-----------------|--|
| | 5 | 4 | 3 | 2 | 1 | |
| Depressed Mood | | | | | | |

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• Relationship Evaluation

- ERA Dyad
 - Anger, hostility
 - Flat, empty, constricted
 - Tension, anxiety
 - Enthusiasm, joyful, mutual enjoyment
 - Joint attention, activity
 - Reciprocity
 - Organization/regulation of interactions
 - State similarity

| ERA | Area of Strength | | Area of Some Concern | | Area of Concern | |
|---------------------------|------------------|---|----------------------|---|-----------------|--|
| | 5 | 4 | 3 | 2 | 1 | |
| Flat, empty, constricted | | | | | | |
| Joint attention, activity | | | | | | |

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7 month old infant with his Mother

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Keeping the *Bodyworld* First

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