Family Matters: Essentials for Child Development

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Topics
- Attachment theory and research
- Children without families
- Family support
- Differential susceptibility

Attachment

“To say of a child that he ....has an attachment to someone means that he is strongly disposed to seek proximity to and contact with a specific figure and to do so in certain situations, notably when he is frightened, tired or ill.”

(John Bowlby, Attachment, p.371)

Attachment behavior and exploration

Environment
- avoidant (A) 25%
- secure (B) 65%
- resistant (C) 10%
- Disorganized (D)

Attachment figure
- Minimizing att
- Maximizing att
Attachment predictive of...

- later behaviour problems
  - both externalizing and internalizing
- social competence
- academic achievement
- not: temperament

Meta-analysis: combined effects of ALL studies on a specific topic

- replication
- explanation for differences between study outcomes

**Attachment**

- Attachment behavior necessary for survival to reproductive age
  - contact and proximity
  - comfort and protection
  - universal across species and cultures

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**Meta-analysis**

Attachment – Externalizing behavior

![Graph showing correlation between attachment and externalizing behavior](image)


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**Attachment**

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**Intervention Experiment at Great Ape Nursery Yerkes**

- 29 standard care
- 17 responsive care

- Peer-reared

- **Bayley**
  - 9mo
  - 12mo

- Strange Situation

- Birth

- +4 hours per day

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**Infant chimpanzee exploratory behavior in the Strange Situation**

![Graph showing exploratory behavior in the Strange Situation](image)

Attachment in chimpanzee infants (Yerkes)

- Standard care: 72% Disorganized
- Responsive care: 41% Disorganized

Report to the World Health Organization on the post-war status of orphans and abandoned children (1951)

- Conclusion: orphanages have a devastating effect on child development
- But: about 8 million children grow up in institutions (UNICEF)
- How is life in an institution?

Developmental delays in Mumbai orphanage

<table>
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<tr>
<th>SD</th>
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- weight
- height
- head circumference
- IQ

Juffer, Bakermans-Kranenburg, & Van IJzendoorn (2017)

Institutionalized care in Ukraine

- > 100,000 children in institutionalized care
- Growing number of HIV (social) orphans
- Sufficient medical care and food
- Caregiver-child ratio 1:3 to 1:7
- Many changes in caregivers
  - After 3 yrs > 50 caregivers

Natasha Dobrova-Krol
Institutional Care in Ukraine

- Family HIV -
- Family HIV +
- Institution HIV -
- Institution HIV +


Height-for-Age

Bowlby was right:
Attachment distributions in institutions and families

- Secure
- Disorganized
- Insecure

Institutions from Greece, Romania, Russia, Ukraine, Chile, China

IQ

- 64 70 79 99
- Family HIV-
- Family HIV+
- Institution HIV -
- Institution HIV +


Institutional care in the brain (1)

- Children (11 yrs) adopted to US from Russia, Romania (30 mo)
- Adopted children smaller cerebellum
- Mediates lower performance on memory and planning

Bauer et al., 2009

Institutional care in the brain (2)

- Bucharest Early Intervention Project (Romania)
- Assignment to foster care 7-33 mo; assessment at 10 yrs
- White matter recovery, grey matter no catch-up

Sheridan, Fox, Zeanah, et al., 2012
Institutional care in the brain (2)

What did we learn so far?
- Attachment is universal across species and cultures
- Extreme environments create anxious attachments and numerous deficits
  - Environment is crucial even for “heritable” traits
- Extreme environments affect brain development
  - Not only institutional care
  - Not only extreme environments

Maltreatment in the family: 0-3 yrs at increased risk

Infant crying elicits care and abuse
- Proximity-seeking
- Information on health condition
- Evolutionary adaptive
- BUT: Aversion

Intermezzo: Adult Attachment

The Adult Attachment Interview
George, Kaplan & Main
- Semistructured
- General descriptors of childhood relationships (mother and father)
- Concrete evidence from attachment-related experience
- Evaluation of effects on current personality
- Traumatic events: loss and maltreatment
- Current relationship with parents

Intermezzo: Adult Attachment

“Set of conscious and/or unconscious rules for the organization of information [about attachment experiences] and for obtaining or limiting access to that information”
(Main, Kaplan, & Cassidy, 1985)

Adult Attachment Interview
Attachment representation
Adult attachment representations

- Secure-autonomous (F)
  - Value attachment relationships
- Insecure-dismissing (Ds)
  - Idealize or minimize importance of attachment
- Insecure-preoccupied (E)
  - Anger and maximize impact of attachment
- Unresolved loss and trauma (U)

Adult Attachments in Typical and Abused

The First 10,000 Adult Attachment Interviews
Bakermans-Kranenburg & Van IJzendoorn, Attachment & Human Development, 2009

AAI and Neural response to crying

Insecure: more amygdala activation

Riem, Bakermans-Kranenburg, Van IJzendoorn, Out, & Rombouts (2012)
Attachment & Human Development, 24, 533-551

Higher activation of the amygdala in Ds, E, & U
What did we learn so far?
- Maltreating parents are more often unresolved.
- Insecure parents show more activation of the amygdala in response to crying, indicating more aversion.
- Insecure parents experience more irritation during infant crying, and use excessive force more often.

What can we do?
- Parent support!

Video feedback
- Attachment and Biobehavioral Catch-up
  - ABC, Mary Dozier
  - ten 1-hour sessions
  - video and 'in the moment' comments by parent coach
- Video feedback Intervention to promote Positive Parenting (VIPP-SD)
  - six 1.5-hour sessions
  - personalized video-feedback

Features of the VIPP method

- Focus on parent-child interaction
- Standardized (protocol) and individualized
- Video feedback
  - Practice observational skills
  - "Speaking for the child"
  - Reinforce parental sensitive behaviors
- * Ainsworth’s definition of sensitivity

Terrible twos?

- VIPP- Sensitive Discipline (VIPP-SD)
  - Combination of two research traditions: Bowlby/Ainsworth + Patterson

VIPP-SD themes

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
<th>Session 4</th>
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<tbody>
<tr>
<td>Sensitivity: Attachment &amp; Exploration</td>
<td>Discipline: Distraction &amp; Understanding</td>
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<tr>
<td>&quot;Speaking for the child&quot;</td>
<td>Positive reinforcement</td>
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<td>&quot;Sensitivity chain&quot;</td>
<td>Sensitive time-out</td>
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<tr>
<td>Sharing of emotions</td>
<td>Induction &amp; Understanding</td>
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Sessions 5 and 6 are 'booster sessions' (repeating all themes)

VIPP-SD procedure

- Filming interaction
- Preparing a script
- Next visit: video-feedback
  - Show the videotape
  - Using the manual for themes and messages
  - Using the video of the dyad to connect messages to specific moments or episodes
  - Inviting the parent to also comment on the video

Profile

- Noticing of child signals
- Understanding of what moves the child (interpretation child signal)
- Reacting to positive signals of the child
- Reacting to negative signals of the child
  - Using different reactions to negative signals
- Not interfering when the child is exploring or playing
- Adjusting the pace to that of the child
  - Introduce breaks, "wait and see"
- Giving directions to the child in a sensitive way
- Giving explanations to the child in a sensitive way
- Showing empathy and understanding
- Encouraging eye contact
- Encouraging physical contact
- Open communication, playful interaction and sharing of feelings
- Warmth in the parent’s voice and facial expression
- "Following" of the child

Adaptations VIPP-Foster Care

- Address disturbed attachment behavior
  - E.g., child hurts himself but does not cry
  - E.g., controlling behavior
- Recognize children’s subtle behaviors
  - Small steps in the right direction
- Stress regulation in foster parent and child
- Promoting playful physical/eye contact
Diathesis-Stress versus Differential Susceptibility

- **Diathesis-stress**: vulnerable and resilient individuals develop differently under conditions of environmental stress.
- **Differential susceptibility**: enhanced sensitivity in some individuals to both negative and positive environments, for better and for worse.

**Differential Susceptibility Factors**

- Temperament, Biological sensitivity, Genetic Susceptibility

**Temperament** as moderator of VIPP intervention effects

*Attachment security*

- **Intervention**
- **Control**

\( p = .11 \)
Differential susceptibility to change in maternal sensitivity

Correlation between change in maternal sensitivity and posttest attachment security

Klein Velderman et al., Journal of Family Psychology, 2006, 20, 266-274

Biological Sensitivity as moderator of intervention effects

- Lowest scoring 30% on an early literacy screening test (N=100)
- Biological sensitivity:
  - small for gestational age but full term (SGA)
  - late preterm (LP) in absence of low weight
- Intervention: training basic literacy skills
  - 40 personalized games of about 10 minutes in a period of 15 weeks


Effects moderated by Mild Perinatal Adversities (RCT)

Van der Kooy-Hofland et al. (2012) Journal of Educational Psychology

Long-Term Effects: After one year of reading instruction

Van der Kooy-Hofland et al. (2012) Journal of Educational Psychology

Genetics as moderator of VIPP-SD intervention effects

Developmental Psychology, 2008, 44, 293-300

DRD4 -7R intervention group versus all other groups

Developmental Psychology, 2008, 44, 293-300
Meta-analysis of GxeE
Randomized Controlled Trials

- Scientifically best design
- 22 RCT studies, N = 3257

- Effect size \( r = .33 \) for 'risk' genotypes
- Effect size \( r = .08 \) for others

Leaving non-susceptible individuals behind?
Intervention for orchids only?

- Orchids most vulnerable in suboptimal conditions
- Susceptibility
  - continuum, more/other investment with less susceptibles?
  - domain-specific, compensation with different strategy?
- Moral choice:
  - Pollution does not affect all to similar extent but this does not imply we need not fight pollution
  - Basic human rights, e.g. (good enough) education, for everyone

What did we learn so far?

- Video feedback is a rather successful intervention method
- The average effect size of an intervention is both an overestimation and an underestimation
- Those who are most vulnerable may benefit most
- Central issue: what works for whom?

VIPP Research and implementation in more than 20 countries

- currently testing VIPP-Foster Care

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