

Minnesota Student Survey: Strengths and New Findings

TCRG: February 17, 2021

Background

- Consistent source of data over the past 30 years on school climate, youth physical and mental health, substance use, participation in activities, nutrition, relationships, and more
- Partnership between MDE, MDH, DHS, DPS* and local schools
- Every three years since 1995
- Grade levels surveyed: 5th, 8th, 9th, and 11th (before 2013: 6th, 9th, and 12th)



TREND DATA

*Minnesota Department of Education; Minnesota Department of Health; Department of Human Service; Department of Public Safety

Methodology

- Began transition from paper survey to online survey in 2013; now fully online
- MSS Interagency Team (or the survey vendor) reaches out to the MSS lead and superintendent at each school
- Passive consent approach—parents must opt their child out
- New process for people to request new questions, or revisions to existing questions

What's so great about the MSS?

- Census survey
- Longitudinal
- Compatibility/comparability with national data
- Use of cognitive testing
- Publicly available data with more options for schools and school districts
- Responsive--to local needs and trends
- Expanded demographic options: race/ethnicity, sexual orientation, and gender identity

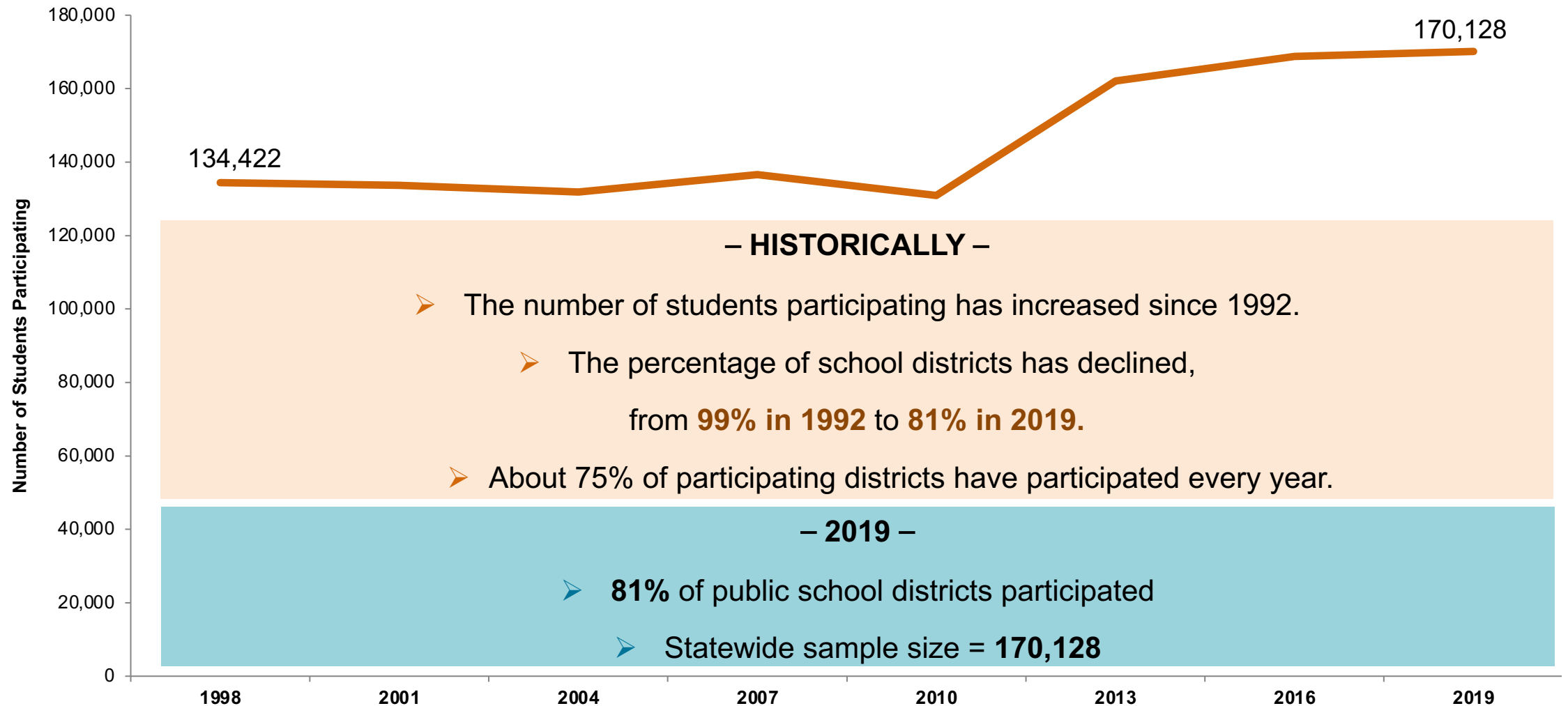
What's so great about the MSS?

- Wide variety of topics:
 - Mental health
 - Physical health
 - School climate and bullying
 - Sexual health
 - Substance use
 - Relationships

Challenges and barriers

- School administration concern about time and assessment fatigue
- Student concern about confidentiality when completing the survey on a school-issued device
- Parent concern about sensitive questions
- Community concern about/distrust of self-reported data

Participation



New demographic response options

Race and Ethnicity

2010

Black, African, or African American only
American Indian or Alaska Native only
Asian or Asian American only
Native Hawaiian or Other Pacific Islander
Hispanic or Latino/a only
Multiple races

2013

Black, African, or African American only
Somali
American Indian or Alaska Native only
Asian or Asian American only
Hmong
Native Hawaiian or Other Pacific Islander
Hispanic or Latino/a only
Multiple races

2019

Black, African, or African American only	14123
Ethiopian-Oromo	591
Ethiopian-Other	766
Liberian	814
Nigerian	585
Somali	3669
Other Black, African, or African American	2951
American Indian or Alaska Native only	2715
Anishinaabe/Ojibwe	1514
Dakota/Lakota	811
Other tribal affiliation	689
Asian or Asian American only	11182
Asian Indian	1373
Burmese	126
Chinese	1526
Filipino	416
Karen 591	
Lao	785
Vietnamese	1428
Other Asian	1662
Native Hawaiian or Other Pacific Islander	411
Hispanic or Latino/a only	10231
Colombian	207
Ecuadorian	373
Guatemalan	736
Mexican	6985
Puerto Rican	417
Salvadoran	648
Spanish/Spanish-American	2319
Other Hispanic or Latino/a	1038
Multiple races	14297

New demographic response options

Sexual Orientation (9th and 11th graders)

2010

2013

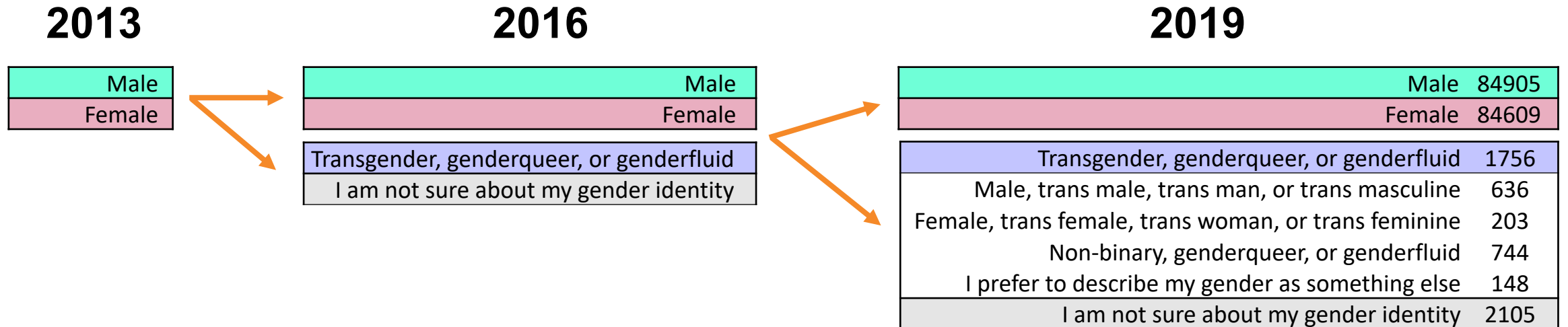
Heterosexual
Gay or Lesbian
Bisexual
Not sure (questioning)

2019

Heterosexual	62799
Gay or Lesbian	4515
Bisexual	1253
Questioning/not sure	1662
Pansexual	1350
Queer	351
I don't describe myself in any of these ways	6671
I am not sure what this question means	1192

New demographic response options

Sex and Gender (8th, 9th and 11th graders)



Demographic data trends

- In 2019, finally have trends (3 years/data points) for:
 - all grades (5th, 8th, 9th, and 11th)
 - for Somali and Hmong students
 - lesbian, gay, and bisexual students

So, what do we do with the data?

- Research
- Grant applications
- Needs assessments
- Policy development
- Raise awareness/messaging
- Evaluate effectiveness of existing supports
- Aid data-driven decision-making and strategic planning
- Coordinate collaborative efforts across agencies and organizations

So, what do **WE** do with the data?

Address current issues:

- Mental health
- Introduction of vaping
- Adverse childhood experiences (ACEs)

Mental health

Historical inclusion

Suicidal ideation and suicide attempts

Self harm

Various questions about **depression, long-term mental, behavioral, or emotional problems** and **treatment** for those issues

Together, form a
validated PHQ-4
measure

Depression index
(Patient Health
Questionnaire-2)

Anxiety index
(Generalized
Anxiety Disorder-2)

1992

2007

2016

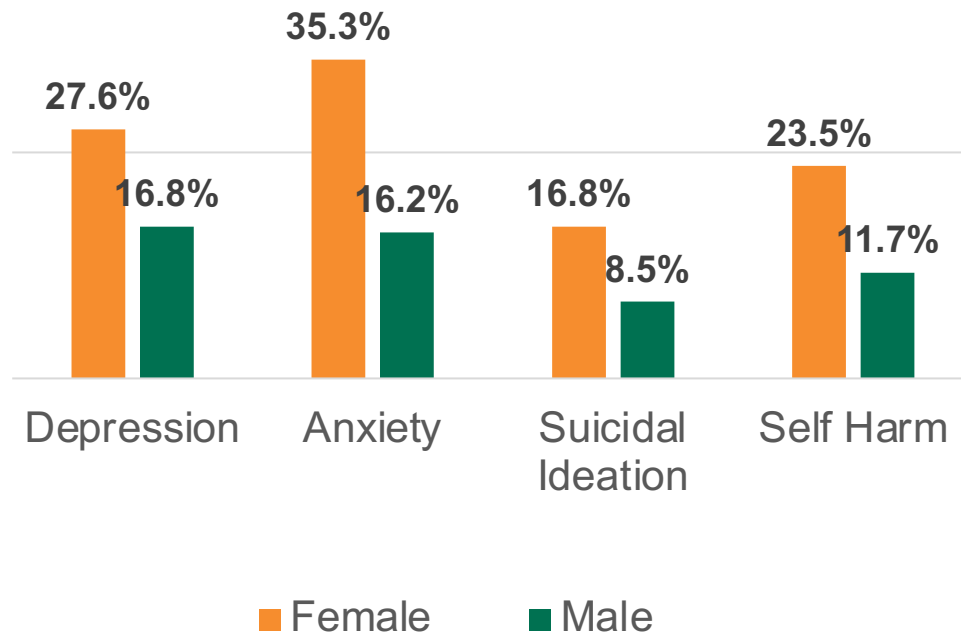
2019

Mental health

2019 MSS data: Prevalence

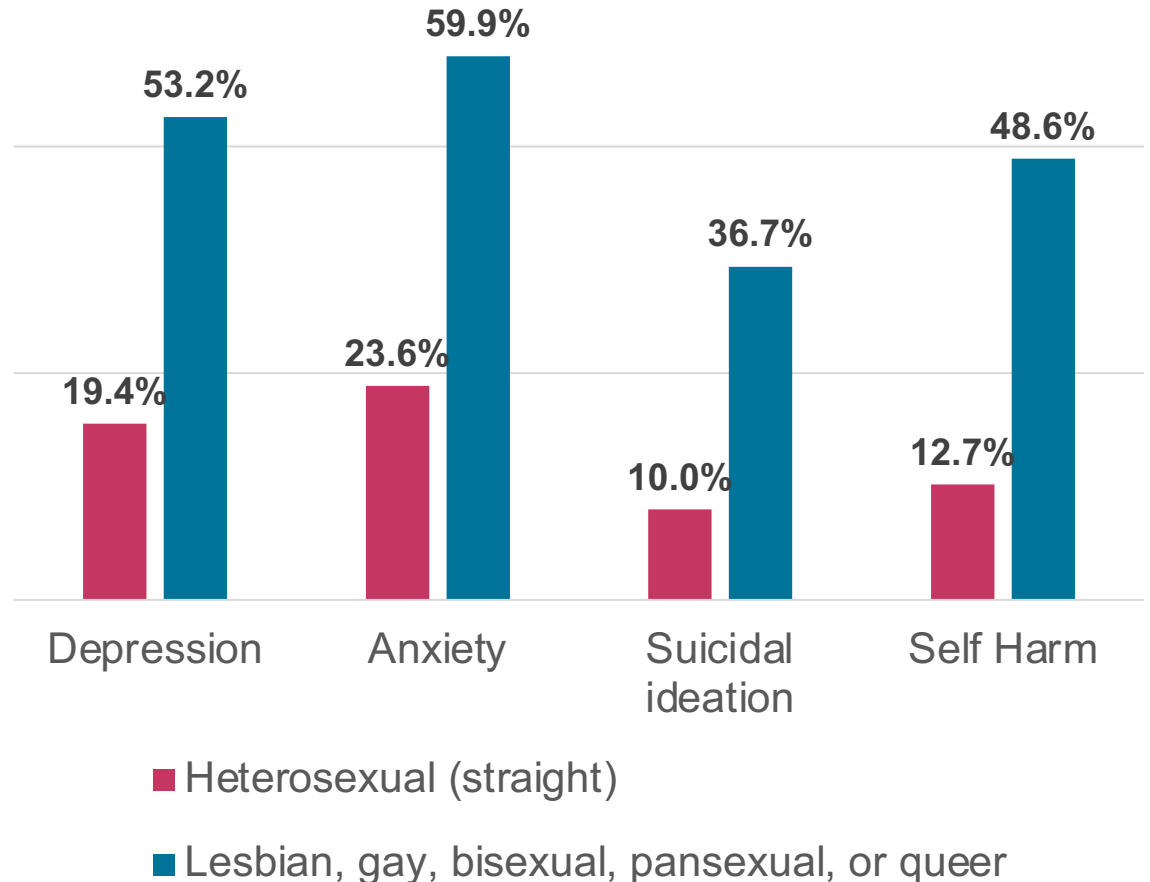
Mental Health + Gender

8th, 9th, and 11th Graders



Mental Health + Sexual Orientation

9th and 11th Graders

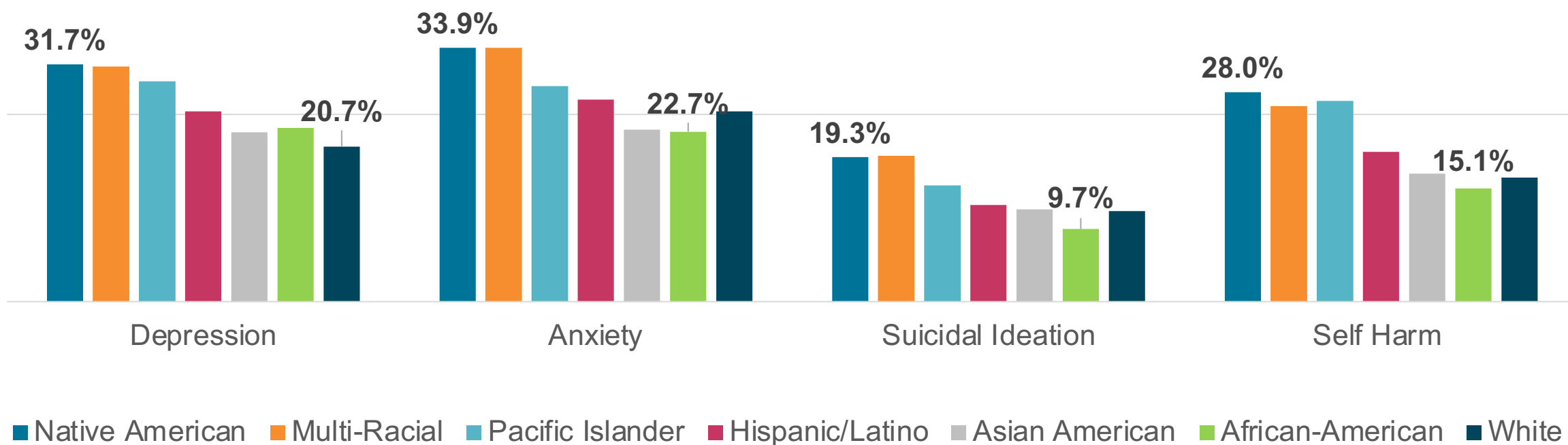


Mental health

2019 MSS data: Prevalence

Mental Health + Race/Ethnicity

8th, 9th, and 11th Graders



Mental health

2019 MSS data: Associations

- Students with past 2-week symptoms of anxiety are...
 - **2.1** times more likely to report alcohol use*
 - **2.0** times more likely to report e-cigarette use*
 - **3.4** times more likely to report prescription drug misuse*
 - **4.3** times more likely to report past-year self-harm
 - **5.4** times more likely to report past-year suicidal ideation

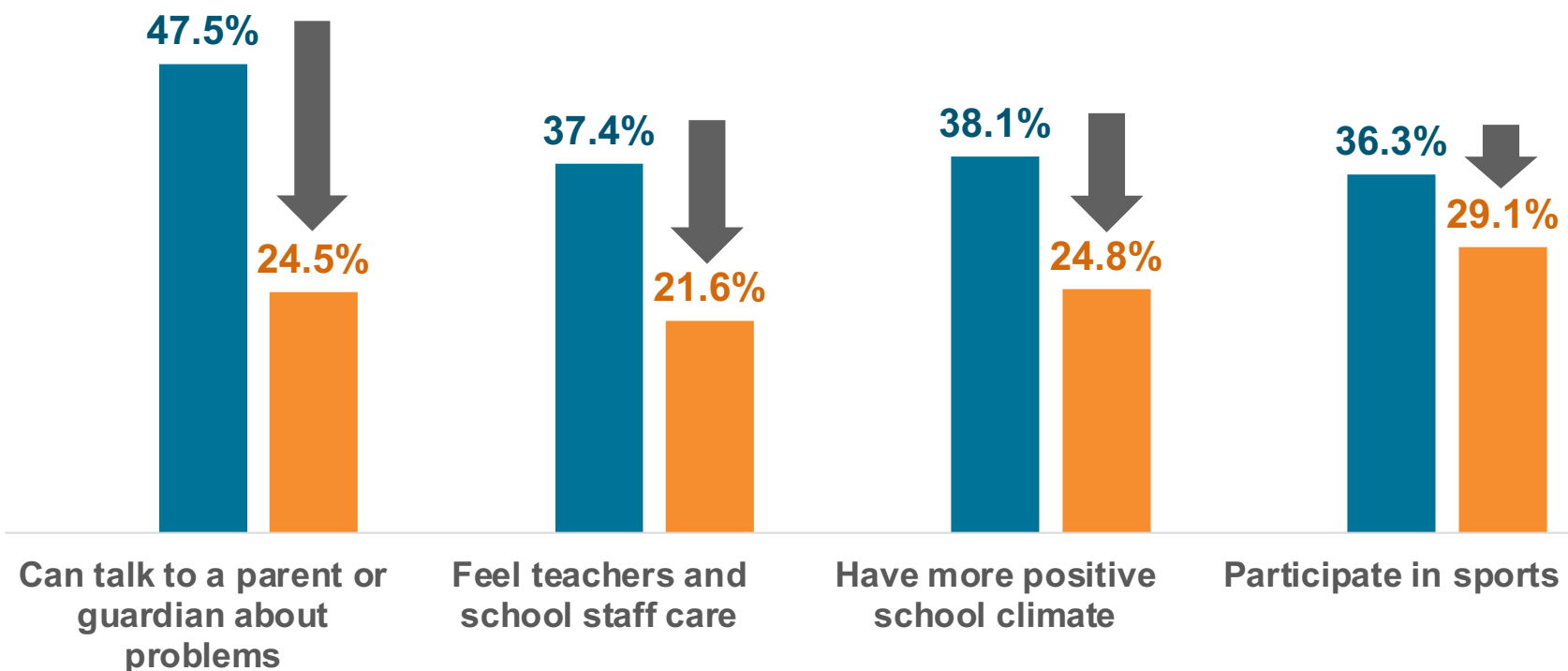
*in the past month

Mental health

2019 MSS data: Mitigation

Rates of **suicidal ideation in students with anxiety** are lower when students have protective factors in their lives that build relationships and life skills
8th, 9th, and 11th graders, 2019 MSS

Of students who report anxiety, 47.5% who feel they CAN'T talk to a parent also report having suicidal ideation. However, when students DO have a parent to talk to about problems, prevalence of suicidal ideation drops to 24.5%.

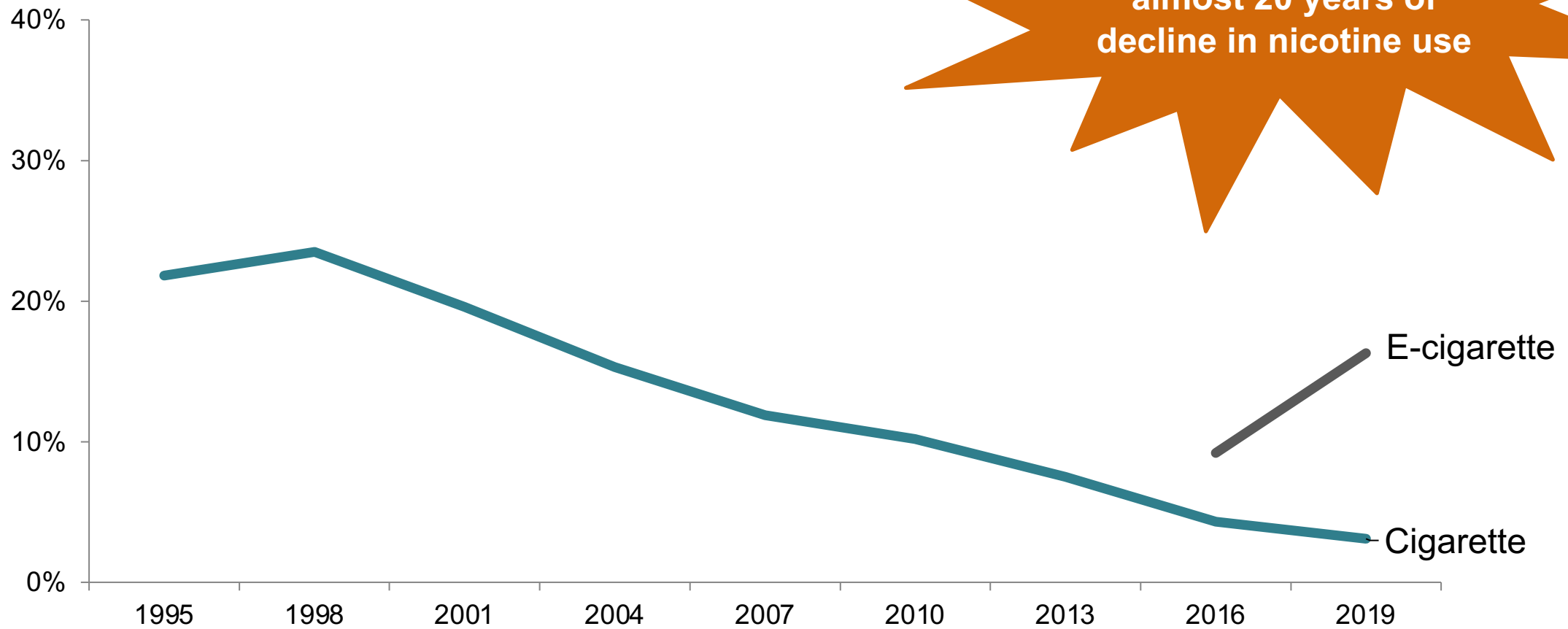


Vaping

Keeping an eye on emerging trends

Cigarette and E-cigarette Use

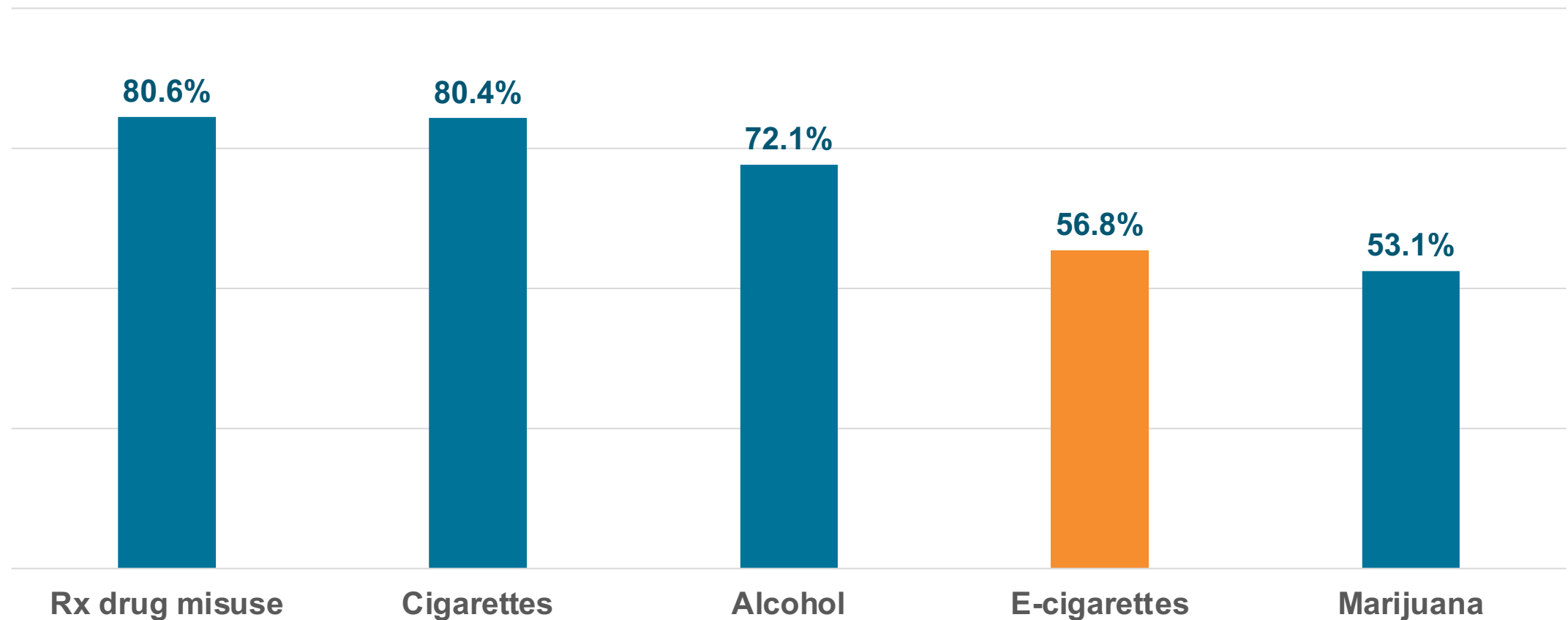
9th Graders



Vaping

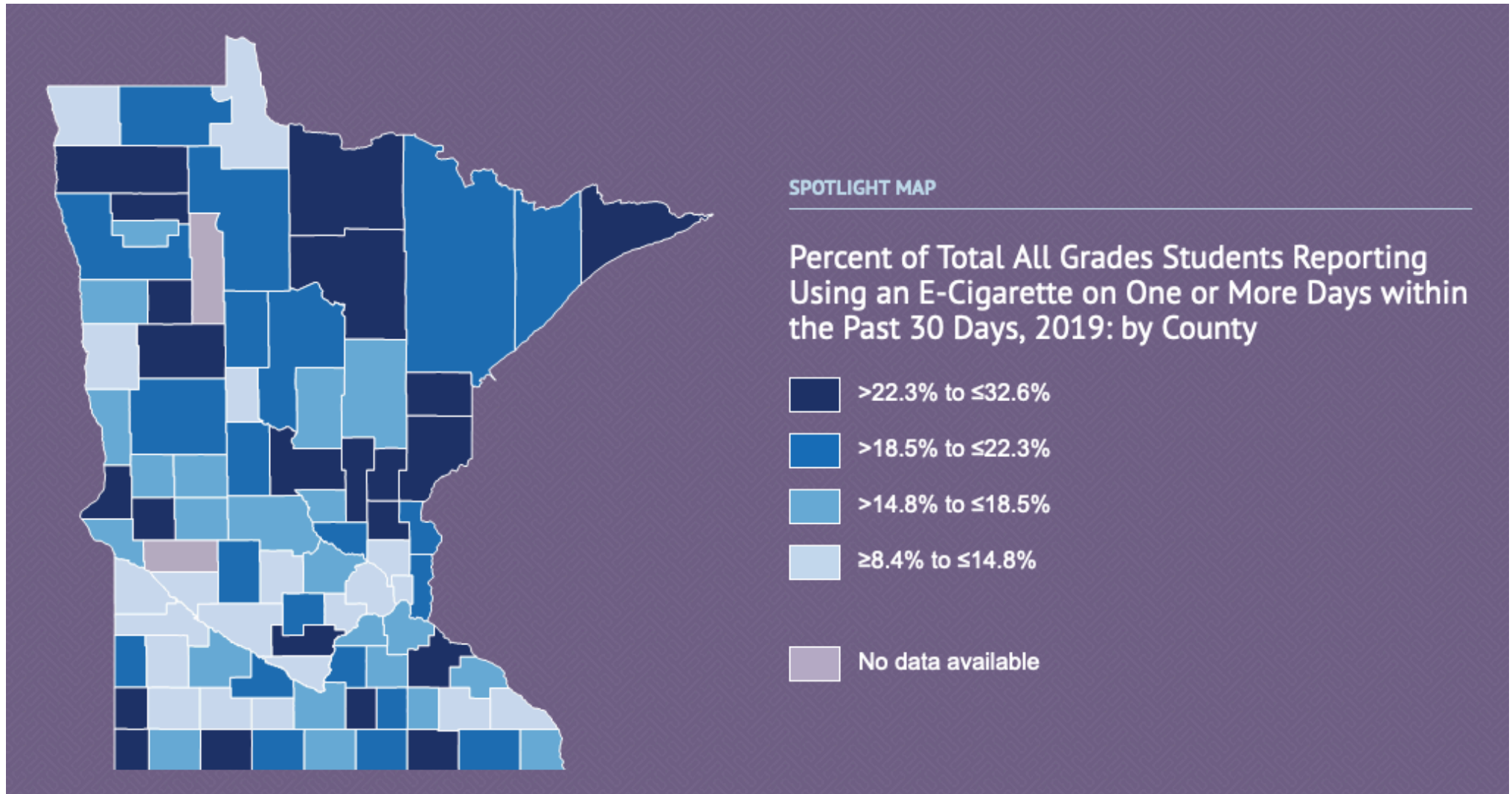
Keeping an eye on emerging trends

Students reporting perceived risk of moderate or great harm from use of substances
5th, 8th, 9th, and 11th graders, 2019 MSS



Vaping

Keeping an eye on emerging trends



Vaping

Keeping an eye on emerging trends

Two highlights from the vaping data:

- Flexibility and responsiveness of the tool
 - Vaping tech and language are developing quickly:
2022 MSS will update language, methods, and substances consumed, while maintaining continuity
- Usefulness of county-level data
 - Not available for national surveys
 - Most helpful for community-driven programs

Adverse Childhood Experiences (ACEs)

Background and general correlations

- Original study (CDC/Kaiser-Permanente in CA, 1995-1997) found dose-response relationship between ACEs and negative outcomes
- ACEs are:
 - Stressful or traumatic experiences, including abuse, neglect and a range of household dysfunction
 - Associated with health problems, like substance abuse, diabetes, cancer, cardiovascular problems, and depression

Adverse Childhood Experiences (ACEs)

History of ACEs questions on the MSS

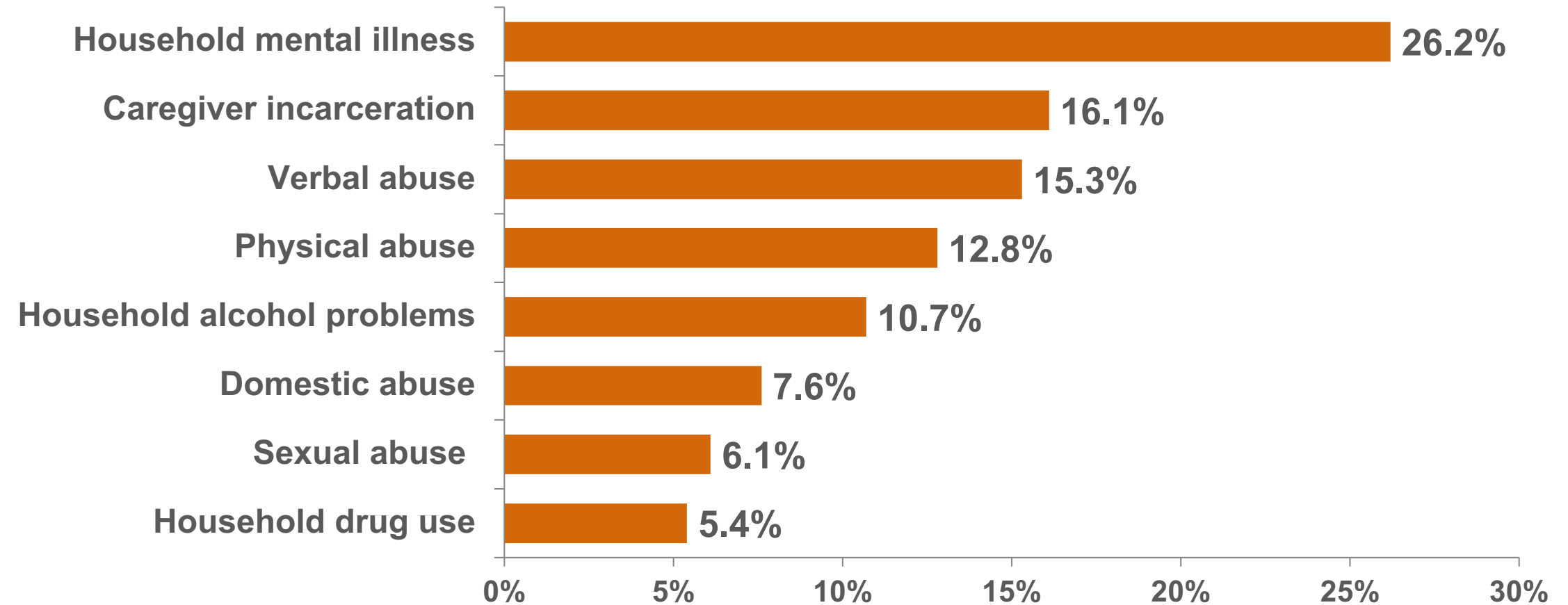
- Some ACEs (such as sexual abuse) on the survey from the beginning
- Some indicators could be considered ACEs but aren't part of the scale (e.g. parental separation, homelessness, sex trafficking)
- The ACEs scale, as we conceive of it now, began in **2013**, with inclusion of physical and verbal abuse
- Household mental illness added in **2019**

Adverse Childhood Experiences (ACEs)

2019 MSS data

Frequency of ACEs, by Category

8th, 9th, and 11th Graders



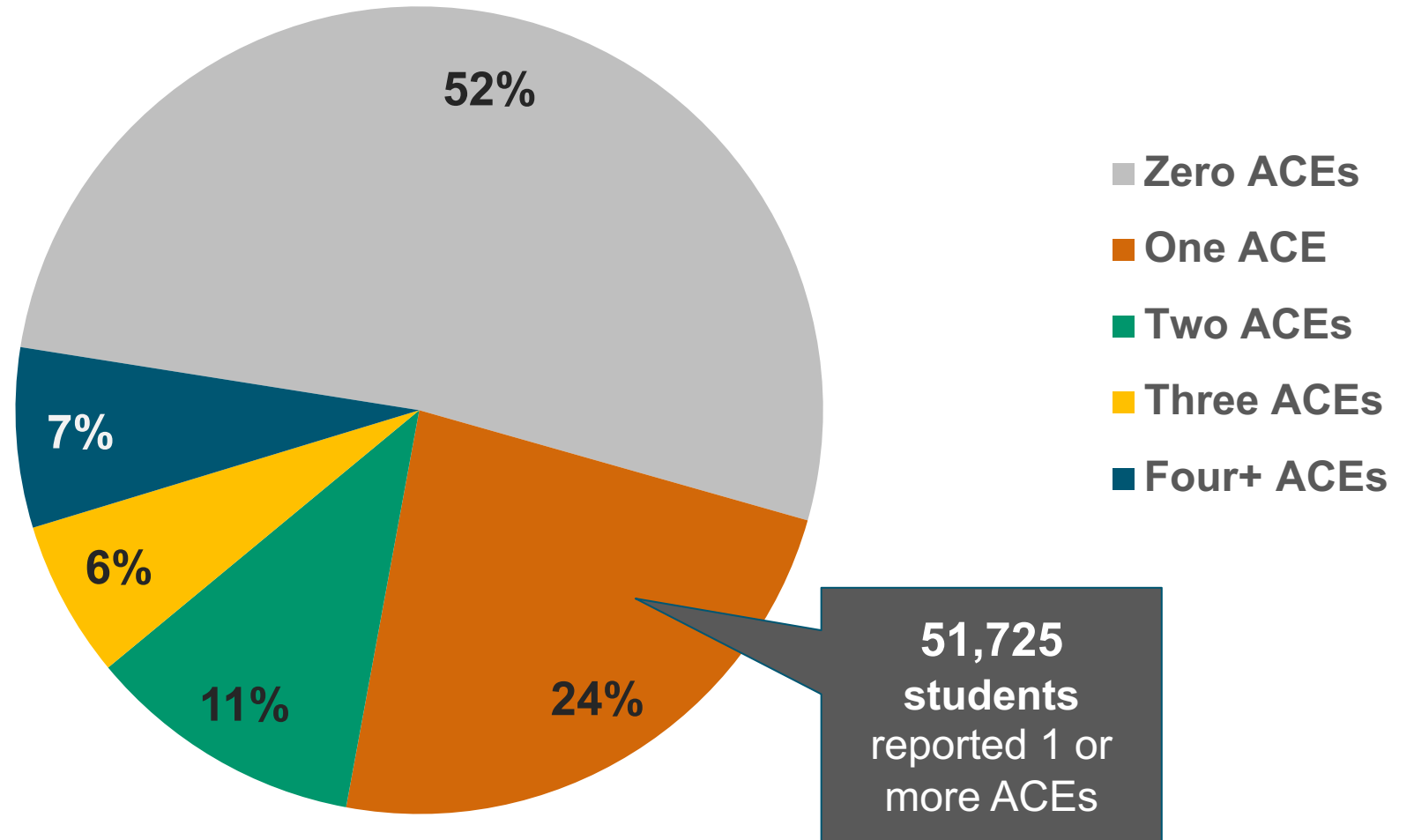
Adverse Childhood Experiences (ACEs)

2019 MSS data

Number of ACEs

8th, 9th, and 11th Graders

Students report about the same proportion of ACEs, regardless of grade level



Adverse Childhood Experiences (ACEs):

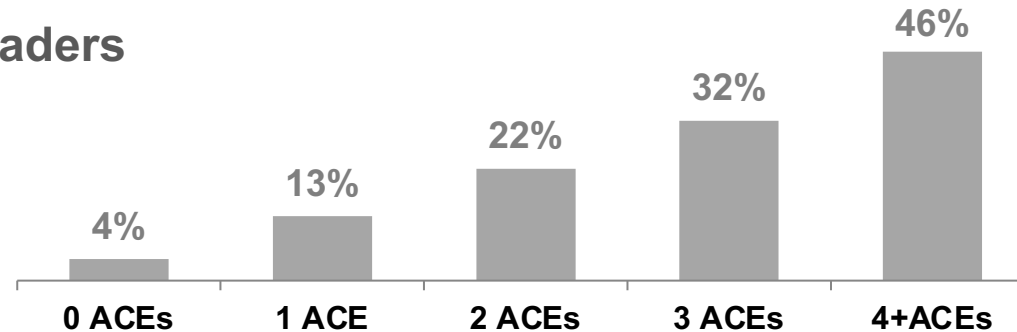
Associations with negative outcomes

Mental Health + ACEs

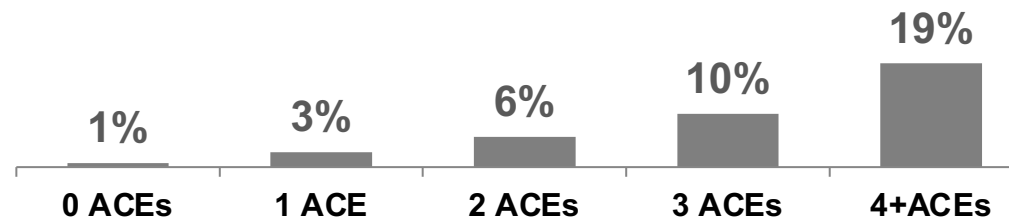
8th, 9th, and 11th Graders

MSS data show the same **dose-response relationship** with mental health indicators found in the original CDC-Kaiser study

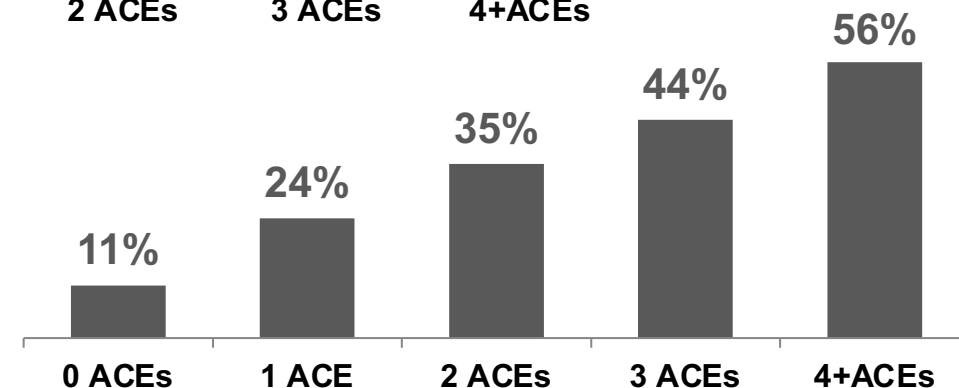
Past-year suicidal ideation



Past-year suicide attempt(s)



Past 2-week depression

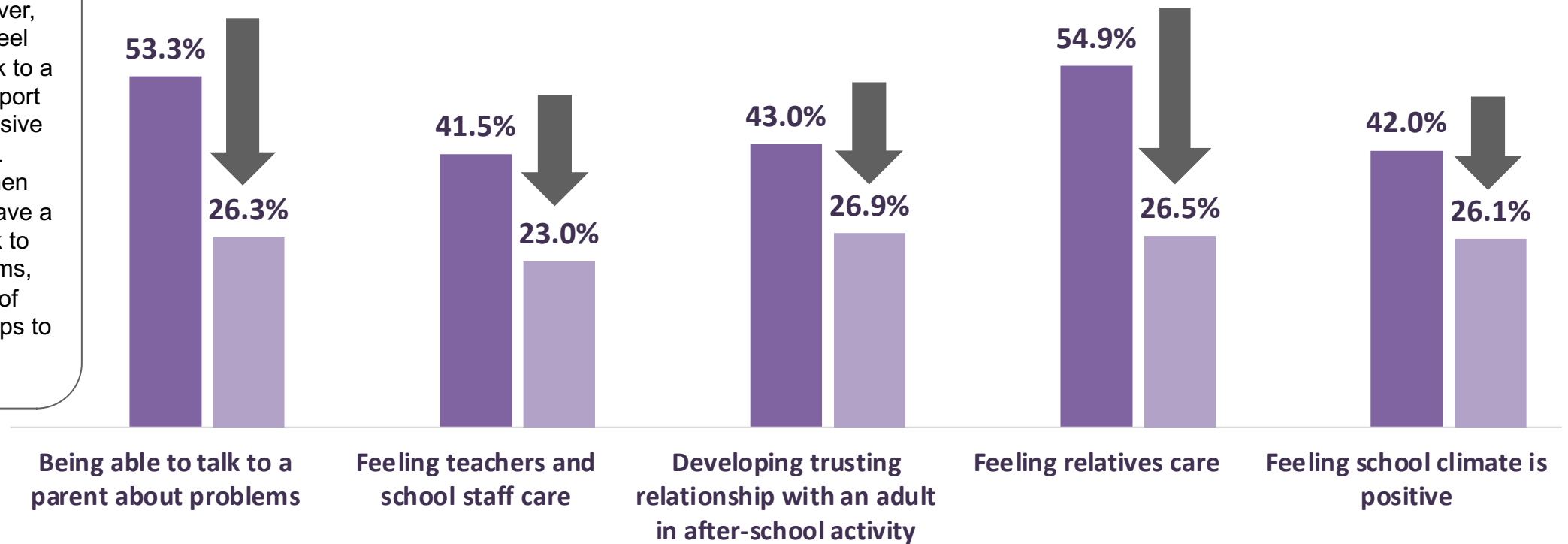


Adverse Childhood Experiences (ACEs)

Protective factors: Parental incarceration

Rates of **depressive symptoms in students with incarcerated parents** are much lower when students have protective factors in their lives that build relationships, joy, and life skills
8th, 9th, and 11th graders, 2019 MSS

Of students who have or had an incarcerated parent/caregiver, 53.3% who feel they CAN'T talk to a parent also report having depressive symptoms. However, when students DO have a parent to talk to about problems, prevalence of depression drops to 26.3%



Where to find the MSS data

1. Minnesota Department of Education

- Website has links to static reports and interactive PDF tables at <https://education.mn.gov/MDE/dse/health/mss/>

2. The Center for Health Statistics (at Minnesota Department of Health)

- Website has PDFs of static tables, trend reports, special reports, and spreadsheets at <https://www.health.state.mn.us/data/mchs/surveys/mss/index.html>

3. Substance Use in Minnesota

- Interactive tables, fact sheets, and infographics, maintained in conjunction with the Minnesota Department of Human Services Behavioral Health Division, through the State Epidemiological Outcomes Workgroup (SEOW) at <https://sumn.org>

3. Request data

- <https://www.surveygizmo.com/s3/5250891/MSS-Data-Request-Form-2019>



**Plug for
the SEOW**

Questions?



Contact information

Melissa Adolfson

Research Scientist

Wilder Research

Melissa.Adolfson@wilder.org

Jacquelyn Freund

Data Analysis and Visualization

EpiCog

jfreund@epi-cog.com

