CONNECT - AN ATTACHMENT BASED PROGRAM
INTERVENTION DEVELOPMENT & EVALUATION

DR. MARLENE M. MORETTI
PROFESSOR, SIMON FRASER UNIVERSITY
BRITISH COLUMBIA CANADA
moretti@sfu.ca
Teens - Common Myths

• Teenage pregnancy is estimated as 10-25 times higher than official statistics
• Even though rates of youth crime has declined universally in a recent Canadian survey:
  • 45% believed it remained unchanged;
  • 39% believed increased;
  • Only 12% believed it has declined.
Majority of Psychiatric Disorders Present During Adolescence

Tomá Paus, Matcheri Keshavan & Jay N. Giedd
Nature Reviews Neuroscience 9, 947-957 (December 2008)

Emergence and peak in mental disorders during adolescence
One in five adolescents have a mental illness that will persist into adulthood

- ADHD, conduct disorder
- Anxiety disorders
- Mood disorders
- Schizophrenia
- Substance abuse
- Any mental illness

(Kessler et al., 2005)
70% of adult mental health disorders present before age 25
75% of youth and their families experience barriers to accessing age relevant services
Adolescence
A Period of Transition

Significant transitions in:
- Neurological functioning
- Cognitive functioning
- Social-emotional functioning
- Interpersonal Relationships
- Sexual Development

Adolescence is the second major ‘window’ of development, next only in significance to early childhood development.
Adolescent Brain Development - Socially Sensitive Experience Linked Pruning

- Prepubescent increase of grey matter
- Selective pruning ‘from back to front’ linked to social context
- Myelination results in great efficiency in neurotransmission; shifts in representational thought and capacity for complex information processing
- Brain maturation associated with increased capacity for cognitive and affective regulation


CONNECT – UPDATE ON RESEARCH AND PRACTICE Moretti 2015
Risk, adaptation and the functional teenage brain
Howard Sercombe (2014)

“... the teen brain is not a broken or defective adult brain. It’s been exquisitely forged by the forces of our evolutionary history to be a very good teen brain.” Giedd, in Conan (2012)

“... at the very least this evidence indicates that a society substantially in the hands of young people would not necessarily be headed for disaster, and reinforces the principle that human societies have survived because of the capacities of the adolescent brain, not in spite of them”

What Do Teens Need to Thrive in this Unique Developmental Period?

- Attachment security critical protective factor as children transition through adolescence.

- Strong evidence for the protective role of attachment security in adolescence:
  - Less aggressive and violent behaviors
  - Less experimentation with substance use and risky sexual behavior
  - Greater capacity for managing frustration
  - Popular with peers yet less influenced by peer pressure
  - Better able to manage transition to high school.

- Protective benefit is similar across culture (Hilario, Saewyc, Johnson & Vo, 2013).
Attachment is a Biologically Based Regulatory System

- Stress regulatory system that monitor ‘real’ or ‘perceived’ threat.
- When triggered, attachment system dominates over other systems and motivation to:
  - Seek proximity
  - Protest separation
  - Seek safe haven

- When threat is not present, relationships can provide ‘secure base’ for exploration and development.
WHAT PROMOTES ATTACHMENT SECURITY?

I: Sensitivity

Ability to **ATTEND, PERCEIVE AND INTERPRET** verbal and nonverbal signals in a child and to respond with empathy and support.

- Awareness of signals - requires attention and engagement.
- Interpretation from an attachment lens.
- Developmentally and attachment informed response.
WHAT PROMOTES ATTACHMENT SECURITY?

II: Cooperation and Shared Partnership

- Parent’s mindfulness of the child’s mood, interests and autonomy in guiding their care for the child

- Parents ability to form a ‘shared partnership’ with their child in the caregiving process.

Seeking to “guide rather than control actions” rather than “interfering or intrusive” care that may interrupt “activity, and thus cause dysregulation” (Ainsworth, 1969).
Can Programs Increase Sensitivity and in Turn Increase Attachment Security in Insecurely Attached Teens?

- Mothers who showed low sensitivity were likely to have children who were insecurely attached.

- But a shift toward increased maternal sensitivity as children move into adolescence predicted a shift toward security in teens.

Can Adolescents in Foster Care Form Secure Attachments?

<table>
<thead>
<tr>
<th></th>
<th>Biological Mother</th>
<th>Foster Mothers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>9%</td>
<td>46%</td>
</tr>
<tr>
<td>Dismissing</td>
<td>55%</td>
<td>42%</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>2%</td>
<td>---</td>
</tr>
<tr>
<td>Disorganized</td>
<td>35%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Attachment-Based Interventions

- Several attachment-based interventions for parents of infants and young children:
  - Video Feedback Intervention to promote Positive Parenting
  - Circle of Security
  - Attachment and Bio-behavioral Catch-up Intervention
  - Few attachment-based interventions for parents of adolescents.
Development of an Attachment Based Program for Parents of Teens at Risk

Goals:

1. Tailored to factors that influence adolescent mental health
2. Strength-focused
3. Designed to engage “difficult to reach families”
4. Portable across communities
5. Portable across a broad spectrum of mental health, education and other professionals to maximize penetration
6. Designed to promote program fidelity
7. Designed to promote uptake, feasibility and sustainability
### CONNECT PARENT GROUP

**Target population:** Parents/alternate caregivers of:

- **Preteen (8-12) and Teen (13-18) program**
- Significant behaviour problems and comorbid mental health problems (including depression/anxiety, PTSD)

**Program Characteristics**

- Manualized
- Pre-inclusion interview to engage families
- 10 x 1.5 hour sessions group sessions of 10-14 parents
- Delivered by a range of health practitioners
- Low cost; high uptake in communities to ensure sustainability

*Scheduled for update summer 2015 to include separate manual for 6-12 year olds*
Format: Structured but with focus on experiential learning and skill development

Each week: Key attachment principle specifically related to adolescent development, attachment and parenting.

Integrates effective treatment components including CBT, DBT and attributional retraining.

Helps parents become aware of the impact of both verbal and nonverbal communication.

Not prescriptive; not problem solving focused. Engages mindfulness of self and child; availability and sensitivity to teen.
## Illustrative Sessions and Goals

|   | Understanding Behaviour Through Attachment | All behaviour has meaning. | ➤ Enhance recognition of behaviour as a form of communication about attachment.  
➤ Develop skills in stepping back and considering alternate meanings of behaviour. |
|---|--------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 2 | Attachment over the Lifespan               | Attachment is for life.   | ➤ Enhance recognition that attachment needs continue throughout life but are expressed differently as children develop.  
➤ Develop skills in reframing children’s behaviour in terms of their developmental level and attachment needs. |
| 3 | Conflict – An Opportunity for Understanding and Connection | Conflict is part of attachment. | ➤ Enhance recognition and acceptance of conflict as a normative part of relationships, particularly during adolescence, which often communicates attachment needs.  
➤ Develop skills in regulating affect, maintaining connection and negotiating in the face of conflict. |
| 4 | Autonomy Includes Connection               | Secure attachment contains a balance between connection and independence. | ➤ Enhance recognition and acceptance of adolescent strivings for autonomy but continued need for parental availability in support.  
➤ Develop skills in providing continued emotional support coupled with clear structure and expectations in response to adolescent behaviour. |
| 5 | Empathy – The Heartbeat of Attachment      | Understanding, growth, and change begin with empathy. | ➤ Enhance understanding of the role of empathy for children’s and parents’ experiences as essential to secure attachment.  
➤ Develop skills in empathetic listening with others in conflict situations |
CONNECT Goals: Strengthening the Building Blocks of Attachment Security

Reflective Functioning
• “Stepping Back” - Mindfulness in reflecting on what is in the child’s mind; their thoughts and feelings and what the parent is feeling and thinking

Caregiver Sensitivity
• “Stepping Forward” Skills needed to think about the child’s attachment needs and how these are communicated through behavior.

Dyadic Affect Regulation
• Skills needed to identify and tolerate difficult emotional states in themselves and with their teen.

Shared Partnership & Mutuality
• Negotiation and providing safe and secure base while promoting teen autonomy
Session Content and Dynamic Change Processes

- Adherence *to the structure, exercises and goals* is required but the manual is *illustrative*. Not intended to be read or presented word for word.

- Change is engendered through specific exercises and role plays within each session that are *designed and sequenced to induce specific feelings*.

- Exercises and role plays are *not only about content* - they are strategies for shifting parents feelings and thoughts.
Session Structure

- Each session starts with a principle; new information (educational); and specific exercises/role plays related to session goals.

- Exercises and role plays are not effective if they do not induce specific types of affect.

**Example 1.**

Many exercises begin by having parents think about their children (or children they have known) when they were babies or toddlers.

- Why?
Session Structure

STRUCTURED SEQUENCE OF REFLECTION

CHILD
1. WHAT WAS THE CHILD FEELING AND THINKING?

2. LOOKING AT THE ATTACHMENT NEEDS LIST, WHAT WERE THE CHILD’S NEEDS?

PARENT
3. WHAT WAS THE PARENT FEELING AND THINKING?

4. DO YOU THINK THE PARENT WAS AWARE OF THE CHILD’S ATTACHMENT NEEDS?

5. WHERE DID IT LEAVE THE RELATIONSHIP BETWEEN THE PARENT AND THE CHILD?
## Illustrative Sessions and Goals

<table>
<thead>
<tr>
<th></th>
<th>Session Title</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Understanding Behaviour Through Attachment</td>
<td>• Enhance recognition of behaviour as a form of communication about attachment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Develop skills in stepping back and considering alternate meanings of behaviour.</td>
</tr>
<tr>
<td>2</td>
<td>Attachment over the Lifespan</td>
<td>• Enhance recognition that attachment needs continue throughout life but are expressed differently as children develop.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Develop skills in reframing children’s behaviour in terms of their developmental level and attachment needs.</td>
</tr>
<tr>
<td>3</td>
<td>Conflict – An Opportunity for Understanding and Connection</td>
<td>• Enhance recognition and acceptance of conflict as a normative part of relationships, particularly during adolescence, which often communicates attachment needs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Develop skills in regulating affect, maintaining connection and negotiating in the face of conflict.</td>
</tr>
<tr>
<td>4</td>
<td>Autonomy Includes Connection</td>
<td>• Enhance recognition and acceptance of adolescent strivings for autonomy but continued need for parental availability in support.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Develop skills in providing continued emotional support coupled with clear structure and expectations in response to adolescent behaviour.</td>
</tr>
<tr>
<td>5</td>
<td>Empathy – The Heartbeat of Attachment</td>
<td>• Enhance understanding of the role of empathy for children’s and parents’ experiences as essential to secure attachment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Develop skills in empathic listening with others in conflict situations</td>
</tr>
</tbody>
</table>

* Moretti 2014
Evidence - Published Works


### Effectiveness at Development Site

<table>
<thead>
<tr>
<th>Clinical Population</th>
<th>Outcomes</th>
<th>Effect Size (for treatment period; no significant effects over waitlist)</th>
<th>Follow-Up and Other Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent/teen high risk dyads</td>
<td>Aggressive behaviour</td>
<td>.27</td>
<td>Effects retained one year follow-up</td>
</tr>
<tr>
<td>&gt;50% threatened to harm or kill others</td>
<td>Conduct Problems</td>
<td>.46</td>
<td></td>
</tr>
<tr>
<td>&gt; 50% threatened to harm self</td>
<td>Internalizing problems (e.g. depression)</td>
<td>.63</td>
<td>Similar outcomes for girls/boys</td>
</tr>
<tr>
<td></td>
<td>Parenting Satisfaction and Efficacy</td>
<td>.45-.86</td>
<td></td>
</tr>
</tbody>
</table>

### Effectiveness in Community Practice


<table>
<thead>
<tr>
<th>Clinical Population</th>
<th>Outcomes</th>
<th>Effect Size</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 300 high risk parent-teen dyads rural &amp; urban sites</td>
<td>Conduct Problems</td>
<td>.36</td>
<td>Effects same for girls and boys, across age and type of caregiver even when other services are taken into account</td>
</tr>
<tr>
<td></td>
<td>Oppositional</td>
<td>.65</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Internalizing</td>
<td>.34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parenting Satisfaction and Efficacy</td>
<td>.71-.74</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parenting Strain</td>
<td>.70-.98</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CTS Aggression</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Teen to Parent</td>
<td>.94</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Parent to Teen</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teen Affect Regulation</td>
<td>.46</td>
<td></td>
</tr>
</tbody>
</table>
Two-year Findings from a National Effectiveness Trial: Effectiveness of behavioral and non-behavioral parenting programs on children’s externalizing behaviors.
Högström, Olofsson, Özdemir, Enebrink & Stattin (under review)

Participants: Parents of 749 children with moderate levels of externalizing behavior problems referred from child mental health clinics, social services and schools recruited parents of 749 children (up to 12 years) with moderate levels of externalizing behaviors

Randomized to one of the four programs:

- Incredible Years
- COPE
- Comet
- Connect

Assessments included parent-reported measures of child externalizing behavior and ADHD symptoms and telephone interviews (Parent Daily Report checklist - PDR) conducted by professionals.
INDEPENDENT RANDOMIZED CONTROL TRIAL
SWEDEN (Multisite Collaborative Team*)

Eyberg Child Behavior Inventory (item mean score)

- Incredible Years
- Cope
- Komet
- Connect

*Provided with permission by Dr. Håkan Stattin, University of Orebro
A health economic evaluation of parent training programs for children in Sweden.

Natalie Zarabi, Filipa Sampaio & Inna Feldman, Uppsala University

<table>
<thead>
<tr>
<th>Program</th>
<th>Average Cost Per Child</th>
<th>Average Net Cost 12 Months Follow Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect Program</td>
<td>369</td>
<td>133</td>
</tr>
</tbody>
</table>

Net cost = program cost - cost saving (dollars that would have been spent without treatment improvement) in CAN funds.

- Least expensive compared to three alternative parent management programs
- Consistent with the UN Rights of the Child
1. DECREASE IN PARENTING STRESS & INCREASE IN PARENING SATISFACTION

2. INCREASE IN PARTNERSHIP AND MUTUALITY, SECURE BASE, AUTONOMY GRANTING, MONITORING

3. REDUCTION IN TEEN PROBLEM BEHAVIOR

LARGE & MEDIUM EFFECT SIZE CHANGES

Interview Excerpt

How do you think the Connect Parent Group influenced you?

*Father:*

“Quite a bit, actually. It gave me a different insight into how to deal with Sandy, how to react with him and how to see what was actually in his mind, you know, like try to see it through his eyes, and I think that helps a lot. ... it gives me food for thought whenever I see him doing something or seeing him getting upset, I try and figure out why or what's he doing, what's he thinking sort of thing. Instead of just going in and saying, don't be angry, don't be upset. That doesn't work that well, so it's helped a lot.”

Reduced Affect Dysregulation and Attachment Insecurity Related to Drop in Externalizing and Internalizing Symptoms (N=540 parent/teens)

<table>
<thead>
<tr>
<th></th>
<th>Pre-Treatment</th>
<th>Post-Treatment</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$ ($SD$)</td>
<td>$M$ ($SD$)</td>
<td></td>
</tr>
<tr>
<td><strong>Externalizing Symptoms</strong></td>
<td>72.65 (12.94)</td>
<td>67.84 (13.07)</td>
<td>.37</td>
</tr>
<tr>
<td><strong>Internalizing Symptoms</strong></td>
<td>64.43 (14.56)</td>
<td>61.67 (14.49)</td>
<td>.19</td>
</tr>
<tr>
<td><strong>Affect Dysregulation</strong></td>
<td>3.69 (1.09)</td>
<td>3.25 (1.13)</td>
<td>.40</td>
</tr>
<tr>
<td><strong>Attachment Avoidance</strong></td>
<td>3.42 (1.28)</td>
<td>3.14 (1.22)</td>
<td>.22</td>
</tr>
<tr>
<td><strong>Attachment Anxiety</strong></td>
<td>3.38 (1.14)</td>
<td>3.28 (1.12)</td>
<td>.09</td>
</tr>
</tbody>
</table>

A MODEL OF CHANGE IN ATTACHMENT PROGRAMS FOR PARENTS

- Help parents identify thoughts & feelings that make parenting difficult
- Facilitate stepping back & mindfulness of child’s feelings, thoughts and attachment needs

Increase Provision of Safe Haven and Secure Base

- Increase parental sensitivity to behavior as attachment signal especially during conflict
- Increase capacity to co-regulate difficult feelings with teen

Promote shared partnership
- Shift focus from problems to positives
- Prepare parents to manage set-backs (relapse prevention)

Facilitate Shift from Frustration & Need to Control to Curiosity and Desire to Understand

Promote Attachment Security and Protect from Adversity
IMPLEMENTATION SCIENCE

Proctor (2011):

Good Outcomes

Uptake

Sustainability

IMPLEMENTATION SUCCESS
Connect Parent Groups
2006 - 2014
N = 466
Number of Clinicians Trained in BC 2006-2014: 735
Number of parents completing the program 2006-2014 in BC: 5012
Building Capacity & Sustainability: Canada and Sweden

- NOVA SCOTIA (HALIFAX, IWK HOSPITAL)
- ALBERTA CHILDREN’S HOSPITAL
- ONTARIO (GUELPH/KITCHENER-WATERLOO)
- TRANSLATED INTO FRENCH SCHEDULED TRIAL IN QUEBEC
- CONNECT FOSTER PARENTS IN STATE OF DELAWARE, USA

CONNECT PARENT GROUP LEADER WORKSHOP 2

Humana
UPDATE TO COMMUNITY PARTNERS AND RESEARCH COLLABORATORS

“Rethinking Attachment Theory” poster to be presented at the International Meeting on Indigenous Child Health

The Adolescent Health Lab is committed to translating the knowledge that has been shared with us about attachment in Aboriginal communities into practical intervention. From March 20-22 we will be in Ottawa at the International Meeting on Indigenous Child Health to present a poster encouraging those attending to “rethink attachment theory”. The poster will invite attendees to consider an expanded view of attachment that includes community and cultural elements. We will also discuss our process and next steps for adapting the Connect Parent Group program.

Letter of Intent submitted to the CIHR Pathways to Health Equity for Aboriginal Peoples funding competition

In November researchers from the Adolescent Health Lab, with support from community partners, prepared a Letter of Intent for the CIHR Pathways to Health Equity funding competition. This program funds community-based research which aims to adapt mainstream health programs (such as Connect) so that they are a better cultural fit for Aboriginal clients. The results of the competition will be released in February and, if successful, we will be invited to submit a full funding application in September of 2015. We will keep you updated on the outcome of this competition!

Enhancing the cultural competency of Clinical Psychologists in training

In our meetings and interviews many of you told us about the value of the PHSA Indigenous Cultural Competency training. We decided

STAY IN TOUCH!

Have you had a recent experience delivering Connect Parent Group to Aboriginal caregivers or applying attachment theory in your work with Aboriginal families? We would love to hear your thoughts and learn from your experiences!

If there is something you want to share, please feel free to contact our research team at any time:
NEW DEVELOPMENTS

“RECLAIMING CONNECTIONS”

- Attachment may be universal but it may be expressed differently across culture

1. Strengthening our existing relationships and developing new relationships with Aboriginal communities across B.C.

2. Enhancing capacity within Aboriginal communities to deliver the Connect Parent Group program

3. Exploring potential adaptations that could be used by leaders in Aboriginal communities to improve the cultural safety of Connect through conversations with service providers and parents
Knowledge Translation

Research shows that foster families who receive support in understanding the impact of trauma and attachment on children in their care report greater efficacy and satisfaction in their work, and in turn their placement stability and mental health outcomes improve amongst the children they care for. Our research to date demonstrating the effectiveness of the basic Connect program provided the foundation for the program adaptation and the production of the Connect Foster Parents Manual (English version and Swedish translation). In the next two years we will undertake an extensive assessment of treatment impacts in foster care contexts as a prelude to scaling up initiatives. The results of this research will provide the foundation for the development of research funding applications specifically focused on improving health outcomes for adolescent girls and boys in foster care.

Have you had a recent experience delivering Connect Parent Group to foster parents or applying attachment theory in your work with foster families? We would love to hear your thoughts and learn from your experiences!

If there is something you want to share, please feel free to contact our research team at any time:

778-782-4956
Understanding the impact of trauma on development, attachment and behavior in relationships

How has trauma shaped the strategy the child adopts to navigate relationships and the world?

“Seeing” the “attachment suitcase” behind the behavior and helping the child to feel safe with new and different experiences

Developing sensitive caregiving skills that provide –

‘Safe Haven’ (soothing; calming; co-regulation of difficult affect)

‘Secure Base’ (confidence to explore the world and seek autonomy).
NEW RESEARCH
DOES CONNECT WORK THE SAME FOR ALL PARENTS AND TEENS?

TREATMENT

PLASTICITY GENE (E.G. DRD4)

SHORT ALLELE
LARGER TREATMENT EFFECTS

LONG ALLELE
SIGNIFICANT BUT SMALLER EFFECT

CALLOUS-UNEMOTIONAL TRAITS

HIGH CU IN CHILD BUT LOW CU IN PARENT
STRONG EFFECTS

LOW CU IN CHILD BUT HIGH CU IN PARENT
SMALL OR INSIGNIFICANT EFFECTS
WHAT ARE THE PROCESSES THAT ACCOUNT FOR TREATMENT OUTCOMES?

TREATMENT
- PARENT
- YOUTH

MEDIATORS
- PARENT STRESS; PARENT AFFECT REGULATION
- TEEN ANXIETY AND AVOIDANCE

OUTCOMES
- PARENT REDUCED DEPRESSION & RATINGS OF TEEN PROBLEMS
- TEEN REDUCED SYMPTOMS (MAY BE LAPSED EFFECT THAT APPEAR LATER)

OTHER MEDIATORS?
CHANGES IN EVOKED POTENTIAL RESPONSE TO AFFECT (DR. MARIO LIOTTI)
http://connectparentgroup.org/
Thanks to...

Canadian Institutes of Health Research

Maples Adolescent Treatment Centre

Members of the Adolescent Health Lab, Simon Fraser University and Collaborators

For more information go to: [http://adolescenthealth.ca/](http://adolescenthealth.ca/) or contact Marlene Moretti at: moretti@sfu.ca