

Dr. Emily Sallee, PhD



**Lowering the Risk
of Adolescent
Suicide by
Addressing
Protective Factors**



and



Dr. Lillian Martz, PhD

2025

Lowering the Risk of Adolescent Suicide by Addressing Protective Factors

Emily Sallee, PhD

Lillian Martz, PhD

Session Outcomes:

1

Participants will be able to **understand Joiner's Interpersonal Theory of Suicide (IPTS)** for the conceptualization of suicidal behaviors in adolescents.

2

Participants will be able to **identify protective factors related to perceived burdensomeness and thwarted belonging**, with the purpose of increasing these factors as part of an intervention plan.

3

Participants will be able **apply research-informed interventions and techniques for addressing suicidality in adolescents**.












Prevalence/Statistics

- National rates increased 28% from 2000 to 2015, when 44,193 people died by suicide (one every 12 minutes)

- **Third** leading cause of death in children and adolescents nationally

- **First** leading cause of preventable death for children (10-14) in Montana (DPHHS)

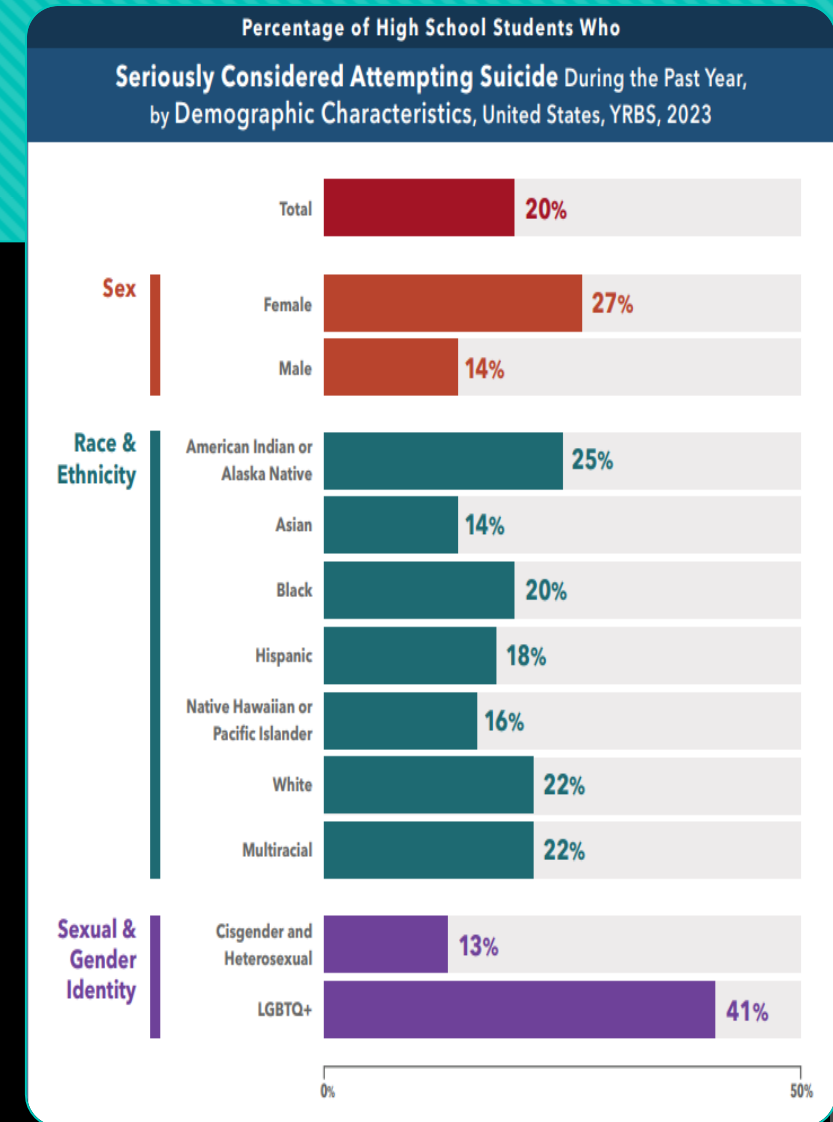
- Documented suicide deaths in children as young as **5-years-old**

The Percentage of High School Students Who:*	2013 Total	2015 Total	2017 Total	2019 Total	2021 Total	2023 Total	Trend (All Years Available)	2-Year Change (2021-2023)
Experienced persistent feelings of sadness or hopelessness	30	30	31	37	42	40		
Experienced poor mental health†	–	–	–	–	29	29	–	
Seriously considered attempting suicide	17	18	17	19	22	20		
Made a suicide plan	14	15	14	16	18	16		
Attempted suicide	8	9	7	9	10	9		
Were injured in a suicide attempt that had to be treated by a doctor or nurse	3	3	2	3	3	2		

*For the complete wording of YRBS questions, refer to Appendix A.
 †Question introduced in 2021.

High Risk Populations

- Girls Twice as likely (YRBS, 2023)
- LGBTQ+ teen suicide rates are higher
 - 46% of transgender/nonbinary youth consider suicide ([Trevor Project](#))
 - 41% of LGBTQ youth consider suicide (YRBS, 2023)
 - Less likely to seek support and support is more restricted now
 - 42% cited being afraid to talk about mental health concerns
 - 37% said they did not want to have to get parent/caregivers permission
- Racial/Ethnic minorities
 - Consider, make plans, and attempt suicide 2023 MT YRBS
 - 26% of youth “seriously considered suicide”
 - 21% of youth made a suicide plan
 - 11.2% of youth made at least one suicide attempt in the last 12 months (9.6% made 2-3 attempts)



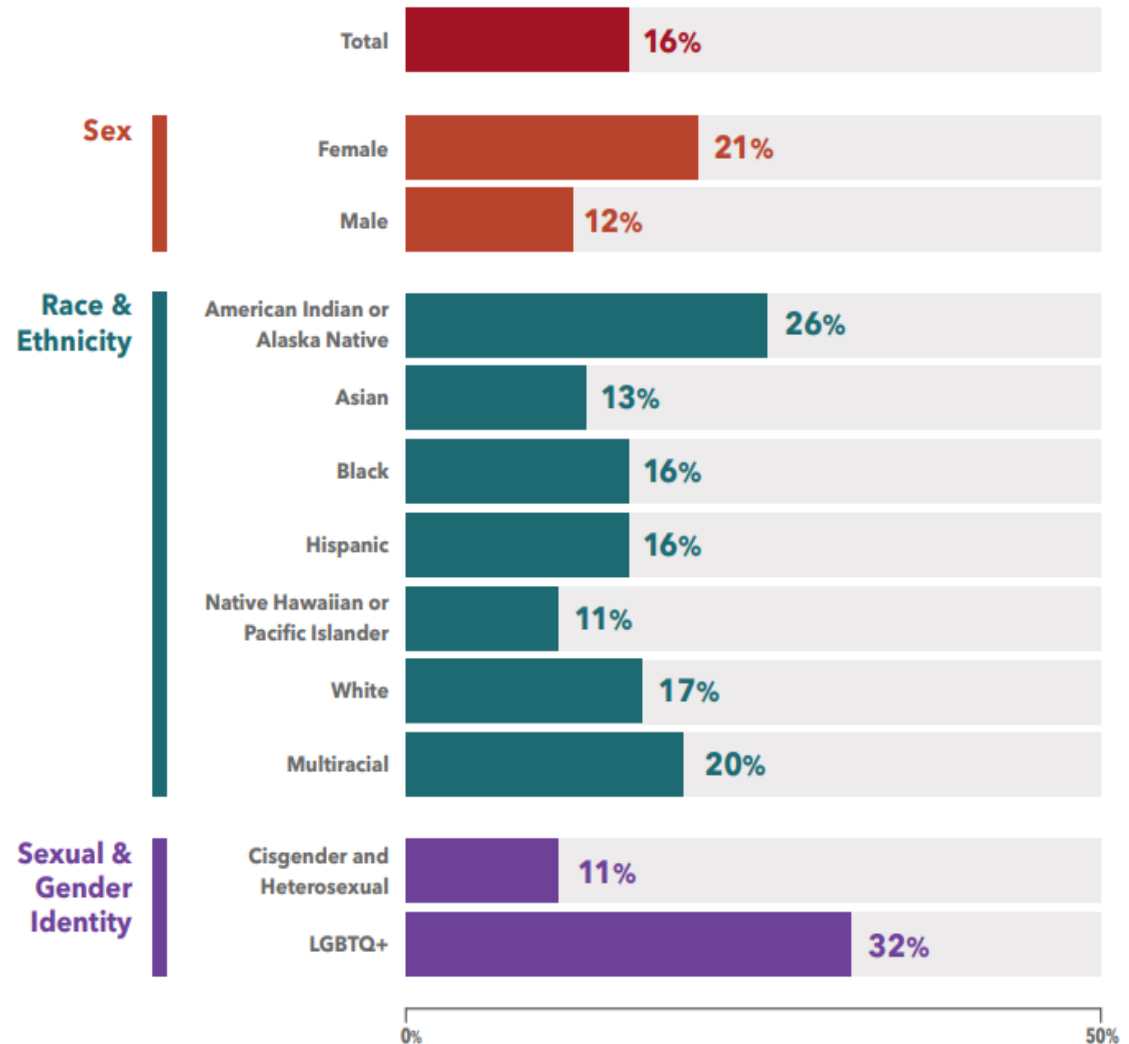
Montana

○ 2023 MT YRBS

- National Trends risk went down slightly. In Montana some went up
- 26% of youth “seriously considered suicide” (up from 21.7% in 2021)
- 21% of youth made a suicide plan (up from 18% in 2021)
- 11.2% of youth made at least one suicide attempt in the last 12 months (up from 10.2% in 2021)
- 9.6% made 2-3 attempts

○ Risks for American Indian/Alaska Native youth are higher and 14% of Montana's Public K-12 students are American Indian (OPI, 2018).

Percentage of High School Students Who
Made a Suicide Plan During the Past Year,
by Demographic Characteristics, United States, YRBS, 2023



Adolescents and Suicidality

- Immense biological and neurological growth and change
 - Underdeveloped prefrontal cortex = impaired decision-making
 - Increased emotional reactivity
- 8th graders (typically ages 13-14) → “early adolescence”
 - Self-comparison to peers
 - Beginnings of puberty
- 11th graders (typically ages 16-17) → “middle adolescence”
 - Increased drive for independence; increased self-involvement
 - Renegotiation of relationships
 - Increased concern with physical appearance
 - Tasked with gaining autonomy and independence, while likely experiencing periods of sadness/grief due to psychological loss

The Interpersonal Theory of Suicide (IPTS)

*Thwarted Belonging (TB) + Perceived Burdensomeness (PB) = **Suicide Ideation (SI)***

*Thwarted Belonging (TB) + Perceived Burdensomeness (PB) + Acquired Capability (AC) = **Suicide Attempt (SA)***

TB: dynamic, interpersonal state of loneliness and lack of reciprocally positive relationships (social disconnection)

PB: dynamic, interpersonal state of hopelessness and the misconception of being a burden (Self-Hated)

AC: static, fearlessness (or lowered fear) of death + elevated/increase physical pain tolerance

Suicide Desire

Reciprocal
Relationship

Loneliness

Thwarted
Belongingness
(TB)

Perceived
Burdensomeness
(PB)

Liability

Self-hatred

Lethal
(or near lethal)
Suicide

Acquired Capability

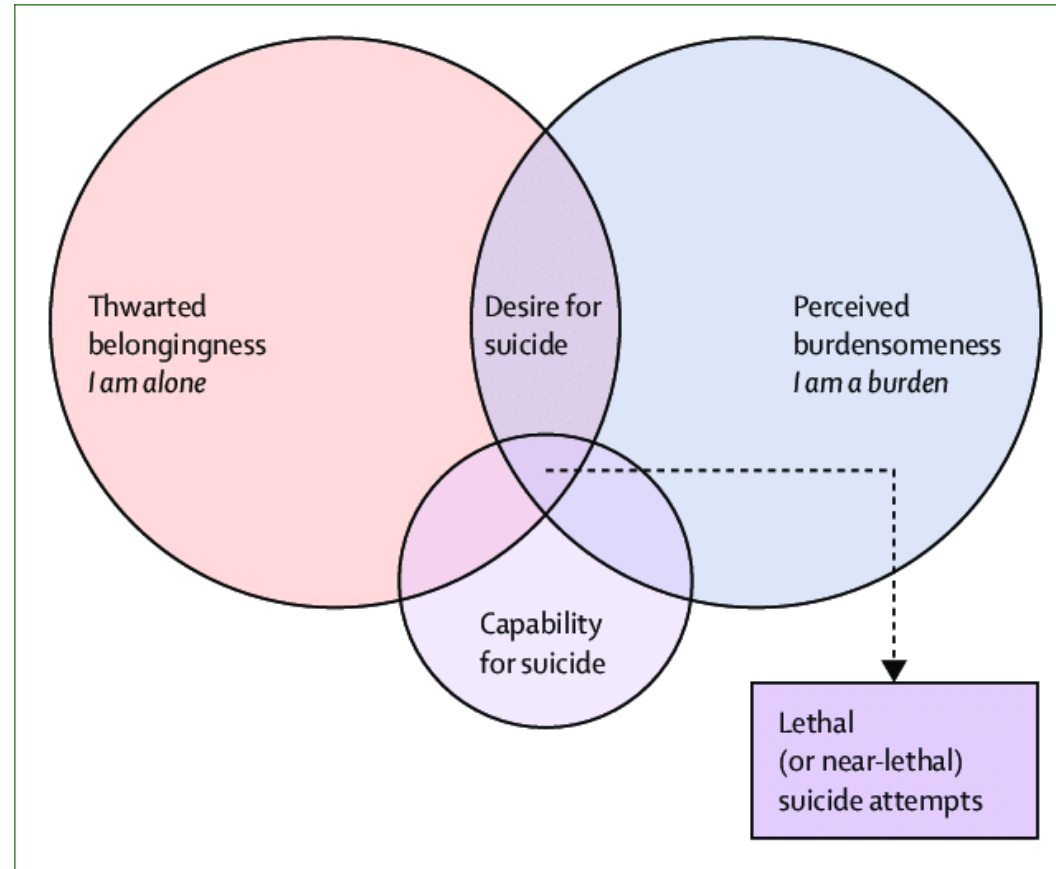
Physical
Abuse

Combat
Exposure

Sexual
Abuse

Previous
Suicide
Attempt

- 1) Increased 'Fear of Death'
- 2) Decreased 'Pain Tolerance'



Risk Factors vs Protective Factors

- Most suicide prevention and interventions focus on risk factors
- Emily's Dissertation: Using Joiner's IPTS theory to identify risk factors (**being sad**, **poor emotional health**, absences due to feeling unsafe, **not straight**, NB, and being bullied were all significant risk factors for 8th graders (bold for 11th grade as well).
- Montana Happiness Project: Positive Psychology and Strengths-based focus. What protects youth from risks of suicide?

Oregon Health Teen (OHT) Survey

Derived from the Youth Risk Behavior Survey (YRBS)

- Developed by the Centers for Disease Control and Prevention (CDC)

Biennial survey administered to volunteering 8th and 11th graders in Oregon

- Managed by the Oregon Health Authority (OHA)

Utilizes a probability design and a randomization process

- Intends to minimize possible selection biases and sampling error

2017 OHT Survey demographics:

8th grade - 14,852 participants (11,505 used in study)

- 47.6% female, 47.2% male, 5.2% non-binary/GNC
- 59.2% White, 25.6% Hispanic/Latino, 3.9% Asian, 2.3% Black, 8.2% Other, 0.8% Multiple

11th grade - 11,895 students (10,131 used in study)

- 48.2% female, 45.9% male, 5.9% non-binary/GNC
- 62.9% White, 25.0% Hispanic/Latino, 3.6% Asian, 2.2% Black, 5.5% Other, 0.8% Multiple

Prevalence according to the OHT Survey



8th grade (11,505 participants):

17.5% (2,013 8th graders) reported suicide ideation
8.3% (855 8th graders) reported suicide attempt



11th grade (10,131 participants):

18.1% (1,834 11th graders) reported suicide ideation
6.6% (669 11th graders) reported suicide attempt



National reporting values for adolescents:

Suicide ideation → 17.2%
Suicide attempt → 7.4%

Research Study Outline

Research Questions:

- **Research Question 1:** To what extent do protective factors combatting perceived burdensomeness and thwarted belonging prevent suicidal ideation in adolescents?
- **Research Question 2:** To what extent do protective factors combatting perceived burdensomeness and thwarted belonging prevent suicidal attempts in adolescents?

Method:

- Retrospective, correlational study that used binomial logistic regression (binary scales) to analyze an archival dataset
- Predictor Variables (PV): (1) Perceived Burdensomeness, (2) Thwarted Belongingness (Proxy Items)
- Outcome Variables (OV): (1) Suicide Ideation, (2) Suicide Attempt

Perceived Burdensomeness (PB) Proxy Items

Emotional or mental health needs met: "During the past 12 months, did you have any emotional or mental health care needs that were not met? Count any situation where you thought you should see a counselor, social worker, or other mental health professional" (yes, **no**)

Physical Health needs met: "During the past 12 months did you have any physical health care needs that were not met? Count any situation where you thought you should see a doctor, nurse, or other health professional. (yes, **no**)

Self-Agency 1: "I can do most things if I try (**very much true, pretty much true, a little true**, not at all true)

Self-Agency 2: "I can work out my problems" (**very much true, pretty much true, a little true**, not at all true)

Food Security: "In the past 12 months, did you ever eat less than you felt you should because there wasn't enough money to buy food" (yes, **no**)

Data was binarized- Bolded = (protective factor) non-bolded = (not protective)

Thwarted Belongingness (TB) Proxy Items

○**Physical Health:** “Would you say your general physical health is... (**excellent, very good, good, fair,** poor)”

○**Emotional Health:** “Would you say in general your emotional health is... (**excellent, very good, good, fair,** poor)”

○**Caring Teacher:** “There is at least one teacher or other adult in my school that really cares about me (**very much true, pretty much true, a little true,** not true at all)”

Attendance: “During the past 12 months how many school days did you miss (**none, 1-2 days, 3-5 days, 6-10 days, 11-15 days,** 16+ days)”

○**Volunteer:** “I volunteer to help with others in my community (**very much true, pretty much true, a little true,** not true at all)”

○Data was binarized- **Bolded = (protective factor)**
non-bolded = (not protective)

Study Results (Suicidal Ideation)

Perceived Burdensomeness

All proxy items were found to be statistically significant

Better emotional/mental health: Students who reported this were 3X less likely to be suicidal

Emotional needs met: Students who reported having needs met were 8X less likely to be suicidal

Self-Agency: Students who endorsed these items were 6X less likely to consider suicide

Food Security: Food secure students were 2.89 times less likely to report suicidal ideation

Stepwise regression:

All of those were consistent across grade levels when looked at individually. When combined in a stepwise regression several were more protective for Grade 8 vs Grade 11.

Food security: More protective for younger students

Emotional Needs met: More protective for younger students

Self-Agency: More protective for younger students.

Thwarted Belonging

Excellent Health: Students who had good physical health were 2.9X less likely to report suicidal ideation

Attendance: Regular attendance made students 1.92 times less likely to report suicidal ideation

Caring Adult: Students with caring adults were 2.25X less likely to consider suicide

No significant Grade Level differences

Study Results (Suicide Attempt)

All proxy items were found to be statistically significant at $p < .01$

Stepwise regression:

Better emotional/mental health: 3.55X less likely to attempt suicide

Emotional Needs met: 3.39X less likely to attempt suicide

Self-Agency: 2.36X less likely to attempt suicide

Food Security: 1.96X less likely to attempt suicide

Attendance: 1.48X less likely to attempt suicide

Caring teacher: 1.57 times less likely to attempt suicide

Implications for Practice

- Meeting Emotional Needs (8X) and Self-Agency (6X) are huge protective factors.
- Schools can continue take steps to improve the sense of belonging for students through **mentoring programs** (caring teacher), efforts to improve attendance (**school safety, access**), and measures to **promote physical health** (Community Health centers/Community Schools)
- Schools can take steps to reduce feelings of burdensomeness on students. Programs that **boost self agency** (project based learning, community partnerships), improve **mental health supports** for all students (Tier 1 and Tier 2 strengths-based approaches, more counselors), and improve **food security** (universal free lunch).

Contact Info & Resources

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CDC (2023) National YRBS Trends 2013-2023: <https://www.cdc.gov/yrbs/dstr/index.html>

DPHHS (2023): <https://dphhs.mt.gov/suicideprevention/toolkit/index>

Joiner, T.E., Van Orden, K.A., Witte, T.K., Selby, E.A., Ribeiro, J.D., Lewis, R., & Rudd, M. (2009). Main predictors of the Interpersonal-Psychological Theory of suicidal behavior: Empirical tests in two samples of young adults. *Journal of Abnormal Psychology*, 118, 643-646.

MT Happiness Project: <https://montanahappinessproject.com/>

MT 2023 YRBS:

<https://opi.mt.gov/Portals/182/Page%20Files/YRBS/2023YRBS/Youth%20Risk%20Behavior%20Survey%2011-2024.pdf?ver=2024-11-27-170354-820>

MT 2021 YRBS: <https://archive.legmt.gov/content/Committees/Interim/2021-2022/Children-Families/Studies/HJR-35/nov2021-yrbs-mental-health-results.pdf>

Oregon Health Authority (2017). *Oregon Healthy Teens Survey*. Retrieved from

<https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/SURVEYS/OREGONHEALTHYTEENS/Documents/2017/2017OHT8thSurvey.pdf> and

<https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/SURVEYS/OREGONHEALTHYTEENS/Documents/2017/2017OHT11thSurvey.pdf>