Minding the Future: Early Life Caregiving Influences Upon Brain, Cognitive, and Emotional Development

Anne Rifkin-Graboi, PhD
Senior Research Scientist
Centre for Research in Child Development
National Institute of Education, Singapore
Brains Are Built for the World We Experience

Art by Michaela Bruntraeger
How do Infants Learn the Conditions of their World?
Physical, Economic, & Social Environment
(Resources, Stability, Security)

Parental Well Being

Child’s Antenatal Environment

Managing Challenges

Relationships

Attachment

Child’s Postnatal Environment

The role of ethnicity and socioeconomic status in Southeast Asian mothers’ parenting sensitivity
Jeremy Heng, Jeffrey Ong, Lit Wei Sim, Shamini Sammugam, Blitz Breelkman, Jean-François Bureau, Michael J. Meany, Joanna D. Holbrook, and Anne Rifkin-Graboi

*Bremer Centre for Molecular Medicine, Singapore Institute for Clinical Sciences (SICS), Agency for Science and Technology (A*STAR), Singapore, Singapore; Department of Psychology, Faculty of Arts and Social Sciences, National University of Singapore, Singapore, Singapore; School of Psychology, Faculty of Social Sciences, University of Ottawa, Ottawa, ON, Canada; Department of Psychiatry, VU Medical Centre, Amsterdam, the Netherlands; Departments of Psychiatry and Neurology, McGill University, Montreal, QC, Canada; Ludmer Centre for Neuroinformatics and Mental Health, Montreal, QC, Canada. *NHIR Biomedical Research Centre, Academic Unit of Human Development and Health, Faculty of Medicine, University of Southampton, Southampton, UK.
What is an “Attachment Relationship”? 

• Unique and non-interchangeable affectional bond
• Involves a person who (can be expected to be) a figure of (minimal) support
• Can be “attached” even if the quality of the relationship is poor
• In Infancy quality is assessed via Mary Ainsworth’s Strange Situation
  • Separations & Reunions
  • Balance between Exploration and Attachment
Sensitive Parenting
Exploration & Seek Comfort
Secure Attachment
Inconsistent Parenting
Focus Continually on Parent
Not Fully Comforted
Resistant Attachment
Rejecting Parenting
Ignores Caregiver
Avoidant Attachment
Fear while Parenting
Disruptions in Behavior
Disorganized Attachment
Sensitivity, Attachment, Stress & Fear


Sensitivity, Attachment, & Cognitive Performance


- Ding et al. 2014. The relation of infant attachment to attachment and cognitive and behavioural outcomes in early childhood. Early Hum Dev.


GUSTO is a collaborative study involving National University of Singapore (NUS), Singapore Institute for Clinical Sciences (SICS), National University Hospital (NUH), and Kandang Kerbau Women’s and Children’s Hospital (KKH).
Sensitivity, Attachment, & Classroom Behavior

- Teacher Rated (Q Sort) Ego-resilience (flexibility in self restraint), Sroufe 1983
- Observed self-management in the face of “social problems” with peers, Erez, 1987
- Teacher Rated Behavior Problems, Erickson et al, 1985
- Observed Bullying & Victimization (Troy & Sroufe, 1987)
- Teacher Ratings and Observed Dependency (Sroufe, 1983; Sroufe et al, 1983)
- Observed and Teacher Reported Teacher- preschooler relationship (Sroufe & Fleeson, 1988)- expectations, engagement, number of contacts

Theoretical Profiles

Avoidant (Rejecting Care)
- Hostile/mean, aggressive, antisocial (lying, stealing, devious)
- Emotionally insulated, asocial isolated
- Disconnected, spaced out, psychotic-like. May be oblivious or bizarre or just not know what’s going on

Resistant (Inconsistent Care)
- Overstimulated (hyper), easily frustrated, tense, or anxious
- Dependent, passive, weak, helpless, teacher oriented

Teachers’ Descriptors of Students

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mean to other children, kept things that didn’t belong to her. The most dishonest preschooler I have ever met. Mean lying– everything is hers.</td>
</tr>
<tr>
<td>2</td>
<td>Ideal kid, good looking, OK. Well-coordinated agile, competent. Very solid kid. Vulnerable to life changes, positive and negative.</td>
</tr>
<tr>
<td>4</td>
<td>Bright but impulsive and tense. Frustrated, easily in play situations, inconsiderate of children. Holding “gun” saying it is his.</td>
</tr>
<tr>
<td>6</td>
<td>Happy rising star in the group– looked better all the time. Agile, coordinated, jumping around room. Shy, but gutsy with care group.</td>
</tr>
<tr>
<td>7</td>
<td>Spunky sleeper- more powerful than meets the eye. Competent, quiet, So funny, cute, elf-like.</td>
</tr>
<tr>
<td>8</td>
<td>So mean- lack of respect for humans. Angry, mean, playing with cars. Out of control, trying to do better.</td>
</tr>
<tr>
<td>9</td>
<td>“High”– difficult to settle and difficult to concentrate. High (hyper). An operator– popular and fast (very elusive).</td>
</tr>
</tbody>
</table>
What is “Sensitive Parenting”?  
Dr. Mary Ainsworth  
http://www.psychology.sunysb.edu/attachment/measures/content/ainsworth_scales.html

• **Sensitivity vs Insensitivity**  
  • Awareness, Accurate Interpretation, Appropriate and Prompt Response

• **Cooperation vs. Interference**  
  • Type (physical/verbal) and Quantity of Interruption in Activity

• **Physical and Psychological Availability vs. Ignoring and Neglecting**  
  • Active acknowledge and response

• **Acceptance vs. Rejection of the Baby's Needs**  
  • Acceptance of positive and negative emotions and both good and bad behavior
Sensitivity Scored via the Mini for Video MBQS
Maternal Behavior Q Sort

• Maternal Behavior Q Sort (MBQS) developed by David Pederson, Greg Moran, and Sandi Bento, https://works.bepress.com/gregmoran/50
• 25 Descriptors of Behavior
• Forced Sort into 5 Groups: Most to Least Like Observed Behavior
• Correlated with Scores from an “Ideally Sensitive” Mother
What’s “Ideally Sensitive” to You?

• Work in Groups
• Think of the MOST sensitive caregiver in interaction with a baby or young toddler
• Divide the Cards into Piles Reflecting Most Similar, Least Similar, and Unsure
• Further Divide the Cards Until You Create 5 groups of 5 cards
  • 5 = very similar, 4 = similar, 3 = not observed; somewhat similar/unsimilar; 2 = unsimilar; 1 very unsimilar

<table>
<thead>
<tr>
<th>Sensitivity vs Insensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness, Accurate Interpretation, Appropriate and Prompt Response</td>
</tr>
<tr>
<td>Cooperation vs. Interference</td>
</tr>
<tr>
<td>Type (physical/verbal) and Quantity of Interruption in Activity</td>
</tr>
<tr>
<td>Physical and Psychological Availability vs. Ignoring and Neglecting</td>
</tr>
<tr>
<td>Active acknowledge and response</td>
</tr>
<tr>
<td>Acceptance vs. Rejection of the Baby’s Needs</td>
</tr>
<tr>
<td>Acceptance of positive and negative emotions and both good and bad behavior</td>
</tr>
<tr>
<td>Item</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>27. Responds to B's distress and non-distress signals even when</td>
</tr>
<tr>
<td>engaged in some other activity such as having a conversation</td>
</tr>
<tr>
<td>with visitor</td>
</tr>
<tr>
<td>34. Interactions revolve around B's tempo and current state</td>
</tr>
<tr>
<td>71. Builds on the focus of B's attention</td>
</tr>
<tr>
<td>2. Monitors B's activities during visit</td>
</tr>
<tr>
<td>44. Realistic expectations regarding B's self-control of affect</td>
</tr>
<tr>
<td>55. Able to accept B's behaviour even if it is not consistent with</td>
</tr>
<tr>
<td>her wishes</td>
</tr>
<tr>
<td>65. Responds to B's signals</td>
</tr>
<tr>
<td>72. Notices when B smiles and vocalizes</td>
</tr>
<tr>
<td>24. Arranges her location so she can perceive B's signals</td>
</tr>
<tr>
<td>45. Praises B</td>
</tr>
<tr>
<td>10. Speaks to B directly.</td>
</tr>
<tr>
<td>43. Is animated when interacting with B</td>
</tr>
<tr>
<td>48. Points to and identifies interesting things in B's environment</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

The Maternal Behavior Q Sort (MBQS) and A “Prototypically” Sensitive Mother (developed by David Pederson, Greg Moran, and Sandi Bento, [https://works.bepress.com/gregmoran/50/](https://works.bepress.com/gregmoran/50/))
Sensitivity across Development

Sensitivity vs Insensitivity
  Awareness, Accurate Interpretation, Appropriate and Prompt Response
Cooperation vs. Interference
  Type (physical/verbal) and Quantity of Interruption in Activity
Physical and Psychological Availability vs. Ignoring and Neglecting
  Active acknowledge and response
Acceptance vs. Rejection of the Baby's Needs
  Acceptance of positive and negative emotions and both good and bad behavior

• What has changed between infancy and preschool?
<table>
<thead>
<tr>
<th>Item</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responds appropriately to signals of distress or frustration.</td>
<td>Builds on the focus of C's attention.</td>
</tr>
<tr>
<td>Parent skilful in dividing attention between child and competing</td>
<td>Makes verbal demands, commands of C.</td>
</tr>
<tr>
<td>demands.</td>
<td></td>
</tr>
<tr>
<td>Realistic expectations regarding C's self-control of affect.</td>
<td>Provides C with little opportunity to contribute to the interaction</td>
</tr>
<tr>
<td>Is comfortable in close contact or in physical proximity.</td>
<td>Parent ignores bids, requests for assistance or attention</td>
</tr>
<tr>
<td>Offers acceptable alternative to divert attention from inappropriate</td>
<td>Responds with flat affect, when interacting with C.</td>
</tr>
<tr>
<td>activity or emotional expression.</td>
<td></td>
</tr>
<tr>
<td>Parent conveys information which C understands. Parent may alter</td>
<td>Non-synchronous interactions with C i.e. the timing of parent's</td>
</tr>
<tr>
<td>tone of voice or speech to C's level to ensure comprehension</td>
<td>behavior out of phase with C's behavior.</td>
</tr>
<tr>
<td>Praises C, parent takes advantage of opportunities for positive</td>
<td>Parent mislabels C's affect.</td>
</tr>
<tr>
<td>evaluation.</td>
<td></td>
</tr>
<tr>
<td>Parent delights in C; enjoyment is obvious and continual.</td>
<td>Annoyed, irritated or impatient with C.</td>
</tr>
<tr>
<td>Structures activities to provide opportunities for C to be</td>
<td>Emphasizes parent's needs and wishes.</td>
</tr>
<tr>
<td>successful and/or satisfied.</td>
<td></td>
</tr>
<tr>
<td>Well resolved interaction with C - interaction ends when C is</td>
<td>Parent is inflexible when interacting with C.</td>
</tr>
<tr>
<td>satisfied.</td>
<td></td>
</tr>
<tr>
<td>Accepts C's initiatives.</td>
<td></td>
</tr>
<tr>
<td>Content and pace of interactions are set by parent rather than</td>
<td></td>
</tr>
<tr>
<td>according to the C's responses.</td>
<td></td>
</tr>
<tr>
<td>Acknowledges C's positive emotions (i.e., joy, excitement, contentment)</td>
<td></td>
</tr>
</tbody>
</table>
Programs to Enhance Sensitive Caregiving

Key Elements of Successful Interventions

• Focused on sensitivity
• Less than 16 sessions
• Video Feedback
• Six Months of Age or Older
Attachment and Biobehavioral Catch-Up (ABC)

- 10 Sessions
- Live Feedback
- Video Feedback
- Nurturance, Following Child’s Lead, Reducing Frightening Behavior, Limiting “Voices from the Past”
- Compared with “DEF” (Developmental Education for Families)
Video Feedback Intervention to Promote Positive Parenting and Sensitive Discipline (VIPP)
In 7 Sessions of the VIPP

• Speaking for the Child
  • Awareness of Signals

• Putting behavior in context (general information about child development)
  • Acceptance

• “Sensitivity Chains”
  • Contingent Responsiveness

• Sensitive Discipline
  • Cooperation vs Interference

• Reinforcement of Relationship
  • “You are so important to him/her”
What is Highlighted During Video Review

- Normal Child Development
- Exploration
- Attachment
- Empathy for Parents and Children
- “Sensitivity Chains”
- Sensitive Discipline
Having Children Follow The Rules

Beforehand
• Spend Time Together Having Fun
• Give Compliments (Double Up!)
• Praise Positive Behavior
• Anticipate Difficult Situations

During
• Announce the Change
• Give Instructions
• “In It” Together
• Active Role
• Explain Why
• Distraction & Alternatives
• What’s Next?
• Sensitive Time Out
Participant’s feedback

I enjoyed the visits, and I think the VIPP program would be very useful in Singapore. Sometimes I see neighbors caning their children, and it just makes me so emotional. People think “sensitive parenting” means just letting your children do what they want— but that’s not what it is. VIPP teaches other ways. You still have to be the parent, but you see ways to teach them to listen and to support them that don’t use punishment. That way when they are older they feel secure and things become easier in your relationship.
Video-feedback intervention in center-based child care: A randomized controlled trial

Claudia D. Werner¹, Harriet J. Vermeer², Mariëlle Linting³, Marinus H. Van Uzendoorn⁴

Erasmus University, Centre for Child and Family Studies, The Netherlands

ARTICLE INFO

Keywords:
- Center-based child care
- Attachment-based intervention
- Professional caregiver training
- Randomized controlled trial

ABSTRACT

In the current study, we aim to improve center-based child care quality with an attachment-based program. The Video-feedback intervention to promote Positive Parenting and Sensitive Discipline for Child Care (VIPP-CC) is a professional caregiver training program for child care centers. In the current study, we aimed to evaluate the effectiveness of VIPP-CC in improving child care quality for children in center-based child care centers. A randomized controlled trial was conducted with 47 children and their caregivers. The VIPP-CC intervention group received training and feedback on how to improve their child care practices. The control group received standard training. The results showed that the VIPP-CC group had significantly better child care quality than the control group. This study suggests that the VIPP-CC intervention can be an effective tool for improving child care quality in center-based child care centers.

Published online: 24 January 2016
© The Author(s) 2016. This article is published with open access at Springerlink.com

Randomized Video-Feedback Intervention in Home-Based Childcare: Improvement of Children's Wellbeing Dependent on Time Spent with Trusted Caregiver

Marleen G. Groeneveld², Harriet J. Vermeer³, Marinus H. Van Uzendoorn², Mariëlle Linting³

Abstract

Background: The childcare environment offers a wide array of developmental opportunities for children. Providing children with a feeling of security to explore this environment is one of the most fundamental goals of childcare. Objective: To examine the effectiveness of a Video-Feedback Intervention to promote Positive Parenting and Child Care (VIPP-CC) on children's wellbeing in home-based childcare in a randomized controlled trial. Methods: Forty-seven children and their caregivers were randomly assigned to the intervention group or control group. Children's wellbeing, caregiver sensitivity, and global child care quality were observed during a pretend-and-pretend activity. Results: We did not find an overall intervention effect on child wellbeing, but a significant interaction effect with months spent with a trusted caregiver was present. Children who were less familiar with the caregiver showed an increase in wellbeing scores in both the intervention and control group, but for the group of children who were more familiar with the caregiver, wellbeing increased only in the intervention group. Conclusion: Although there was no overall effect of the VIPP-CC on children's wellbeing, the VIPP-CC seems effective in children who have been cared for by the same trusted caregiver for a longer period of time.
So What Can You Do with This Knowledge?

Remember We Build Brains for the Environment We Expect

The Classroom is Only One World

Art by Michaela Bruntraeger

Blind monks examining an elephant, an ukiyo-e print by Hanabusa Itcho (1652-1724)
So What Can You Do with This Knowledge?(2)

Build on Children’s Strengths

Support Positive Relationships
Read Up & Be a Resource for Interested Parents

1. The Emotional Life of the Toddler
   - Why "No" is every toddler's favorite word
   - Why your toddler clings to you one minute and rejects you the next
   - How to understand your child's sudden fear of familiar things like the bathtub
   - Alicia F. Lieberman, Ph.D.

2. Becoming Attached
   - First Relationships and How They Shape Our Capacity to Love
   - Robert Karen, Ph.D.

3. Why Zebras Don't Get Ulcers
   - The Acclaimed Guide to Stress, Stress-Related Diseases, and Coping
   - Robert M. Sapolsky
Consider Relational Savoring

The Practice of Relational Savoring

Jessica Borelli, Ph.D.

Relational Savoring involves deeply reflecting on a moment of close connection between you and your child. Relational savoring has been shown to improve parents’ mood and to enhance their satisfaction and closeness with their relationship with their children. This handout provides some simple instructions you can use to engage in the practice of relational savoring.

First, you will need to select a memory that you would like to savor. Pick a memory where you felt close or in sync with your child. You may wish to savor a memory of a time when you when you found joy in helping your child grow, or a time when your child needed you and you were there for him/her. It may be a time when you felt like you comforted, soothed, protected, or supported your child. Feel free to choose something that you felt was a milestone or something simple that happens on a daily basis.

Using the memory you have chosen, follow these steps:

1. Bring the memory to mind at a time when you are feeling calm and are able to reflect deeply on it.
2. Recall all of the details of the experience — Where were you? What were you wearing? What was your child wearing? What was the air like? What smells did you notice? What was the temperature like? What happened in that moment that made it special — what did your child say or do? What did you say or do? What about the connection between you and our child allowed that special moment to happen?
3. Next turn your attention to how you felt at the time. What kinds of things were you feeling in your body? Were you feeling happy and excited, or were you deeply calm and relaxed? Think about where in your body you felt these emotions and try to feel them again.
4. Then try to recall what your thoughts were at the time the memory occurred. For example, were you thinking, “My child really needs me right now. My child feels really close to me.” Or were you thinking, “I feel so close to my child at this moment. I feel comfortable being my child’s parent.” Then take a moment to reflect upon what your thoughts are about the memory now.
5. Finally, turn your focus to the future. Focus on how close you felt to your child at the time the memory occurred. How well will the bond that you have together affect your relationship in the future? What positive things can you imagine happening as a result of your bond to one another?

In order to have memories to savor, you will find that you need to pay attention to these moments of close connection as they occur between you and your child throughout the day, which requires being emotionally present in the moment.

Support Research

• We are recruiting families of preschoolers for a longitudinal study
  • sensitive parenting and the home environment
  • preschool working memory
  • mathematical outcomes
  • opportunities to take part in MRI

• Please take some SPACE study flyers

• Add your name to the list if you want to learn more about this study