



New York State
Psychiatric Institute



COLUMBIA UNIVERSITY
Department of Psychiatry

SUICIDE AND BULLYING

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Translating Injury Science into Prevention Symposium

Rosenfield Auditorium and Hess Commons

Mailman School of Public Health, Columbia University

May 25, 2017

FACULTY DISCLOSURE

- No potential conflict involving the subject matter of this presentation or involving commercial supporter(s)

SCOPE OF THE PROBLEM: Youth Suicide Deaths, U.S.

- In 2015, suicide ranked as the ***second leading*** cause of death for individuals under 24 years of age.
- 5,904 individuals under the age of 24 died by suicide in 2015.... around 16 suicide deaths per day.

10 Leading Causes of Death, U.S. 2015

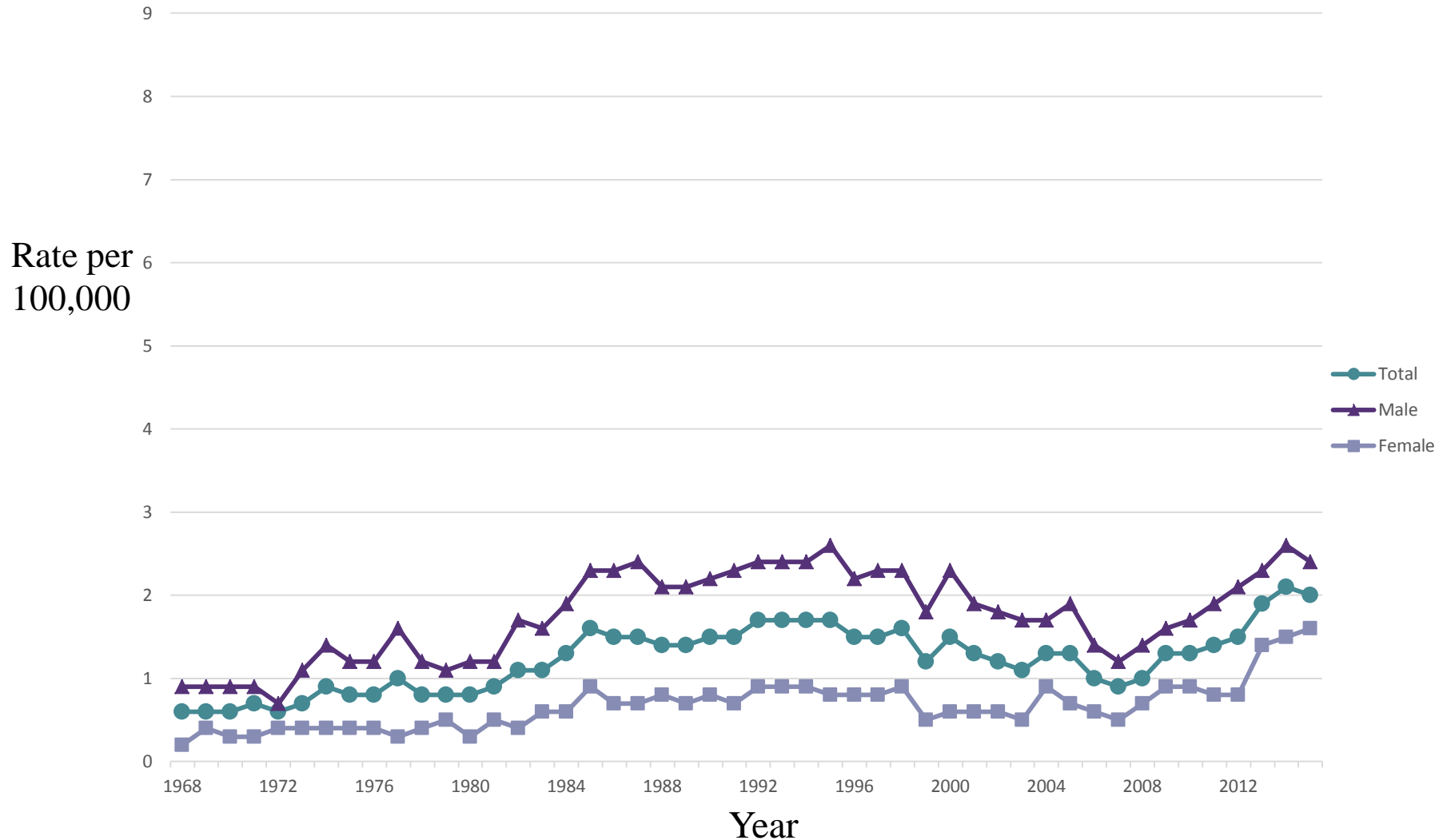
| Rank | Age Groups | | | | | | | | | | | All Ages |
|------|--------------------------------------|--|--|--|--|---|---------------------------------------|---------------------------------------|---|--|---|---|
| | <1 | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | |
| 1 | Congenital Anomalies 4,825 | Unintentional Injury 1,235 | Unintentional Injury 755 | Unintentional Injury 763 | Unintentional Injury 3,919 | Unintentional Injury 8,595 | Unintentional Injury 19,795 | Unintentional Injury 17,818 | Malignant Neoplasms 43,054 | Malignant Neoplasms 116,122 | Heart Disease 507,138 | Heart Disease 633,842 |
| 2 | Short Gestation 4,084 | Congenital Anomalies 435 | Malignant Neoplasms 437 | Malignant Neoplasms 428 | Suicide 2,061 | Suicide 3,430 | Suicide 6,947 | Malignant Neoplasms 10,909 | Heart Disease 34,248 | Heart Disease 76,872 | Malignant Neoplasms 419,389 | Malignant Neoplasms 595,930 |
| 3 | SIDS 1,568 | Homicide 369 | Congenital Anomalies 181 | Suicide 409 | Homicide 1,587 | Homicide 3,146 | Homicide 4,863 | Heart Disease 10,387 | Unintentional Injury 21,499 | Unintentional Injury 19,488 | Chronic Low. Respiratory Disease 131,804 | Chronic Low. Respiratory Disease 155,041 |
| 4 | Maternal Pregnancy Comp. 1,522 | Malignant Neoplasms 354 | Homicide 140 | Homicide 158 | Malignant Neoplasms 583 | Malignant Neoplasms 886 | Malignant Neoplasms 3,704 | Suicide 6,936 | Liver Disease 8,874 | Chronic Low. Respiratory Disease 17,457 | Cerebrovascular 120,156 | Unintentional Injury 146,571 |
| 5 | Unintentional Injury 1,291 | Heart Disease 147 | Heart Disease 85 | Congenital Anomalies 156 | Heart Disease 306 | Heart Disease 691 | Heart Disease 3,522 | Homicide 2,895 | Suicide 8,751 | Diabetes Mellitus 14,166 | Alzheimer's Disease 109,495 | Cerebrovascular 140,323 |
| 6 | Placenta Cord Membranes 910 | Influenza & Pneumonia 88 | Chronic Low. Respiratory Disease 80 | Heart Disease 125 | Congenital Anomalies 195 | Congenital Anomalies 191 | Liver Disease 844 | Liver Disease 2,861 | Diabetes Mellitus 6,212 | Liver Disease 13,278 | Diabetes Mellitus 56,142 | Alzheimer's Disease 110,561 |
| 7 | Bacterial Sepsis 599 | Septicemia 54 | Influenza & Pneumonia 44 | Chronic Low. Respiratory Disease 93 | Influenza & Pneumonia 72 | Diabetes Mellitus 144 | Diabetes Mellitus 798 | Diabetes Mellitus 1,986 | Cerebrovascular 5,307 | Cerebrovascular 12,116 | Unintentional Injury 51,395 | Diabetes Mellitus 79,535 |
| 8 | Respiratory Distress 462 | Perinatal Period 50 | Cerebrovascular 42 | Cerebrovascular 42 | Chronic Low. Respiratory Disease 63 | Chronic Low. Respiratory Disease 139 | Cerebrovascular 567 | Cerebrovascular 1,788 | Chronic Low. Respiratory Disease 4,345 | Suicide 7,739 | Influenza & Pneumonia 48,774 | Influenza & Pneumonia 57,062 |
| 9 | Circulatory System Disease 428 | Cerebrovascular 42 | Benign Neoplasms 39 | Influenza & Pneumonia 39 | Cerebrovascular 61 | Complicated Pregnancy 120 | HIV 529 | HIV 1,055 | Septicemia 2,542 | Septicemia 5,774 | Nephritis 41,258 | Nephritis 49,959 |
| 10 | Neonatal Hemorrhage 406 | Chronic Low. Respiratory Disease 40 | Septicemia 31 | Two Tied 33 | Diabetes Mellitus 52 | Influenza & Pneumonia 112 | Congenital Anomalies 443 | Septicemia 829 | Nephritis 2,124 | Nephritis 5,452 | Septicemia 30,817 | Suicide 44,193 |

Scope of the Problem: Youth Suicide Ideation/Behavior

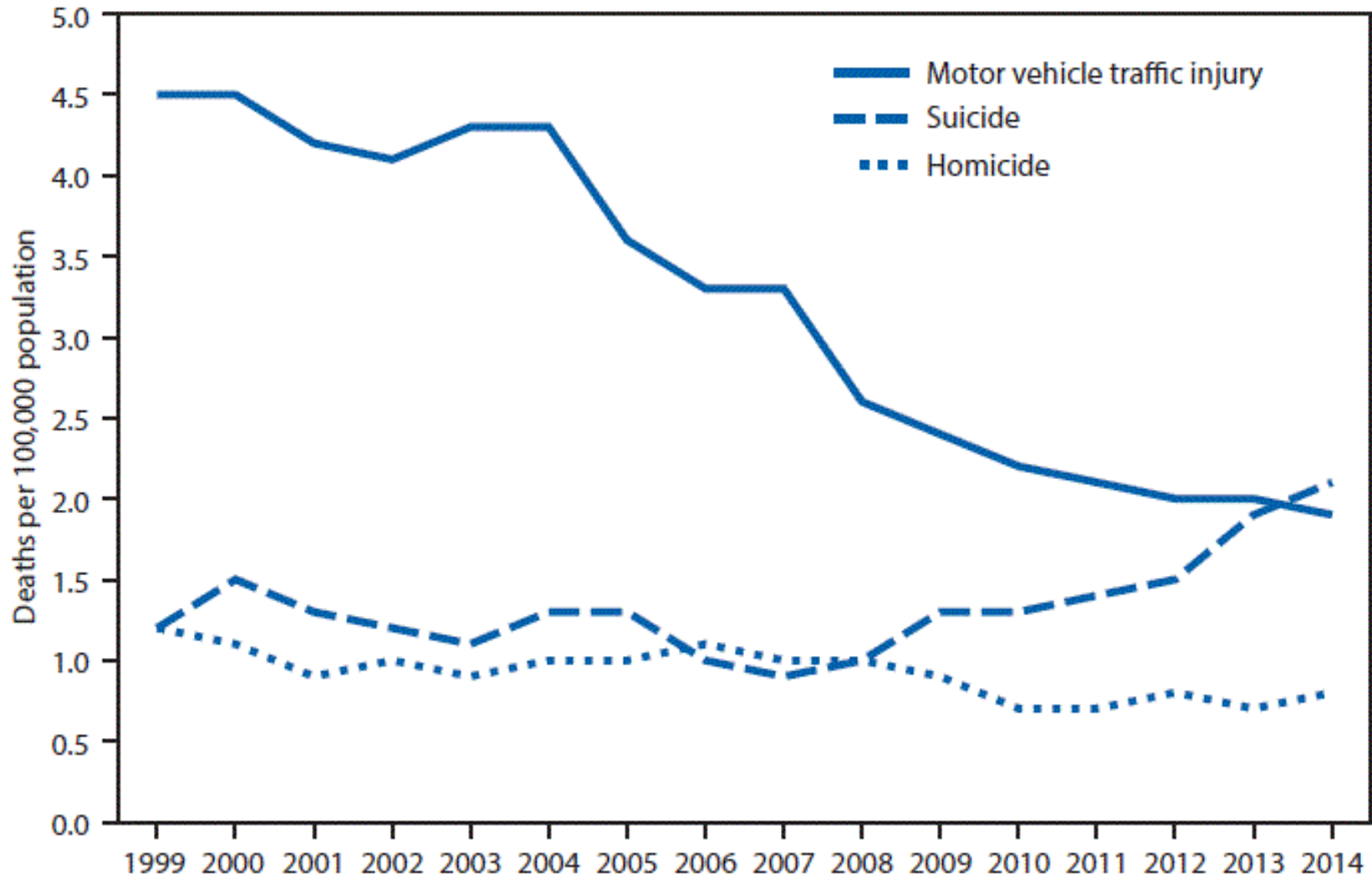
17.7% of U.S. high school students seriously consider attempting suicide and 8.6% attempt suicide during a 12-month period (YRBS, 2015).

U.S. Latina girls have the **highest rates** of feeling sad and hopeless, seriously considering suicide, making a suicide plan AND attempting suicide when compared to whites and blacks.

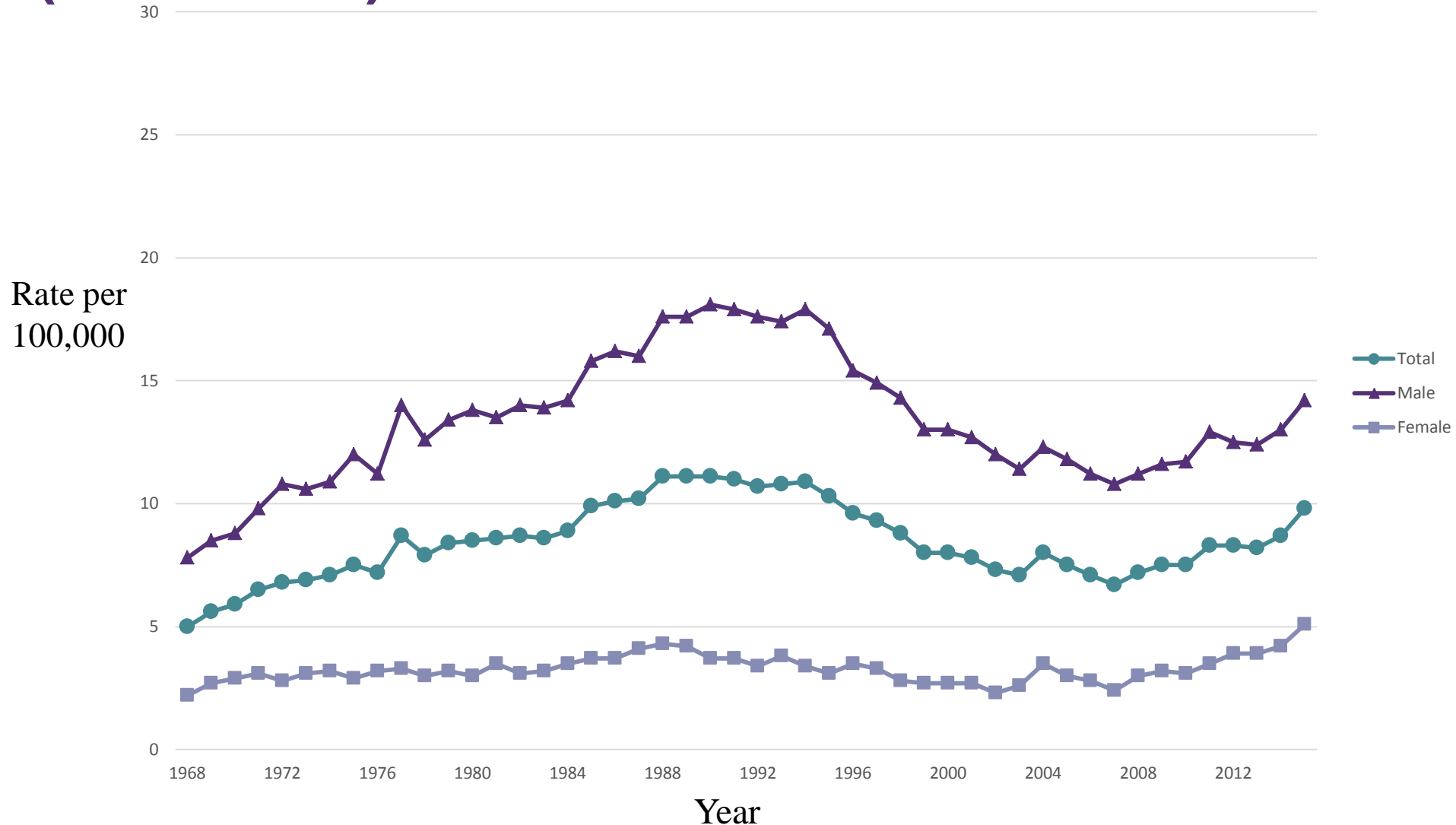
Suicide Deaths Among Youth Ages 10-14 (1968-2015)



Death Rates for Motor Vehicle Traffic Injury, Suicide and Homicide, 10-14 Years, U.S., 1999 - 2014

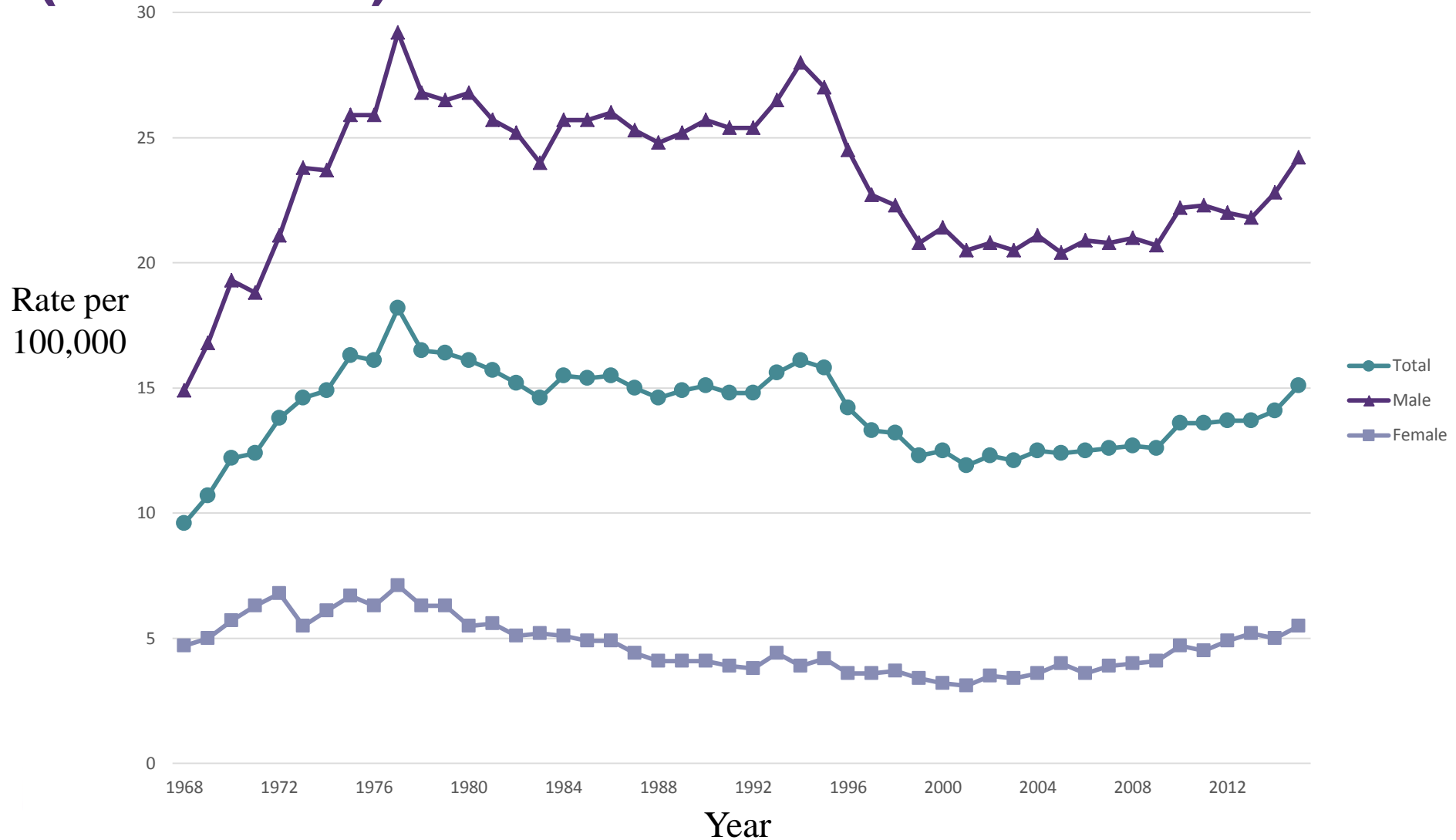


Suicide Deaths Among Youth Ages 15-19 (1968-2015)



Source: Centers for Disease Control and Prevention. Wide-ranging OnLine Data for Epidemiologic Research (WONDER) [Online]. (2017).

Suicide Deaths Among Youth Ages 20-24 (1968-2015)



Source: Centers for Disease Control and Prevention. Wide-ranging OnLine Data for Epidemiologic Research (WONDER) [Online]. (2017).

UNDERLYING VULNERABILITY

e.g.: Mood Disorder / Substance Abuse / Aggression / Anxiety / Impulsivity/ Sexual Orientation/ Abnormal Serotonin Metabolism/ Family Characteristics, including history of suicidality/ Sexual Abuse/Physical Abuse/Social adversity



STRESS EVENT

(often caused by underlying condition)

*e.g. In Trouble With Law or School / Loss/ **Bullied***



ACUTE MOOD CHANGE

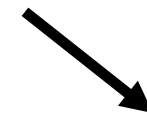
e.g.: Anxiety – Dread / Hopelessness / Anger

INHIBITION

*Family cohesion/ Strong personal relationships/ Available support / Positive coping strategies/ Unavailability of lethal means
Media models (of coping)/Treatment*



SURVIVAL



FACILITATION

*Method/Weapon available / Recent example /Media models (of suicide)
Lack of services*



SUICIDE



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THE REMAINDER OF TODAY'S PRESENTATION WILL ADDRESS THE FOLLOWING QUESTIONS:

- Are teens “bullied to death”?
- What is the relationship between bullying and suicidal ideation/behavior?
- What are the implications of media messages?

OUTLINE OF PRESENTATION

- Definition of bullying behaviors
- Prevalence of bullying behaviors
- Association of bullying behaviors with suicidal ideation and behavior
- Confounders, mediators and moderators
- Media considerations

BULLYING BEHAVIORS: DEFINITION

*A student is being bullied or victimized when he or she is exposed, **repeatedly over time**, to negative actions on the part of one or more other students. Must be an **imbalance in strength**.*

(Olweus, 1986, 1991).



TYPES OF BULLYING

- Physical – e.g., hitting, kicking
- Verbal – e.g., name calling
- Social Exclusion
- Spreading Rumors
- Cyberbullying –
e.g., via e-mails, texts,
web sites

OVERT
VICTIMIZATION

RELATIONAL
VICTIMIZATION



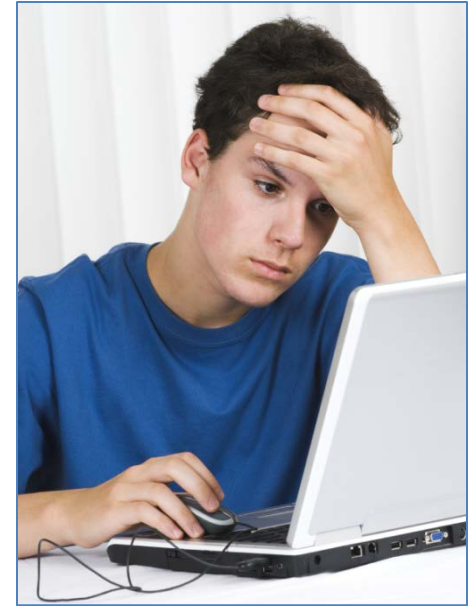
CYBERBULLYING: DEFINITION

“An aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself.”

(Smith et al., 2008, p. 376)

CHARACTERISTICS OF CYBERBULLYING

- Difficult to escape from
- Large potential audience
- Anonymity of the cyberbully
- Cyberbully may be less aware of consequences of his/her actions
- Fewer opportunities for empathy



(Hinduja & Patchin., 2009; Kowalski & Limber., 2007; Smith et al., 2008; Sourander et al., 2010)

YOUTH INVOLVED IN BULLYING BEHAVIOR

- Bullies
- Victims
- Bully-Victims
- Bystanders



ASSESSMENTS OF BULLYING BEHAVIORS

- Teacher ratings
- Peer nominations
- Self-reports

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INSTRUCTIONS

The next 7 questions are about bullying. We say a student is being bullied when another student, or group of students, says or does nasty and unpleasant things to him or her. It is also bullying when a pupil is teased repeatedly in a way he or she doesn't like. But it is not bullying when two students of about the same strength quarrel or fight.

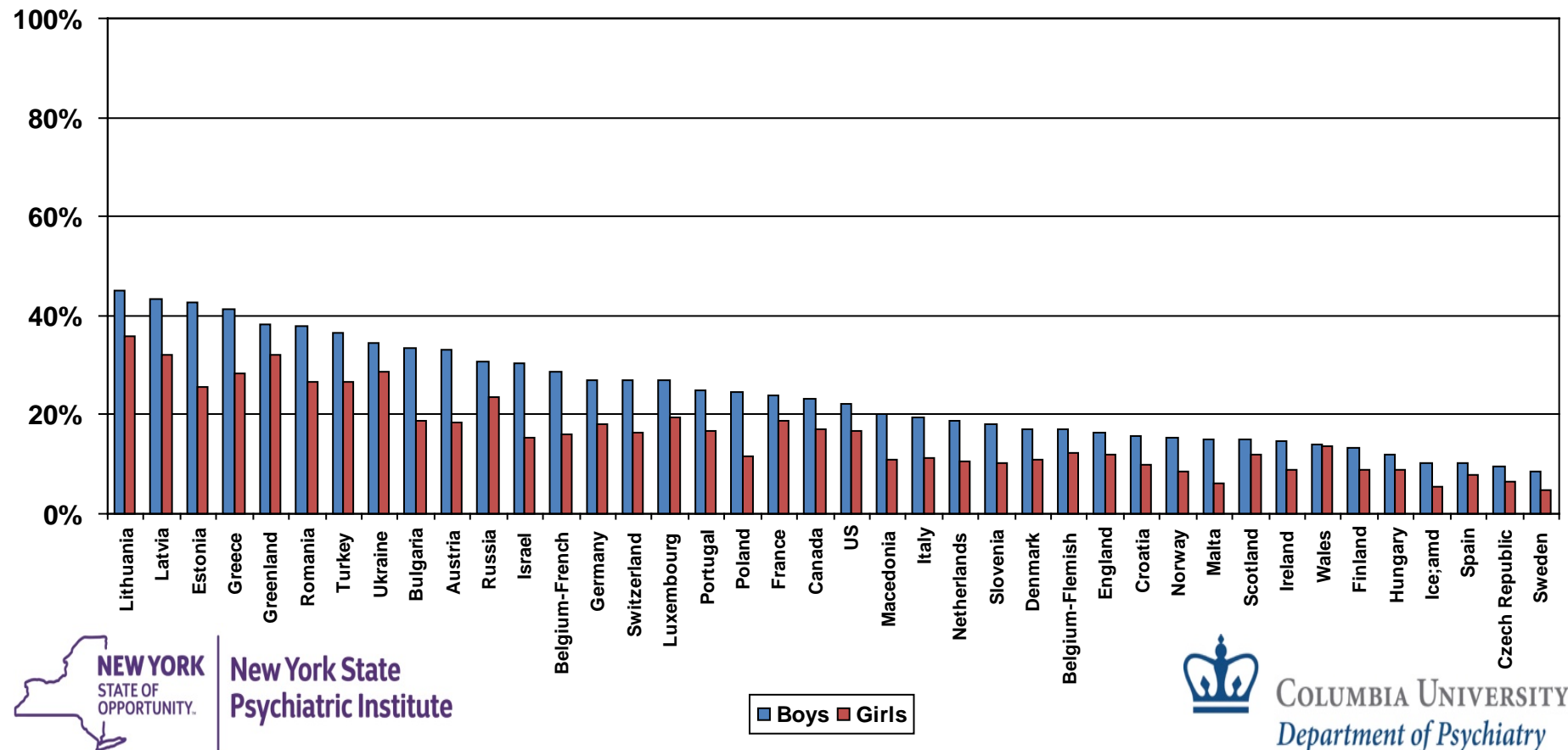
| | | Not at all | 1 - 2 Times | 3 - 4 Times | A few times a week | Most days |
|---|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 61. How often have you been bullied at school in the past four weeks? | Not at all | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 1 - 2 Times | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 3 - 4 Times | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | A few times a week | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Most days | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 62. How often have you been bullied away from school property during the past four weeks? | Not at all | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 1 - 2 Times | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 3 - 4 Times | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | A few times a week | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Most days | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 63. At what age were you first bullied? | I was never bullied | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Younger than 5 years old | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 5 - 10 years old | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 11 - 14 years old | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 15 - 18 years old | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 64. How often have you bullied others at school during the past four weeks? | Not at all | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 1 - 2 Times | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 3 - 4 Times | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | A few times a week | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Most days | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 65. How often have you bullied others away from school property in the past four weeks? | Not at all | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 1 - 2 Times | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 3 - 4 Times | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | A few times a week | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Most days | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 66. At what age did you first bully someone else? | I never bullied anyone | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Younger than 5 years old | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 5 - 10 years old | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 11 - 14 years old | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 15 - 18 years old | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 67. How often in the past four weeks has someone bullied you in the ways listed below? | Never | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 1 - 2 Times | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 3 - 4 Times | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | A few times a week | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Most days | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Made fun of you because of your religion or race | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Made fun of you because of your looks or the way you talk | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Someone was mean about your not acting like a boy or girl | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Hit, slapped, or punched you | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Spread rumors or mean lies about you | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Made sexual jokes, comments, or gestures to you | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Someone from your school used e-mail or the internet to be mean to you | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

CDC's National Youth Risk Behavior Survey

- The next 2 questions ask about bullying. Bullying is when 1 or more students tease, threaten, spread rumors about, hit, shove, or hurt another student over and over again. It is not bullying when 2 students of about the same strength or power argue or fight or tease each other in a friendly way.
- During the past 12 months, have you ever been bullied **on school property**?
 - A. Yes
 - B. No
- During the past 12 months, have you ever been **electronically** bullied? (Count being bullied through e-mail, chat rooms, instant messaging, websites, or texting.)
 - A. Yes
 - B. No

Percentage of Students Involved in Bullying (as Victims, Bullies or Bully-Victims) by Gender

40 Nation Study of 11, 13 & 15-Year-Old School Children (Craig et al., 2009)



PREVALENCE OF CYBERBULLYING VICTIMIZATION

- 15.8% of high school students reported cyberbullying in past 12 months.
- A majority (59.7%) of cyberbullying victims were also school bullying victims.
- 36.3% of school bullying victims were also cyberbullying victims.
- Distress was highest among victims of both cyberbullying and school bullying.

American Journal of
**PUBLIC
HEALTH**

January 2012

Schneider et al., 2012

Prevalence of Bullying Victimization by Gender and Type of Victimization

- U.S. National Sample (N=13,846) -

| | Any bullying victimization (school or cyber) N = 3,429 | School bullying victimization only N = 1,372 | Cyberbullying victimization only N = 935 | Both types of Bullying victimization N = 1,122 |
|--------------------|---|---|---|---|
| Among Girls | 31.3% | 9.2% | 9.1% | 12.9% |
| Among Boys | 22.9% | 12.2% | 4.7% | 6.1% |



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(Messias et al., 2014)



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Prevalence of Bullying Victimization by Age and by Type of Victimization

- U.S. National Sample (N=13,846) -

| | Any bullying victimization (school or cyber) N = 3,429 | School bullying victimization only N = 1,372 | Cyberbullying victimization only N = 935 | Both types of Bullying victimization N = 1,122 |
|-----------------------|---|---|---|---|
| ≤ 14 years old | 32.6% | 16.6% | 6.2% | 9.8% |
| 15 years old | 28.7% | 12.9% | 6.1% | 9.8% |
| 16 years old | 28.1% | 9.9% | 6.9% | 11.2% |
| 17 years old | 24.2% | 8.4% | 7.5% | 8.3% |
| ≥ 18 years old | 21.2% | 7.1% | 7.4% | 6.8% |

(Messias et al., 2014)

ASSOCIATED RISK OF SUICIDE

The past 15 years have witnessed a surge in research on association between bullying behaviors and suicidal ideation and behavior.

- **Cross-sectional Studies:**

Kaltiala-Heino et al., 1999 Finland; Rigby & Slee, 1999 Australia; Cleary, 2000 USA; Van der Wal et al., 2003 Netherlands; Eisenberg et al., 2003 USA; Kim et al., 2005 Korea; **Brunstein Klomek et al., 2007 USA; Brunstein Klomek, 2008 USA;** Bauman, 2008 USA; Kaminski & Fang, 2009. Bonanno & Hymel, 2010 Canada; Hinduja & Patchin, 2010 USA; Dempsey et al., 2011 USA; Hepburn et al., 2012 USA; Litwiller & Brausch, 2013 USA

- **Longitudinal Studies:**

Kim et al., 2009 Korea; **Brunstein Klomek et al., 2008 Finland; Brunstein Klomek et al., 2009 Finland;** Heilbron & Prinstein, 2010 USA; **Brunstein Klomek et al., 2011 USA.,** Fisher et al., 2012 UK; Copeland et al., 2013 USA

Original Investigation

JAMA Pediatr. 2014

Relationship Between Peer Victimization, Cyberbullying, and Suicide in Children and Adolescents

A Meta-analysis

Mitch van Geel, PhD; Paul Vedder, PhD; Jenny Tanilon, PhD

IMPORTANCE Peer victimization is related to an increased chance of suicidal ideation and suicide attempts among children and adolescents.

OBJECTIVE To examine the relationship between peer victimization and suicidal ideation or suicide attempts using meta-analysis.

DATA SOURCES Ovid MEDLINE, PsycINFO, and Web of Science were searched for articles from 1910 to 2013. The search terms were *bully**, *teas**, *victim**, *mobbing*, *ragging*, and *harassment* in combination with the term *suic**. Of the 491 studies identified, 34 reported on the relationship between peer victimization and suicidal ideation, with a total of 284 375 participants. Nine studies reported on the relationship between peer victimization and suicide attempts, with a total of 70 102 participants.

STUDY SELECTION Studies were eligible for inclusion if they reported an effect size on the relationship between peer victimization and suicidal ideation or suicide attempt in children or adolescents.

DATA EXTRACTION AND SYNTHESIS Two observers independently coded the effect sizes from the articles. Data were pooled using a random effects model.

MAIN OUTCOMES AND MEASURES This study focused on suicidal ideation and suicide attempts. Peer victimization was hypothesized to be related to suicidal ideation and suicide attempts.

RESULTS Peer victimization was found to be related to both suicidal ideation (odds ratio, 2.23 [95% CI, 2.10-2.37]) and suicide attempts (2.55 [1.95-3.34]) among children and adolescents. Analyses indicated that these results were not attributable to publication bias. Results were not moderated by sex, age, or study quality. Cyberbullying was more strongly related to suicidal ideation compared with traditional bullying.

CONCLUSIONS AND RELEVANCE Peer victimization is a risk factor for child and adolescent suicidal ideation and attempts. Schools should use evidence-based practices to reduce

← Patient Page page 500

+ Author Audio Interview at jamapediatrics.com

+ Supplemental content at jamapediatrics.com

Figure 2. Forest Plot of the Effect Sizes Between Peer Victimization and Suicidal Ideation

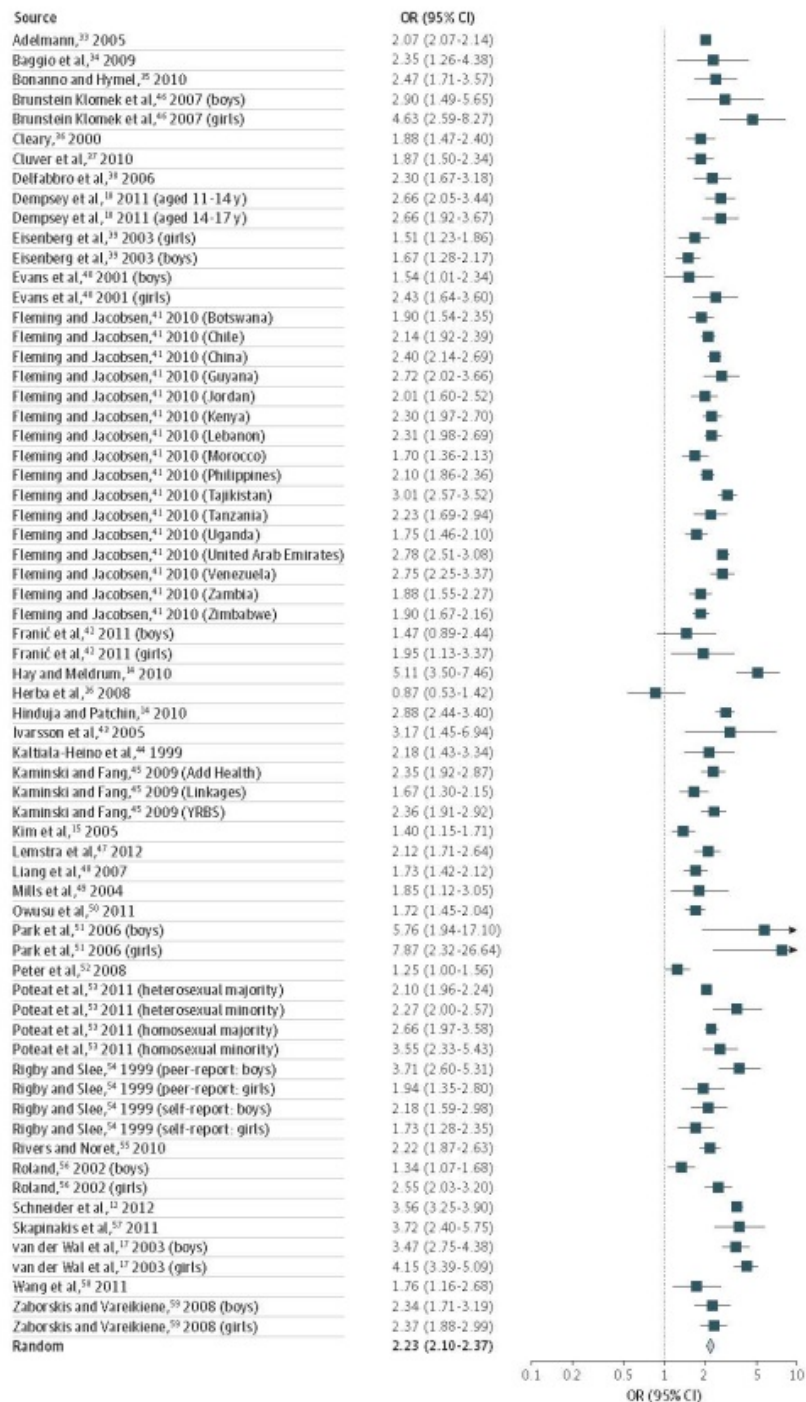
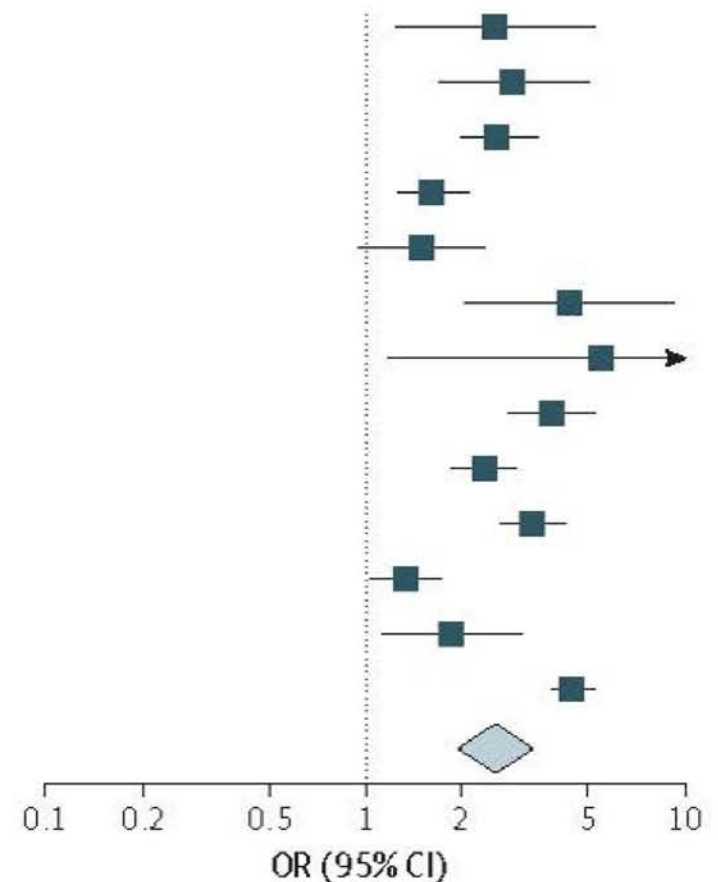


Figure 3. Forest Plot of the Effect Sizes Between Peer Victimization and Suicide Attempts

| Source | OR (95% CI) |
|--|-------------------------|
| Brunstein Klomek et al, ⁴⁶ 2007 (boys) | 2.54 (1.25-5.15) |
| Brunstein Klomek et al, ⁴⁶ 2007 (girls) | 2.90 (1.69-4.97) |
| Coggan et al, ⁶⁰ 2003 | 2.60 (1.96-3.44) |
| Eisenberg et al, ³⁹ 2003 (boys) | 1.63 (1.26-2.11) |
| Eisenberg et al, ³⁹ 2003 (girls) | 1.50 (0.95-2.36) |
| Goodenow et al, ⁶¹ 2006 | 4.35 (2.04-9.27) |
| Ivarsson et al, ⁴³ 2005 | 5.44 (1.17-25.35) |
| Kaminski and Fang, ⁴⁵ 2009 (Add Health) | 3.83 (2.78-5.27) |
| Kaminski and Fang, ⁴⁵ 2009 (Linkages) | 2.35 (1.88-2.93) |
| Kaminski and Fang, ⁴⁵ 2009 (YRBS) | 3.34 (2.64-4.22) |
| Liang et al, ⁴⁸ 2007 | 1.35 (1.05-1.73) |
| Mills et al, ⁴⁹ 2004 | 1.86 (1.13-3.08) |
| Schneider et al, ¹² 2012 | 4.45 (3.83-5.16) |
| Random | 2.55 (1.95-3.34) |



TYPES OF BULLYING INVOLVEMENT (I)

- Bullying others, and not only being victimized, is associated with suicidal ideation and attempts. (Forero et al., 1999; Kaltiala-Heino et al., 1999, 2000; Roland., 2002; Klomek et al., 2007)
- The strongest association between involvement in bullying and suicidal ideation/attempts is found among those who are both bullies and victims (bully-victims). (Kim et al., 2005; Kim & Leventhal., 2008; Klomek et al., 2007; Hepburn et al., 2012, Copeland et al., 2013)

TYPES OF BULLYING INVOLVEMENT (II)

- Involvement in cyberbullying, as either a victim or a bully, *uniquely* contributes to the prediction of suicidal ideation, over and above the contribution of involvement in traditional forms of bullying (physical, verbal, relational) (Bonanno et al., 2013)
- Cyberbullying victimization is more strongly related to suicidal ideation and attempts than is traditional bullying victimization (Messias, 2014; van Geel et al., 2014)

GENDER DIFFERENCES

- There appear to be gender differences in the threshold for adverse psychological outcomes.
 - Females: *any* involvement in bullying is associated with adverse outcomes.
 - Males: *frequent* involvement in bullying is primarily associated with adverse outcomes.
- “Gender Paradox”: females are less likely to be bullies but when they are, they have a more severe impairment than their male counterparts.
- However, gender effects are inconsistent, and recent meta-analysis did not find gender differences.

(e.g., Tiet et al., 2001; Wasserman et al., 2005; Kim, et al., 2006; Brunstein Klomek et al. 2007; Dempsey et al., 2011; Hepburn et al., 2012 Fisher et al., 2012; van Geel, 2014)

POTENTIAL CONFOUNDERS

Victims and bullies/victims differ from children not involved in bullying in their rates of exposure to other risk factors for suicide, including:

- Depression and other psychopathology
- Environmental factors, such as
 - low socioeconomic status
 - unstable family structure
 - family dysfunction (including domestic violence)
 - parental psychopathology
- Physical maltreatment by parent or other adult

Controlling for Potential Confounders

(Sourander et al., 2005; Klomek et al., 2008, 2009)

Bullying behavior at age 8, in Finland

Suicidal ideation at age 18 (males, N=2348)

Suicide attempts and suicide at age 25 (both genders, N=5302)

Males - Frequent bullying behavior is **no longer** associated with suicidal ideation after controlling for **baseline depression**;

Frequent bullying and victimization are **no longer** associated with later suicide attempts and completed suicides after controlling for **conduct and depression symptoms**

Females - Frequent victimization is **still** associated with later suicide attempts and completed suicides, even after controlling for **conduct and depression symptoms**

Controlling for Potential Confounders

(Copeland et al., 2013)

Bullying behaviors (bullies and victims) between 9 and 16

Range of psychiatric outcomes in young adulthood 19, 21 and 24-26

Controlling for **childhood psychiatric disorder and family hardships:**

Victims continued to have higher prevalence of agoraphobia, GAD, and panic disorder

Bullies/victims continued to have higher risk for depression, panic disorder, agoraphobia (females only), suicidality (males only)

Bullies continued to have higher risk for antisocial personality disorder

Controlling for Potential Confounders

(Fisher et al., 2012)

Internalizing and externalizing problems and IQ at age 5

Bullying victimization and maltreatment by adult at ages 5, 7 and 10

Self-harm at age 12

Controlling for **physical maltreatment by an adult, pre-morbid emotional or behavioral problems, and IQ:**

For both boys and girls, association between frequent bullying victimization and self harm behavior **remained**

*In addition, a matched analysis of twins was conducted in order to control for shared environmental factors (i.e., **poverty, parental psychopathology, domestic violence**). Bullied twins were significantly more likely to self harm than were their non-bullied co-twins.*



MEDIATORS

- Relationship between victimization and suicidal ideation was partially mediated by **social hopelessness** (but not general hopelessness)
(Bonanno & Hymel, 2010)
- Relationship between bullying/victimization and suicide attempts was mediated by **depression**, but differently for males and females. (Bauman et al., 2013)
- Relationships between suicidal behavior and victimization from both physical bullying and cyberbullying were partially mediated by **substance use and violent behavior** (Litwiller & Brausch, 2013)

MODERATORS

- Relationship between victimization and suicidal ideation was moderated by **perceived social support from family** (but not friends) (Bonanno & Hymel, 2010)
- Relationship between frequent bullying victimization before age 12 and self-harm at age 12 was moderated by **family history of suicidal behavior**, history of **physical maltreatment by an adult**, and history of **mental health problems** (Fisher et al., 2012)

DISCREPANCIES BETWEEN STUDIES

- Correlational vs. longitudinal studies
- Differences in the participants age
- Different definitions of bullying
 - Experience can vary by type, frequency, intensity, duration
- Different assessment of bullying.
 - (e.g., self-report surveys, asking peers to identify those who are bullies or bullied)
- Different outcomes:
 - suicidal ideation- any/severe
 - suicidal behavior- any attempt/severe attempt/suicide
- Controlling for baseline psychopathology

(Kim & Leventhal, 2008)

SUMMARY

- Worst outcomes for individuals who are both victims and bullies
- Long-term effects of victimization are maintained even after accounting for childhood psychiatric disorders and a range of environmental factors, including family hardships.
- Among children exposed to bullying, the ones at risk for suicide are those with additional risk factors.
- Suicidal ideation and behavior cannot be attributed to just one event or factor (e.g., bullying).

CLINICAL IMPLICATIONS

- Youth involved in bullying should be assessed for other risk factors
- Exposure to multiple types of trauma/adversity heightens risk (and is therefore important to assess)
- Involvement in childhood bullying (in combination with other factors) is a risk factor for mental illness and suicide later in life
- Aggression is another risk factor – don't forget about suicide risk to bullies and bully-victims

A common media script is simplistic explanation of causality



Full Picture?

- Moved to new country
- Divorced parents
- Poor grades
- Recent break up with boy friend
- Previous suicide attempt
- History of depression

BULLYING MEDIA MESSAGES

- Typical media message: bullying causes suicide.
- May normalize suicide as a reaction to being bullied.
- This does not tell the full story.
- Presents misinformation about the causes of suicide because suicide risk is substantially influenced by other factors.
- Oversimplified messages may contribute to suicide contagion.

RECOMMENDED MEDIA MESSAGE

- Bullying increases the risk of suicidal ideation and behavior

However,

- Most youth who are bullied do not have thoughts of suicide or engage in suicidal behavior

RESOURCES FOR PARENTS AND PATIENTS

<http://schools.nyc.gov/RulesPolicies/RespectforAll/default.htm>

<http://www.stopbullying.gov/>