Make the Connection 0-1: Evaluation of an Early Intervention Parenting Skills Program

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Evaluation Partners

Learning Objectives

Participants will:

- Recognize the key elements of the evaluation design and methodology and their importance in advancing research into the effectiveness of parenting programs in the early years

- Enhance understanding of how infant temperament, parental confidence and parental sensitive responding plays a role in attachment outcomes

- Consider how the results of the outcome evaluation can support evidence based practice and inform program planning in their community

Why Focus on Attachment?

Critical Period

Brain Development

Socio-Emotional Development

Mental Health

Foundation for Learning

Grossman & Grossman, 1991; Fraley, 2002; Kiang, Moreno, & Robinson, 2004; Lewis-Morrarty et al., 2015; Moss & St. Laurent, 2001; Schore, 2001; Sroufe, 2005

Definition of Attachment

"**Attachment** is one specific aspect of the relationship between a child and a parent with its purpose being to make a child safe, secure and protected."

Parent as a **secure base**: Infant is able to confidently explore the world, knowing that the parent will respond if they encounter threats to emotional or physical well-being.

Ainsworth & Bell, 1970; Bowlby, 1969; Waters & Waters, 2006

What Interferes with Secure Attachment?

Parents/caregivers:

- Insecure/unresolved attachment history
- Unresolved grief/trauma
- Mental health issues
- Young age of parent

Baby:

- Special needs
- Difficult temperament

Family and Community:

- Isolation (social and/or geographic)
- Limited family and/or community supports
- Adjusting to a new culture
- Poverty

Belsky & Rovine, 1987; Foss, 1996; Lamb, Hopps, & Elster, 1987; Lyons-Ruth et al., 2002; Naber et al., 2007; Shah, Clements & Poehlmann, 2011; van Ljzendoorn, 1995

Attachment and Temperament

- Negative Affect – distress prone
- Effortful Control - ability to focus and regulate emotions and behavior
- Surgency - engagement with environment and show positive affect/excitement

- Parenting Stress
- Differential Susceptibility –"difficult" infants respond most to sensitive parenting
- Bidirectional Influence - temperament influences interaction, but interaction influences temperament

Belsky, Hsieh, & Crnic, 1998; Belskyh & Pluess, 2009; Rothbart & Bates, 2006; Putnam et al., 2013; van den Boom, 1994; Velderman et al., 2006; Williford, Calkins, & Keane, 2007

Goals of MTC

Help parents...

- Discover and practice age-sensitive ways to **connect emotionally** and **communicate** with their child

- Feel more **confident** and supported in their parenting role

So that their child...

- **Develops a secure attachment**

- **Develops a strong foundation for language**

- **Feels confident to explore and learn**

"If a community values its children it must cherish their parents".
John Bowlby, Father of Attachment Theory, 1951

Relational Approach in MTC

When parents respond sensitively to their infant's cues and are emotionally available to their infant – most of the time …
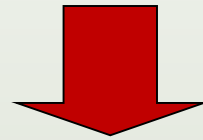
The infant develops a secure affective bond with the caregiver which enables them to develop…

- **Trust in availability of caregiver, self-esteem, self-regulation, empathy for others**

- **Motivation to communicate with caregiver and acquire language**

- **The curiosity to learn and confidence to explore the environment**

Learning Essentials in MTC

1. REFLECTION

Facilitator questions/ Parent reflection scenarios

Let's see how you're doing

2. INFORMATION

Posters/magnets/ "nuggets" in scripts

What do the experts say?

Make the Connection with your Baby

Video review/Photo book/ leader observations

What does the parent know, think and feel?

Parent-baby activities/ "It isn't always easy"

How does it work with your baby?

4. FEEDBACK

3. PRACTICE/PROBLEM SOLVING

MTC THEMES

- LOVE

- LANGUAGE

- LEARNING

- EMOTIONAL CONNECTIONS

- COMMUNICATION CONNECTIONS

- PLAY PARTNERSHIPS

Attachment-promoting activities

- **Group support**
- **Parent-baby activities**
- **Discussions**
- **Video-feedback and/or photo-feedback**

Research Questions

Outcome

- Does MTC enhance parent knowledge of other community resources?

- Does MTC enhance parent social networks?

- Does Make the Connection improve parental attachment and sense of competence?

- Do parents of infants with certain temperament characteristics benefit from Make the Connection more than others?

Research Questions

Process

- Is the program reaching the target population?
- Is the program being implemented as planned?
- What factors promote or hinder attendance?
- What are parent perceptions of the program and their participation?

Research Methodology

- Quasi randomized control trial

  ✓ Assignment to control or experimental group based on age of infant and group availability

- Pre and Post questionnaires

  ✓ Demographics, scales (validated) and participant feedback

  ✓ Electronic Data collection

- Qualitative and Quantitative analysis

Target Population

- Screening tool developed to identify population of interest.

Parents of infants 0-12 months of age who have custody of their infant and at least two of the following risk factors:
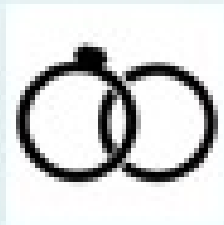
- < 25 years of age

- First time parent

- Parenting alone

- Isolated

- < 12 years formal education

- Lack confidence or self efficacy skills

- At risk for postpartum depression

- At risk for low sensitivity/attachment to infant

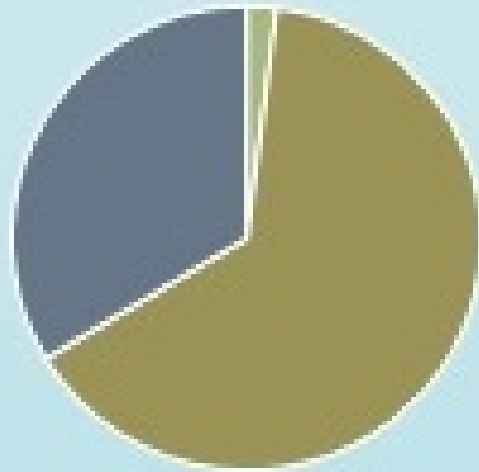# MTC Participant Profile

98 % Mothers

81 %
Married

88 %
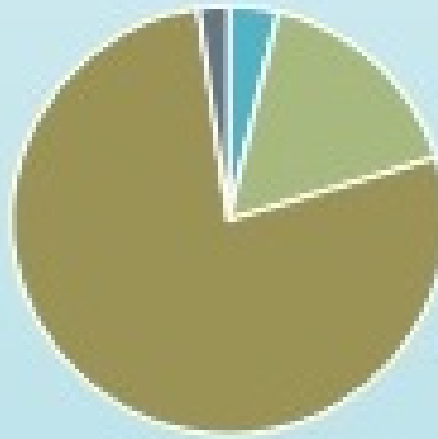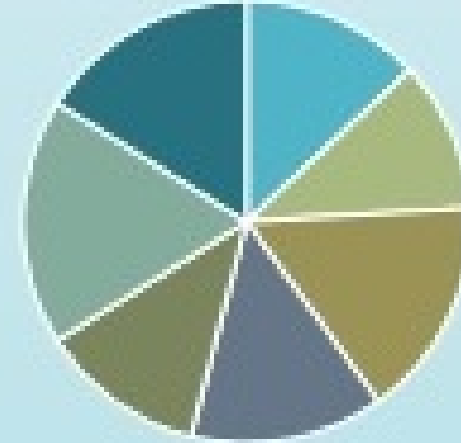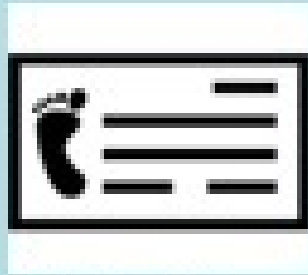First Time Parent

11 %
Lone Parent

Mother

Education

Household Income

Mother	
■ <19	■ 20 - 25
■ 26-35	■ 36+

Education
■ High School
■ Community College
■ Bachelors
■ Graduate

Household Income	
■ 0-29000	■ 30-59000
■ 60-89000	■ 90-119000
■ 120-149000	■ 150000+
■ N/A	

Birth Place
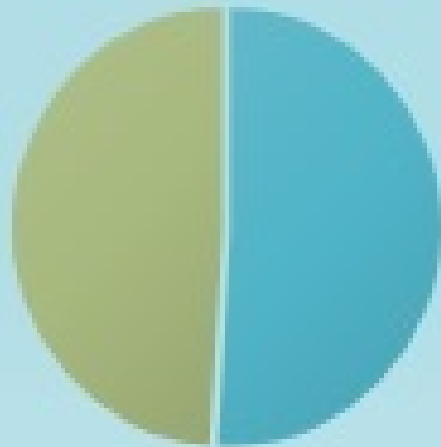
Infant

- Born in Canada
- Born outside Canada

- 1 - 6 months
- 7 - 12 months

Source: TPH MTC Outcome Evaluation 2017

Barriers to Attendance

- Baby's schedule

- Illness

- Bad weather

Not within control of program

What Keeps Them Coming

- Liked the facilitator

- Felt connected to the other parents

- Topics interesting

"Love the facilitator - she's warm and caring and a great listener! "

"Ice-breaking with other moms, sometime moms share their experience is very important, then we know we are not the only one or alone. "

"I really liked learning about the psychology behind different baby behaviours and feelings."

Parent Perceptions of the program

Are you doing anything different with your baby?

82% -Singing, Playing, Talking, Following Infant's Lead

Changes in Baby's Behaviour

54% - Interacting, Responds to songs, More social, Happier

Videotaping

92% - Very Useful/Useful

Knowledge of Community Resources

46% Referred/Learned of Resource

Social Connectivity

55% Have met or planned to meet

Client Satisfaction

96% Would recommend the program to a friend

Outcome Question

Does Make the Connection (0-1) improve parental attachment and sense of competence?

Measures

1. **Maternal Postnatal Attachment Scale (MPAS)** -parental attitudes towards infant

    - **Absence of Hostility**

    When I am caring for the baby I get feelings that the child is deliberately being difficult or trying to upset me.

    - **Pleasure in Proximity**

    I try to involve myself as much as I possibly can playing with the baby.

    - **Attachment Quality**

    When I am with the baby and other people are present, I feel proud of the baby

    Condon & Corkindale, 1998

Measures

2. Parent Sense of Competence (PSOC)

- **Satisfaction**

Even though being a parent could be rewarding, I am frustrated now while my child is at his/her present age.

- **Interest**

My talents and interests are in other areas, not in being a parent.

- **Efficacy**

Being a parent is manageable, and any problems are easily solved.

Gilmore & Cuskelly, 2008

- **Absence of Hostility**
- **Pleasure in Proximity**
- **Attachment Quality**
- **Satisfaction**
- **Interest**
- **Efficacy**

Maternal Global Attitude

- Inter-item reliability was strong, treated these scales as different elements of a single overall trait
- Equally weighted each measure and averaged to produce one overall score - MGA
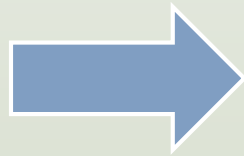
Cronbach's Alpha = .831

Participants & Assignment

- N = 180 mothers
- Infants aged 3-8 months, M = 5.7 months
- 66% male
- Attended at least 5 sessions and completed both video feedback sessions
- Matching procedure, to create a subsample with an equal distribution of age and sex in each condition
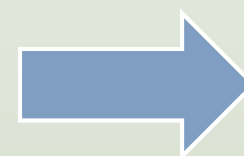
Does Make the Connection (0-1) improve parental attachment and sense of competence?
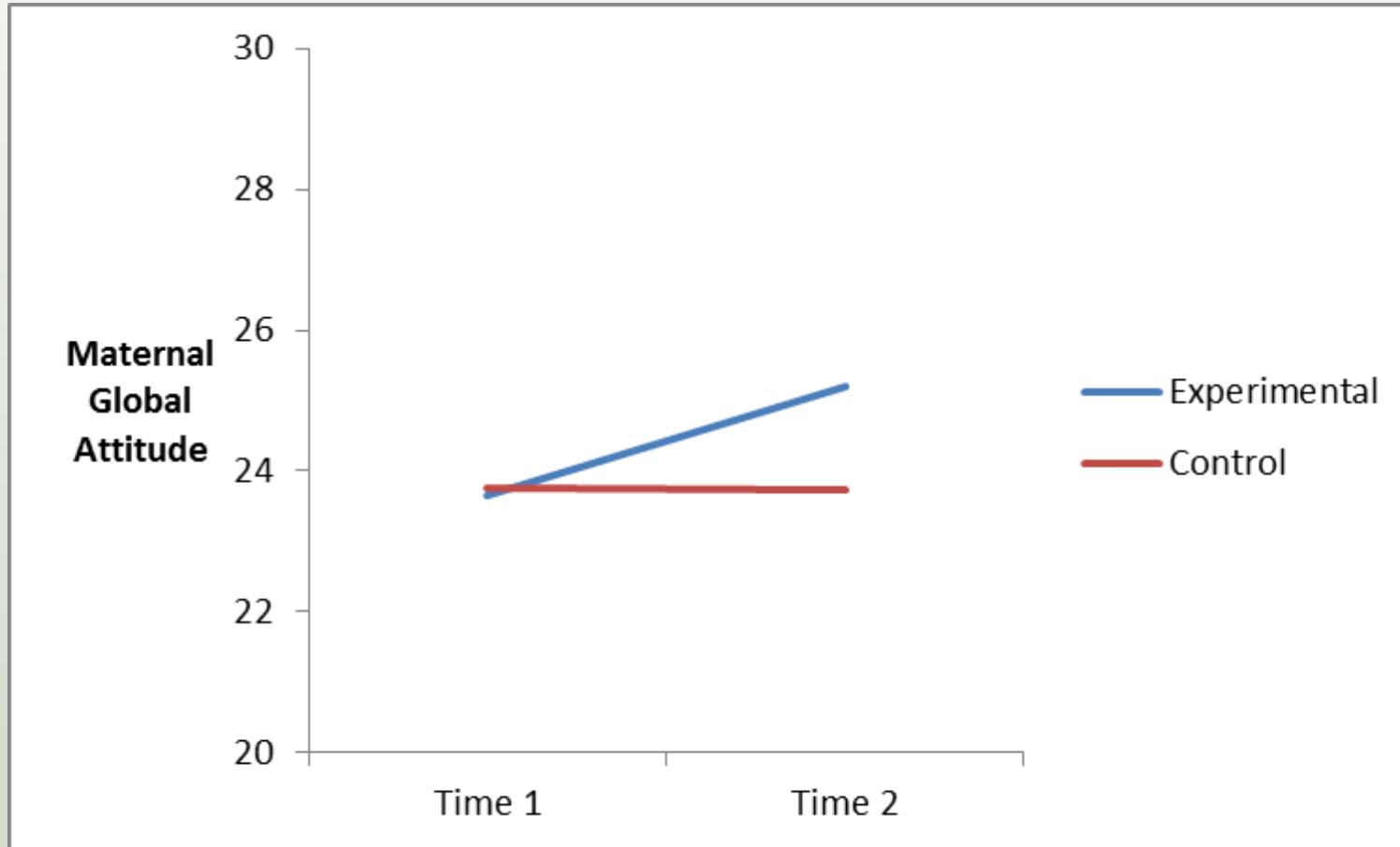
Average of:

Absence of Hostility
Pleasure in Proximity
Attachment Quality
Interest
Satisfaction
Efficacy

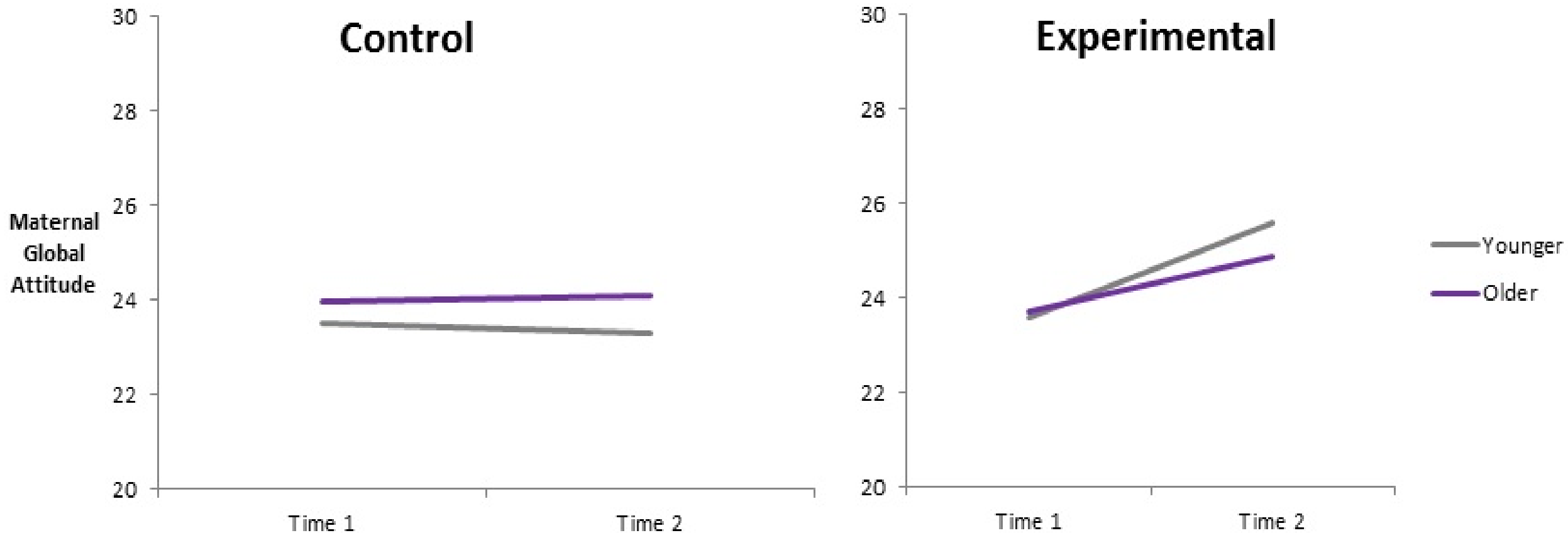$F(1,178) = 27.872$, $p < .001$, $\eta^2 = .135$ Sig difference - MTC vs Control on attitude change over time.

Does Make the Connection (0-1) improve parental attachment and sense of competence?

Parents of younger children (3-5 months) showed greater attitude improvement relative to parents of older infants (6-8 months), although they both show improvement.

$F(1,176) = 3.748$, $p = .054$, $\eta^2 = .021$

Does Make the Connection (0-1) improve parental attachment and sense of competence?

Positive Effects for:

Absence of Hostility $\quad$ $F(1,143) = 24.255, p < .001, \eta^2 = .145$

Interest $\quad$ $F(1,143) = 15.106, p = .001, \eta^2 = .081$

Attachment Quality $\quad$ $F(1,143) = 10.721, p = .001, \eta^2 = .070$

Pleasure in Proximity $\quad$ $F(1,143) = 6.433, p = .012, \eta^2 = .043$

Satisfaction $\quad$ $F(1,143) = 46.497, p = .019, \eta^2 = .038$

- Significant improvements associated with MTC for 5 out of the 6 subscales
- Biggest change was in Absence of Hostility – parent's feelings of resentment toward the infant
- Small effect sizes for the other 4
- Improvement in mothers':
✓ Interest in their role/identity as a parent e.g. "Being a good mother is a reward in itself"
✓ Attachment Quality- sense of connectedness to the infant e.g. "I would describe my feelings for the baby as intensely affectionate"
✓ Pleasure in proximity- enjoyment in being with the baby e.g. "When I have to leave the baby I usually feel rather sad and it's difficult to leave

Does Make the Connection (0-1) improve parental attachment and sense of competence?

Positive Effects for:

Absence of Hostility $F(1,143) = 24.255, p < .001$ ... .145

Interest $F(1,143) = 1$... = .081

Attachment Quality $F(1,143)$ ...

Pleasure in Proximity $F(1,143) = 6$...

Satisfaction $F(1,143) = 46.49$...

What about Efficacy?

Efficacy

- Significant results for 5 out of 6 scales, but what about efficacy?
- You would think that program would improve the parent's sense of efficacy for taking care of their child.
- Efficacy improved the most over time, regardless of program participation.
- It's not that MTC moms weren't improving on efficacy, it's that the control group moms were as well – due to the main effect of time.
- Also saw a main effect of time for Absence of Hostility and Satisfaction indicating that those attitudes tend to improve as an infant gets older, but MTC participants showed more improvement.

Does Make the Connection (0-1) improve parental attachment and sense of competence?

YES!

Outcome Question

Do parents of infants with certain temperament characteristics benefit from Make the Connection more than others?

Temperament Measures

Infant Behavior Questionnaire (Very Short Version)

- Measures three broad temperamental factors:
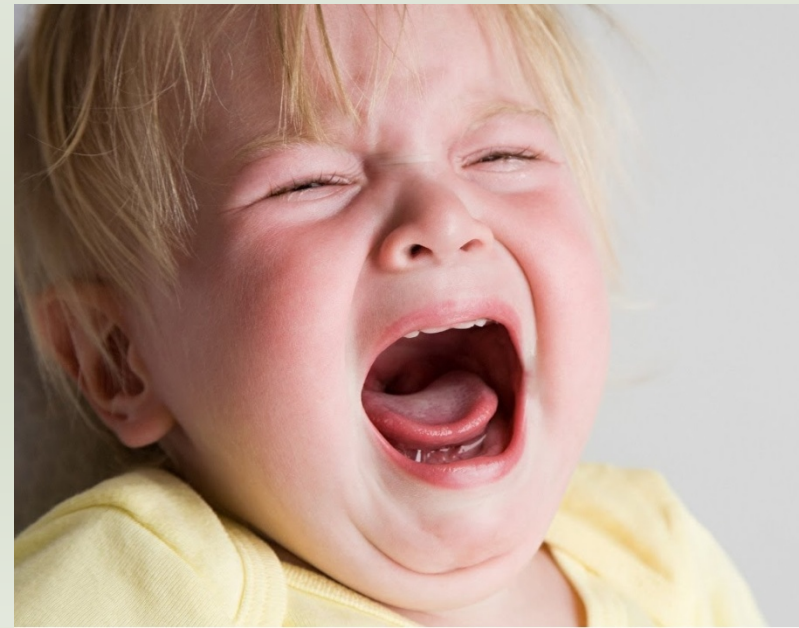✓Effortful Control
✓Negative Affect
✓Surgency

Effortful Control
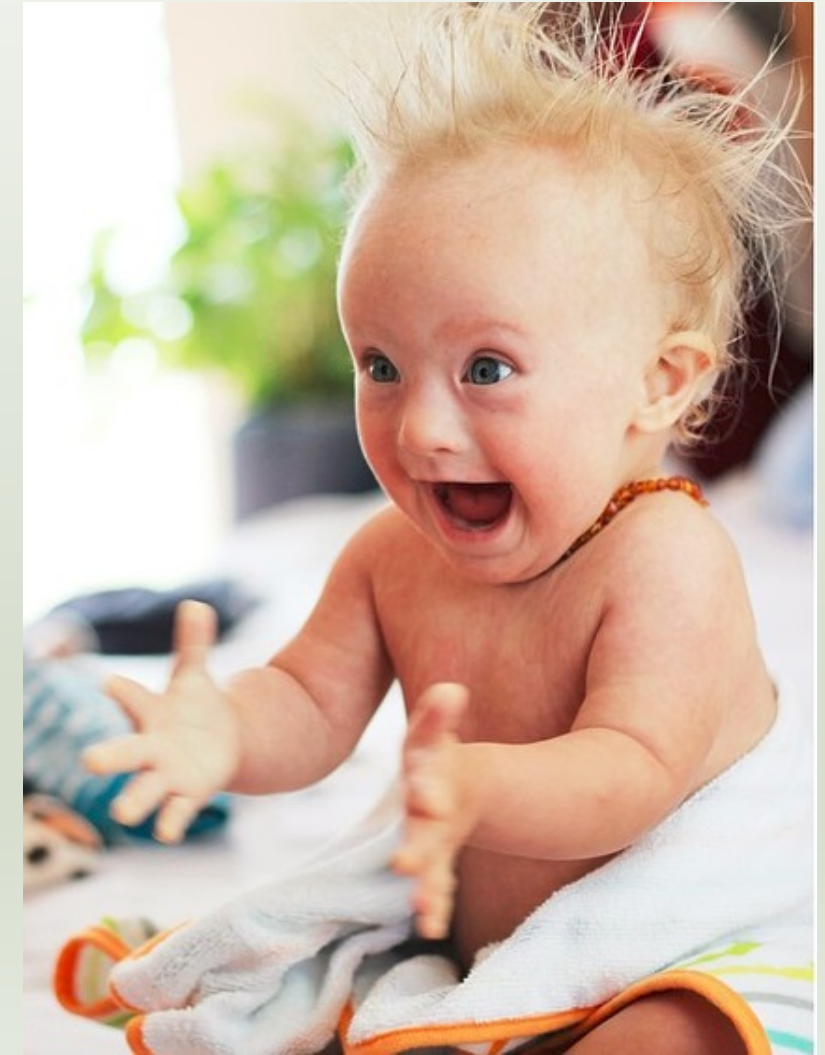
When showing the baby something to look at, how often did s/he soothe immediately? How fast do they calm down?

Negative Affect

How often did the baby seem angry (crying and fussing) when you left her/him in the crib?

Surgency

How much the baby seeks out interaction with positive affect, like smiling or laughter. During a peekaboo game, how often did the baby laugh?

Participants

- N = 386 mothers

- Infants aged 1-12 months, Mean = 6 months

- 55% male

- Experimental and Control Groups

- Established that the program works using a controlled, matched sample, used the entire sample to see whether these temperament traits influence response to the MTC program.

Global Attitude At Time One...

Parents with negative attitudes had infants who were:

- Lower on Effortful Control r(386) = .441, *p* < .001 - take longer to calm down

- Higher on Negative Affect r(386) = -.147, *p* = .004 – cry and fuss more

- Lower on Surgency r(386) = .244, *p* < .001 – don't show as much enjoyment

Parents of these infants might be considered to be "at risk" for attitudes that could undermine sensitive responding.

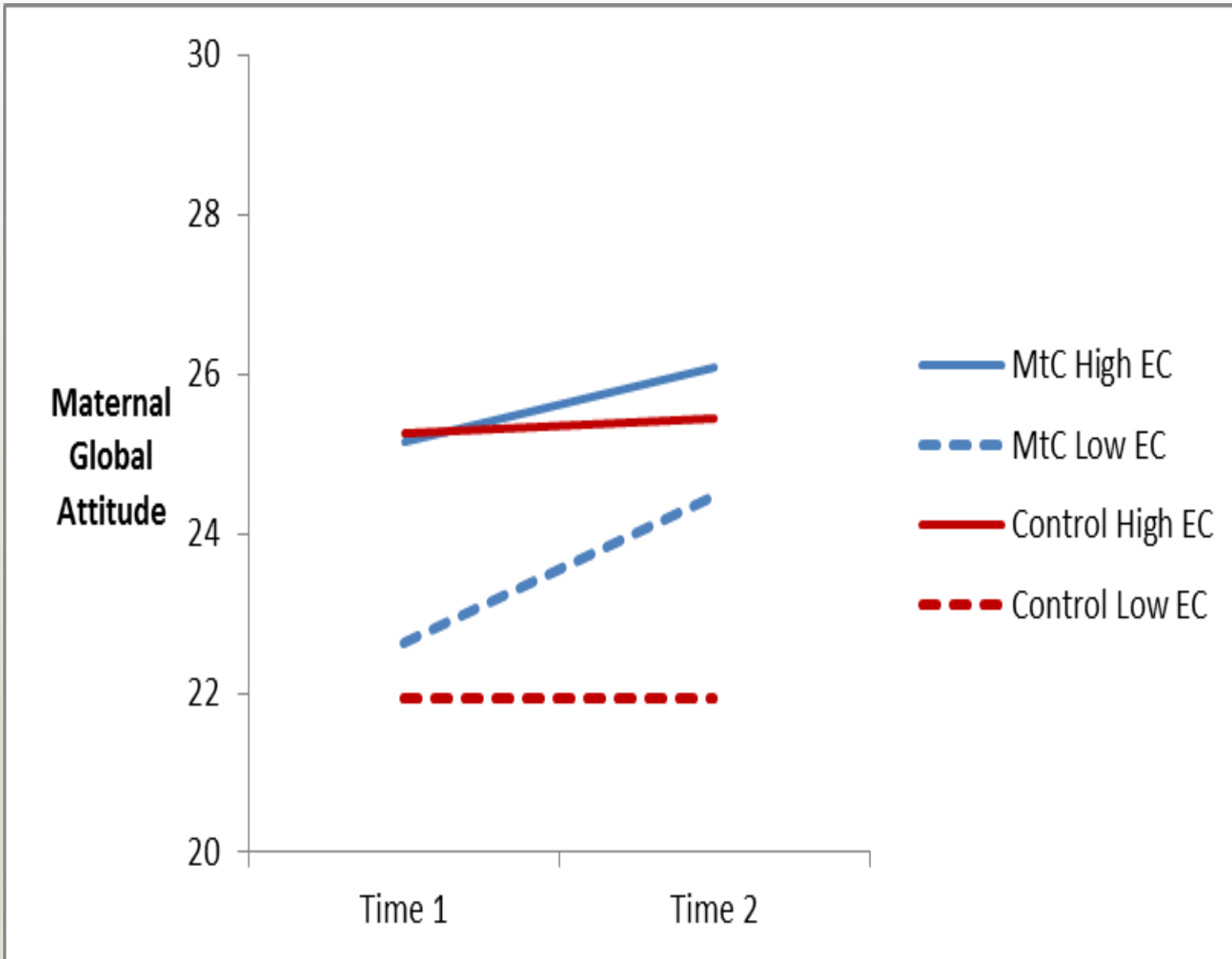Do these parent's benefit more from attending MTC?

Effortful Control

**Compare
Low vs High**

Strongest risk factor based on time 1 data. Split the sample into thirds, and compared attitude change for mothers with infants high and low in EC.

Time 1, groups are equivalent, no one has attended MTC yet.
Parents of low EC infants, more negative compared to moms of High EC children.

Over time:
Without intervention (red, control), stay fairly constant over time (flat slope of red lines).
MTC group (blue) – improvements in both, moms of low EC infants show the most benefit (steeper slope of blue dash line).
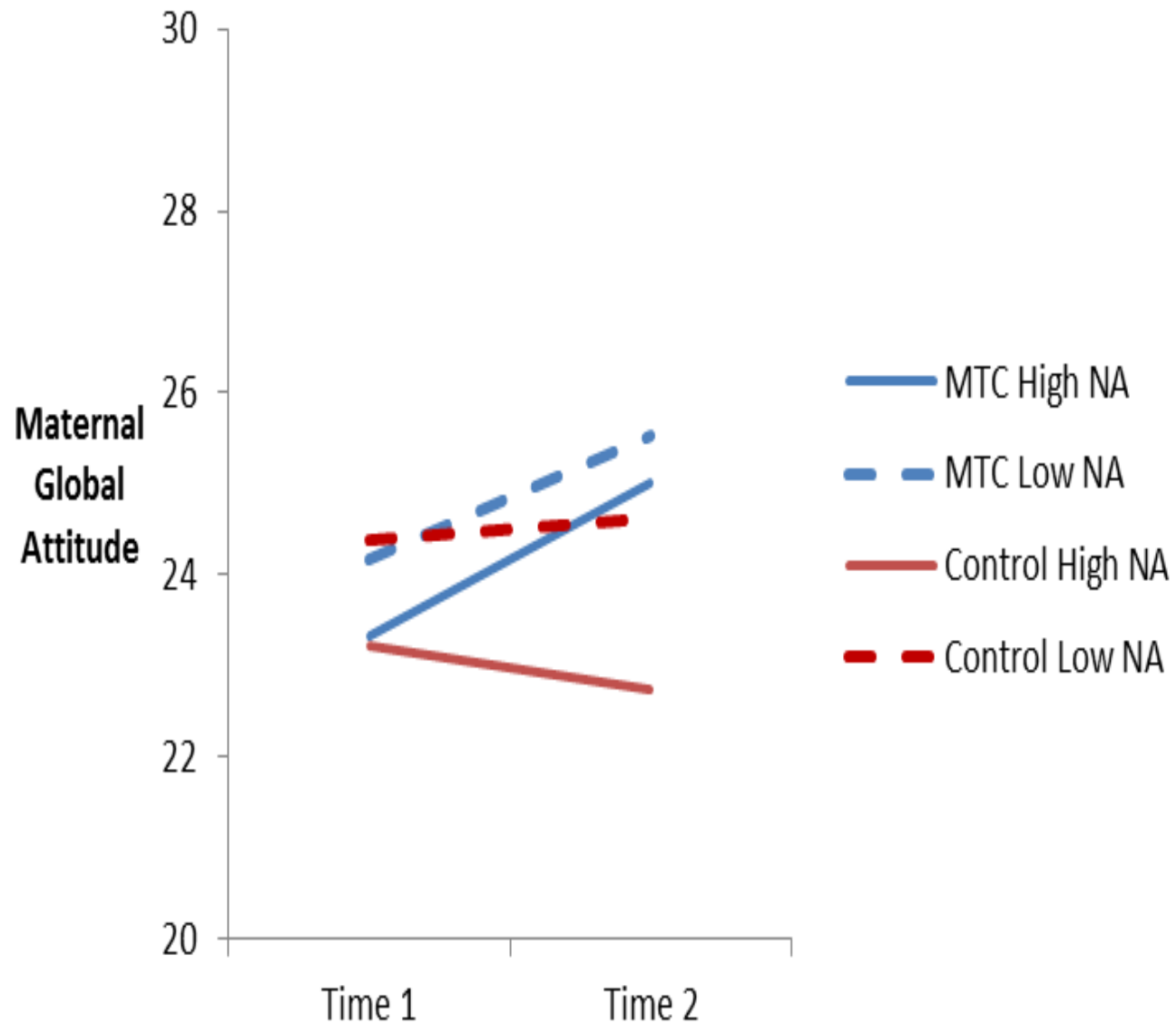
Negative Affect

Compare
Low vs High

Same approach for negative affect: compare moms of infants who don't show a lot of distress to infants who are particularly prone to frequent, intense distress in the form of crying or fussiness.

Similar pattern:
Time 1: Parents of Low NA infants (dashes) more positive compared to moms of High NA infants (solid lines).

Over time:
Control group (red) – Low NA parents (red dash) stay fairly constant, High NA (red solid) decline over time without intervention
MTC group (blue) – both High and Low NA groups improve, slope of the solid blue line is a bit steeper showing that parents of high NA infants improve the most.

Surgency
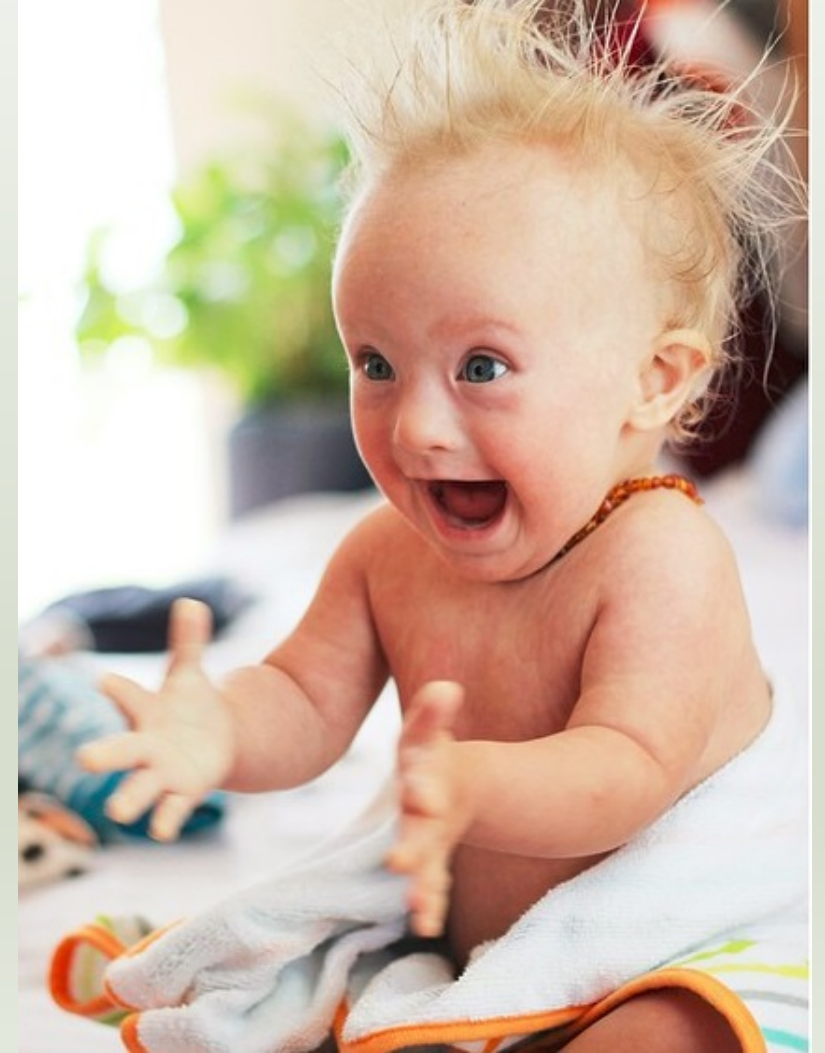
Compare
Low vs High

Same approach with surgency: Moms with infants who are highly interactive and show lots of positive affect, with moms of infants who are more subdued or withdrawn.
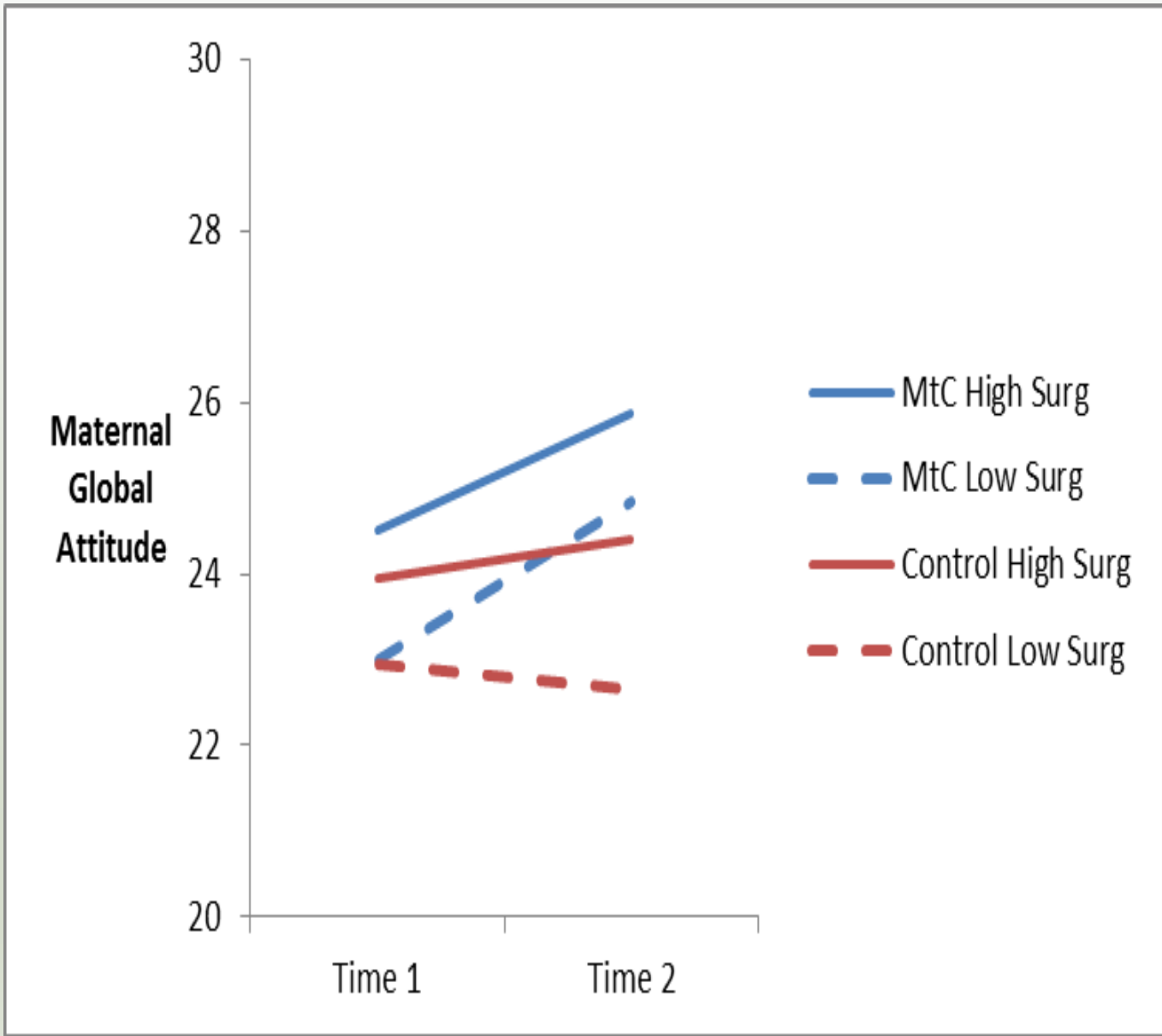
Time 1:
Low Surg (dashes) → parents more negative compared to High Surg (solids).

Over time:
Control group (red) – Both groups stay fairly constant, slight decline for low surg parents (red dash) and slight improvement in high surg parents (red solid).

MTC group (blue) – improvements in both, low surgency moms show a bit more benefit (steeper slope of blue dash line).

Temperament Results

- Parents who were "at risk" based on temperament at Time 1 also showed the most gains from the program, with small effect sizes:

- Low Effortful Control F(1,247) = 4.149, p = .043, η^2 = .017

- High Negative Affect F(1,255) = 3.604, p = .059, η^2 = .014

- Low Surgency   F(1,245) = 4.405, p = .037, η^2 = .018

What We Learned and Implications for Practice

Barriers - out of our control

High quality staff - keep people coming

Parent/infant interactions – number increased

Positive infant behaviour changes - happier

Client satisfaction - high

What we Learned cont'd

- Make the Connection improves positive parent attitudes toward their infants, especially among those with younger infants

- Temperament Based Risk Factors: Low Effortful Control, Low Surgency, and High Negative Affect

- Parents who were "at risk" based on temperament at Time 1 showed the most gains from the program

What Could We Do Better?

Outreach - missing those with little formal education, lone parents, young parents, fathers

Increase parent knowledge - of community resources

Encourage - social connectivity

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