Beyond “Boys Being Boys”
The Long-Term Impact of Bullying on Health and Well-Being

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Learning Objectives
Examine…
1. link b/w bullying and mental health (MH)
2. temporal sequence
3. heterogeneity in MH outcomes
4. moderating role of gender

Prevalence of MH Disorders in Children and Adolescents

✔️ 13.4% = Worldwide
   – Polanczyk et al., 2015

✔️ 15-20% = Economically advanced countries
   – Vaillancourt & Boylan, 2018

National Comorbidity Survey

- 10,123 13 to 18 year-olds
  - Anxiety disorders = 31.9%
  - Behaviour disorders = 19.1%
  - Mood disorders = 14.3%
  - Substance use disorders = 11.4%
  - With severe impairment &/or distress = 22.2%

According to UNICEF (2017)
“adolescent mental health is a growing concern”

✔️ Suicide is the leading cause of death among youth in high income countries
   - 17.6% of all deaths
   - Particular problem for boys
Enormous continuity

- 50-75% of adult MH disorders began in childhood
  - Typically before age 15

Kim-Cohen et al., 2003; Kessler et al., 2001; 2007; Weiss, 1998

- Adults with a childhood MH disorder were 6x > to have at least 1 adverse adult outcome and 9x > to have 2 or more

MH problems in childhood and adolescence leading cause of health-related burden
  - In adults, depression is the leading cause of disability worldwide

UNICEF, 2008; Whiteford et al., 2013
Most youth with MH problems do not receive services
- Only 20% receive Tx they require

Youth with severely impairing mental disorders received Tx at rates
- ADHD and behavioural disorders

Call for action…

MH problems by bullying

WHY?
bullying ➔ MH problems

What is bullying?

• A person is being bullied if he or she is exposed repeatedly and over time, to negative actions on the part of one or more persons.
  - Three Criteria:
    - repeated over time
    - imbalance of power
    - intentionality
  - Systematic abuse of power.

Prevalence Rate

30% bullied occasionally
7-10% bullied on a daily basis

- Boys are more involved than girls in bullying as targets, perpetrators, and target-perpetrators
- Gay and bisexual boys experience the highest rates of peer victimization
- Boys more likely to be bullied in single-sex schools

Link b/w bullying and MH

- MH profile of targets
- MH profile of perpetrators

National Academies of Sciences, Engineering, and Medicine, 2016
Long-term consequences

- academic difficulties
- school truancy/avoidance
- increased absenteeism
- somatic complaints
- stress-related illness
- physical health problems

Bullied youth either get mad or they get sad.
Temporal Sequence

Bullied ⇒ poor MH? ☑

Poor MH ⇒ bullied ⇒ poorer MH?

Internalizing Problems

- Peer victimization linked to internalizing problems in ensuing years

Arseneault et al., 2006; Faris & Felmlee, 2014; Goodman et al., 2001; Hanish & Guerra, 2002; Hodges et al., 1999; Hodges & Perry, 1999; Kumpulainen & Rasanen, 2000; Krygsman & Vaillancourt, 2017; Lee & Vaillancourt, 2018; Schwartz et al., 2015; Snyder et al., 2003; Sweering et al., 2006; Troop-Gordon & Ladd, 2010; Vaillancourt et al., 2011, 2013, Zuwarynska et al., 2012; see also meta-analyses by Reijntjes et al., 2010; Ttofi et al., 2011

Externalizing Problems

- Peer victimization linked to externalizing problems in ensuing years

Barker et al., 2008; Haltigan & Vaillancourt, 2014; Hanish & Guerra, 2002; Ladd & Troop-Gordon, 2003; Smith et al., 2004; Vaillancourt et al., 2013; Yeung & Leadbeater, 2010; see also meta-analysis by Reijntjes et al., 2011

Target ⇒ perpetrator

Joint Trajectories of Bullying and Peer Victimization Across Elementary and Middle School and Associations With Symptoms of Psychopathology

Arseneault et al. 2006

- But for some, the pathway is symptoms-driven

Bullied ⇒ Poorer MH

Poor MH
MH profile of perpetrators

- But when controlling for family hardship and childhood psychiatric disorders:
  - Targets at ⚠ risk
    - poor health, wealth, & social-relationship outcomes in adulthood
  - Perpetrators were not at ⚠ risk
Why these divergent pathways?

**Targets**
- Interferes with fundamental need to belong.

**Perpetrators**
- Does not interfere with fundamental need to belong.
- Linked to high status.

Heterogeneity in MH outcomes

- Why is it that some youth are so adversely affected by bullying while others seem to cope better?

- Youth bully others to achieve and maintain social status
  - Cillessen & Mayeux, 2004
  - Faris & Felmlee, 2014
  - Prinstein & Cillessen, 2003
  - Vaillancourt & Hymel, 2006; Vaillancourt et al., 2003; Vaillancourt, 2005; 2013; 2018
Divergent Pathways

Exposure to Bullying

Moderator

Environmental characteristics

- Youth with better home environments fare better than youth with poorer home environments
  - Baldry & Farrington, 2005; Flouri & Buchanan, 2002
- In classrooms where bullying emerges as central, the negative impact of victimization on mental health outcomes is greater
  - Huitsing et al., 2012

Personal Characteristics

- Internalizing problems persisted even after bullying had stopped for girls, but not for boys.
- Boys who are bullied because of their sexual orientation experience more adverse outcomes than boys who are bullied for other reasons.

For boys, off-time puberty linked to peer victimization

- Late maturing boys disproportionately bullied at follow-up; especially from grade 5 to 6 (age 11 to 12)
- 22 times more likely to get bullied when compared to their on-time male peers

Klomek et al., 2009; Rueger et al., 2011; Swearer et al., 2008; see Vaillancourt, 2013, 2017 for reviews
Serotonin Gene, Experience, and Depression: Age 26

Replicated with bullied youth in 5 different studies


• “...persistent social acceptance of some types of violence against children...”

• “…corporal punishment and other forms of cruel or degrading punishment, bullying and sexual harassment, and a range of violent traditional practices may be perceived as normal, particularly when no lasting visible physical injury results.”

Neurophysiological Evidence

“I feel like, emotionally, they have been beating me with a stick for 42 years”

• People can relive and re-experience social pain more easily than physical pain.

• The emotions they feel are more intense and painful.

• Physical pain is often short lived whereas social pain can last a life time.

Chen et al., 2008
Sir Winston Churchill

“Criticism may not be agreeable, but it is necessary. It fulfills the same function as pain in the human body. It calls attention to an unhealthy state of things.”

Neural Alarm

• Rejection is differentiated in less than 500 ms by children
  – Using event-related potentials (ERPs) to study neural activity that occurs when a person is rejected

Neuroendocrine Evidence

Parts of cortical physical pain network are also activated when a person is socially excluded

• Physical and social pain share similar neural structures
• Linked to evolution

Crowley et al., 2010

see Vaillancourt et al., 2010, 2013, 2015, and 2017 for reviews

“Results from this natural experiment provide support for a causal effect of adverse childhood experiences on the neuroendocrine response to stress.”

“Disrupted Neurogenesis”
Epigenetic Evidence

- Environmental signals are translated into molecular events
  
- Example: DNA methylation
  - changes gene expression by activating or silencing the gene
  - childhood adversity linked to changes in DNA methylation which has an effect on later stress reactivity

- Found that...
  - DNA methylation of \( SERT \) between ages 5 and 10 for bullied twins but not for non-bullied twins, and
  - this was associated with blunted cortisol response to stress.

Telomere erosion

- Linked to normal processes like aging and...
  - health behaviour e.g., smoking and obesity
  - diseases e.g., cancer, dementia, diabetes, and cardiovascular problems
  - Also linked to psychological stress and mortality.

What does this all mean?
We must **not** approach bullying with the attitude that *boys will be boys*.

- Bullying is associated with significant impairment.
- Bullying likely becomes biologically embedded.
  - Invisible scars change a person’s capacity to deal with subsequent stressors and negatively modifies their future health.

Healthy Peer Relationships Matter