Preteen Suicide and Suicidal Behavior: Assessment and Prevention

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- I have no financial relationships or Conflicts of Interest (COIs) to disclose
Numbers to Call/Text

- **National Suicide Prevention Lifeline:** 1-800-273-TALK (8255)

- **Crisis Text Line:** 741-741 & text “HELLO”

Objectives

- Epidemiology of preteen youth suicide and suicidal behavior; discuss racial disparities

- Options for assessment of suicidal ideation and attempts for preteen youth

- Suggest prevention/interventions for preteen suicide and suicidal behavior
Definitions

- **Suicide** - death caused by injuring oneself with an explicit or inferred intent to die.

- **Suicidal Ideation** - having thoughts, ideas, or plans to end one's life.

- **Suicide Attempt** - non-fatal self-injurious behavior with stated or inferred intent to die.

- **Self-Harm** - purposeful acts of physical harm to the self performed *without* the intent to die.

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The Problem of Youth Suicide

- In 2020, suicide was the 10th leading cause of death for all ages but the 3rd leading cause of death for youth aged 10-19 years in the United States.

![Bar Chart](chart.png)

More deaths from suicide than 7 leading causes of death

Youth Suicide Rate in the U.S., 1997-2020, 10-19 Years

- Overall
- Male
- Female

Suicide rate per 100,000 persons

Year

Source: CDC WInj plausible 6/30/2021 from
https://www.cdc.gov/nchs/whatsnew.htm

Preteen Youth Epidemiology
Leading Causes of Death, Age 5-12 years

U.S. Youth Suicide Rate: Ages 5-12 Years, 2000 to 2020

Suicide Rates in US Youth Aged 5-12 Years, by Sex in 2020

26% more males die by suicide than females
Suicide Rates in US Youth Aged 5-12 Years, 2000 to 2020, by Race

Suicide rate per 100,000 persons

2000

2020

White
Black
Am Indian/AK Native
Asian/Pac Islander


Suicide Rates in US Youth Aged 5-12 Years, 2010 to 2020, by Ethnicity

Suicide rate per 100,000 persons

Males
Females

Hispanic
Non-Hispanic

Self-Harm Rates in US Youth Aged 5-12 Years, 2001 to 2020

Suicide Trends in Elementary School-Aged Children, 5-11 yrs, in the United States, 1993 to 2012

- 657 children died by suicide
  - ~33 deaths per year
  - 11th leading cause of death in 2012
- 553 (84%) boys
- 558 (85%) aged 10-11 years
- 441 (67%) white and 177 (27%) black
- 555 (84%) non-Hispanic
- 514 (78%) hanging/suffocation
No significant change in the overall suicide rate between 1993-1997 and 2008-2012 (incidence rate ratio [IRR] = 0.96, 95% CI = 0.90-1.03)

Source: Bridge et al. JAMA Pediatrics, 2012
Follow-up Study of Suicide in Elementary School-Aged Children and Early Adolescents

National Violent Death Reporting System (NVDRS)

- State-based surveillance system collects data on all violent deaths
- **Uses multiple sources** (e.g., medical examiners, coroners, law enforcement)
- Expanded to all 50 states in 2018 however data online only 34 states
- **Information collected** includes circumstances related to suicide (e.g., depression, relationship or school problems)
Precipitating Circumstances of Suicide in Children and Early Adolescents

- 2003-2012 data on all suicide decedents aged 5 to 14 years
- Restricted-use data available for 17 states
- Precipitating circumstances included: mental health history/treatment, substance use, physical health history, stressful life events, & suicide-related circumstances
- Comparisons were made based on:
  - Age group (5-11 vs. 12-14 years)
  - Race (black vs. non-black)

Differences Between Child (N=87) and Early Adolescent (N=606) Suicide Decedents*

*All differences significant at P < 0.05
No Differences Between Child and Early Adolescent Suicide Decedents

- Ethnicity
- Time of injury leading to death
- In public custody at time of death
- Perpetrator or victim of interpersonal violence
- Recent criminal legal problem
- Other legal problems
- Physical health problems
- School problems (including bullying behaviors)
- Recent crisis
- Death of a friend or family member
- History of suicide attempt
- Suicide intent disclosed (29.5% child vs. 28.9% early adolescent)
- Recent suicide of family member or friend
- Current mental health concern
- Current or past history of mental health treatment
- Problems with alcohol or drugs
- Presence of alcohol or drugs at time of death (toxicology reports)
- Race-by-precipitating circumstances interactions in child vs. early adoles. decedents
The Problem of Black Youth Suicide*

- In 2020, suicide was the 3rd leading cause of death for Black youth aged 5-19 years in the United States

<table>
<thead>
<tr>
<th>Condition</th>
<th>2020 Death Count</th>
<th>2010 Death Count</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza and pneumonia</td>
<td>39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVID-19</td>
<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Congenital Anomalies</td>
<td>101</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart Disease</td>
<td>136</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory Disease</td>
<td>137</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malignant neoplasms</td>
<td>235</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suicide</td>
<td>395</td>
<td></td>
<td>102%</td>
</tr>
</tbody>
</table>

102% increase since 2010

Timeline of Work on Black Youth Suicide, 2015 – current*

2015 Bridge et al.
2016 Sheftall et al.
2017 Lindsey et al.
2017 Racial Discrimination as risk factor
2018 Joe et al.
2018 Bridge et al.
2019 Lindsey et al.
2019 Congressional Black Caucus Emergency Taskforce
2019 The Alarm Report
2020 Large media presence
2020 NIMH RFA
2021 JAACAP manuscript
2021 Ground Zero Approach

*Work displayed not only work completed during this timeframe

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Comparison of Suicide Incidence Rates Between Black and White Youth in the U.S. From 2001 to 2015, by Age

<table>
<thead>
<tr>
<th>Age, y</th>
<th>LOG(IRR), 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
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<td>14</td>
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<tr>
<td>15</td>
<td></td>
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<tr>
<td>16</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations: IRR, incidence rate ratio; LOG, natural logarithm. Blue squares indicate the estimated LOG of the age-specific IRR, vertical lines indicate 95% CI, and reference group is white youth. 95% CIs that do not include zero are considered statistically significant.

Source: Bridge et al., JAMA Pediatrics, 2018
<table>
<thead>
<tr>
<th>Age, y</th>
<th>Youth Suicides, No. (95th CI per 1 Million Persons)</th>
<th>RR (95% CI)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black</td>
<td>White</td>
</tr>
<tr>
<td>All</td>
<td>1161 (8.53)</td>
<td>673 (5.19)</td>
</tr>
<tr>
<td>5-9</td>
<td>26 (0.53)</td>
<td>45 (0.59)</td>
</tr>
<tr>
<td>10</td>
<td>47 (4.68)</td>
<td>79 (1.08)</td>
</tr>
<tr>
<td>11</td>
<td>103 (9.91)</td>
<td>190 (4.00)</td>
</tr>
<tr>
<td>12</td>
<td>129 (12.57)</td>
<td>471 (9.86)</td>
</tr>
<tr>
<td>13</td>
<td>167 (16.16)</td>
<td>979 (20.57)</td>
</tr>
<tr>
<td>14</td>
<td>194 (18.60)</td>
<td>162 (23.65)</td>
</tr>
<tr>
<td>15</td>
<td>215 (24.25)</td>
<td>246 (51.48)</td>
</tr>
<tr>
<td>16</td>
<td>317 (20.49)</td>
<td>372 (69.20)</td>
</tr>
<tr>
<td>17</td>
<td>429 (41.13)</td>
<td>408 (81.39)</td>
</tr>
</tbody>
</table>

**Boys**

<table>
<thead>
<tr>
<th>Age, y</th>
<th>Youth Suicides, No. (95th CI per 1 Million Persons)</th>
<th>RR (95% CI)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black</td>
<td>White</td>
</tr>
<tr>
<td>5-9</td>
<td>22 (0.88)</td>
<td>40 (0.34)</td>
</tr>
<tr>
<td>10</td>
<td>42 (8.24)</td>
<td>67 (2.78)</td>
</tr>
<tr>
<td>11</td>
<td>70 (12.55)</td>
<td>154 (6.33)</td>
</tr>
<tr>
<td>12</td>
<td>91 (17.45)</td>
<td>316 (13.72)</td>
</tr>
<tr>
<td>13</td>
<td>122 (21.34)</td>
<td>649 (26.34)</td>
</tr>
<tr>
<td>14</td>
<td>129 (24.74)</td>
<td>1117 (41.09)</td>
</tr>
<tr>
<td>15</td>
<td>164 (21.07)</td>
<td>1760 (70.73)</td>
</tr>
<tr>
<td>16</td>
<td>238 (45.07)</td>
<td>2512 (100.33)</td>
</tr>
<tr>
<td>17</td>
<td>347 (05.62)</td>
<td>3281 (130.17)</td>
</tr>
</tbody>
</table>

**Girls**

<table>
<thead>
<tr>
<th>Age, y</th>
<th>Youth Suicides, No. (95th CI per 1 Million Persons)</th>
<th>RR (95% CI)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-11y</td>
<td>40 (1.17)</td>
<td>53 (0.33)</td>
</tr>
<tr>
<td>12</td>
<td>38 (7.53)</td>
<td>135 (9.80)</td>
</tr>
<tr>
<td>13</td>
<td>45 (8.85)</td>
<td>330 (14.10)</td>
</tr>
<tr>
<td>14</td>
<td>65 (12.73)</td>
<td>508 (21.60)</td>
</tr>
<tr>
<td>15</td>
<td>88 (17.20)</td>
<td>738 (31.19)</td>
</tr>
<tr>
<td>16</td>
<td>78 (25.44)</td>
<td>960 (36.20)</td>
</tr>
<tr>
<td>17</td>
<td>81 (15.83)</td>
<td>803 (33.70)</td>
</tr>
</tbody>
</table>

Source: Dhib et al., JAMA Pediatrics. 2018

Abbreviation: RR, incidence rate ratio.
Black Youth Suicide Rates: 2003 to 2017 by Age

Precipitating Circumstances of Suicide in Black Youth

- Youth 5-11 years and 12-14 years
  - Die in own residence
  - Family problem/crisis
  - School problem/crisis
  - Injury within 24 hours of an argument
  - ADHD/ADD diagnosis
  - More girls died by suicide
Black Youth Suicide Rates: 2003 to 2017 by Sex

Sex Specific Precipitating Circumstances

- **Girls**
  - Relationship problems/crisis
  - Die within 24 hrs of argument
  - Physical health concerns
  - History (hx) of suicidal thoughts, plans, & attempts
  - Current mental health (mh) concern, receiving current mh treatment (tx), & hx of mh tx
  - Depression/dysthymia and anxiety
Continued...

• Boys
  – Recent criminal/legal problem
  – ADHD mental health diagnosis
Assessment of Suicidal Behavior for Preteens

- Columbia Suicide Severity Rating Scale (C-SSRS)
- Ask Suicide-Screening Questions (ASQ)
- Not many exist for youth 5-12 years

The Good News

Suicide is Preventable!
Preteen Suicide Prevention

- Emotion dysregulation to prevent SB (primary prevention)
  - Promoting Alternative Thinking Strategies (PATHS)
  - Sources of Strength

- Provide insight for signs and symptoms associated with SB (gatekeeper training)
  - Signs of Suicide (SOS)
Black Youth: Ground Zero Approach

- Understand what are the culturally relevant risk factors (e.g., discrimination)
- Establish theories and test theories considered universal with minoritized groups
- Investigate the trajectory of ideation to behavior in Black youth
- Mixed methods approaches are needed

Promising Avenues for Black Youth Suicide Prevention

- Engage community organizations
- Faith-based
  - Helping Alleviate Valley Experiences Now (HAVEN)
    Molock et al., 2008
- School-based
  - Adapted-Coping with Stress Course (A-CWS)
    Robinson et al., 2021
- Gatekeeper Trainings
  - After-school programs, barber and beauty shops, Columbus Urban League
Suicide Prevention Resources

- Suicide Prevention Lifeline 1-800-273-TALK (8255)
- Spanish Suicide Prevention Lifeline 1-877-727-4747
- Crisis Text 741-741 (Text “HOME”)
- SAMHSA HS Suicide Prevention http://store.samhsa.gov/product/Preventing-Suicide-A-Toolkit-for-High-Schools/SMA12-4669
- http://actionallianceforsuicideprevention.org/
- http://www.sprc.org/
- https://www.withyouhere.org/
- http://afsp.org/
- https://www.starcenter.pitt.edu/
- http://jasonfoundation.com/
- http://zerosuicide.sprc.org/
- http://www.thetrevorproject.org/
- https://www.translifeline.org/
- http://www.crisistextline.org/
- http://www.suicidepreventionlifeline.org/
- https://Aakomapproject.org
- https://projectliftservices.org/
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