ATTACHMENT AND CHILD HEALTH (ATTACH)

Phase 1 Results

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Outline

- Background
  - IPV and Preschool Children's Development & Attachment
  - Attachment & Reflective Function (RF)
- The ATTACH Program
- Methods
- Results & Next Steps

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BACKGROUND

Influence of IPV on infants (Birth to 2 Years of Age)

- Insecure attachment in infancy
- Insecurely attached or to have disorganized attachment patterns
- Disorganized attachment has been most consistently linked to psychopathology
- Emotion regulation, separation anxiety, and difficult temperament such as excessive crying, fussiness and irritability

Cyr, Euser, Bakermans-Kranenberg, & Van Ijzendoorn, 2010; A. Groh et al., 2012; Howe, 2011; van Ijzendoorn, Schuengel, & Bakermans-Kranenberg, 1999; Casanueva et al., 2010; Marta Lundy & Susan Grossman, 2005

Influence of IPV on infants (Birth to 2 Years of Age)

- Greater behavioral problems, particularly social-emotional problems, behavioral problems or delays, in 1 and 2 year olds
- In 1 to 3 year olds, children exposed to IPV has significantly higher levels of adjustment problems, particularly atypical or maladaptive behaviors such as making odd sounds or repetitive movements
- Effects strongest when children also abused, least when parents' sensitive in relationships
- Even trauma symptoms, such as social withdrawal have been observed in infants exposed to IPV

Easterbrooks, Katz, Kotake, Stelmach, & Chaudhuri, 2015; A. Levendosky, Leahy, K., Bogat, G., Davidson, A., William, S, von Eye, A., 2006; DeJonghe, von Eye, Bogat, & Levendosky, 2011), however, parenting practices linked to security of attachment may mediated the association (A. Levendosky et al., 2011; R. McDonald, Jouriles, E., Briggs-Gowan, M., Rosenfield, D., & Carter, A., 2007; Bogat, DeJonghe, Levendosky, Davidson, & von Eye, 2006

Influence of IPV on Preschoolers (Three to Six Years of Age)

- Reduced attachment security
- Reduced social competence and poor social relationships
- Emotion regulation problems (moderated by better parenting performance, fewer mental health problems and less severe violence)
- Maternal depression with IPV predicted ADHD

Veríssimo, Santos, Fernandes, Shin, & Vaughn, 2014; Miller, Grabell, Thomas, Bermann, & Graham-Bermann, 2012; Minze, McDonald, Rosentraub, & Jouriles, 2010

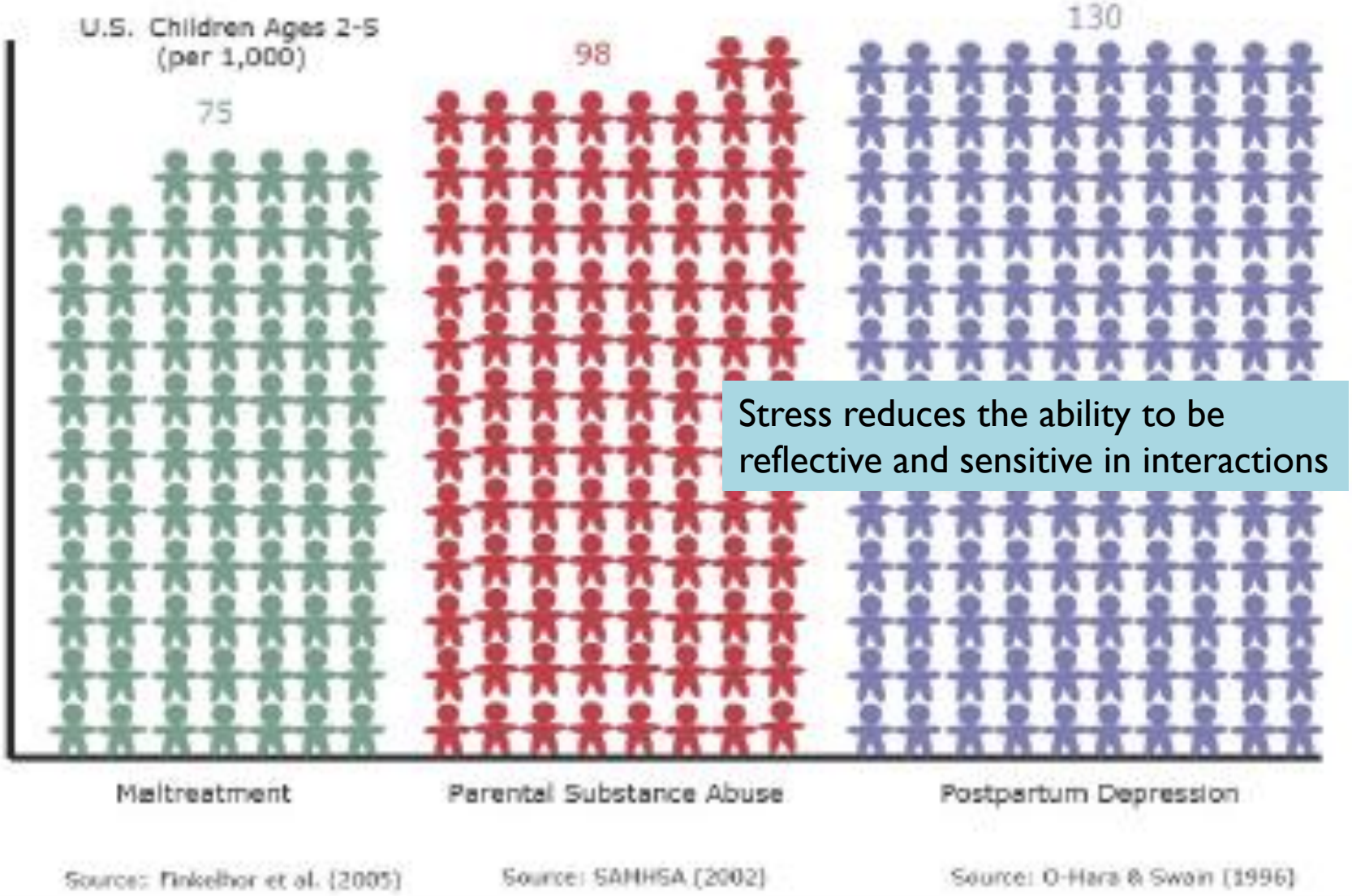
Influence of IPV on Preschoolers (Three to Six Years of Age)

- When mothers have PTSD, children more likely to, even if not experienced abuse directly.
- Young children may be particularly vulnerable to relational PTSD due to their close physical and emotional relationship with their parents

Alytia A Levendosky, Bogat, & Martinez-Torteya, 2013; Graham-Bermann et al., 2012).

How does IPV affect development?

Sources of Toxic Stress in Young Children



Stress reduces the ability to be reflective and sensitive in interactions

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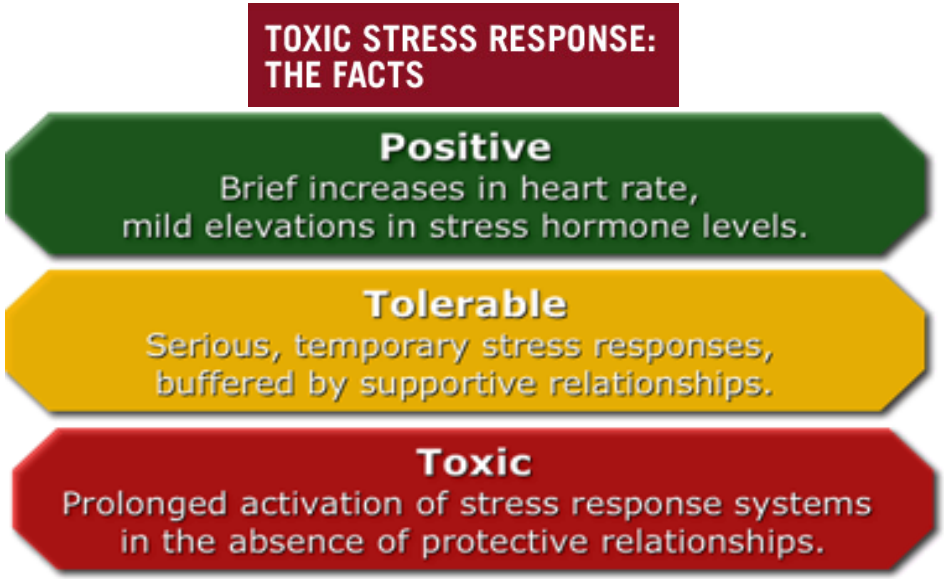
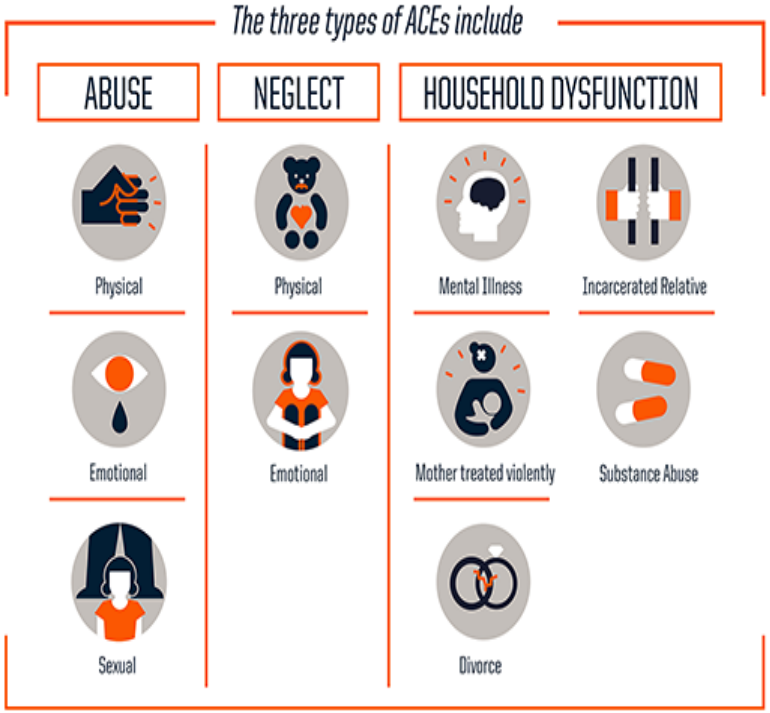
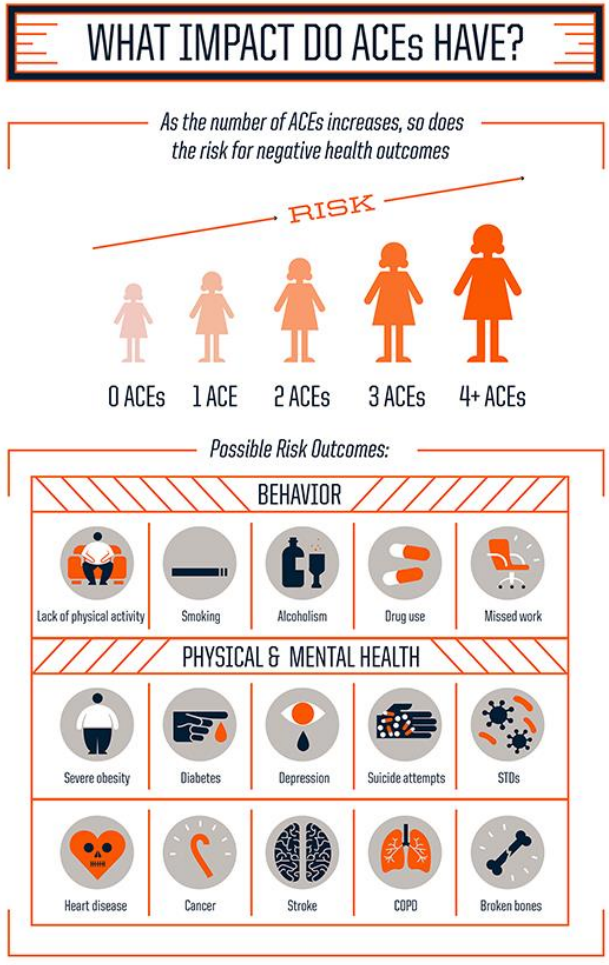


WHAT ARE THEY?

ACEs are

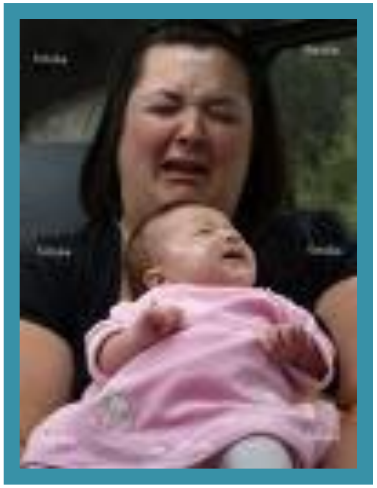
ADVERSE CHILDHOOD EXPERIENCES



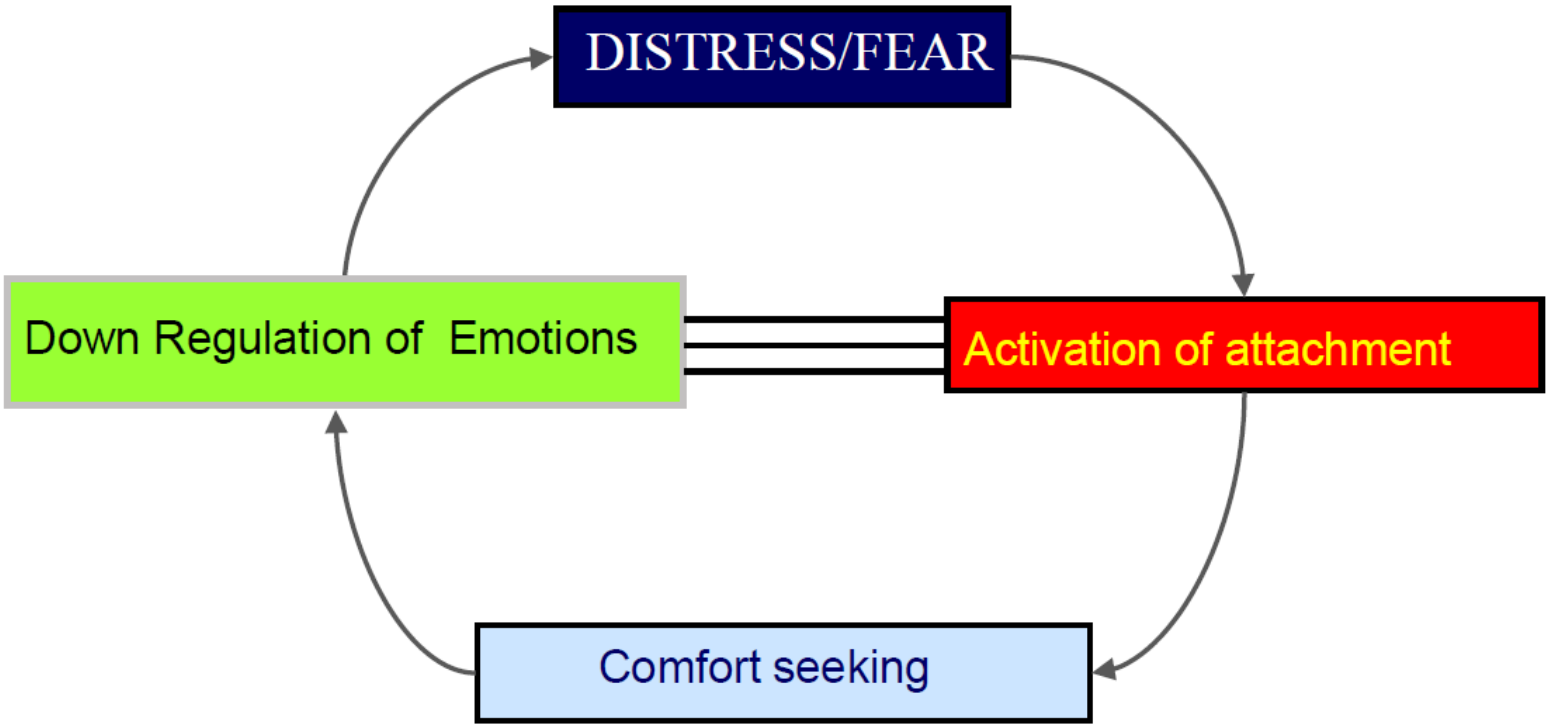


In the absence of **supportive relationships**, the scale tips towards negative outcomes.

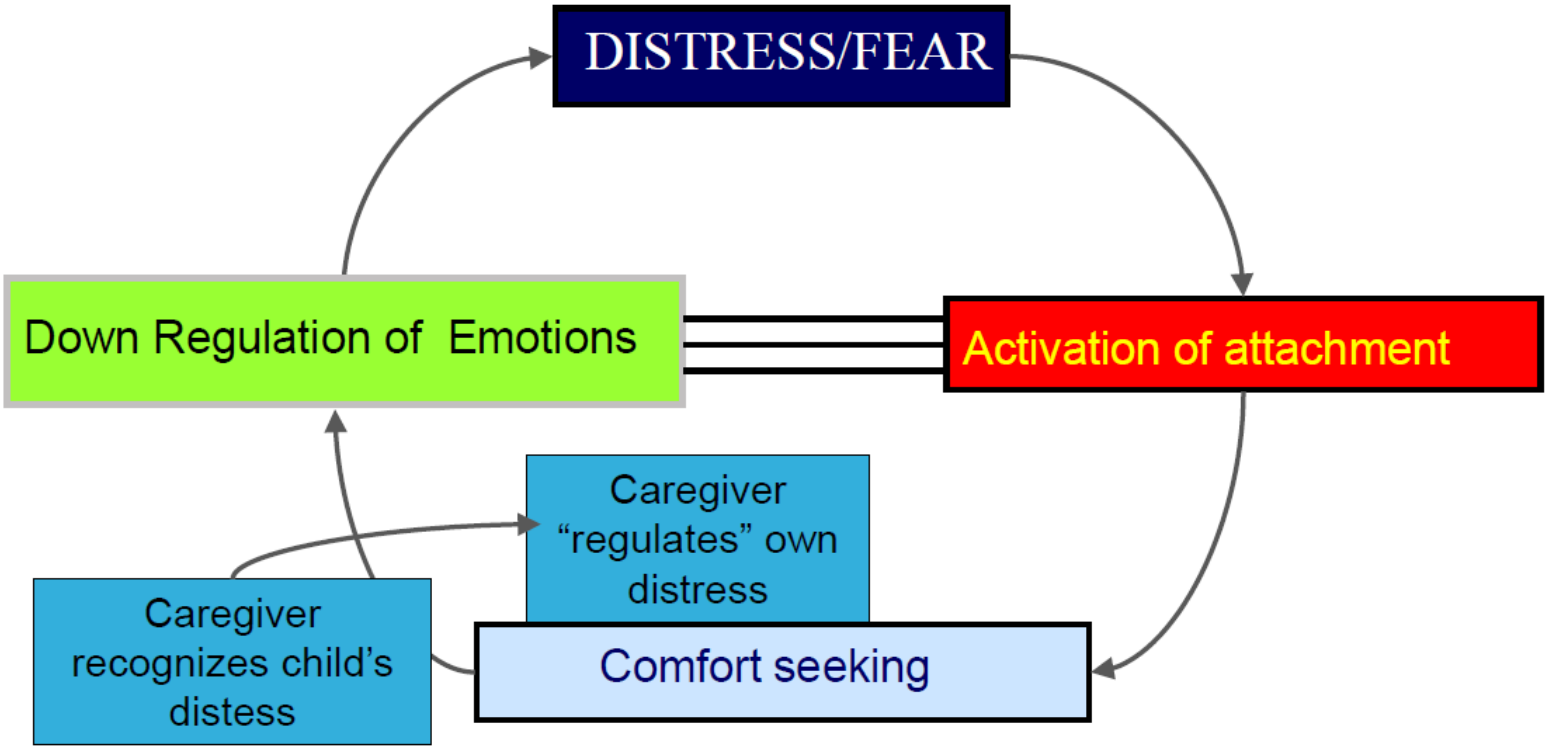
Sadly, primary caregivers (usually mothers) affected by IPV may be traumatized, depressed or distressed which reduces their regulation of the infant's stress (e.g. are withdrawn, emotionally unavailable, or frightening)



And abusers are unlikely to provide environment conducive to safety and security, essential for healthy development



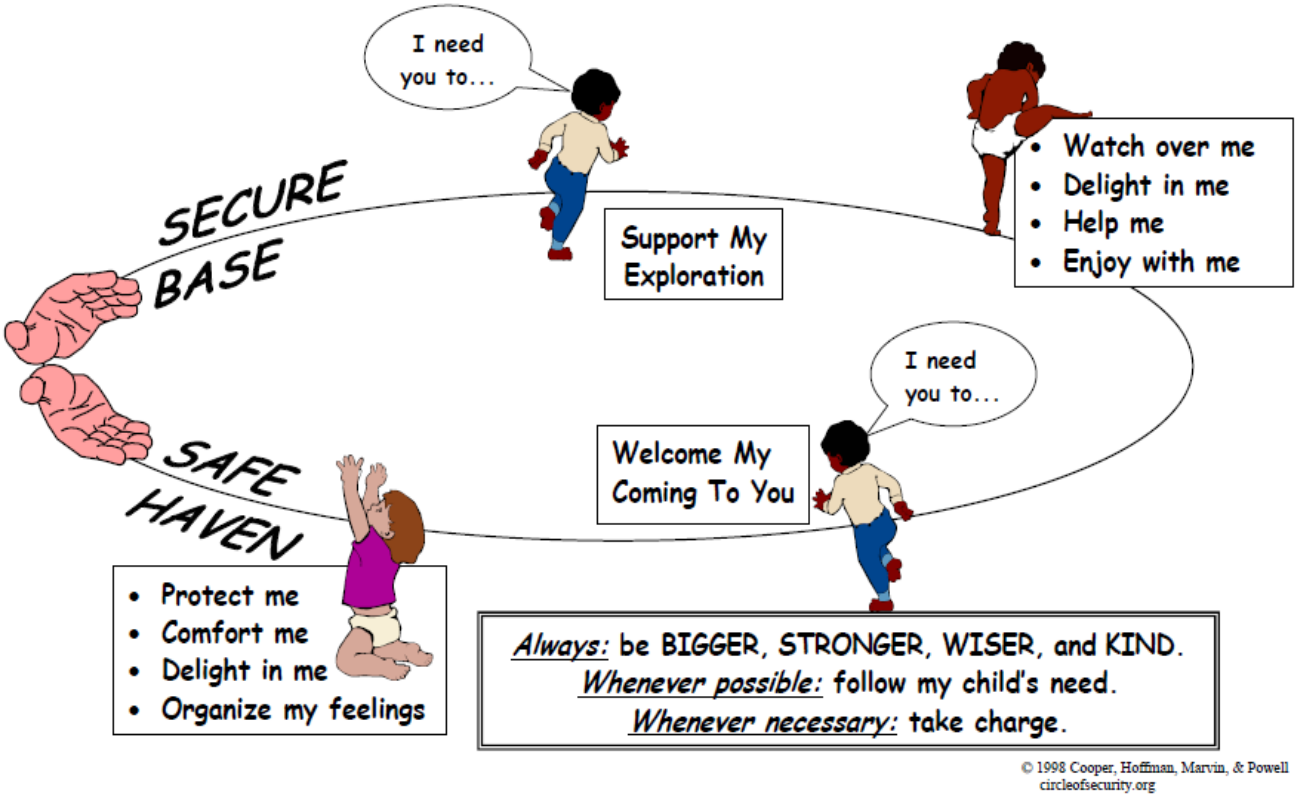
*Luyten, P., Mayes, L.C., Fonagy, P., & Van Houdenhove, B. (In Press). The interpersonal regulation of stress.



*Luyten, P., Mayes, L.C., Fonagy, P., & Van Houdenhove, B. (In Press). The interpersonal regulation of stress.

CIRCLE OF SECURITY

PARENT ATTENDING TO THE CHILD'S NEEDS



Secure Infant Attachment Predicts:

- Attachment security in adulthood, even though significant life events may shift attachment patterns (Waters 2000; Weinfeld 2004)

- More optimal relationships with peers throughout childhood and adolescence (Schneider 2001)

- Children's social-emotional development (Sagi-Schwartz 2005)
  - Positive behaviors such as resiliency and curiosity in preschool children (Arend 1978)
  - Self-reliance, self-regulation and social competence in adulthood (Sroufe 2005; Fonagy 2010 & 2014)

Overall Positive Mental Health & Healthy Relationships

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Insecure Infant Attachment Predicts:

- Children's externalizing behaviour disorders (e.g. aggression, behavior problems, antisocial behavior)

  Fearon, 2010; Lyons-Ruth 1993

- Children's internalizing behavioral disorders (e.g. anxiety, depression)

  Colonnesi 2011; Groh 2012; Madigan 2013

- Inflammatory disorders & all-cause disease Puig 2013
- Cognitive & language development Van Ijzendoorn 1995

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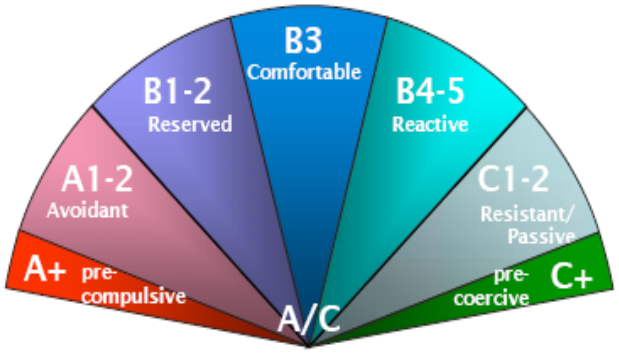
DMM Patterns of Attachment in Infancy

Integrated

Cognition

Affect

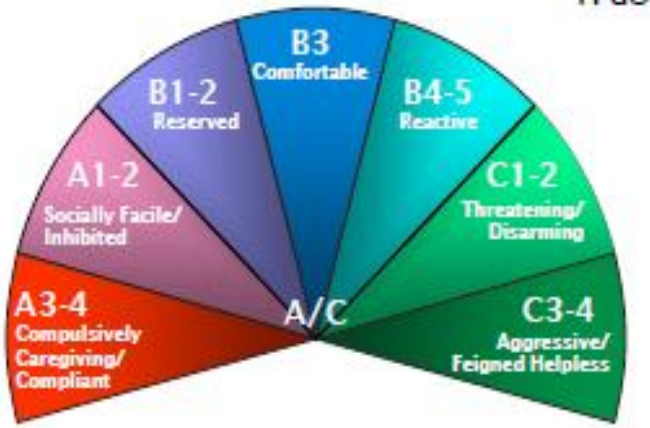


DMM Patterns of Attachment in the Preschool Years

Integrated

True Cognition

True Negative Affect



False Positive Affect

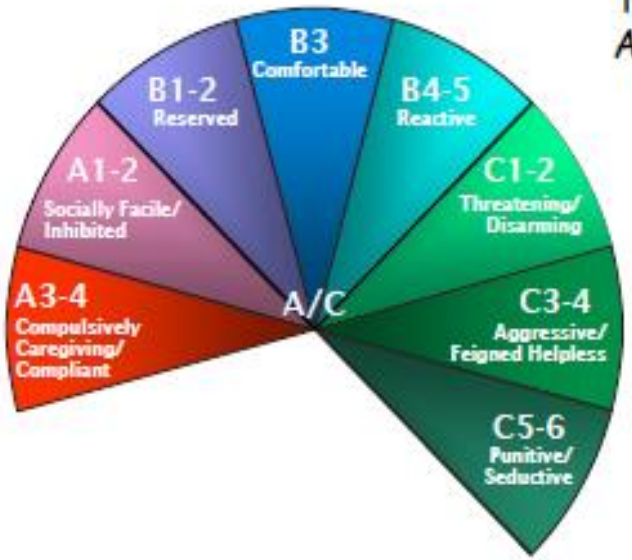
www.CHILDstudies.ca

DMM Patterns of Attachment in the School Years

Integrated True Information

True Cognition

True Negative Affect



False Positive Affect

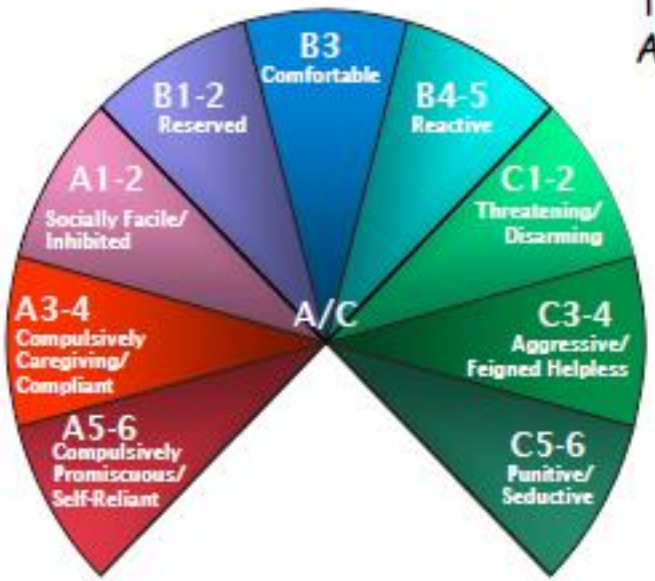
False Cognition

DMM Patterns of Attachment in Adolescence

Integrated True Information

True Cognition

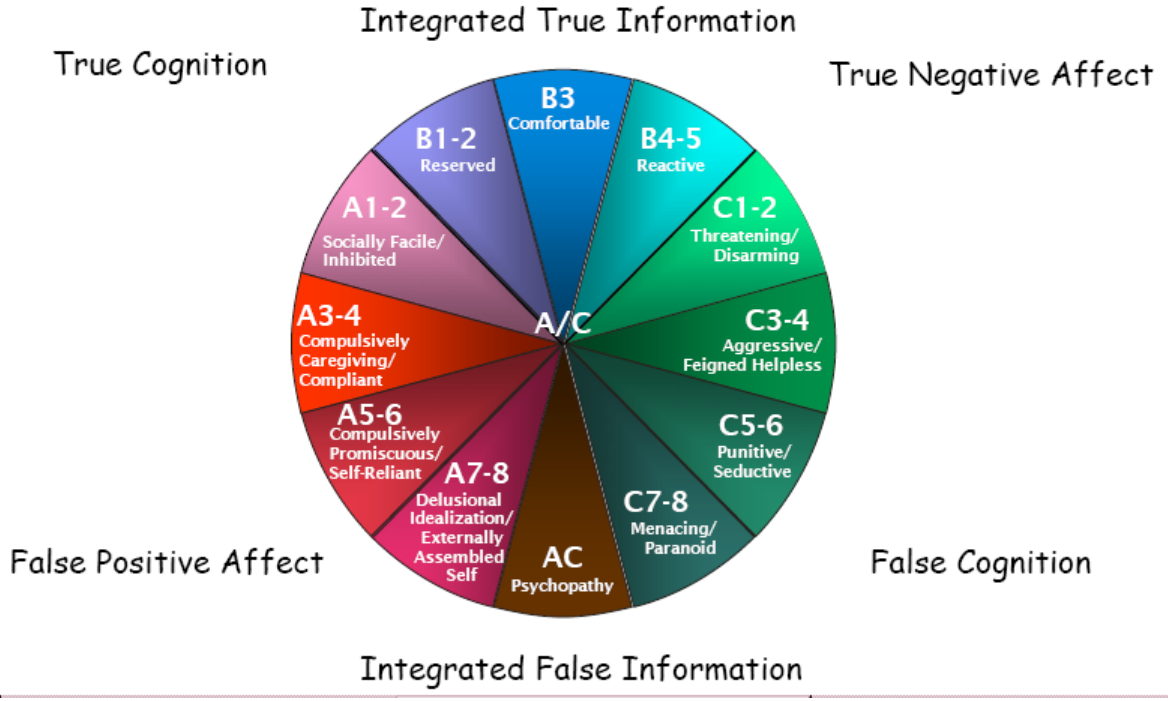
True Negative Affect



False Positive Affect

False Cognition

DMM Patterns of Attachment in Adulthood



Reflective Function

- Ability to 'mentalize' or envision mental states in the self and others
- Operationalization of Mentalization Theory (e.g. verbalization of what the self and others are thinking and feeling, and why)

Fonagy 2002

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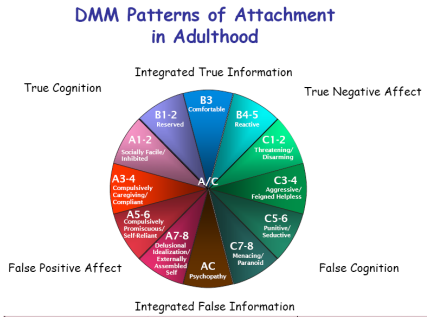
Parental Reflective Function

- Strengthens the parent-child relationship
- Underpins parental sensitivity
- Believed to support child development
- Plays a particularly important role in the intergenerational transmission of attachment (Fonagy et al., 1995; Slade, et al., 2005).



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Reflective Function and Attachment

Parental RF is associated with infant attachment security
(Fonagy 1991, Meins 2002, Sadler 2013)

Attachment security is associated with children's development
(Cyr 2010, Fearon 2010, Groh 2012)

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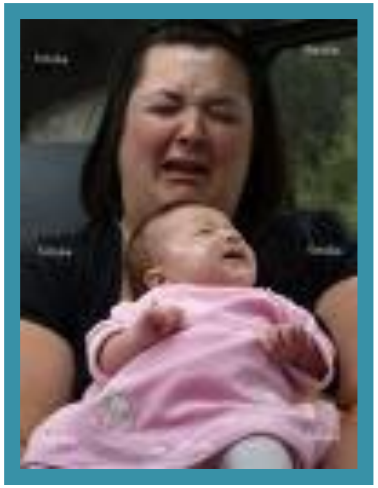
Sadly, primary caregivers (usually mothers) affected by toxic stress may be traumatized, depressed or distressed which reduces their regulation of the infant's stress (e.g. are withdrawn, emotionally unavailable, or frightening)



And in the case of abuse, abusers are unlikely to provide environment conducive to safety and security, essential for healthy development

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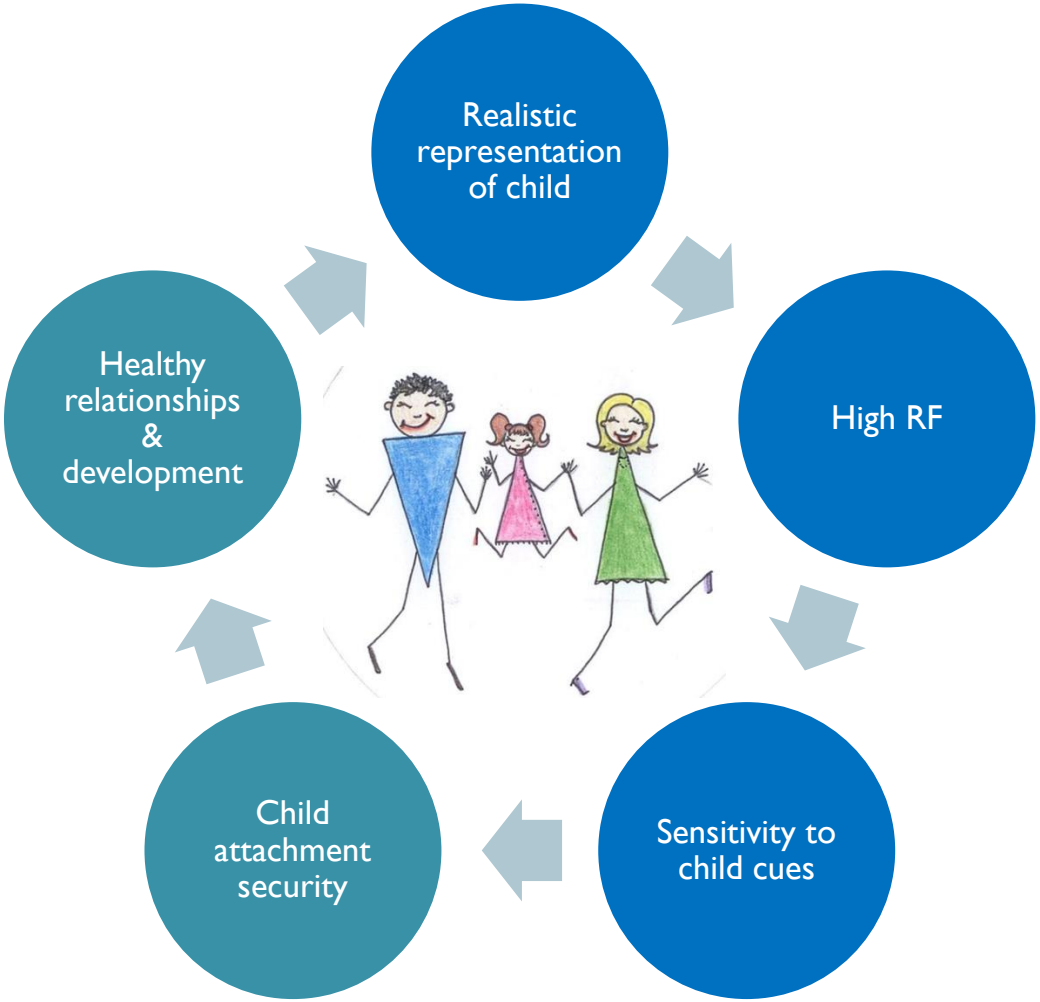
THE ATTACH PROGRAM

ATTACH Intervention Model



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The ATTACH Intervention

- A parenting psychoeducational program designed to foster parental RF, especially maternal RF
- Consists of face-to-face, one-on-one ATTACH Intervention sessions and face-to-face triadic ATTACH Intervention sessions

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ATTACH Intervention Objectives

- First aim:
  - Foster parental RF for the self.
  - Involves helping the parent to:
    - develop the capacity to mentalize,
    - recognize when mentalizing is lost, and
    - restore mentalizing when it is lost.
- Second aim:
  - Foster parental RF for the child and for the caregiver/child relationship.
- Third aim:
  - Foster caregiver achievement of a realistic representation of the child, and improvements in RF, which involves expressing sensitivity to emotional cues.
  - Doing so encourages the development of a secure attachment between the child and the caregiver.

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The ATTACH Intervention Process

Promotes RF skill building by practicing RF via three processes:

1. Video feedback of free play Mom-Child Interactions
2. Hypothetical Situations
3. Real Life Situations

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1. Video Feedback of Free Play

Interventionist states the following to Parent:

I will point out 2 parts of the free play interaction that I thought were interesting. But first,

1. *You pick a part of the interaction where you felt you and your child were <u>really connecting</u>.*
2. *You pick a part of the interaction where you felt you and your child were <u>NOT really connecting</u>.*

(What were you thinking/feeling at these times during the interaction and what do you think your child was thinking/feeling at these times)

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2. Hypothetical Situations

You and your family are at the dinner table - the youngest child named Skylar who is 2 years old, throws her food on the floor. How might everyone think and feel in this situation?

-review from each person's perspective starting with one emotion or thought, then re-do with a differerent emotion or thoughte

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3. Real Life Situations

Example:

Parent: *"My mother was suppose to come with me to a medical appointment for my baby son, we had a disagreement about our in-laws and instead she jumped out of the car in the hospital parking lot and ran away."*

Interventionist: *"What did you actually think and feel when this happened? And now looking back on it how could you have thought and felt differently about this situation?"*

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METHODS

Sites & Samples

CUPS is the Innovation Site, with a successful history of delivering programs focused on promoting health and development of children in families affected by ***toxic stress, poverty and housing challenges***. N=20

The Sonshine Centre is a second stage shelter serving women and children who are escaping family violence and abuse. N=10

Sonshine
community services

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Assessment & Evaluation

Reflective Function

- PDI - The Parent Development Interview (Aber 1985, Slade 2003)

Infant Attachment Security

- SSP - Strange Situation Procedure (Ainsworth 1978)

Parent-Child Interaction (maternal sensitivity)

- NCAST - Nursing Child Assessment Satellite Training (Sumner 1994)

Child Development

- Ages and Stages Questionnaires (3rd Edition and SE; Bricker & Squres, 2002; 2009)

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Measuring RF

- RF is measured using Fonagy's RF scale which consists of several levels of RF (i.e. -1, 0=absent, 1-4 = low, 5-6 = moderate, 7-9 = high symbolic mentalizing)

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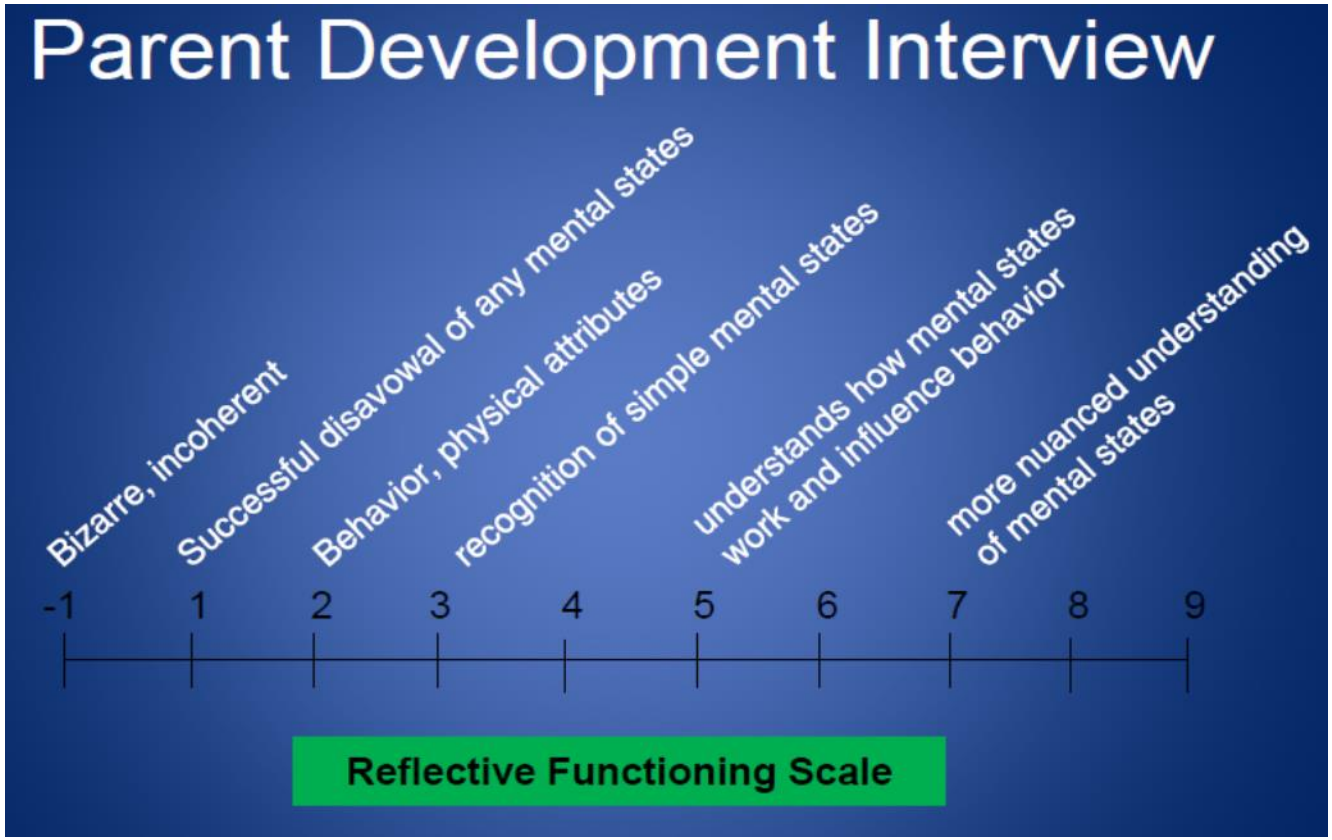
RF Scale



(Fonagy, et al, 1995)

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RESULTS & NEXT STEPS

SAMPLE CHARACTERISTICS	n	Percent	Mean (SD)
Ethnicity			
Caucasian	12	40.0%	
Non-Caucasian	18	60.0%	
First Language			
English	26	87%	
Not English	4	13%	
Marital Status			
Single	26	86.7%	
Married or common-law	4	13.3%	
Education			
Some high school	19	63.3%	
Post-secondary degree	11	36.7%	
Employment			
Employed	4	13.3%	
Unemployed	26	86.7%	
Number of Children Under 18 in Household			
1 child	17	56.7%	
2 or more children	13	43.3%	
Infant Age (months)	30		12.5 (10)
Maternal Age (years)	30		27.8 (4.2)

Pilot 1 and 3: Results

- RCT revealed that the ATTACH intervention significantly improved RF in the treatment parents compared to control parents and the treatment children were more likely to be securely attached

- More children securely attached in the treatment (C = 2/11, Tx = 6/14)

Pilot 1 and 3: Results

Repeated measures using the mixed models approach to ANCOVA indicates a significant time by group interaction, indicating a significant difference between the control and treatment groups following the program for:

- Overall RF
  - ($F = 5.39, p = .029$)
  - On average, the intervention group increased 1.85 points on the Overall RF scale compared to the control group
- Maternal RF
  - ($F = 4.26, p = .049$)
  - On average, the intervention group increased 1.65 points on the Child RF scale compared to the control group
- Child RF
  - ($F = 5.43, p = .028$)
  - On average, the intervention group increased 2.12 points on the Child RF scale compared to the control group

Figure 1. Differences from Baseline to Post-Treatment for Overall RF

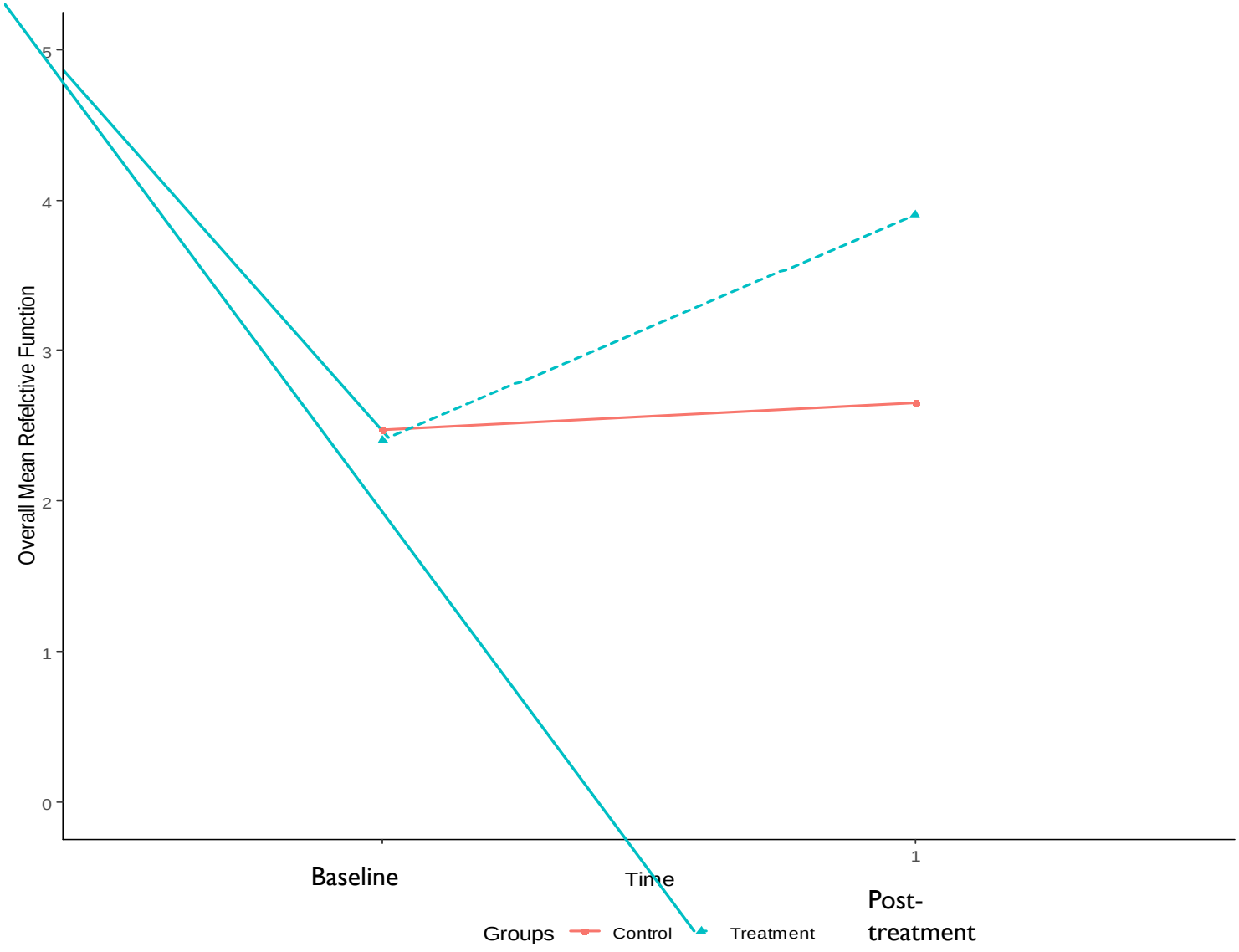


Figure 2. Differences from Baseline to Post-Treatment for Maternal RF

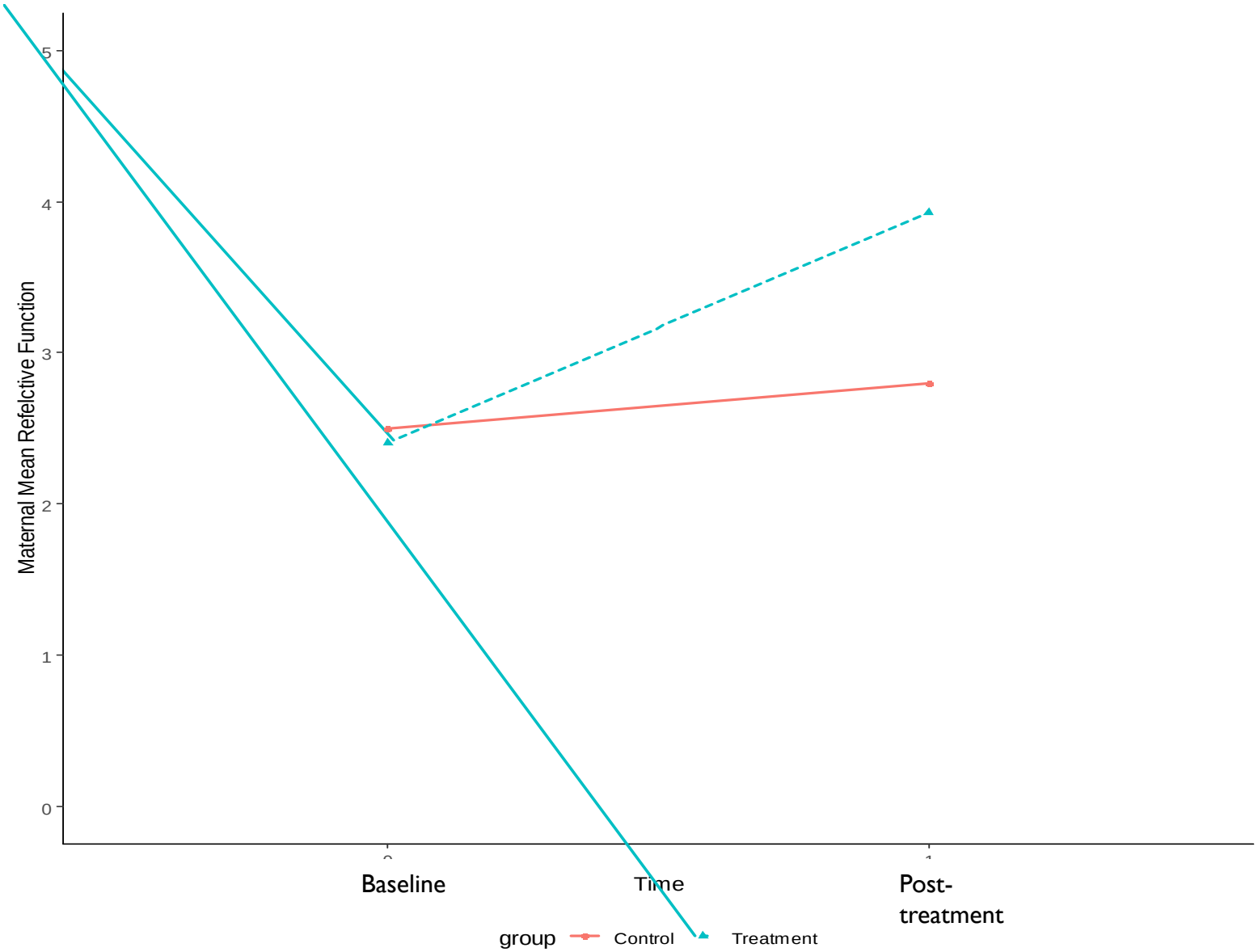
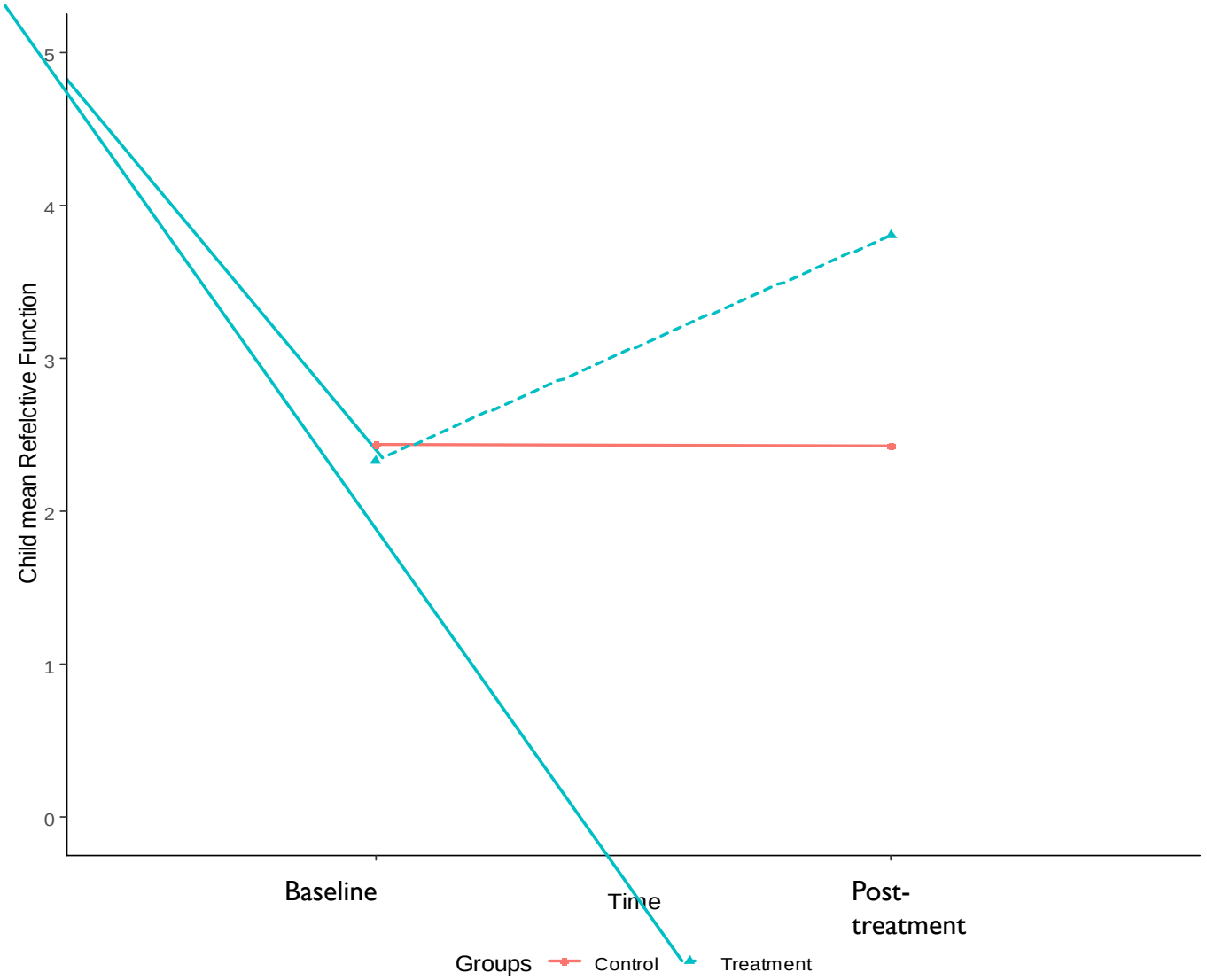


Figure 3. Differences from Baseline to Post-Treatment for Child RF



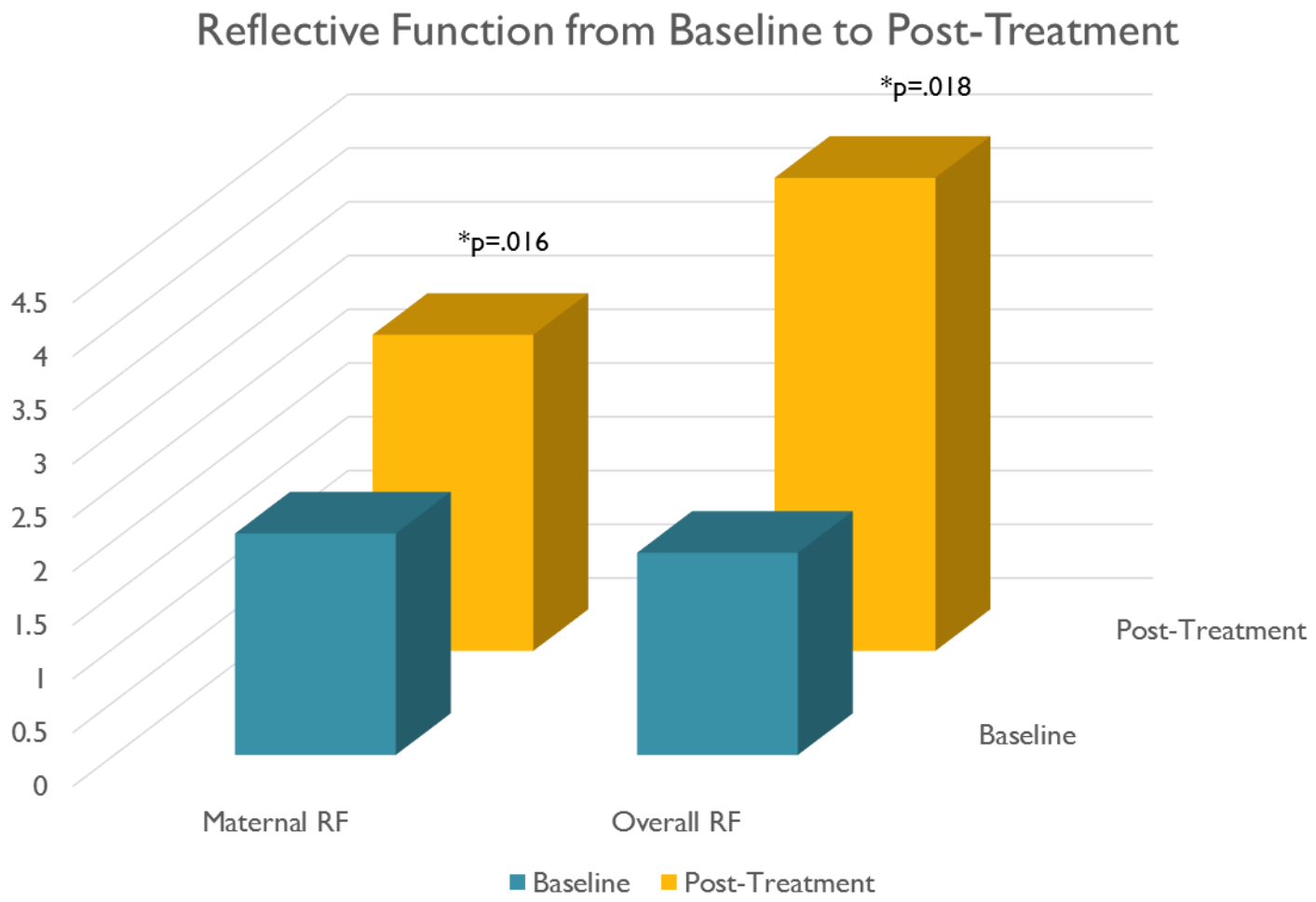
Pilot 2: Results

- Pilot 2, the quasi-experimental study showed a significant improvement in **maternal** and **overall RF** and more children were secure after the intervention.

- Children moved from insecure to secure strategies (Control=1/7, Tx= 2/7) after the intervention.

- Two tailed paired samples t-test results showed that:
  - Ratings were significantly (t = -2.70, p = .016) higher for maternal RF post-test scores (mean = 2.94, SD = 1.88) than maternal RF pre-test scores (mean = 2.06, SD = 1.54)
  - Ratings were significantly (t = -2.61, p = .018) higher for overall RF post-test scores (mean = 2.81, SD = 1.67) than overall RF pre-test scores (mean = 1.88, SD = 1.38)

Pilot 2: Results



ATTACH: Phase 2

- Additional testing started in January 2018 with at-risk populations at CUPS, Discovery House, as well as normative population at YMCA.
- RCTs and Quasi-Experimental Designs, targeting N=60
- We have incorporated and are starting to train facilitators at designated sites to conduct the ATTACH Intervention on their own.
- Funded by The Harvard Center on the Developing Child & Palix Foundation

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Levels of RF

Level	Characteristics
Negative RF	Active, hostile resistance to the mentalizing stance, derogation of reflection; bizarre or frankly paranoid attributions – all in the context of a total absence of any reflection
Lacking in RF	Reflective is totally, or almost totally, absent; banal and simplistic mentalizing; extreme concreteness, clearly inaccurate attributions indicative of failure to reflect
Questionable or low RF	Rudimentary consideration of mental states; relatively superficial and impersonal; generally, references to mental states and their relation to behavior are not specific or explicated; alternatively, over-analytical, unintegrated insights not linked to the individual's experience
Ordinary RF	Common in non-clinical populations; a number of instances of reflection indicating that the individual maintains coherent models of the mind for the self and attachment figures; ability to make sense of experience in terms of thoughts and feelings; somewhat lacking in complexity of subtlety; indications of limited refection in relation to one key relationship along with adequate reflection regarding other relationships
Marked RF	Consistently maintained reflectiveness evidencing the effort to tease out mental states underlying behavior; detailed understanding of thoughts and feelings of protagonists; originality of thinking about mental states associated with actions; ability to maintain a developmental and intergenerational perspective
Exceptional RF	Rare cases of exceptional sophistication, coupled with consistent maintenance of a reflective stance throughout; integrating several instances of reflectiveness into unified and fresh perspectives; full and spontaneous reflection with respect to a range of relationships across the speaker's life history