

Normative Developmental Patterns of Violent and Aggressive Behaviours from Age 7 to 24

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A Book



A book “that shall not be mentioned” (Amy Nivette and J.K Rowlings)

- **Contextualise** z-proso in a specific moment in space and time.
- **Capitalise** on the about 140 z-proso publications.
- **Focus** on violence and aggression.
- **Accessible** to a non-specialist audience.
- **Implications** for policy and practice.

- **Ch2: Describe** the overall patterns over the life-course.

At what age are we most violent and aggressive?

A rush through theory

What do we mean by Aggression and Violence?

Aggression: behavior intended to cause physical, psychological or social harm to another person.

Violence: specifically involves the **use of physical force** with the potential to cause injury, death, or severe harm.

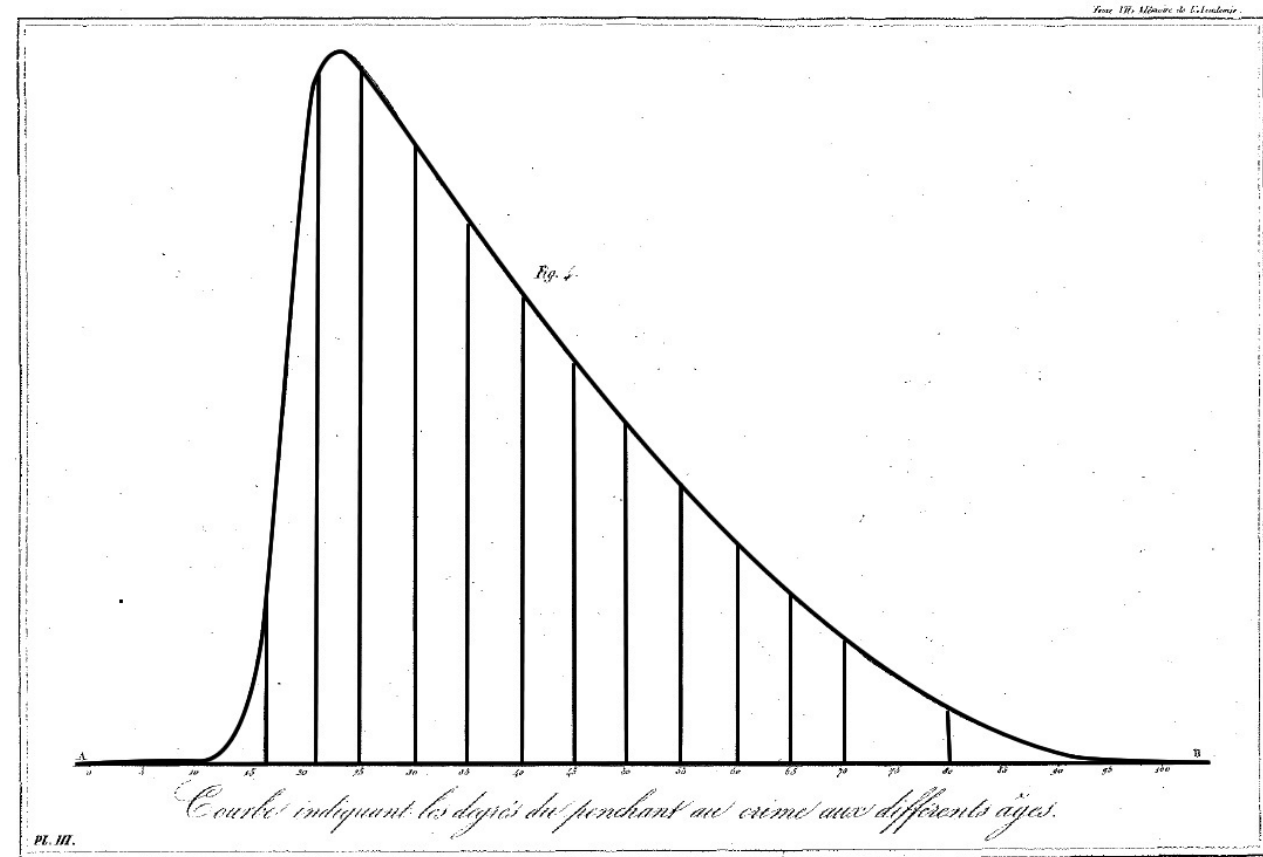
Violence peaks at age 25 years!

Adolphe Quetelet, 1831

“It is around the age of twenty-five that the propensity to crime reaches its highest point; once his physical powers are fully developed, man turns them more often against persons.”

[....]

“The intellectual and moral development, which unfolds more slowly, subsequently dampens the propensity for crime, which then declines later further due to the weakening of physical strength and passions.”



Quetelet, A. (1831). *Recherches sur le penchant au crime aux différents âges*. Bruxelles: M. Hayez.

Physical aggression peaks at age 25 months!

Richard Tremblay, 2004

“The peak age for physical aggression was not during early adulthood, adolescence, or even kindergarten, but rather between 24 and 42 months after birth.”

“The diminishment of physical aggression in toddlers occurs as they attain certain new skills, such as use of language, to help them communicate their frustration more constructively and better manage their emotions.”

- Aggression is universal early in life.
- The decline is tied to gains in language, self-control, and social problem-solving.
- Persistent violence is pathological.

Tremblay, R. E. (2004). Development of physical aggression during infancy. *Infant Mental Health Journal*, 25(5), 399-407.

Tremblay, R. E. (2008). *Early learning prevents youth violence: Prévenir la violence par l'apprentissage à la petite enfance*. < bound method Organization. get_name_with_acronym of< Organization: Canadian Council on Learning>>.

Violence peaks at age 14-17 years!

E.g. Steinberg, Moffit, Farrington, Loeber, Sampson and Laub)

Neuro-developmental Frameworks

“The increase in reward seeking at puberty, coupled with immature self-regulatory competence, creates a period of heightened vulnerability to risk taking during middle adolescence.”

Steinberg, L. (2008). *A social neuroscience perspective on adolescent risk-taking*. *Developmental Review*, 28(1), 78–106.

Sociological Frameworks

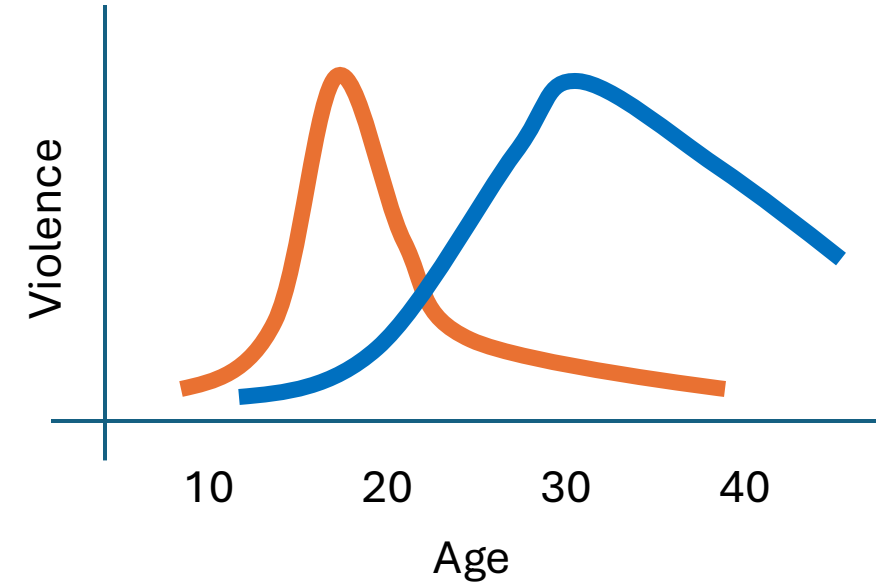
“During adolescence, many individuals experience weakened bonds to the family and to school while they are not yet embedded in the stabilizing contexts of work and family formation.”

Sampson & Laub (1993), *Crime in the Making: Pathways and Turning Points Through Life*, Cambridge, MA: Harvard University Press, p. 253.

Violence peaks at different ages between societies

Darrell Steffensmeier, 2025

- ... age-graded expectations,
- ... social control practices,
- ... age-structured opportunities and stressors,
- ... lifestyle differences across life stages,

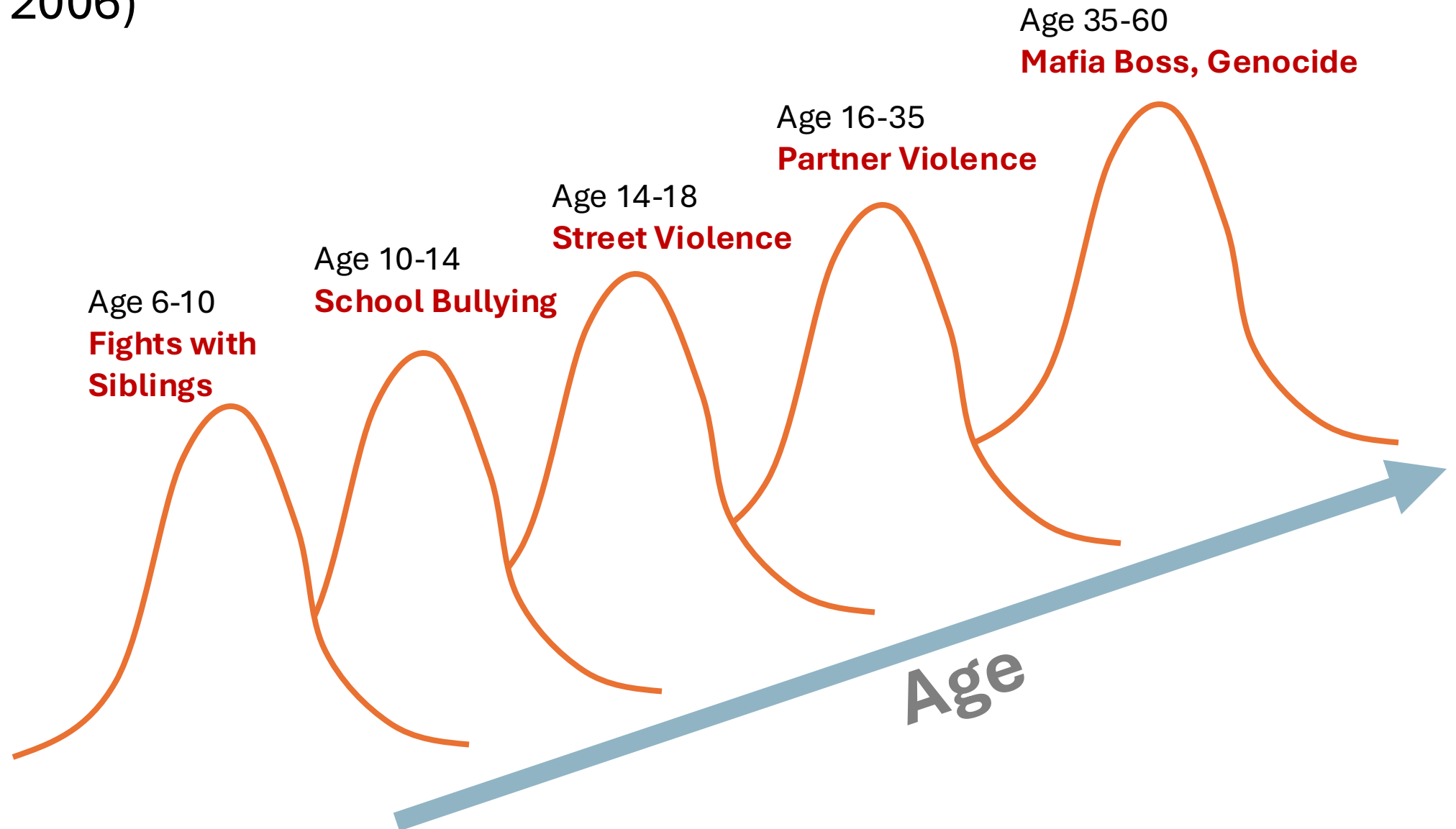


... lead to differences in the age–violence relationship between societies and over time, and between males and females.

Steffensmeier, D., Slepicka, J., & Schwartz, J. (2025). International and historical variation in the age–crime curve. *Annual Review of Criminology*, 8(1), 239-268.

There is **no single peak** of aggression and violence

(Rutter, 2006)



The Goal

Z-proso has a unique array of indicators, from different informants, of aggression and violence from ages 7 through 25.

Focus on the two series with the longest unbroken series, i.e. teacher assessment ages 7-16 (three domains) and self-reports ages 11-25 (eight domains).

What do they show about...

- normative developmental patterns in aggression and violence,
- Peak age of aggression and violence,
- Age patterns in comparison to other longitudinal studies?

Same questions can have different meanings.

Challenges

in assessing violence and aggression from childhood to adulthood



“You
threatened
another
person”



We lack good information about change in the harm associated with a behaviour (Hamby 2017)

Conceptually identical behaviours may change into different ecological settings over time.

Challenges

in assessing violence and aggression from childhood to adulthood



Bullying item

“laughed at, mocked, or insulted another child/youth/person?”

Family -> school -> street?



Survey administration and setting
change in response to
developmental stages.

Challenges

in assessing violence and
aggression from
childhood to adulthood



Two Methodological Notes

**Missingness Patterns and
Age Distributions.**

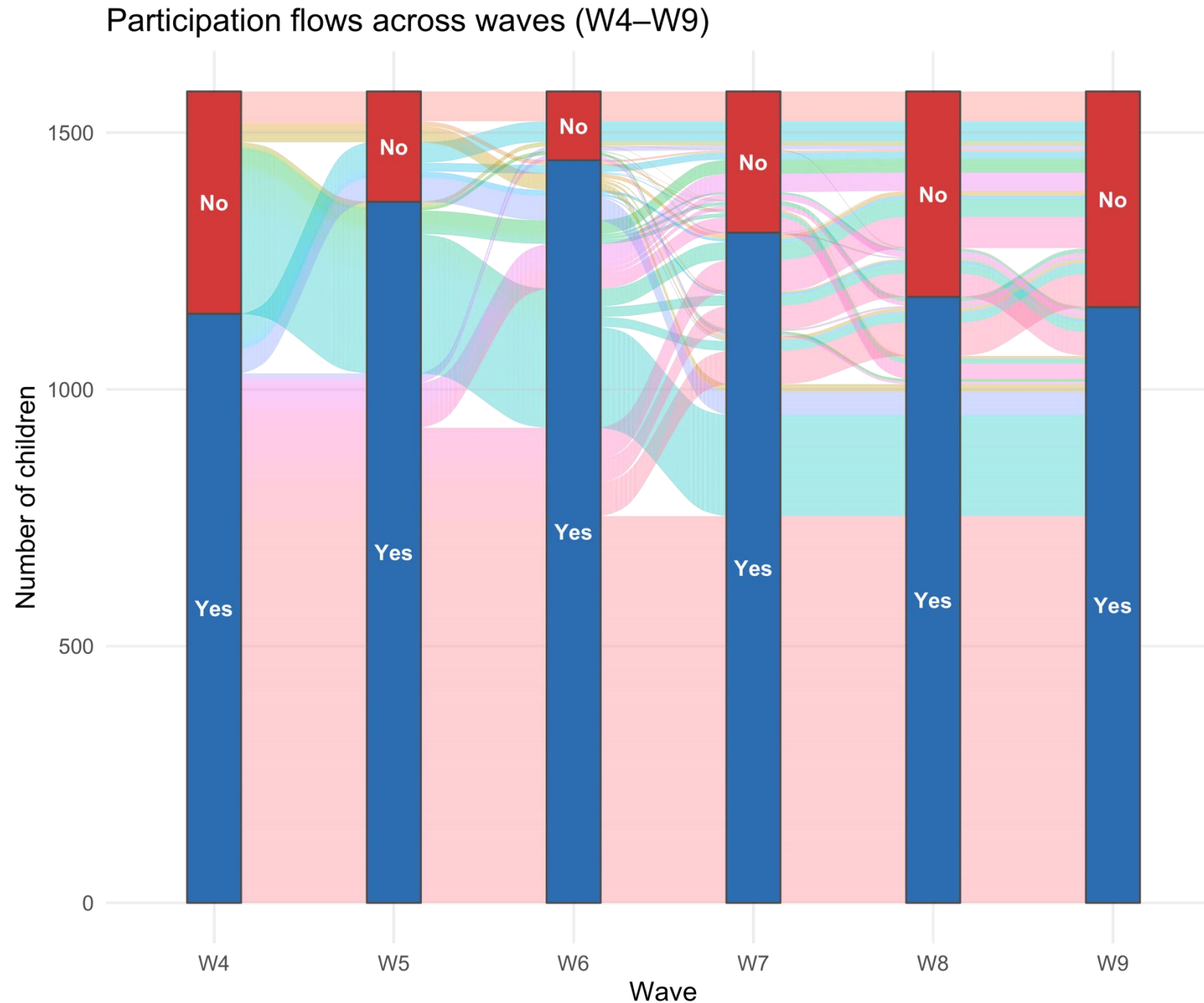
Missingness

Alluvial plot of subjects into and out of participation

Waves 4 through 9 only

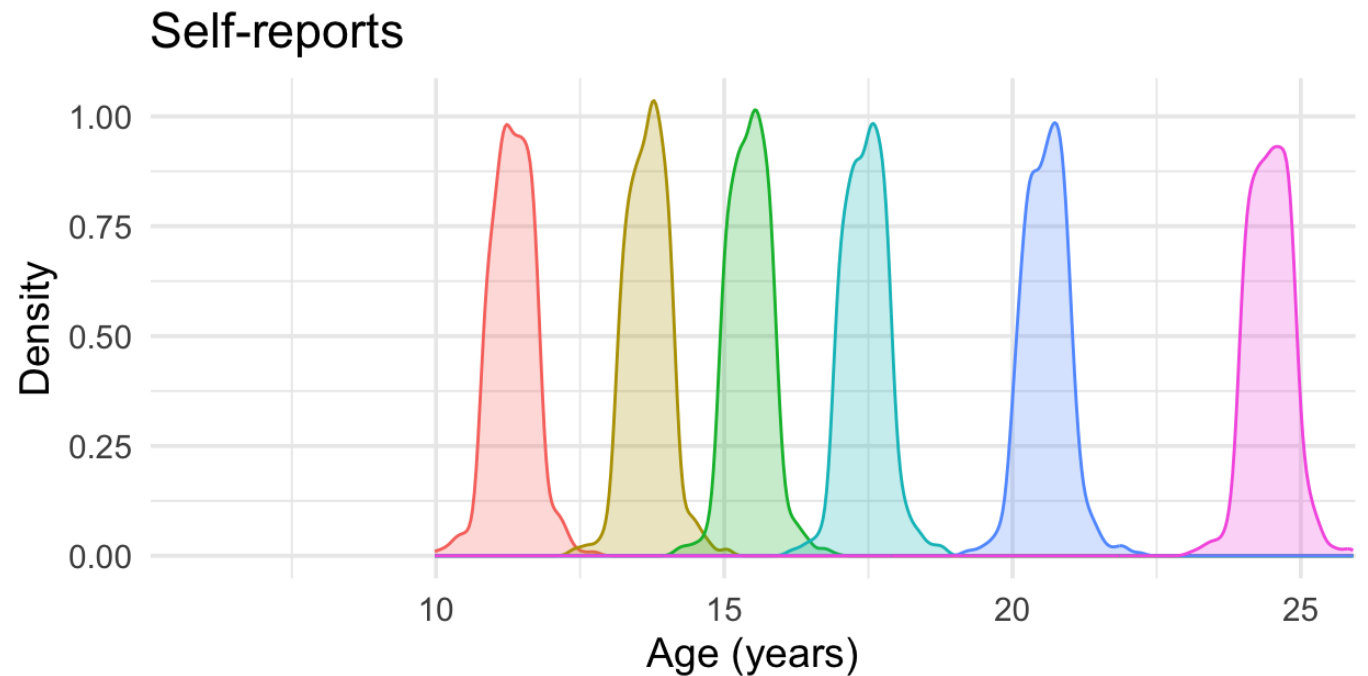
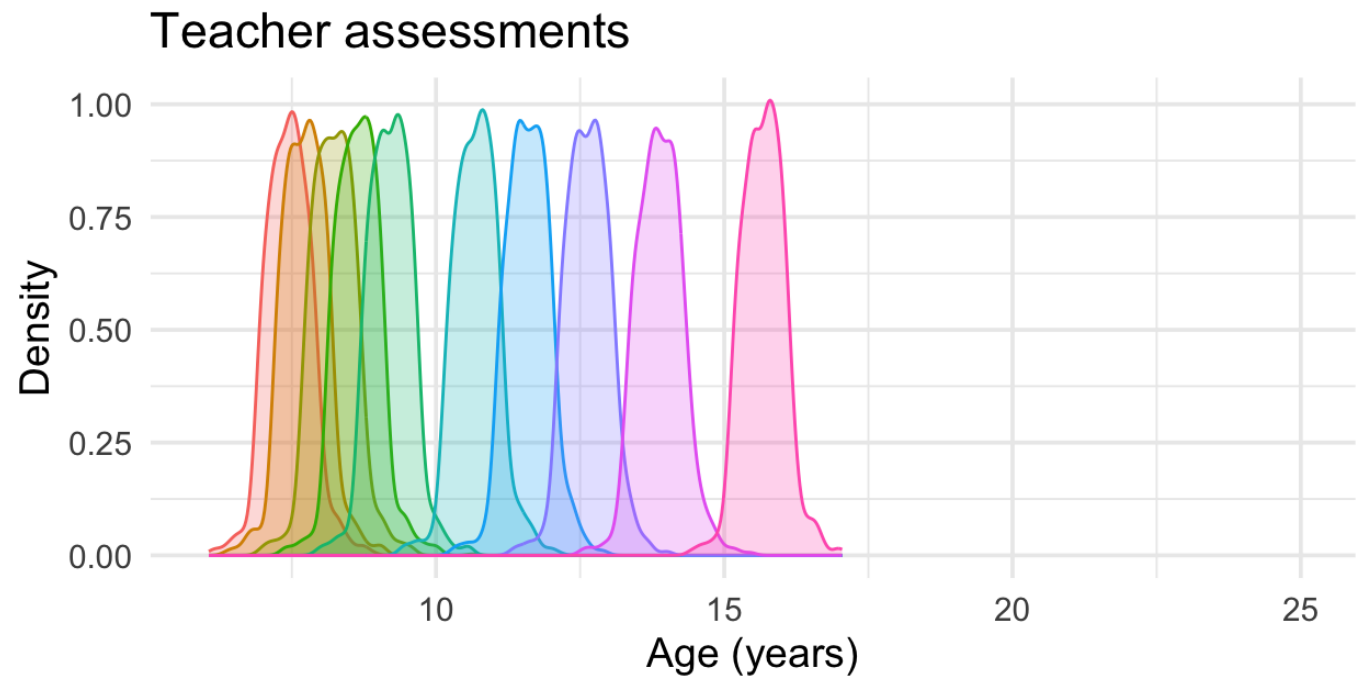
N = 1580 (ever participated in K1 through K9)

Eisner, N. L., Murray, A. L., Eisner, M., & Ribeaud, D. (2019). A practical guide to the analysis of non-response and attrition in longitudinal research using a real data example. *International Journal of Behavioral Development*, 43(1), 24-34.



Age Distributions around data collections.

Age at data collection
Teacher assessment (6-16) and YP self-assessments (10-25)



Results:

Teacher-reported Data, Ages 6.5-15.5

Normative Trajectories of Aggression

(Ages 7–16, Teacher-Report, by Sex)
10 waves, means, 95% CIs, cubic spline lines.

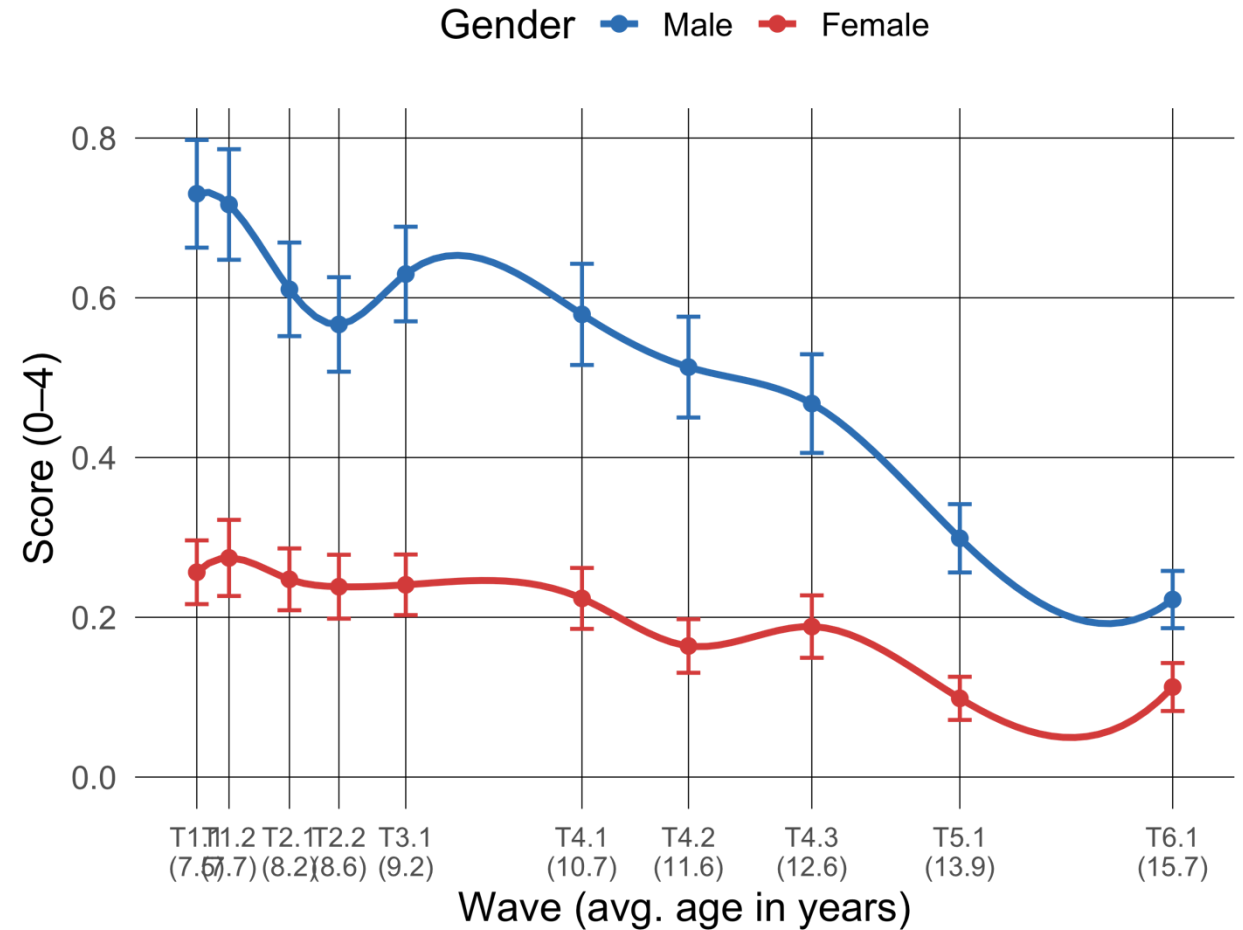
Physical Aggression

“got into fights.”

“kicked, bit, or hit someone”

“physically attacked other people.”

Teacher Physical aggression



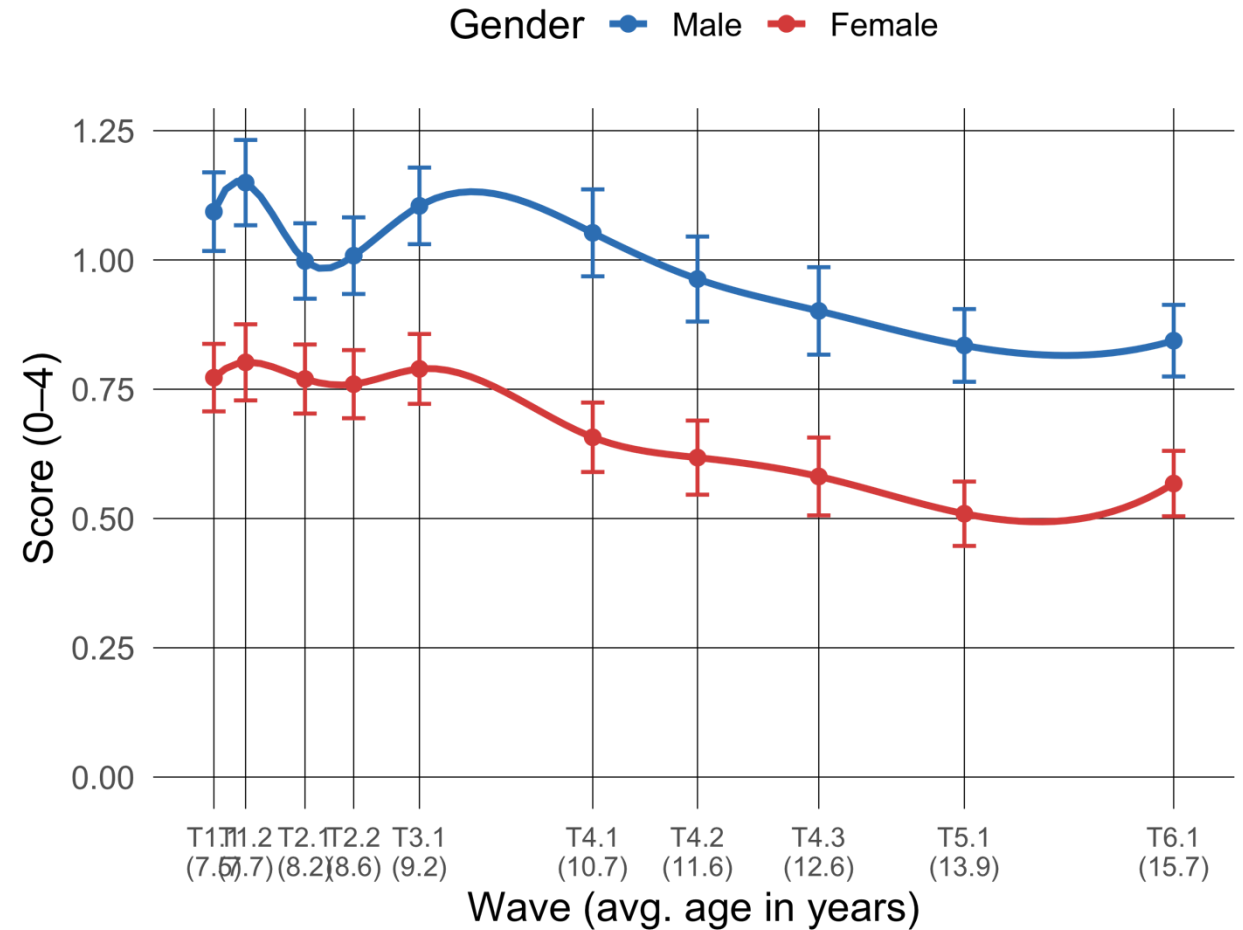
Normative Trajectories of Aggression

(Ages 7–16, Teacher-Report, by Sex)
10 waves, means, 95% CIs, cubic spline lines.

Reactive Aggression

“gets very angry when teased or irritated.”
“reacts aggressively when insulted.”
“goes ballistic” when doesn’t get what they want.

Teacher Reactive aggression



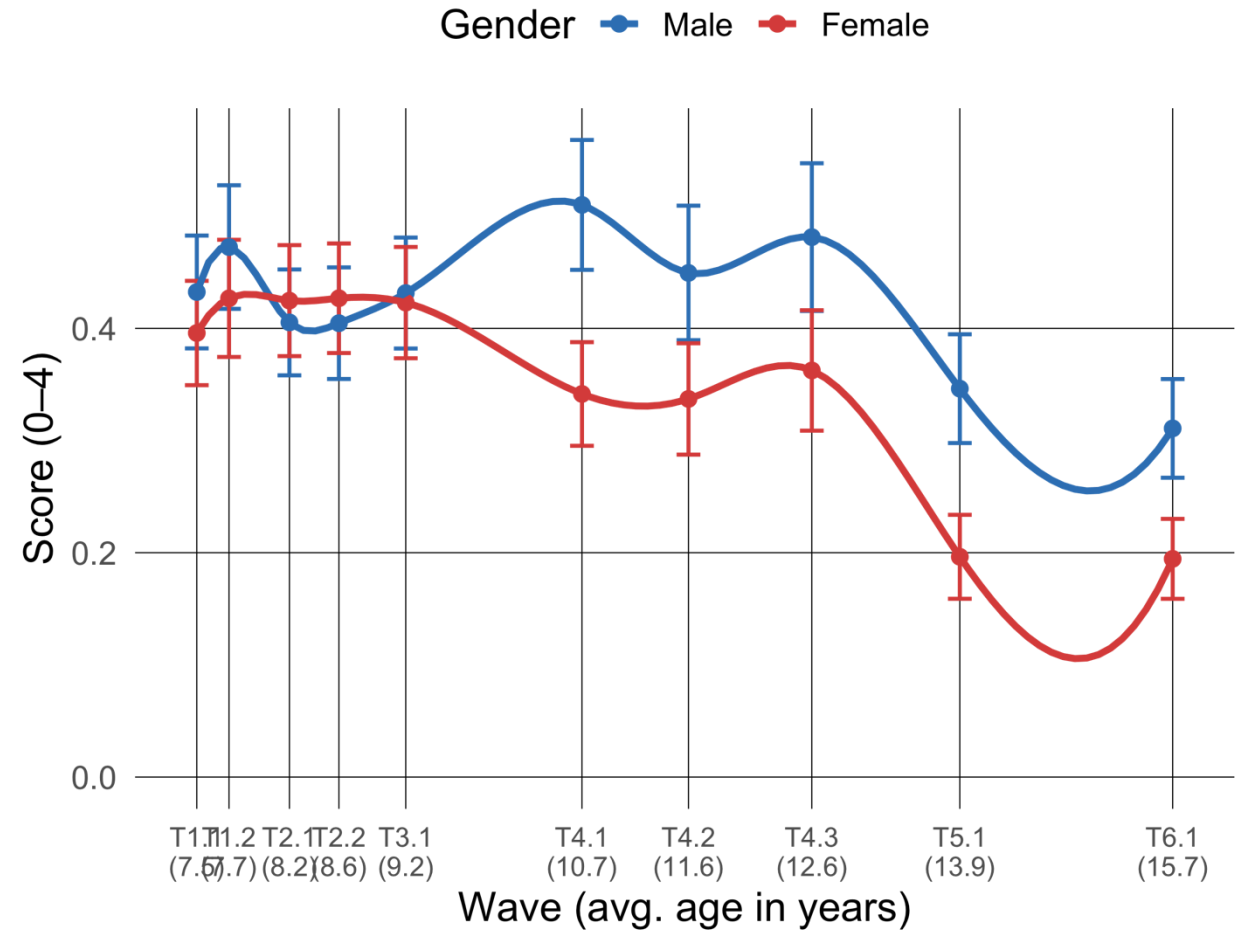
Normative Trajectories of Aggression

(Ages 7–16, Teacher-Report, by Sex)
10 waves, means, 95% CIs, cubic spline lines.

Proactive Aggression

“threaten to get something”
“intimidate to get what they want.”
”incite others to bully”

Teacher Proactive aggression

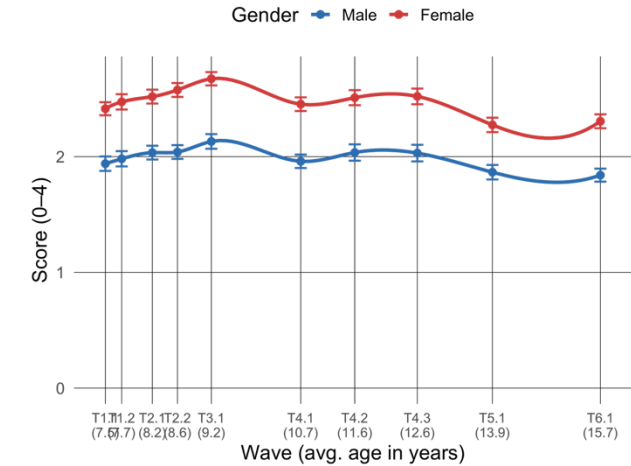


Two behaviour domains with no overall trend in teacher assessments.

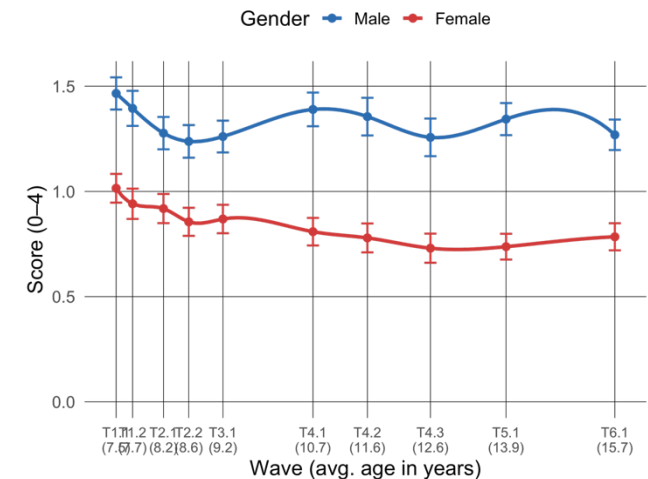
Prosocial Behaviour
(helping and empathy)

ADHD symptoms
(restlessness and attention deficits)

Teacher Prosocial



Teacher ADHD



Key Take-Aways



- Teacher-assessed **physical aggression** shows declining trend from age 7 through 15 years (consistent with Tremblay)
- Some decline in **reactive aggression** from about age 10 to 14
- Divergent trend in **proactive aggression**, increase in males, decrease in females.

Note:

- Change in teacher arrangements at age 12 (primary school -> secondary school) may affect patterns.

Results:
Self-report Data, Ages 11-25

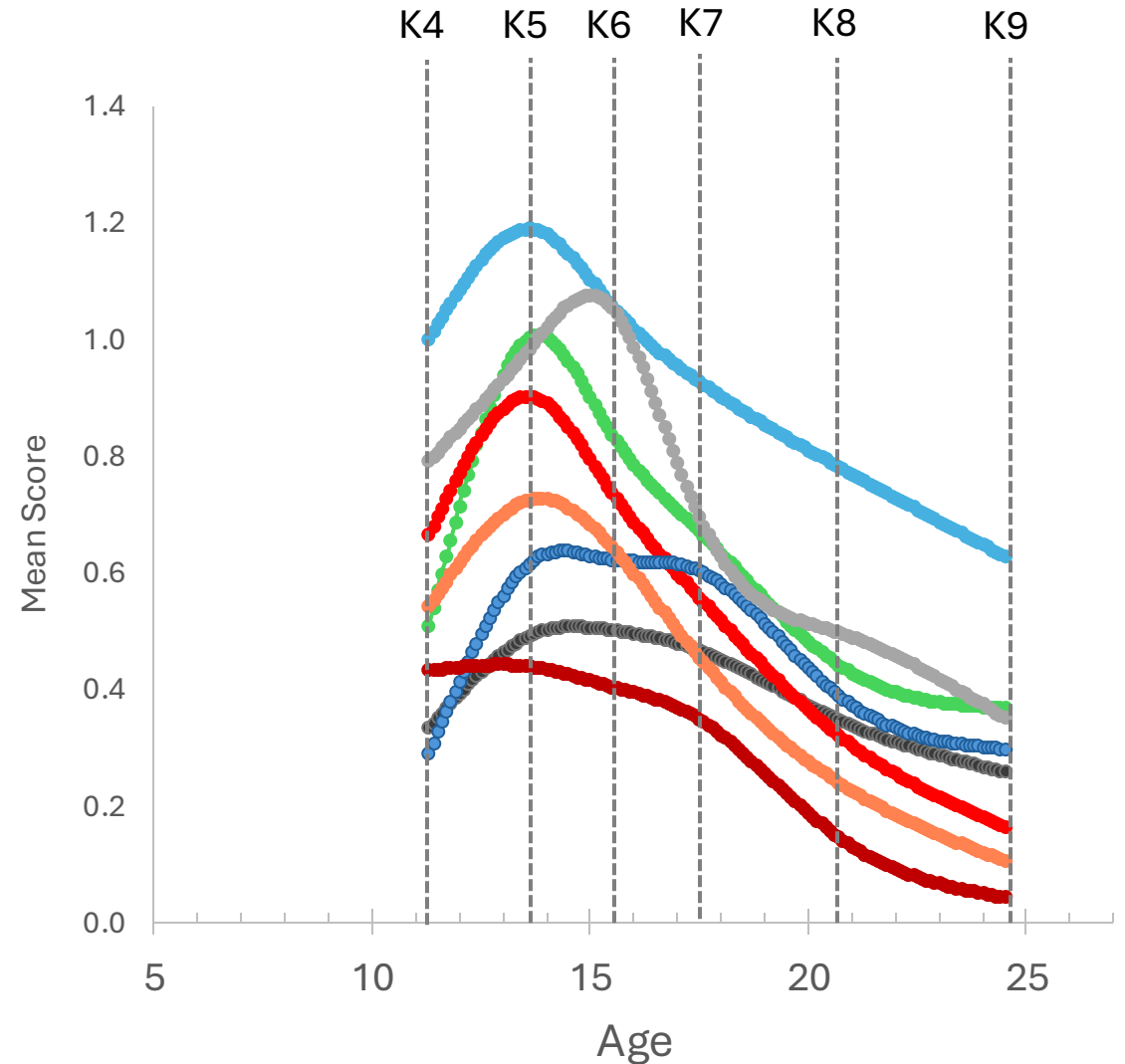
Normative Trajectories

Males

Ages 11–25, Self-report, Cubic spline interpolations between waves.

Eight Forms of Aggression and Violence

- against parents
- indir Aggr
- react Aggr
- phys Aggr
- proact. Aggr
- Bully
- viol response
- assault



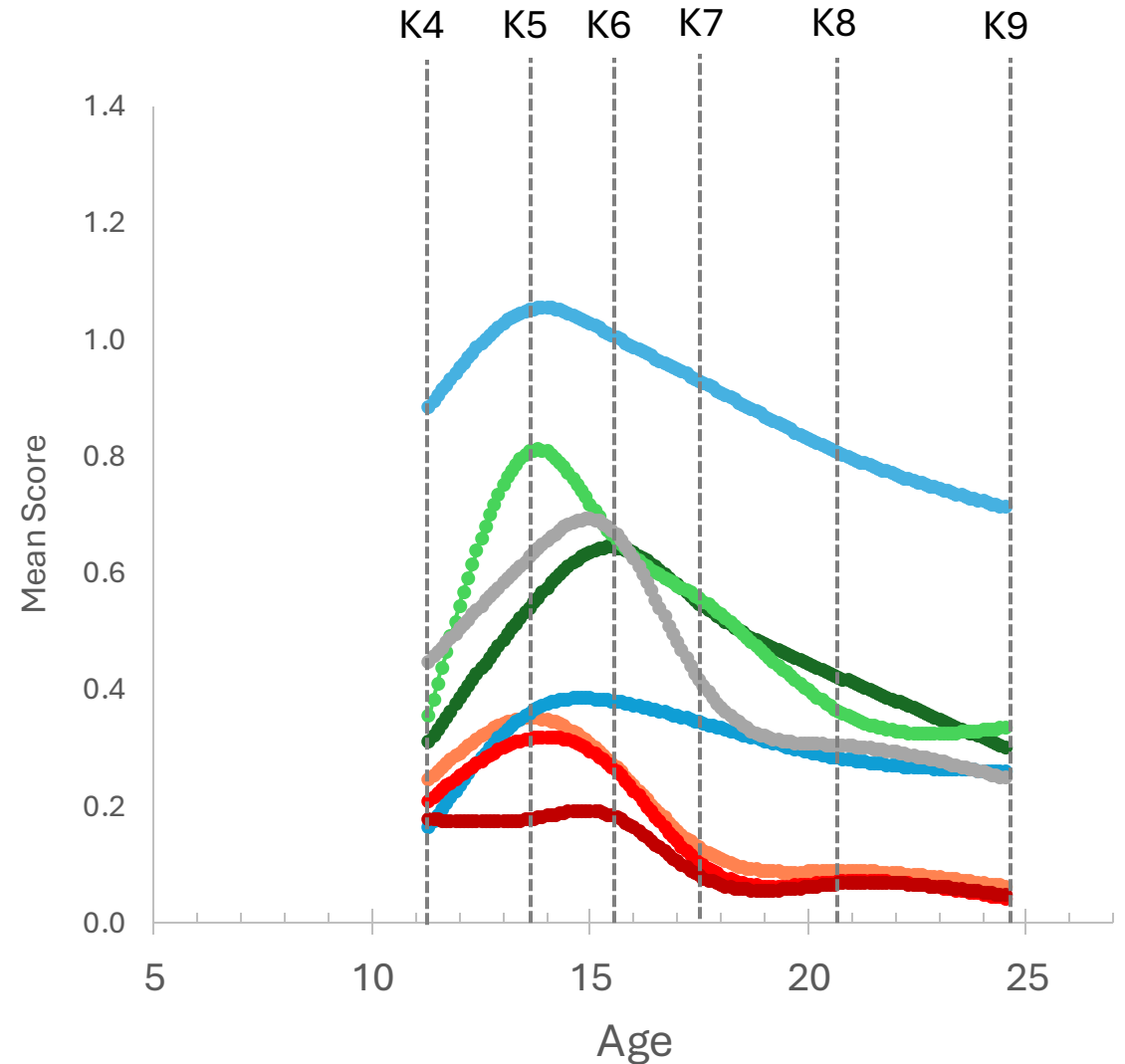
Normative Trajectories

Females

Ages 11–25, Self-report, Cubic spline interpolations between waves.

Eight Forms of Aggression and Violence

- Aggr v parents
- Indir Aggr
- React Aggr
- phys Aggr
- proact. Aggr
- Bully
- viol response
- assault

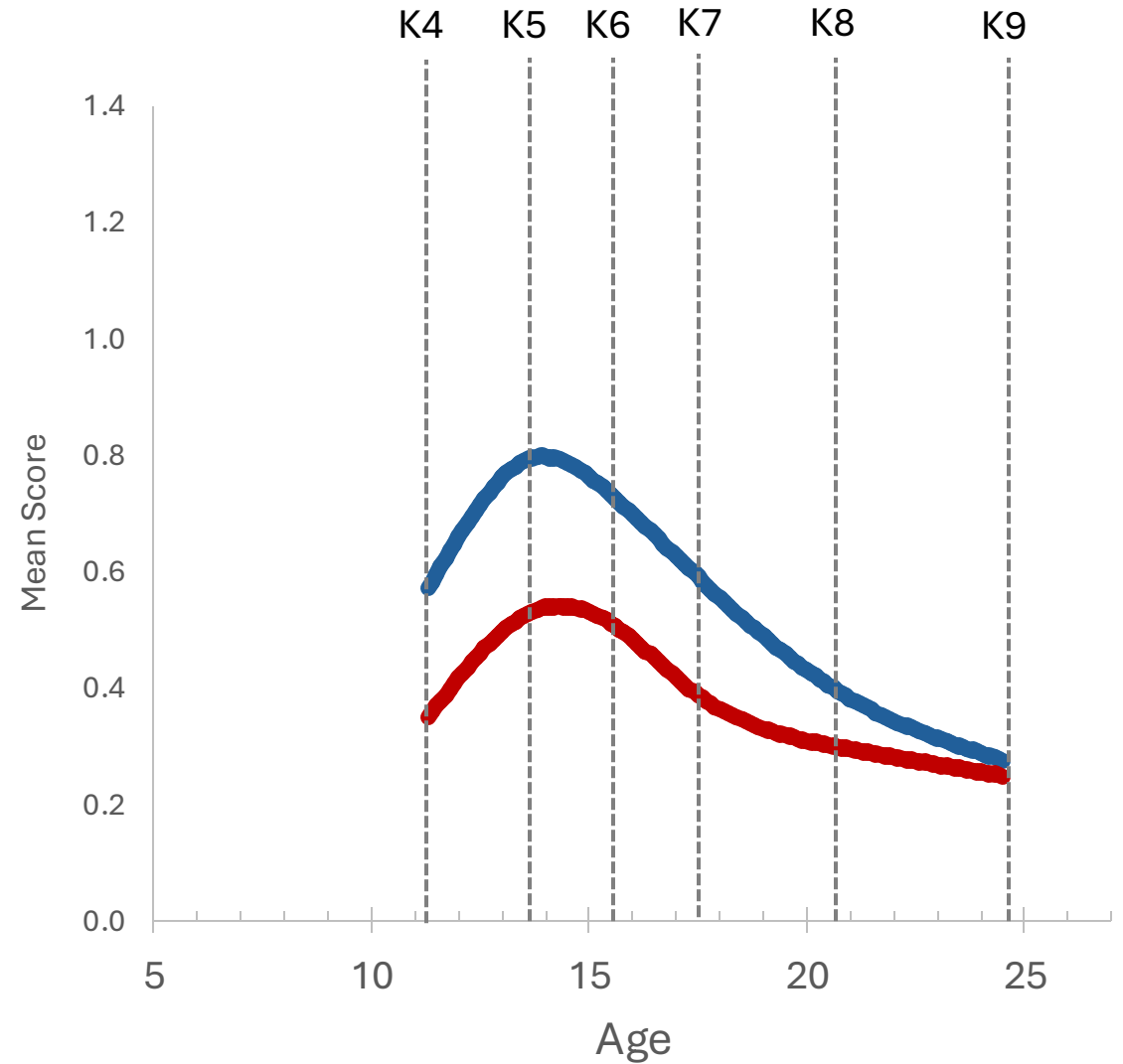


Normative Trajectories

Mean Trend in Aggression and Violence

all eight indicators combined

— male — female



Key Take-Aways



- Very similar age trajectories across eight behaviour domains.
- Limited variation between sexes and specific manifestations.
- Peak consistently at ages 13-15 years (predates peak in recorded offending by about 5 years, consistent with intl. findings)
- No evidence for shifts in age curve from family to other contexts.
- Trajectory not consistent with teacher assessments (!)

International Comparisons

How similar is the normative trajectory of violence in Zurich to other societies?

The Comparison Studies

Four longitudinal studies with comparable self-report data on **physical violence**

USA: Pittsburgh Youth Study

Began 1987, four cohorts (initial ages 5, 6, 7, 8), approximately 600 in each cohort.

Loeber, R. et al. (2015). Constancy and change in the prevalence and frequency of offending when based on longitudinal self-reports or official records: Comparisons by gender, race, and crime type. *J Dev and Life-course Crim*, 1(2), 150-168.

Germany: Criminality in the Modern City (Duisburg)

3.411 participants, start 2003, Waves 1 through 9 covered ages 13 to 22, biennial (every two years) follow-ups extending at least up to age 26

Boers, K. / Reinecke, J. (n.Y.) Crime in the Modern City (CrimoC) – Major Results for Adolescent Age, <https://www.uni-bielefeld.de/fakultaeten/soziologie/forschung/projekte/krimstadt/projektportrait/ergebnisse/>

United Kingdom: PADS+ study (Petersborough)

716 participants, starting at age 12, annual 2004 to 2008 (covering ages approximately 13–17), Additional waves in 2010, 2012, and 2015.

Wikström, P. O. H., Oberwittler, D., Treiber, K., & Hardie, B. (2012). *Breaking Rules*. OUP Oxford.

Trajectories in four societies

Self-reported physical violence

Peterborough

Mean number of violent offences pp, 12 months

Duisburg

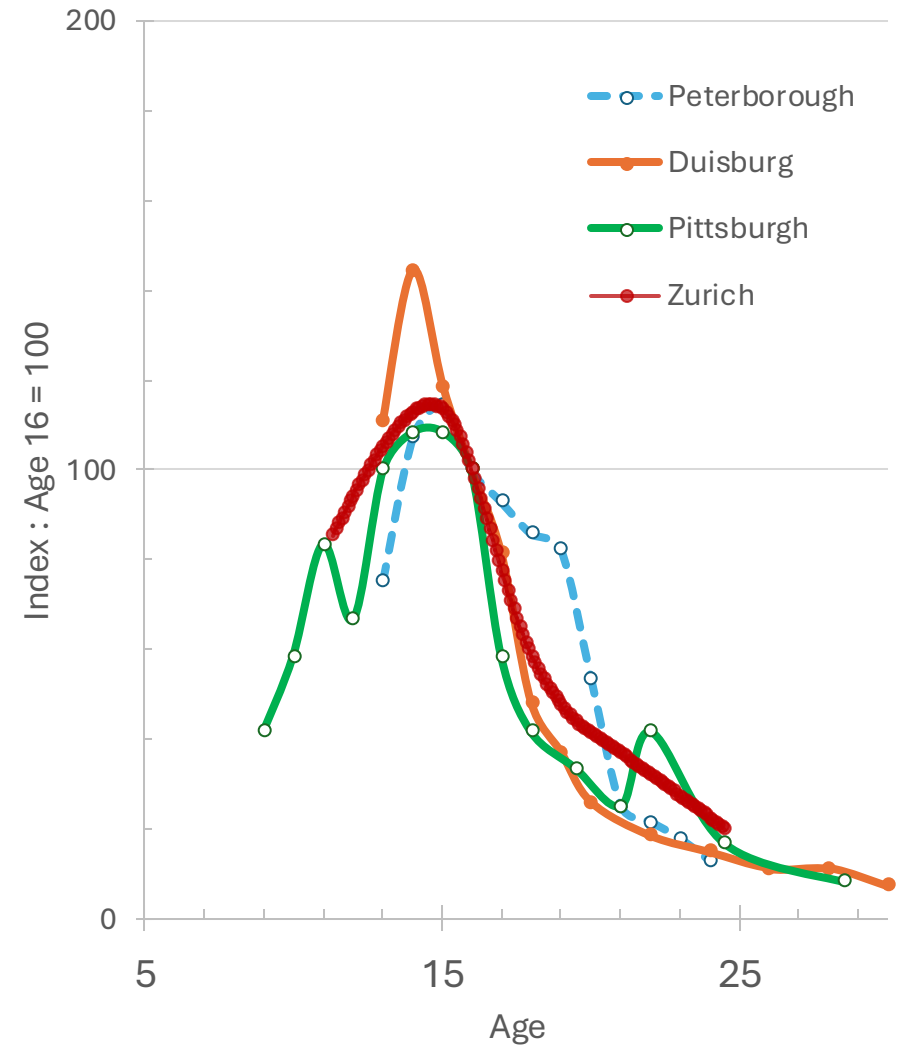
Prevalence violent offences (robbery, assault with and without weapon), 12-months.

Pittsburgh (males only)

Prevalence violent offences (gang fight, robbery, assault, and attack with weapon), 12-months.

Zurich

Mean index score, physical attacks with and without weapon, 12-months.



Key Take-Aways



- High similarity of age curve of self-reported violent offending found in different studies.
- Peak consistently around age 14/15 years.
- Curve can be found in different cohorts and in different contexts (school system, overall crime rate)
- May be indicative of
 - universal socio-biological dynamics (e.g. dual system theory)
 - dynamics shaped by Western model of adolescence.

But

- Unknown pattern in Asian or other non-WEIRD societies.

Conclusions