





Definitions - Expression

- Aggressive displays are:
 - Species-specific
 - Developmental stage dependent





Definitions - Expression



- Indirect (social or relational)
 - No physical contact
 - Facial expressions
 - Gossiping, ostracizing, limiting access of another to resources
 - · Delayed, subtle actions
 - Only form of aggression more common in females than males

Definitions - Antecedents

Reactive Aggression: A Stress Response

- Response to threat or pain
- Fight, flight, freeze
- Impulsive act
- Anger expressed
- Controlled by subcortical limbic circuitry (ventrolateral-medial hypothalamus, amygdaloid nuclei)

Definitions – Antecedents



- Proactive aggression (predatory)
 - Premeditated
 - · No proximal elicitor
 - Reward anticipated
 - Corticolimbic circuitry (dorsolateral hypothalamus, prefrontal cortex)

Definitions - Consequences

- Hostile aggression harm to others with associated pleasure; physical or psychological injury
- Instrumental aggression for reward; attention, gaining an object, resources

Definitions - Research

- Researchers in the field stress the importance of clear definitions of aggression
- Aspects of aggression observed, influences outcomes of studies
- Most major studies are developmental and longitudinal

Typical Development Data from studies from 1920's, 1960's and 1990's in different countries, with different reporting methods, different methodology show same results Frequency of temper and aggressive outbursts increases rapidly from 1 year to 3 years then decreases But, there are more prosocial interactions than physically aggressive interactions

Typical Development: Why are young children aggressive?

"It is a behavior like crying, eating, sleeping, grasping, throwing, and running, which young humans exhibit when the physiological structure is in place, but then learn to control with experience ... this process is called socialization."

Tremblay and



Typical Development: Why are young children aggressive?

- To express an angry feeling
- To get what they want
- Infants less than one year show distress and disengaging cues
- After one year, they interpret others emotions and show more organized protest and selfdefense

Trajectories of Physical Aggression



 Multiple, multinational, longitudinal studies have demonstrated trajectories for the development of physical aggression (PA)



Factors: Genetics Linkage and association studies: contradictory findings, failed replication, aggressive personality trait vs. behaviour Gene-environment studies: 85% of males with low-activity MAOA genotype who suffered severe maltreatment had anti-social behaviour. Caspi et al. 2002



Trajectories of Aggression

- "physical aggression decreases in most children over the course of development
- relational aggression tends to increase.
- This increase may in large part be due
 - that relational aggression often enables the perpetrator to do considerable damage with a relatively low risk of detection and punishment.
 - used by children with advanced cognitive and language skills.
 - does not seem to be related to the same array of future adjustment problems as physical aggression"

Development of Indirect Aggression Before School Entry Mara Brendgen February 2012 http://www.child-encyclopedia.com/aggression/according-experts/development-indirectschool-entry



Trajectories of Aggression



Longterm bullying at school and in the workplace as adults and elder abuse ... ???



Summary

- Physical aggression and antisocial behaviour occur more frequently in males
- Physical aggression in childhood does not predict future adolescent antisocial behaviour in girls, but it does in boys
- But what about relational aggression ...





Summary

- There are two clear trajectories in the development of aggression:
- *High level* continuous from preschool to adolescence
- Low level continuous from preschool to adolescence
- But, there are also examples of late onset conduct disorders, limited to adolescence





- Early genetic influences need to be understood in the context of early relationship and social factors
- Aggressive acts must be understood in the complex human context of harmful behaviour and antisocial behaviour

Summary



- To understand typical changes in the development of aggression, we need to analyze differences between individuals
- To understand individual differences, we need to recognize typical development over lifespan





A Neurorelational Framework for Interdisciplinary Practice

Connie Lillas and

Janiece Turnbull

Framework?





What is the Neurorelational

W.W. Norton, New York, 2009



- A paradigm shift
- A new way to hold complexity
- A new way to help with decision making and targeting the right timing for interventions
- A clinical translation of neuroscience principles
- We collect the same information and use the same evidence-based interventions BUT organize by the 3 steps of the NRF



Evidence-based practice in early childhood:

"a decision-making process that integrates the best available research, evidence with family and professional wisdom and values" Buysee and Wesley, 2006

What is the Neurorelational Framework?



- Encompasses theories & approaches of all disciplines
- Provides relevant core neuroscience knowledge
- Provides "part-to-whole view" for clinicians

































The Ripple Effect: Trauma-Informed Shift

- Shift from , "What's wrong with you?" (bad behavior)
- To a curious and kind attitude, "What happened to you?" J.Foderaro 1991, S. Bloom 1994



Step # 1: How do we identify stress & stress recovery ? Image: Constraint of the stress recovery looks like and who we are at our Best! B. Recognize 3 primary stress responses and who we are at our Worst!

C. Recognize 4 toxic stress patterns

UCB, C. Lillas, © 2014















































Step #1: Aggression Triggers



- A Red Zone stress response may be accompanied by aggression if the duration is long and intensity is severe
- Individual physiological differences in heart rate, cortisol response, and brain electrical activity (EEG)















SE Milestone Language Adapted by Connie Lillas

"Bottom-Up" Processes

Bottom-up = Any behavior that is...

- Automatic & Habitual
- Things we do without thinking
- · Often does not involve the use of words
- Begins at birth
- Dominates the early years
- Not easy to change; can last a lifetime

Step #2B: Recognize "Top-down" Levels

Top-Down (verbal capacities)

- **Level 6** When *reading cues*, able to share feelings with others in pretend play and by talking
- *Level 7* When *sharing feelings,* able to make-sense and to solve problems together

"Top-Down" Processes

Top-down = Any behavior that is...

- Conscious & Effortful
- Things we do with thinking
- Often does involve the use of words









Step #2: Aggression Triggers

• Quality of relationships/attachment:

- High risk infants with disorganized/disoriented attachment classification at 18 months had severe aggression to peers at age 5 and 7 years
- For 7 years olds with severe aggression, 83% had D/D attachment and mental development below the mean at 18 months
- At age 5, only 5% of securely attached children had severe aggression

Lyons-Ruth et al. 1997











Peer relationships:

- 5 10 % of children are rejected by peers chronically
- Aggressive behaviour may lead to rejection and rejection can exacerbate aggressive behaviour
- 50% of friends of aggressive children are aggressive vs. 12% of friends of non-aggressive children (4 – 5 yr olds)
- Best predictor of aggression between 17 42 months: sibling < 2 year age difference (Tremblay et al. 2004)

Boivin, Vitaro & Poulin, 2005



Step #2: Aggression Triggers

Peer relationships:

- Deviancy training: aggressive children's interactions with each other promote more aggressive behaviours; less of a factor in preschool because:
 - Preschool friendships not as stable
 - Preschoolers less rejecting than older kids
 - Aggressive preschoolers respond to adult structure and supervision

Boivin, Vitaro, Poulin, 2005









Regulation: How does the body feel inside?

- bladder/bowel is full or empty
- bowel is moving and passing gas
- heart beat is fast or slow, or steady or jerky
- breathing is fast or slow, deep or shallow
- voice is loud or soft
- body is upside down or right side up
- body is moving or still
- muscles are tense or relaxed

Sensory:

How does the outside world feel?

- Sensory processing happens when the nervous system receives energy from the environment around us and changes it into sensations like:
 - · Hearing sounds
- Vision
- Touch light touch and deep pressure
- Taste and Smell
- Awareness of body in space (proprioception)
- Balance (vestibular)
- Pain

Sensory: How does the outside world feel?



- Sensory modulation happens when the brain balances sensory signals in an appropriate way.
- · Sensory modulation helps us sort out if information coming into our bodies is too much or too little, too long or too short or too fast or too slow.

Relevance:

What meaning is made of emotions?

- Early in development babies are sorting out their inside bodily feelings and outside world sensations to figure out what is important to them and what they will pay attention to over time.
- We develop positive and negative emotions, then we blend emotions and the memories of these emotions help us learn.

Relevance:



- What are my emotions? Happy, sad, angry,
- disgusted, surprised, afraid?
- How are others feeling?
- Are we feeling the same or different feelings?
- What does this emotion and experience mean to me and what does this mean to you?
- Is this emotion going to motivate me or not? Is it important to me?

Executive:

Adaptation to the outside world

- The executive system integrates information from all the other systems.
- It depends on the quality of information it receives from the rest of the brain and body.
- · All this work happens to make sure we achieve our goals and have appropriate social behaviours.
- This part of the brain takes the longest to develop (early twenties).

Executive: Adaptation to the outside world



- The executive system in the brain is like the air *traffic control* centre at a busy airport. It makes real-time, real-world flexible and adaptive actions; what to do, how to do it and when to do it.
- The executive system guides our bodies through complex movements, focuses our attention, organizes our ideas, creates interesting ideas, and manages our emotions.

Step #3: Organizing Individual Differences

How strong or weak are the branches of the tree?

- Assess for Individual Differences & Multiple Causes
- Map out all of the needs across systems of care on a "macro" level
- Map out the individual differences from each brain system on a "micro" level

Step #3



- What are the resilience and protective factors?
- What are the risk factors and needs?

Tools:

- History Worksheets
- Triggers and Toolkits Worksheet











Regulation Triggers

- Genetics discussed previously
- Prenatal Insults
- Neuromodulators
- Hormones
- Health factors



Physical Health Factors

- Sleep
- Diet/Nutrition
- Constipation
- Pain
- Illness







Step #3: Aggression Triggers



Child's mental health challenges:

- Aggression is a symptom across diagnoses
- Aggression is associated with stress
 responses
- Common with ADHD, Tourette's, ASD, OCD ...

Step #3: Aggression Triggers

Parental mental health challenges

- Maternal depression
- Mechanism? Lowered maternal responsiveness and increased irritability

Hay, 2005



Step #3: Aggression Triggers

Parental behaviours:

- Maltreatment
- Coercive parenting: harsh, punitive discipline, controlling, and lack of affectionate behaviour
- Mother's history of antisocial behaviour in adolescence
- Young maternal age

Tremblay et al. 2004



Executive Triggers

- Executive functioning/learning factors
- Language delays/disorder
- Lack of environmental stimulation for early executive functioning
- Expectations for executive functioning inappropriate



Factors: Village



- Poverty/disadvantaged neighbourhoods
- Poor social cohesion/ lack of supportive networks
- Urban
- Cultural variables
- Child welfare system are there enough social supports available to families???





NRF Guiding Principles Assessment is Intervention and Intervention is Assessment The NRF is both an Assessment and an Intervention Process The NRF can be used both sequentially and non-sequentially

NRF Guiding Principles Step [#]1

- Always start at the earliest point in the breakdown.
- This principle applies to all 3 steps. Step #1 is the first Level of Engagement and the first Brain System Regulation.
- You can't solve bottom up problems with top down solutions!



Objectives



1. To review research regarding aggressive behaviour in early childhood

2. To understand early aggressive behaviour in the context of adaptive stress responses and toxic stress and four brain systems

3. To apply evidence based interventions to guide parents to manage aggressive behaviour





- > Challenging behaviors = compliance and noncompliance
- Solved using rewards and punishments
- > Often blame parents



Intervention: Educate Caregivers / Parents



- Meltdowns or aggression are the middle or end of a child's story... not the beginning
- Risks of focusing on the aggression

















Intervention: Build a Toolkit



- After identifying triggers, build a toolkit filled with tools, strategies, items that help to prevent aggression for the child and also regulate the child when triggered.
 - Body / Sensory / Feelings / Thinking



What are some strategies and tools you currently use to prevent aggression and help children regulate after they have been triggered?

Strategies for Preventing Aggression in Young Children

Regulation (Body):

- Physical Activity
- Prevent health triggers
- Minimize rough play at home and in community

Strategies for Preventing Aggression in Young Children

Relevance (feelings) and Sensory:

- Bottom up strategies:
- Model and Practice expressing strong feelings (when in green zone):

* yell into a pillow * punch a pillow * throwing bean bags into a garbage can * push playdough * skip, run or walk * scribble or draw their anger * play in water * blow bubbles * dance * listen to music * other sensory motor expressions of feelings * heavy work

Strategies for Preventing Aggression in Young Children Top Down Relevance Strategies: • Normalize anger & validate feelings • Label! Give children words to express

- Label! Give children words to express
 themselves
- Avoid aggressive toys if aggression an issue (i.e., swords, guns, etc.)
- Modeling and coaching
- Teach children emotion awareness

Strategies for Preventing Aggression in Young Children

Executive strategies:

- Support problem solving skills
- Role play options for conflict resolution
- Provide coaching in the moment
- Social Stories
- Books
- Visuals
- Games

Adults Responding to Children's Aggression

- Maintain green zone = CALM
- Utilize bottom up strategies to calm the child with a time in
- Never ignore aggression
- Be firm but gentle



Challenge Your Community's Assumptions!

Children need co-regulation & scaffolding

- Calm the child's body and mind through your relationship
- > Connect before you correct!
- Use Pyramid Model, PTR and COS strategies

Sam is a 32 month-old boy who was referred to your clinic by his family physician, Dr. Shell, for issues related to aggression. Sam lives with his biological parents, Mike and Cindy and his 6 month-old sister, Beth. Both o£ Sam's parents reported that his tantrums and aggressive behaviours have escalated over the past year and they are struggling to parent him. With regard to the tantrums. Cindy stated that Sam exhibits several explosive tantrums daily that appear to be unprovoked. He will throw things, hit, kick and spit at his parents. In addition, Sam has started pinching and poking at his sister. The family has a dog, Rascal, and Sam is also quite physically rough with him. Mike reported that they find it quite difficult to understand Sam when he speaks which can be quite frustrating for Sam. Cindy stated that Sam's child care centre has reported minor aggression at the centre, but when Sam arrives home, he becomes very dysregulated and often escalates. Mike and Cindy both reported that evenings can be very challenging for the family and it tends to take a long time to settle Sam at bedtime. Sam often does not fall asleep until after 9:30pm and his parents wake him to take him to his child care at

6:30am. His parents report that Sam will often wake up multiple times a night but he can typically fall back asleep within 10 to 15 minutes. Sam no longer naps during the day.

At Sam's recent check-up with Dr. Shell, Cindy voiced concerns with Sam being constipated and somewhat a "picky eater". Otherwise, Cindy reported that Sam is in good health.

Children's Books About Anger and Other Feelings

- The Way I Feel by Cain, Janan.
- Growl Bear by Austin, Martot.
- I Was So Mad by Erickson, Karen.
- Alexander and the terrible, horrible, no good, very bad day by Viorst, Judith
- Sometimes I Get Angry by Watson, Jane Werner.
- When Sophie Gets Angry by Molly, Bang
- When I Feel Angry by Corneila Maude Spelman
- How to Take the GRRRR Out of Anger by Elizabeth Verdick & Marjorie Lisovskis
- Angry Octopus by Lori Lite
- Hands are Not for Hitting by Martine Agassi
- Teeth are Not for Biting by Elizabeth Verdick



Resources and Websites for Therapists



- A Volcano in my Tummy by Eliane Whitehouse
- Seeing Red by Jennifer Simmons
- Emotions Postcards
 <u>https://shop.growinghandsonkids.com/product/emotions-postcards-full-set/ref/22/</u>
- Feeling Stones (homemade)
- Feeling faces in mirrors
- Guess the Emotion
- Make a regulation toolkit with the child





References

- Tremblay, RE, Hartup, WW, Archer, J. (2005) Developmental Origins of Aggression. New York:Guilford Press.
- Cote, et al. (2006) The Development of Physical Aggression from Toddlerhood to Pre-Adolescence: A Nation Wide Longitudinal Study of Canadian Children. J of Abnormal Child Psychology, 34,71-85.
- Dunn, J & Hughes, C. (2001) "I got some swords and you're dead" Child Development, 72, 491-505.
- Hay, DF, Castle, J & Davies, L. (2000) Toddler's use of force against familiar peers: A precursor of serious aggression? Child Development,71,457-467.
- Broidy, L. et al. (2003) Developmental Trajectories of Childhood Disruptive Behaviors and Adolescent Delinquency: A six-Site, Cross-National Study. Developmental Psychology, 39,222-245.
- Caspi, A. et al. (2002) Role of Genotype in the cycle of Violence in Maltreated Children. Science, 297,851-854.



References



- Sameroff et. al. Treating Parent-Infant Relationship Problems. New York, Guilford Press, 2004.
- McMahon and Forehand. Helping the Noncompliant Child. New York, Guilford Press, 2003.
- Landy, S. Pathways to Competence: Encouraging Healthy Social and Emotional Development in Young Children. Baltimore, Paul H Brookes Publishing, 2002.

Fine	ding Your ACE Score	While you were growing up, during your fir	st 18 years o	f life:
 E Swea Act in 	motional Abuse: Did a parent o ar at you, insult you, put you down, n a way that made you afraid that y	r other adult in the household often or very often or humiliate you?or ou might be physically hurt?	Yes No	If yes enter 1
2. Push, Ever	Physical Abuse: Did a parent or , grab, slap, or throw something at hit you so hard that you had marks	other adult in the household often or very often you? or or were injured?	Yes No	If yes enter 1
3. Touci Atter	Sexual Abuse: Did an adult or p h or fondle you or have you touch t mpt or actually have oral, anal, or v	erson at least 5 years older than you ever heir body in a sexual way?or aginal intercourse with you?	Yes No	If yes enter 1
4. No or Your	Emotional Neglect: Did you off ne in your family loved you or thou family didn't look out for each other	en or very often feel that ght you were important or special?or r, feel close to each other, or support each other?	Yes No	If yes enter 1
5. You d Your	Physical Neglect: Did you often didn't have enough to eat, had to w parents were too drunk or high to	or very often feel that ear dirty clothes, and had no one to protect you? take care of you or take you to the doctor if you needed	it? Yes No	If yes, enter 1
6.	Parental Separation: Were you	parents ever separated or divorced?	Yes No	If yes enter 1
7. Ofter Some Ever	Caretakers – Inter Partner Viole n or very often pushed, grabbed, sl etimes, often, or very often kicked, repeatedly hit at least a few minut	nce: Was your mother or stepmother: spped, or had something thrown at her? bitten, hit with a fist, or hit with something hard? es or threatened with a gun or knife?	Yes No	If yes enter 1
8.Ald	coholism: Did you live with anyo who used street drug	ne who was a problem drinker or alcoholic or s?	Yes No	If yes enter 1
9.Me	ental Illness: Was a household m household member	ember depressed or mentally ill, or did a attempt suicide?	Yes No	If yes enter 1
10.	Prison: Did a household memb	er go to prison?	Yes No	If yes enter 1
Now Adve	v add up your "Yes" answer erse Childhood Experiences Study, I	s: iellitti et al.	This is your	ACE Score. 164