

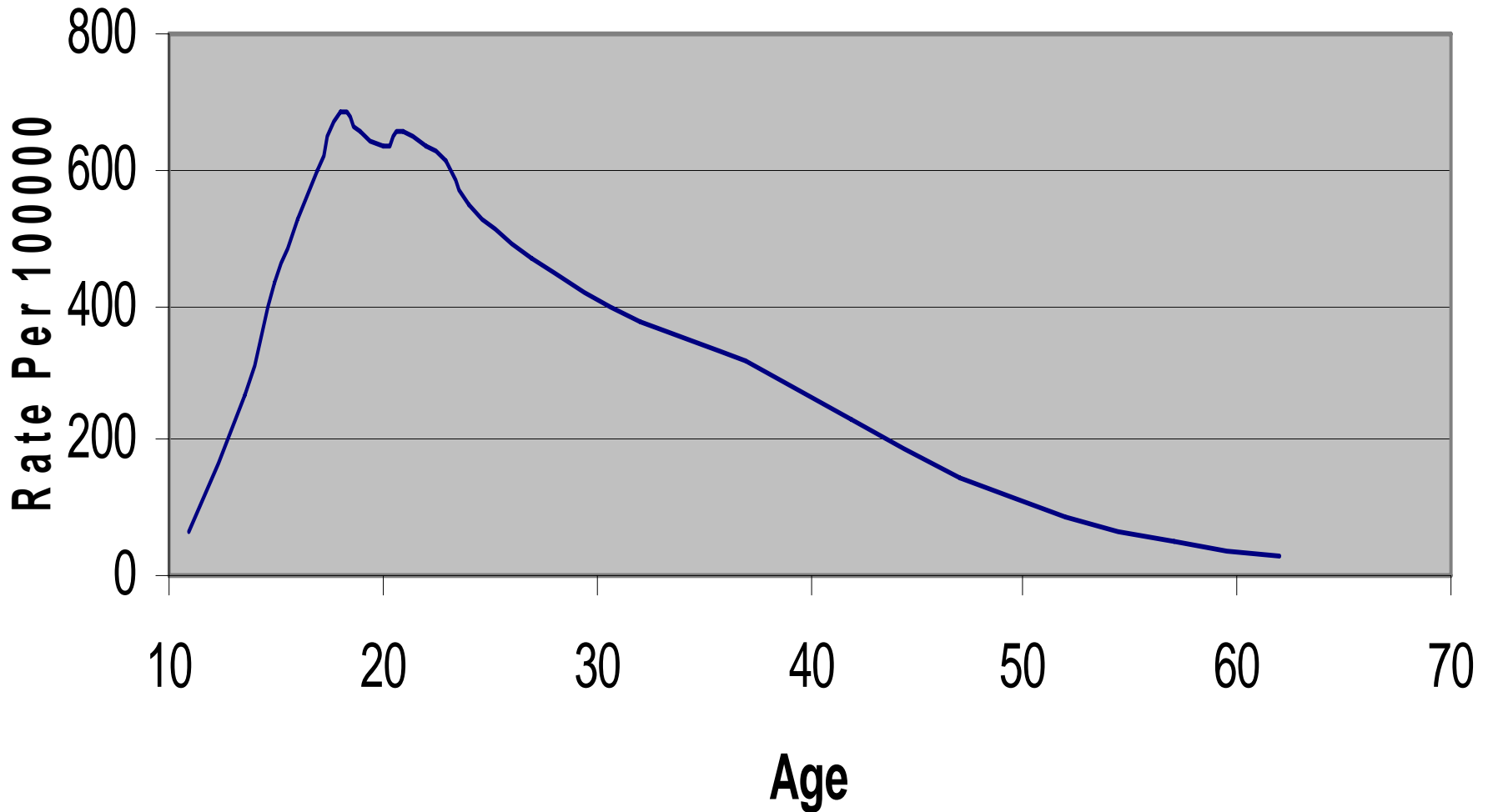
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# The Developmental Course of Physical Aggression

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Daniel S. Nagin  
Carnegie Mellon University  
(and Richard E. Tremblay  
University of Montreal)

# U.S. Violent Crime Arrest Rate by Age (2001)



# THE TWO PATHS.



The boy who avoids alcoholic drinks will become studious and virtuous.

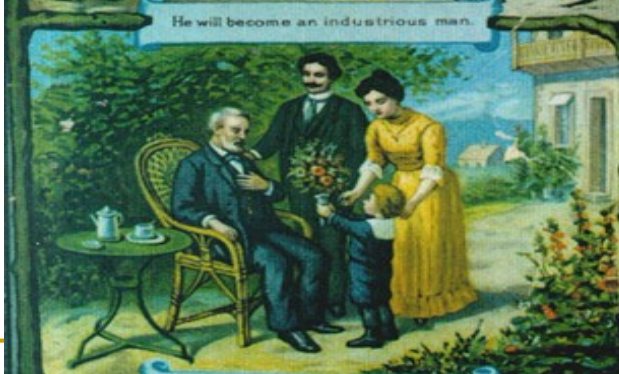
The boy who indulges in alcoholic drinks will become idle and vicious.



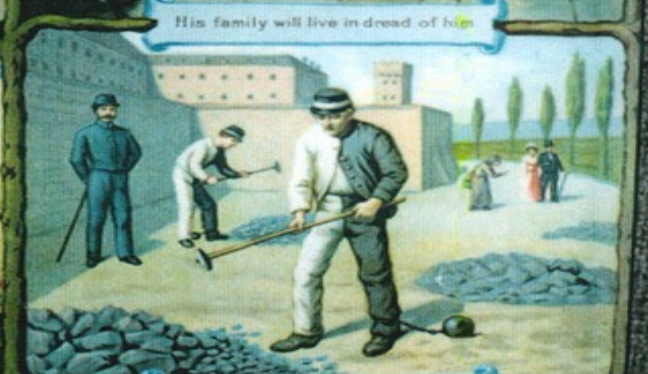
He will become an industrious man.



His family will live in dread of him.



He will be the joy of his family and will experience happiness in his old age.



And he will end in prison.

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# Understanding the Developmental Course of Physical Aggression

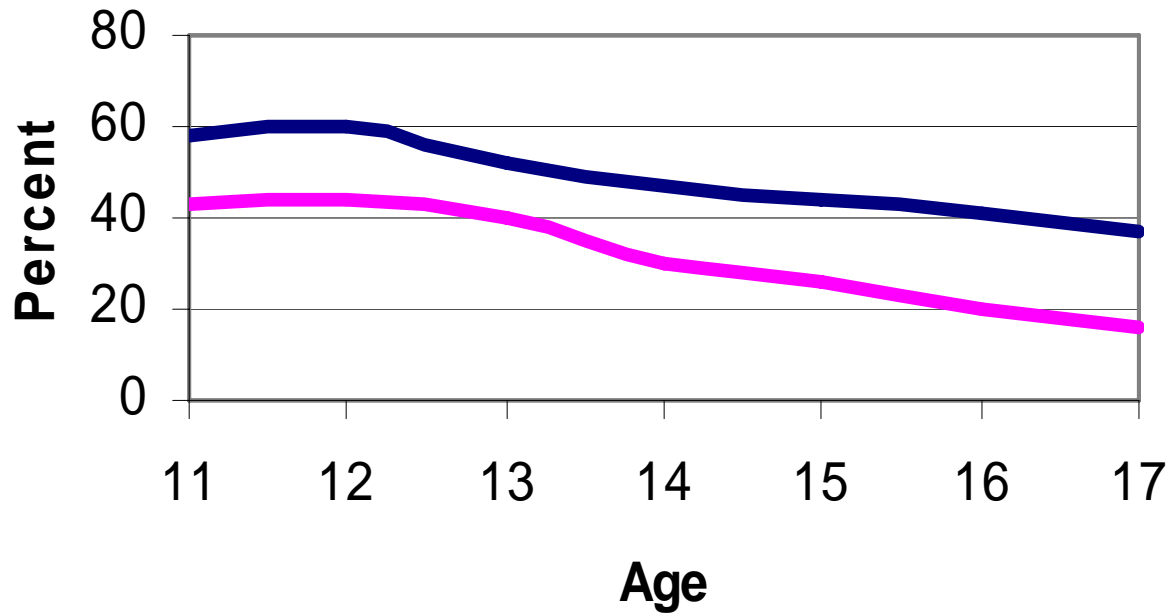
- Physical aggression is not a learned behavior. Rather it is behavior we must learn to control.
  - Late onset violence is the exception not the rule
  - Trajectories of physical aggression general decline from early childhood onward
  - The small group of individuals who do not learn to regulate their physical aggression in childhood have greatly elevated rates of violence as adolescents and young adults
  - “An ounce of prevention is worth a pound of cure”
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# Montreal Data

- 1037 Caucasian, francophone, nonimmigrant males
  - First assessment at age 6 in 1984
  - Most recent assessment at age 24 in 2002
  - Data collected on a wide variety of individual, familial, and parental characteristics including self-reported violent delinquency in adolescence and teacher ratings of physical aggression in childhood
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# Violence as a percentage of total delinquency and of violent & property delinquency from age 11 to 17



— % of Violence & Property

— % of Total Delinquency

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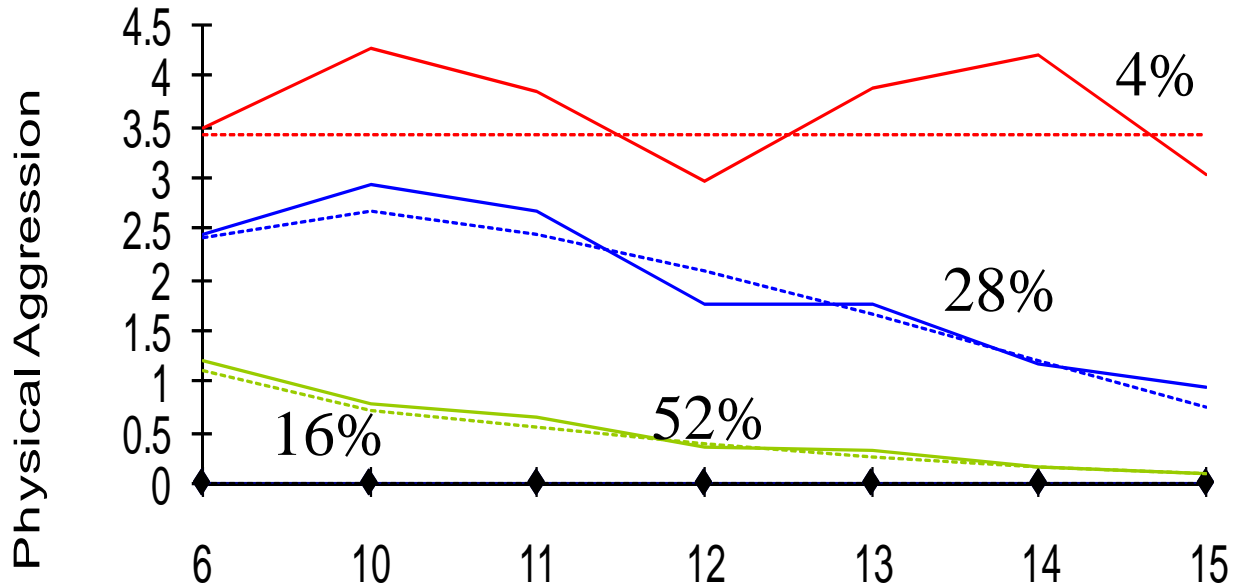
# What is a trajectory?

A trajectory is “the evolution of an outcome over age or time.” (p.1)

Nagin. 2005. *Group-Based Modeling of Development*, Harvard University Press

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# Trajectories of Physical Aggression



◆ Low-actual

— Mod. desister-actual

— High desister-actual

— Chronic-actual

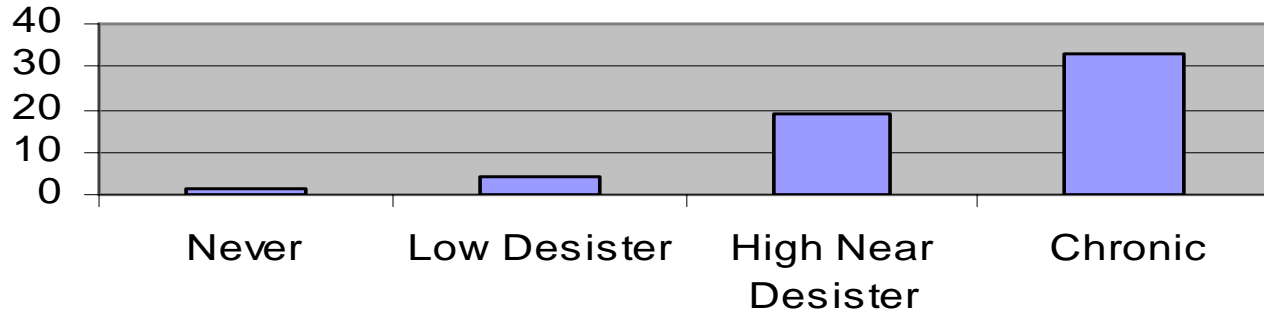
◆ Low-pred.

- - - Mod. desister-pred.

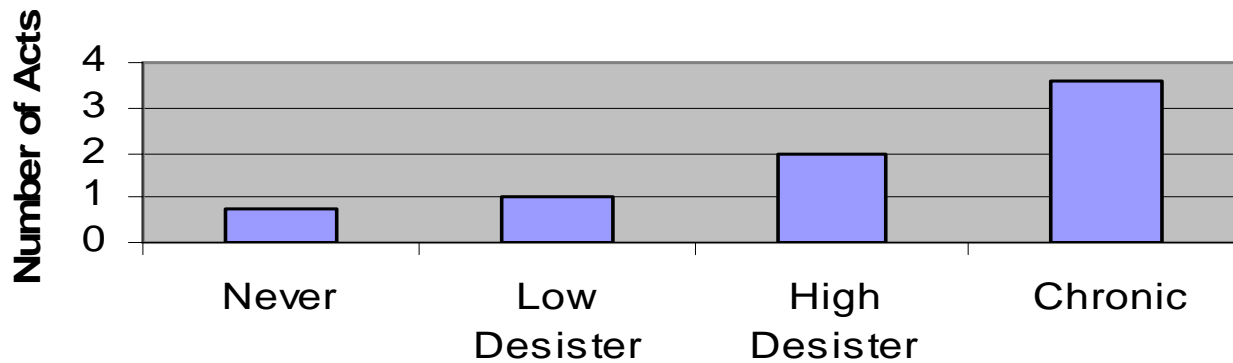
- - - High desister-pred.

- - - Chronic-pred

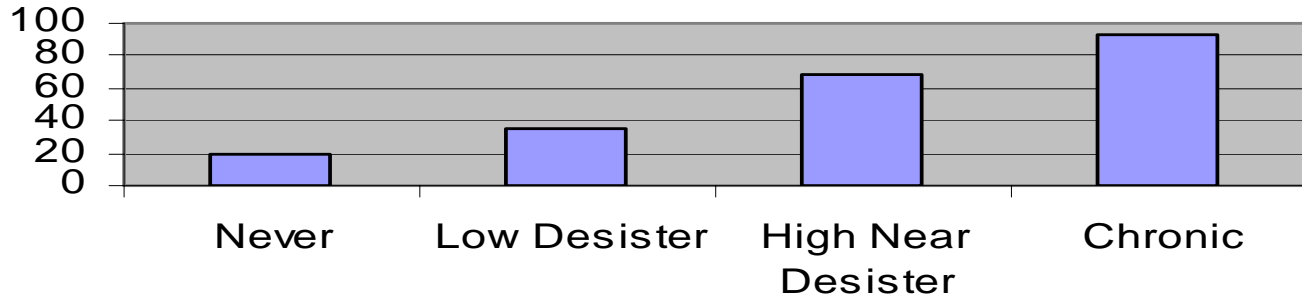
Percent with a Juvenile Record by Age 17 by Childhood Physical Aggression



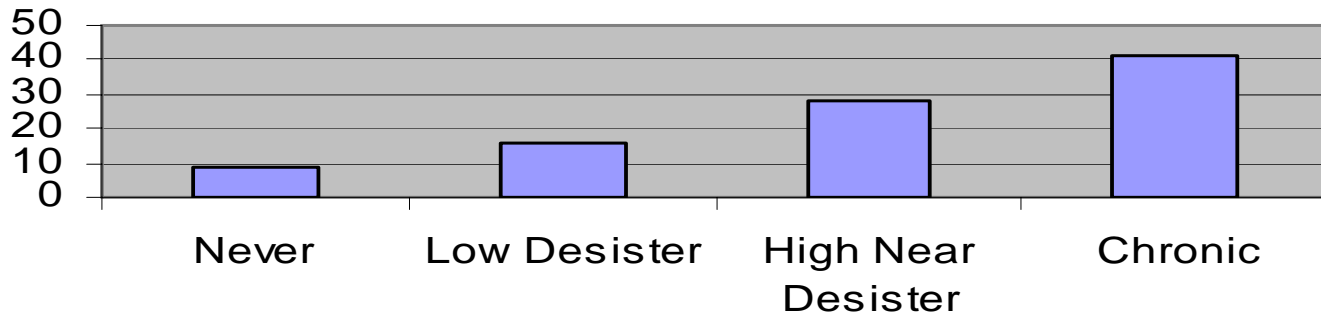
Self Reported Violence at Age 17 by Physical Aggression Trajectory Group



Percent Behind Grade Level by Age 14 by Childhood Physical Aggression



Percent Sexually Active by Age 13 by Childhood Physical Aggression



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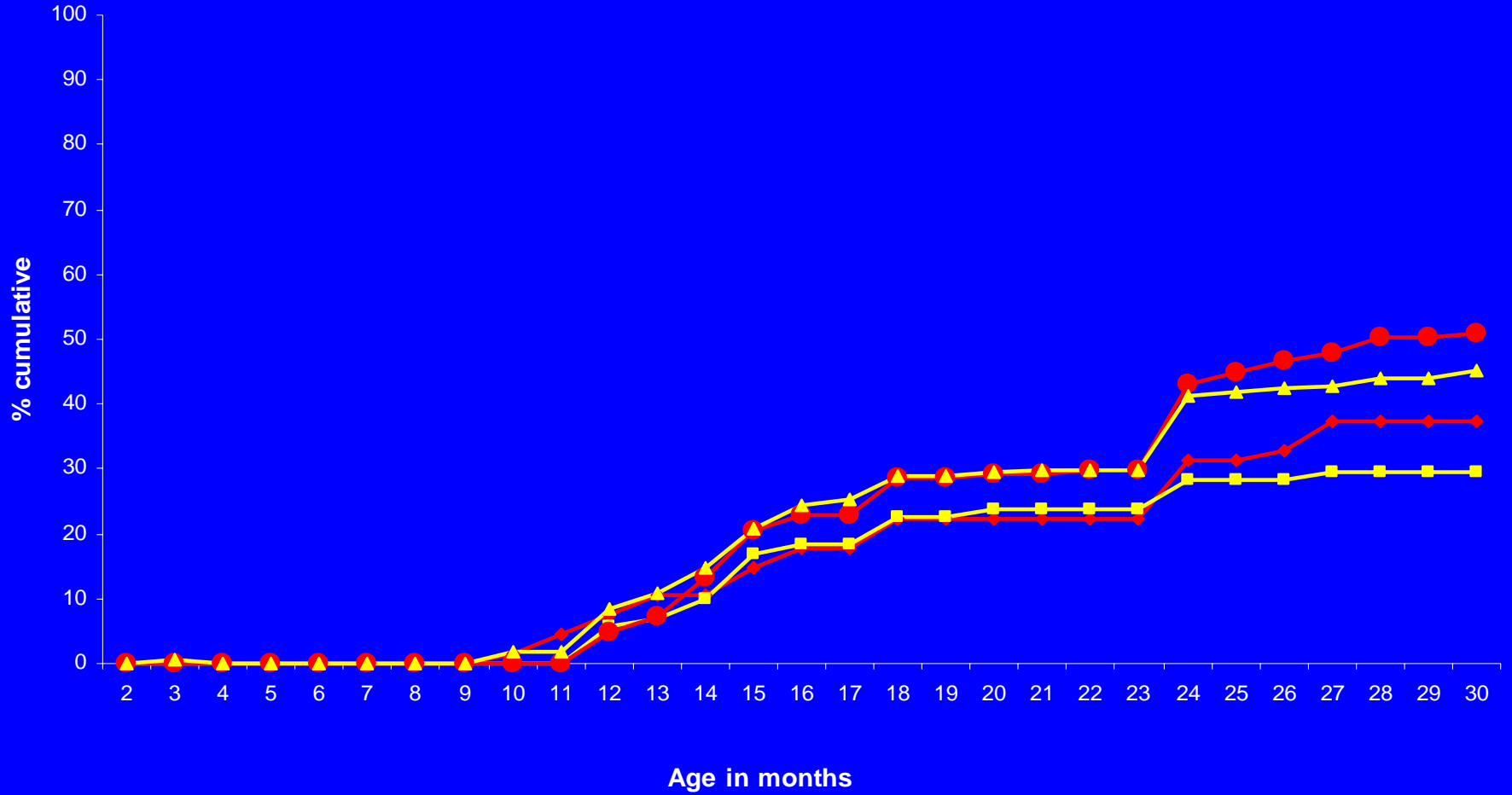
*He who considers things  
in their first growth and origin...  
will obtain the clearest view of them.*

*Aristotle, Politics, Book 1 chap 2*

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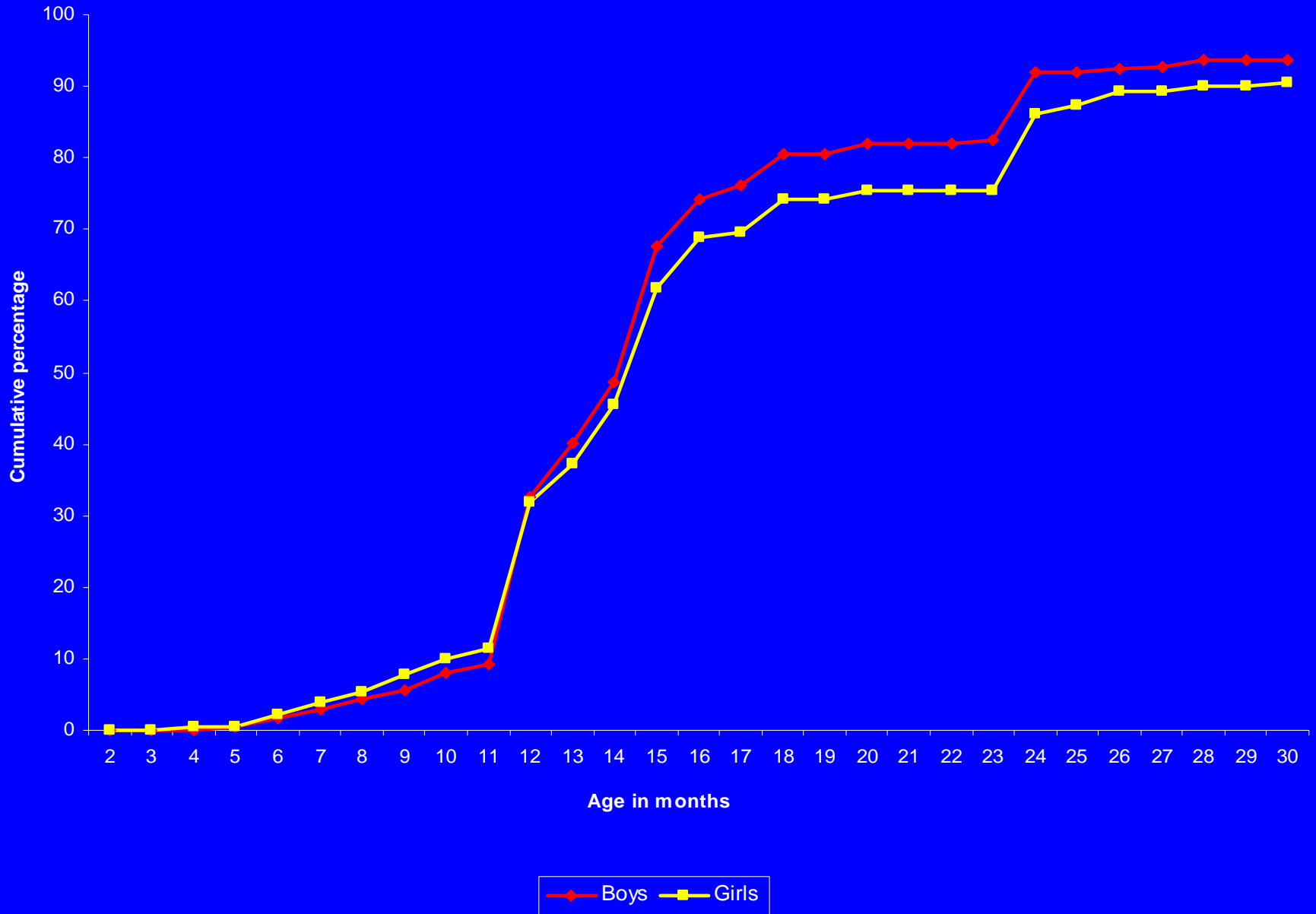
# Physically attacks others



Boys no sib   Girls no sib   Boys sib   Girls sib

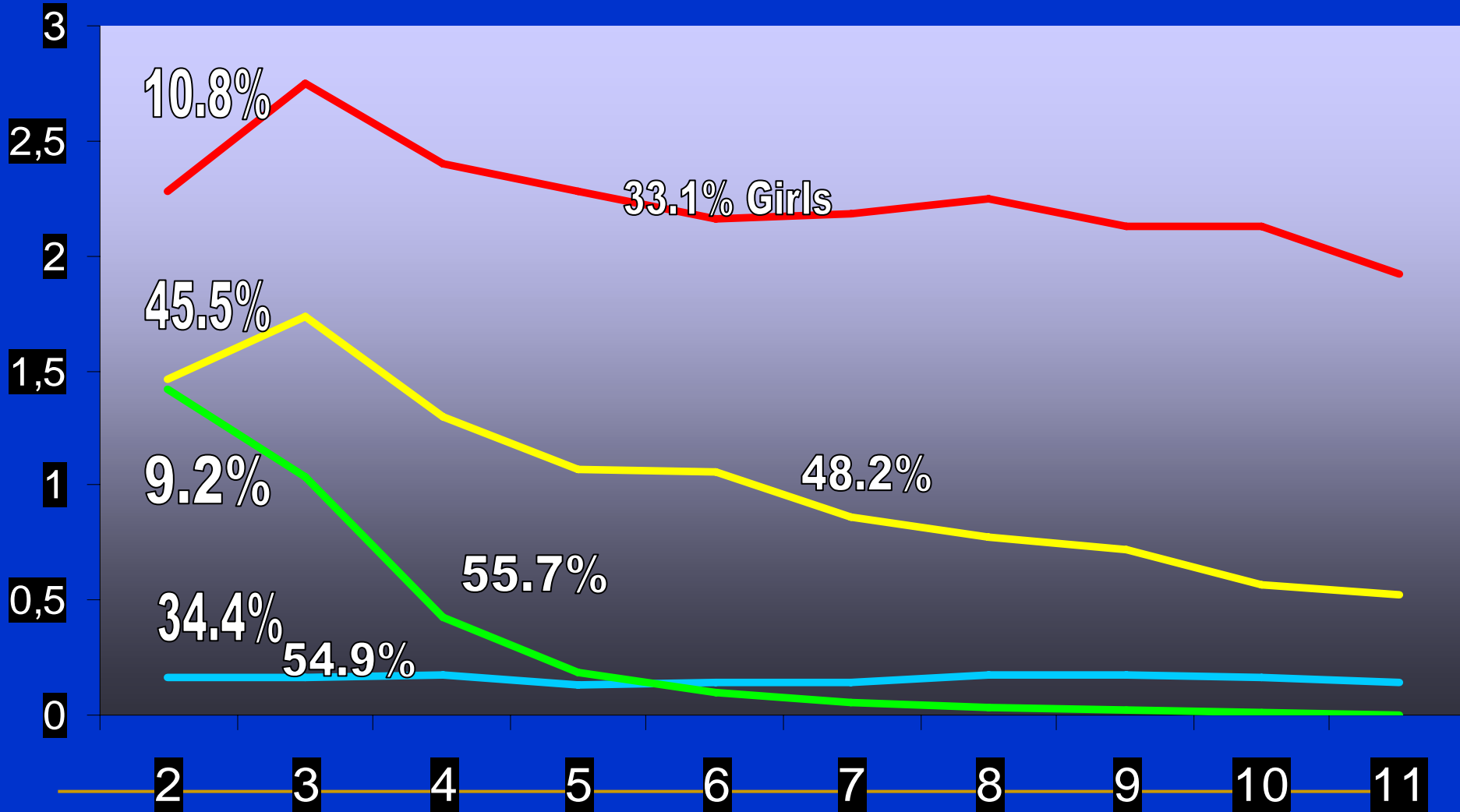


## Takes away things from others

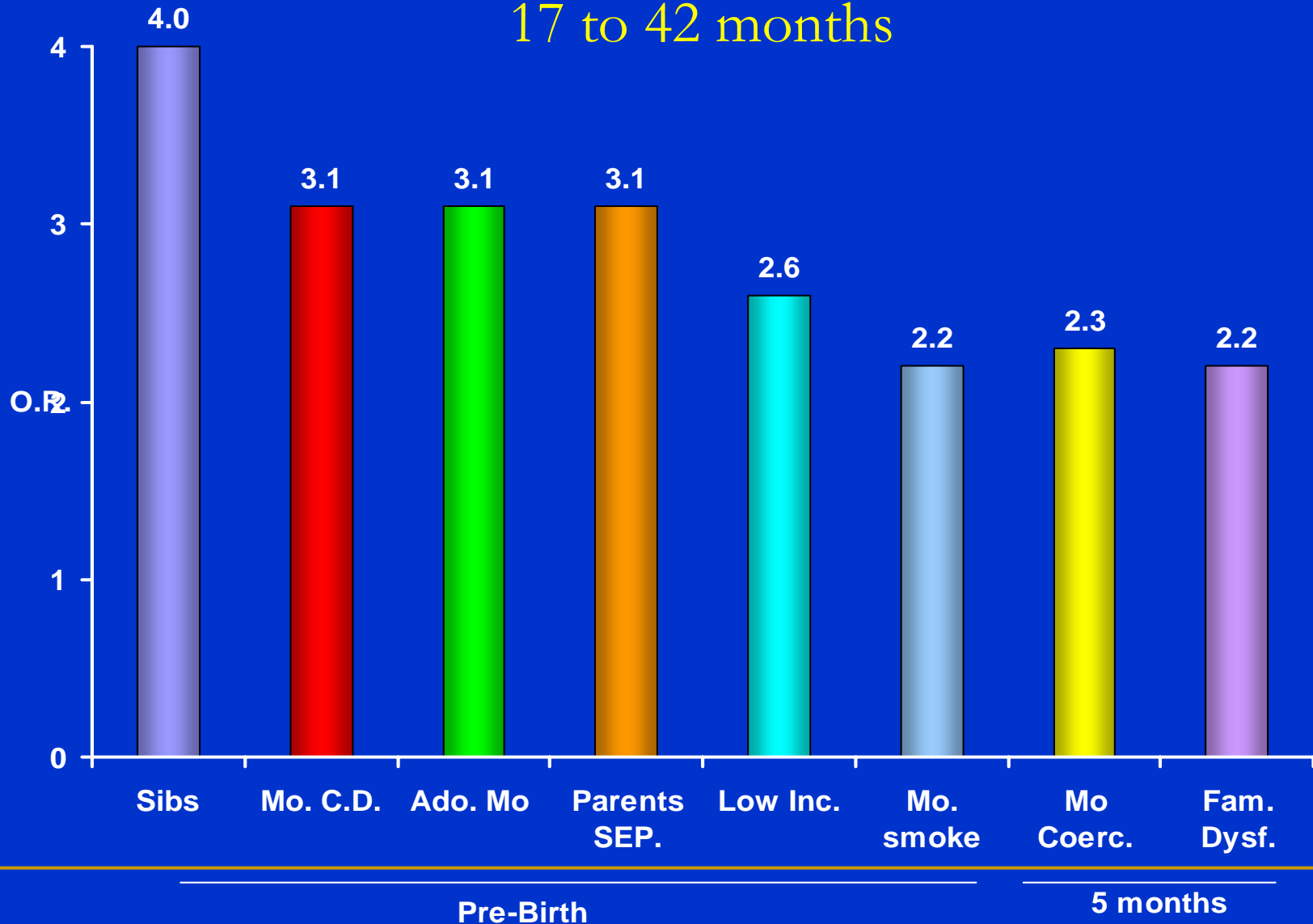


# Physical Aggression Trajectories

Côté et al. (2003)



# Predictors of High Physical Aggression Trajectory 17 to 42 months



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# Impacts of Research

- Group-based trajectory modeling widely applied in medical, psychological, criminological, and sociological research
  - Spawned the Quebec's "Support to Young Parents" Program
    - Support to high risk mothers
    - During pregnancy-support health behaviors & stress management
    - Post-pregnancy support to parenting programs
  - Counterpart programs launched in Dublin and Paris
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