

AGGRESSION

Development of Physical Aggression from Early Childhood to Adulthood

Kate Keenan, PhD

University of Chicago, USA

January 2012

Introduction

Preschoolers who have not successfully developed age-appropriate strategies for regulating aggressive behaviour are at high risk for engaging in chronic aggressive and antisocial behaviour. Aggression co-occurs with several common problems in early childhood including impulsivity, emotion dysregulation and language delays. Exactly how these other problems interact with aggression is still under investigation. Aggression may be worsened by these co-occurring problems in some children. In other children, deficits in these other areas of functioning may have preceded the difficulties with aggression.

Subject

Major developments in cognitive and social-emotional domains occur during early childhood. Regarding cognitive development, the emergence of increasingly sophisticated verbal skills, self-awareness and goal-directed behaviour contribute to a strong push for independence on the part of the child. Simultaneously, parents begin to impose rules and limits, both in response to the

child's newfound autonomy and as a natural part of the socialization process. Clashes between the child's self-assertions and a parent setting limits lead to more frequent episodes of frustration and upset. Thus, some aggressive behaviour in response to frustration is fairly common early in life. Emerging skills appear to influence the trajectory of early aggression. For example, a child's increasing ability to regulate attention and negative emotions, inhibit impulsive responding, and draw on social communication to resolve conflict or express needs provide a foundation for utilizing behaviours other than aggression in response to frustration, anger, fear, etc. Assessing a child's developmental skill set is important for determining whether delays in other areas of functioning should be addressed.

Problems

Defining atypical aggression during the preschool years has been controversial.¹ This is in part because of the fear of using labels or concepts that are developmentally inappropriate. Aggression has been broadly defined in the developmental and abnormal psychology literature,² resulting in a set of behaviours that range from typical and adaptive to atypical and maladaptive. We now know that young children who are manifesting high levels of aggression are at high risk for continued problem behaviour and are in need of services. Aggressive behaviour, however, can reflect deficits in a number of areas and can be exacerbated by co-occurring problems. For example, delays in language development may impede communication of needs, impair the socialization of empathy and emotion regulation, and negatively impact peer relations. In fact, reducing problems with aggression in the context of a developmental delay would require interventions targeted at the delay, not simply at reducing the aggressive behaviour.

Key Research Questions

Aggressive behaviour emerges early,³ and even these early forms can persist and become problematic.² Moreover, high levels of aggression occurring as early as the toddler period, is predictive of later disruptive behaviour disorders.⁴ As a result of these findings, a greater appreciation has been developed for the capacity of studies of chronic aggression in young children to inform research on the causes of serious aggression. The first five years of life is a period during which deficits emerge that may be critical to establishing a foundation for persistent aggressive behaviour.⁵ Multiple domains of functioning likely influence the course of aggressive behaviour including dysregulated emotion, inattention, impulsivity and other developmental delays, particularly in the domain of social communication. Characterization of

problems that co-occur with aggression is a key research agenda.

Recent Research Results

Recently data have been accumulating that demonstrate longitudinal associations between early aggression and deficits in emotion regulation, impulsivity and hyperactivity, and language development.

Emotion dysregulation can be assessed as early as the first year of life via observations or questionnaires. In a small longitudinal study, maternal reports of infant distress on a temperament measure at 6 months were associated with ratings of aggressive behaviour at age 2½ years.⁶

Dysregulated emotion assessed during the toddler period was independently associated with aggression during preschool.⁷ Moreover, the combination of these characteristics accounted for stability of toddler to preschool aggression: a significant relation existed between toddler aggression and preschool-age aggression only for those toddlers who were least able to regulate their emotions.

Deficits in impulse control and problems with overactivity also can be measured relatively early in life. Often, however, the impact of such behaviours on young children's functioning is not fully realized until they are in a school environment. Ostrov and Godleski⁸ asked teachers to rate impulsivity and hyperactivity and conducted observations of aggression in a sample of preschool girls and boys. They found that teacher ratings of impulsivity and hyperactivity in the beginning of the school year were associated with observed physical aggression four months later, even after controlling for the level of aggression observed earlier in the school year. Therefore, problems with impulsivity and hyperactivity appear to increase the likelihood that aggressive behaviour will continue.

Finally, language development had been examined as both a consequence and a predictor of aggressive behaviour. Seguin and colleagues⁹ found that children who engaged in high levels of aggression from 17-41 months were more likely to have language delays as preschoolers than their peers. An observational study of preschool boys with and without language impairments demonstrated that boys with language problems were more likely to engage in aggression during conflicts and had more difficulty re-engaging in play after an aggressive conflict.¹⁰

Research Gaps

Two areas of research are still in early stages of development. The first is the understanding sex differences in early aggression. Numerous studies demonstrate sex differences in the continuity of early aggression.¹¹ Research on sex differences in the characterization of co-occurring problems with aggression will contribute to the ability to propose causal models of chronic aggression across development. One example of such a study is by Hill and colleagues¹² of more than 400 preschool girls and boys from ages 2-5 years. Poor emotion regulation and inattention at age 2 were important predictors of chronic and clinically significant levels of aggression and defiance for girls, whereas inattention was a predictor for boys.

The second area is identifying subgroups of aggressive children who demonstrate specific patterns of co-occurring behaviours and corresponding alterations in biological systems. For example, heart rate and skin conductance have been used to differentiate subtypes of aggression that demonstrate different patterns of co-occurring problems in older children.¹³ Testing such hypotheses in younger children may help disentangle whether the autonomic arousal is a cause or an effect of aggression.

Conclusions

Aggression develops early in life and in most cases demonstrates a gradual decline over the first five years of life. Most children learn to inhibit aggressive behaviours, by drawing on other skills that emerge during that time. Some young children engage in aggression that is pervasive, frequent and severe. Aggression that emerges and persists during the first five years of life is impairing and associated with later mental disorders, poor social outcomes, and accumulation of deficits. Other areas of problem functioning are more likely to occur in the context of persistent and high aggressive behaviour including language problems, impulsivity, hyperactivity, poorly regulated negative emotions and defiance. Although the direction of effect (i.e., which problem came first) isn't yet known, the co-occurrence argues for a comprehensive assessment of developmental functioning when concerns about early aggressive behaviour arise.

Implications

Although the first five years of life is a period of risk for the development of persistent problems with aggression, this same period can be viewed as the optimal opportunity for supporting the development of emotional and behavioural regulation and communication to increase the

probability of healthy social development. Developmental progression along cognitive, emotional, behavioural and social domains should be assessed systematically and regularly throughout the first five years of life. Because of the interrelatedness of each of these domains on the acquisition of prosocial skills, delays in one dimension could affect development in others, resulting in an accumulation of deficits. The encouragement of use perspective taking, emotion and behavioural regulation, delay of gratification, and effortful control are associated with declines in aggression. Therefore, significant delays or deficits in the basic psychological processes that support these areas of growth will impede the normal decline in aggression observed over the first five years of life. Any effective intervention for aggression will require an assessment of deficits across domains, and additional supports to address such deficits.

References

1. Campbell, S. B. (1995). Behavior problems in preschool children: A review of recent research. *Journal of Child Psychology and Psychiatry*, 36, 113-149.
2. Tremblay, R. E., Japel, C., Perusse, D., Boivin, M., Zoccolillo, M., Montplaisir, J. & McDuff, P. (1999). The search for age of "onset" of physical aggression: Rousseau and Bandura revisited. *Criminal Behavior and Mental Health*, 9, 8-23.
3. Landry, S. & Peters, R.D. (1992). Toward an understanding of a developmental paradigm for aggressive conduct problems during the preschool years. In R.D. Peters, R.J. McMahon & V.L. Quinsey (Eds.), *Aggression and violence throughout the life span* (pp. 1-30). Newbury Park: Sage Publications.
4. Keenan, K., Shaw, D.S., Delliquadri, E., Giovannelli, J. & Walsh, B. (1998). Evidence for the continuity of early problem behaviors: Application of a developmental model. *Journal of Abnormal Child Psychology*, 26, 443-454.
5. Keenan, K. (2001). Uncovering preschool precursors to problem behavior. In R. Loeber & D.P. Farrington (Eds.), *Child delinquents*, (pp 117-136), Newberry Park, CA: Sage Publications, Inc.
6. Crockenberg SC, Leerkes EM, Bárrig JÓ PS. (2008). Predicting aggressive behavior in the third year from infant reactivity and regulation as moderated by maternal behavior. *Development and Psychopathology*, 20, 37-54.
7. Rubin, K.H., Burgess, K.B., Dwyer, K.M. & Hastings, P.D. (2003). Predicting preschoolers' externalizing behaviors from toddler temperament, conflict, and maternal negativity. *Developmental Psychology*, 39, 164-76.
8. Ostrov, J.M. & Godleski, S.A. (2009). Impulsivity-hyperactivity and subtypes of aggression in early childhood: An observational and short-term longitudinal study. *European Child & Adolescent Psychiatry*, 18, 477-83.
9. Séguin JR, Parent S, Tremblay RE, Zelazo PD. (2009). Different neurocognitive functions regulating physical aggression and hyperactivity in early childhood. *Journal of Child Psychology and Psychiatry*, 50, 679-87.
10. Horowitz L, Westlund K, Ljungberg T. (2007). Aggression and withdrawal related behavior within conflict management progression in preschool boys with language impairment. *Child Psychiatry and Human Development*, 38, 237-53.
11. Keenan, K. & Shaw, D. (1997). Developmental and social influences on young girls' early problem behavior. *Psychological Bulletin*, 121, 95-113.
12. Hill, A.L., Degnan, K.A., Calkins, S.D. & Keane, S.P. (2006). Profiles of externalizing behavior problems for boys and girls across preschool: The roles of emotion regulation and inattention. *Developmental Psychology*, 42, 913-28.

13. Scarpa, A., Haden, S.C. & Tanaka, A. (2010). Being hot-tempered: autonomic, emotional, and behavioral distinctions between childhood reactive and proactive aggression. *Biological Psychology*, 84, 488-96.