

Aggression In Early Childhood: tools for Assessment and Strategies to Help Caregivers

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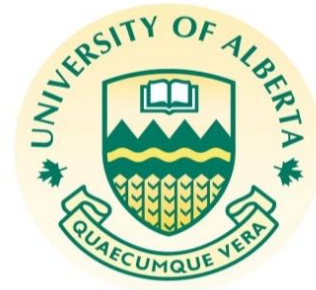
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ElmTree Clinic

NURTURING YOUNG MINDS

ElmTree Psychology



Objectives

- to review current research regarding aggressive behaviour in early childhood
- to understand early aggressive behaviour in the context of adaptive stress responses and toxic stress
- to apply evidence-based interventions to guide parents to manage aggressive behaviour

Case Study

- 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 of 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.

Outline

- Definitions of Aggression
- Integrated Model of Aggression
- Typical Development
- Trajectories of Aggression
- Factors Influencing Development of Aggression
- Summary

Definitions

- Aggression - best defined by an understanding of:
 - Expression
 - Antecedents
 - Consequences

Definitions - Expression

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



Definitions - Expression

- Direct (overt aggression)
 - Physical assault (with an object – stick, rock, bullet, knife; or without – slap, push, punch, kick, bite)
 - Verbal (hostile tone and/or content)



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

Integrated Model

“Aggression is not a behavior, or a set of genes, or a brain mechanism. It is a complex social phenomenon that conveys so many meanings, takes so many forms, results from so many proximal and distal antecedents, and has so many consequences that a universal taxonomy seems an unachievable puzzle.”

Gendreau, P.L. and Archer, J. 2005

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 Nagin, 2005

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 self-defense

Typical Development: Disengaging Cues (NCAST, 1994)



Typical Development

- Use of force less common than other strategies
- More toddlers grab objects held by peers than hitting
- Only a minority use “hard hits”
- Proactive force is uncommon e.g. few children start an interaction by hitting a peer



Hay, 2000

Typical Development

- Variability between individual children in the frequency and intensity of expression of aggression
- Gender differences: at 17 months boys twice more likely to hit another child than girls, longer conflicts with other children (property, dominance)
- *But*, girls from age 2 years show more indirect aggression than boys

Typical Development

- By second year, children show empathy to another's distress, and show an awareness of standards/rules of acceptable behaviour
- By five, children condemn aggression, especially if it is proactive and is physical
- By end of preschool, moral emotions – pride, shame, guilt, empathy
- By age 7 years, explicit and cooperative morality



Typical Development

“The internal process that regulates aggression (in addition to simple fear) seems to be empathy or, perhaps, identification – the ability to *feel the experiences or to adopt the view point* of another, respectively.”

Peterson and Flanders, 2005

- Theory of mind, reflective functioning ...



Typical Development - Play

- Rough-and-tumble play:
 - Mediating and regulating direct physical contact
 - Enjoyment of wrestling, grappling, etc.
- Abstract Play:
 - Attuning to the motivations, emotional reactions, thoughts of others over time

Peterson and Flanders, 2005



Trajectories of Physical Aggression

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

Trajectories of Physical Aggression

- *Low desisting* (31.1%), infrequent use of PA in toddlerhood, virtually no PA by age 11 years
- *Moderate desisting* (52.2%), occasional use of PA in toddlerhood, infrequent use of PA by age 11 years
- *High stable* (16.6%), atypical pattern of frequent and stable use of PA

Cote et al. 2006

Trajectories of Physical Aggression (Cote et al. 2006)

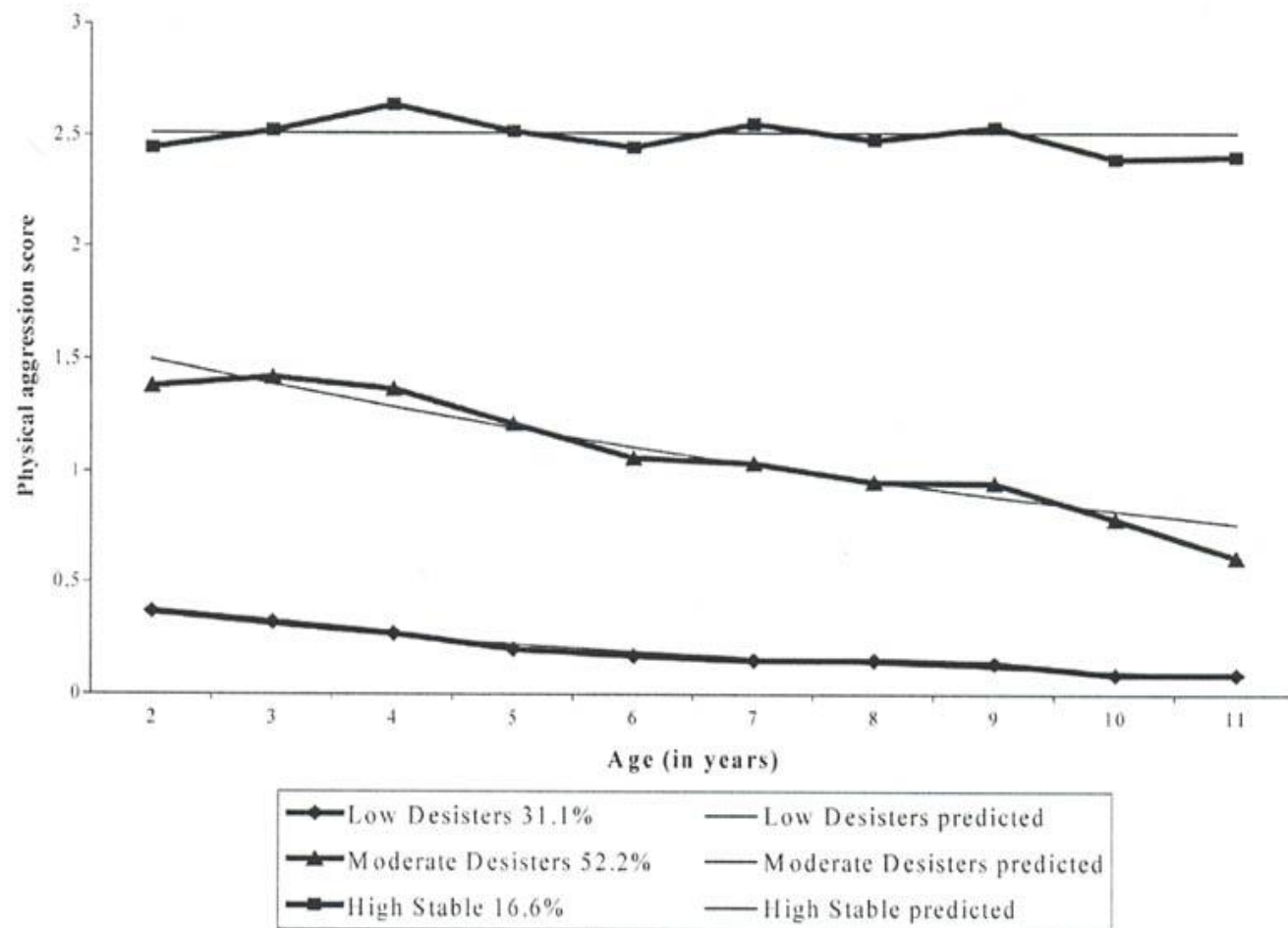


Fig. 1. Trajectories of physical aggression from 2 to 11 years ($n = 10,658$).

Trajectories of Physical Aggression

- Predictors of high PA trajectory
 - Gender (males 2x females)
 - Low family income (poverty)
 - Low maternal education
 - Hostile/ineffective parenting

Cote, et al. 2006

Factors Influencing the Development of Aggression

- **Biological**
 - Genetics
 - Prenatal Insults
 - Neuromodulators
 - Hormones
 - Temperament

Factors Influencing the Development of Aggression

- **Psychological**
 - Attachment
 - Executive Functioning
 - Language development
 - Play

Factors Influencing the Development of Aggression

- **Social**
 - Parental mental health challenges
 - Parental behaviour
 - Daycare/School
 - Peer Relationships
 - Village

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

Primate Research – Suomi

- **5 –10%** of monkeys exhibited impulsive behaviour/ social incompetence
- Also had lower CSF 5-HIAA concentration
- Wild monkeys with low CSF 5-HIAA turned rough and tumble play into serious aggression



Primate Research – Suomi

- In adolescence, consumed more alcohol
- Males, fewer survive to adulthood, avoided by most females
- Females have abnormal maternal behaviour & their infants have abnormal attachment (insecure or disorganized)

Primate Research – Suomi

Gene-environment Interactions:

- **Mother-rearing *protects*** individuals with gene for low CSF 5-HIAA
- Peer-reared individuals with gene have much *lower* CSF 5-HIAA
- Nursery-reared monkeys with gene showed deficient measures of attention, activity and motor maturity vs normal dev. without gene
- **Competent mother-reared monkeys with and without gene had normal development**





Factors: Prenatal Insults

- Toxins: affect differentiation of neurotransmitter systems, cell function, migration and neuronal growth
 - Cocaine
 - Alcohol
 - Marijuana
 - Cigarettes
- Malnutrition, low iron
- Frontal lobe lesions

Factors: Temperament

- Self-regulation of emotions and behaviour
- Sensory processing/modulation capacities
- Physiological differences in heart rate, cortisol response, and brain electrical activity (EEG)

Factors: 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

Factors: Executive Functioning

- Self-regulation of thought, action and emotion (prefrontal cortex)
- Do aggressive children fail:
 - To represent problems adequately?
 - Plan or think ahead properly?
 - Use the rules?
 - Learn from negative consequences?



Seguin and Zelazo,

Factors: Language Development

- Longitudinal studies indicate boys with language deficits 4x more likely to be anti-social than controls, 10x more likely than girls with language deficits
- For boys and girls at 18 and 30 months, >85%tile for vocabulary, lower aggression and higher prosocial skills



Dionne, 2005

Factors:

Parental mental health challenges

- Maternal depression at 3 months associated with violence at age 11 years, especially if mother depressed once later
- Mechanism? Lowered maternal responsiveness and increased irritability



Hay, 2005

Trajectories of Aggression

- “children do not need to learn to use physical aggression from their environment,
- they rather learn not to use physical aggression
- this learning occurs through various forms of interactions with their environment,
 - such as being hurt in an attempt to aggress someone and being reprimanded by adults,
 - but also through play-fighting and indirect aggression.

The Development of Physical Aggression

Richard E. Tremblay *January 2012*

<http://www.child-encyclopedia.com/aggression/according-experts/development-physical-aggressionrev.ed.>

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-indirect-aggression-school-entry>

Trajectories of Aggression

*Does early relational aggression
lead to ...*

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

Factors: Parental Behaviour

- Maltreatment – highly associated with future aggression
- Coercive parenting: harsh, punitive discipline, controlling, and lack of affectionate behaviour
- Maternal coercive parenting at age 5 months predicted stable high trajectory of aggression from 17 – 42 months
- Mother's history of antisocial behaviour in adolescence, young maternal age

Tremblay et al. 2004

Factors: Parental Behaviour

- Family Violence/Dysfunction – Mechanisms for aggression of child to mother:
 - Angry & blames mother for suffering
 - Reenacts aggressive scenes
 - Identifies with perpetrators of violence (mother or father)
 - Over-attribution of hostile intent of others
 - “Aggression works”
 - Defensive response to fear and vulnerability

Lieberman and Van Horn, 2005



Factors: Daycare/Preschool

- Amount of time spent being cared for by someone other than the mother, “modest but significant effect on externalizing behaviour”
- What dimensions of childcare foster aggression?
 - Do childcare workers intervene effectively in quarrels between children?
 - Are there effective consequences for aggression?
 - What are the effects of peers?

NICDH Early childcare Research Network, 2003

Factors: Daycare/Preschool

- But, for high risk families – daycare resulted in less aggressive behaviour in 2 - 3 year olds, Borge, et.al. 2004
- Quality of daycare is important – child-staff ratio and staff qualifications



Factors: Peers

- 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

Factors: Peers

- 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



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???



Summary

- Physical aggression and antisocial 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

Summary

- 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



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