

Risk and Protective Factors Among LGBTQ+ High School Students in Maine

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OBJECTIVE

- To examine differences among risk and protective factors among **LGBTQ+** high school students in Maine.

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BACKGROUND: *Why important?*

- **LGBTQ+** students experience health disparities compared to non-LGBTQ+ peers:
 - Violence victimization
 - Substance use
 - Suicide risk
 - Sexual risk
- Differences linked to social disadvantage, such as a history of exclusion or discrimination
- Historical lack of data contributes to invisibility and stigma
- Population estimates and identified health disparities essential for advocacy

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Why is it important to understand risk and protective factors among LGBTQ+ youth? LGBTQ+ youth experience health disparities compared to non-LGBTQ+ students including violence victimization, harmful substance use, suicide risk and sexual risks.

Many of these differences are linked to social disadvantage including a history of exclusion or discrimination.

We also have a lack of historical data around health disparities among LGBTQ+ youth, which contributes to invisibility and stigma.

However, identifying and quantifying health disparities among our LGBTQ+ youth is essential for advocacy for health interventions and programs.

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Background: MIYHS

- **Maine Integrated Youth Health Survey (MIYHS)**
 - Biennial health survey of Maine high school students
 - All high schools in Maine invited to participate
 - 4 versions of survey (A,B,C,D; Version C = Maine YRBS)
 - All data are weighted

For this analysis, we used the Maine Integrated Youth Health Survey (MIYHS), which is Maine's biennial youth health survey administered in odd years since 2009.

All public and quasi-public high schools in Maine are invited to participate. There are 4 versions of the survey where Version C is Maine's YRBS.

There are roughly 100-110 questions on each survey versions – some questions are the same across all 4 versions, other questions are only on 2 versions and some questions are only on 1.

All data are weighted to be representative of Maine's high school student population.

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BACKGROUND

Survey Question – Sexual Orientation (SO)

- **Sexual orientation question revised in 2021 to include more inclusive answer options**

2009 - 2019 Survey Question:



2021 & 2023 Survey Question:

Which of the following best describes you?

- A. Heterosexual (straight)
- B. Gay or lesbian
- C. Bisexual
- D. Not sure

Which of the following best describes you?

- A. Heterosexual (straight)
- B. Gay or lesbian
- C. Bisexual
- D. I describe my sexual identity some other way
- E. I am not sure about my sexual identity (questioning)
- F. I do not know what this question is asking

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The high school sexual orientation question has been on the MIYHS since 2009, and it was modified once in 2021 to add more inclusive answer options allowing students to indicate they describe their identity some other way or they are unsure/questioning their sexual identity to more accurately capture this population. This question is also a standard YRBS question.

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BACKGROUND

Survey Question – Gender Identity (GI)

- 2017: 10 states (CO, DE, HI, ME, MD, MA, MI, RI, VT, WI) and 9 large urban districts (Boston, Broward County, Cleveland, Detroit, DC, LA, NYC, San Diego, SF) included the question on their YRBS survey

2017 – 2023 Survey Question:

Some people describe themselves as transgender when their sex at birth does not match the way they think or feel about their gender. Are you transgender?

- A. No, I am not transgender
- B. Yes, I am transgender
- C. I am not sure if I am transgender
- D. I do not know what this question is asking

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In 2017, the U.S. CDC Youth Risk Behavior Survey (YRBS) developed a question on transgender identity and 10 states, including Maine, and

9 large urban districts included the question on their YRBS survey. This question allows students to indicate whether they are transgender, unsure if they are transgender or do not understand what the question is asking and has not been modified since it's addition to the survey.

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METHODS

- **Maine Integrated Youth Health Survey (MIYHS), 2023**

- 75% of high schools participated
- 66% of all students in participating schools
- 49% overall survey response rate

29,770

total high school respondents in 2023

- **Analyzed using SAS 9.4 survey procedures**

- 2- and 3-way cross tabulation and chi-square χ^2 analyses

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For this analysis, we used data from the 2023 Maine Integrated Youth Health Survey (MIYHS).

As previously mentioned, all high schools in Maine are invited to participate and in 2023, 75% of schools participated with 66% of students (nearly 30,000) in those schools taking the survey for an overall survey response rate of 49%.

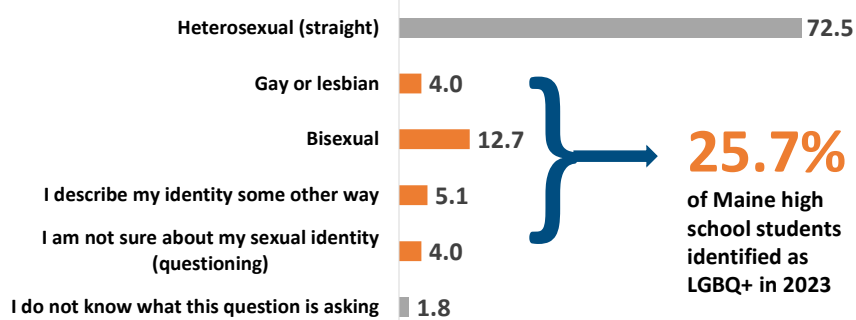
2- and 3-way cross tabulation and chi-square analyses were performed using survey procedures in SAS 9.4.

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DESCRIPTIVE STATISTICS

Sexual Orientation

2023 Sexual Orientation Among Maine High School Students



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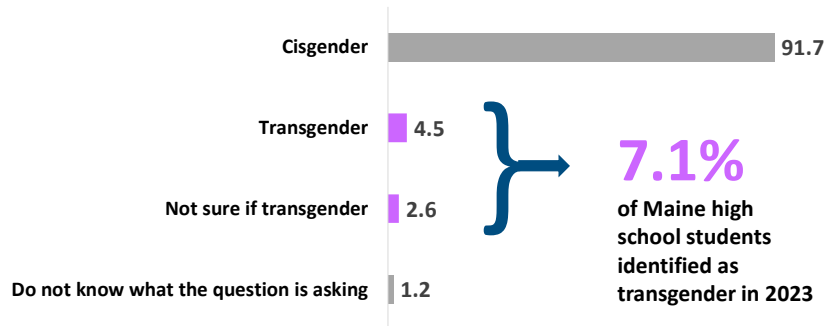
In 2023, 25.7% of Maine high school students identified as gay or lesbian, bisexual, unsure or questioning their sexual identity or described their sexual identity some other way.

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DESCRIPTIVE STATISTICS

Gender Identity

2023 Gender Identity Among Maine High School Students



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And 7.1% of Maine high school students identified as transgender or unsure if they were transgender in 2023.

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LGBTQ+ Combined Variable

- **Included in combined variable if any response between either sexual orientation (SO) or gender identity (GI) question indicated they were:**
 - Gay/lesbian
 - Bisexual
 - Describe sexual identity some other way
 - Not sure about their sexual identity (questioning)
 - Transgender
 - Not sure about their gender identity
- **Data considered missing for combined variable if:**
 - Data for both questions were missing
 - Data for SO was missing + indicated did not know what GI question was asking
 - Data for GI was missing + indicated did not know what SO question was asking
 - Did not understand what either SO or GI questions were asking

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To create a combined LGBTQ+ variable using the sexual orientation and gender identity questions, students were considered LGBTQ+ if they indicated they were: gay or lesbian, bisexual, that they described their sexual identity some other way, were unsure or questioning their sexual identity, were transgender or unsure about their gender identity.

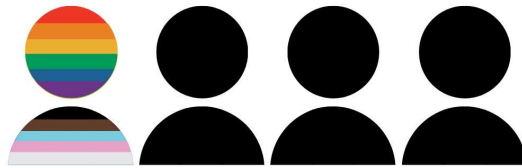
Data were considered missing for the combined LGBTQ+ variable if:

- Data for both questions were missing
- Data for sexual orientation was missing & they indicated they did not know what the gender identity question was asking
- Data for gender identity was missing & they indicated they did not know what the sexual orientation question was asking
- Or they did not understand what either the sexual orientation or gender identity questions were asking

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LGBTQ+ Combined Variable

25.5% of Maine high school students identified as **LGBTQ+** in 2023



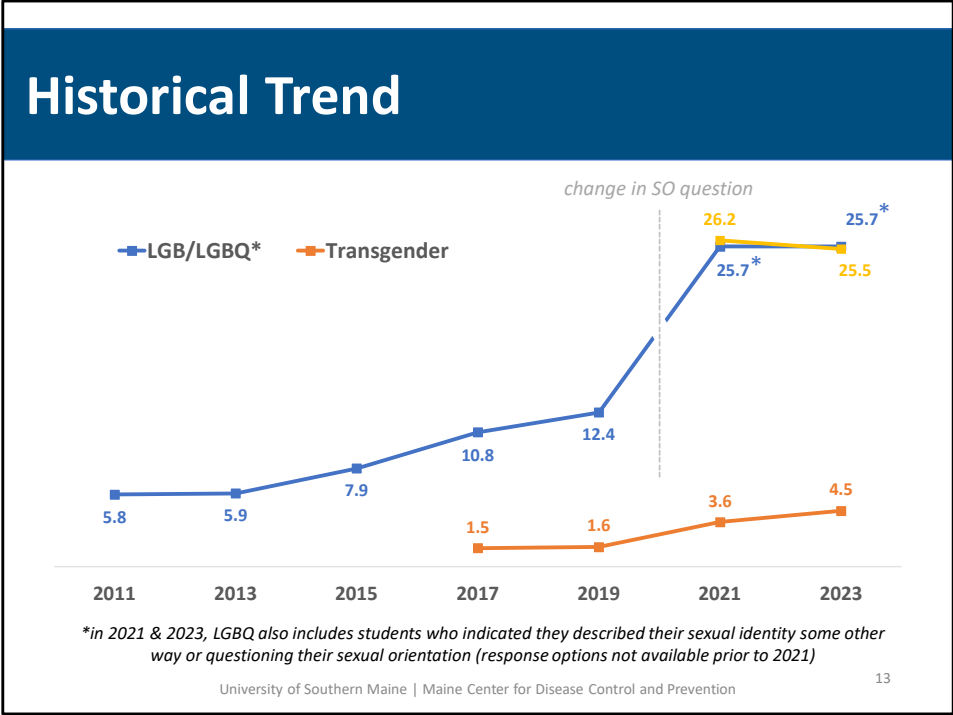
That's approximately 13,860 high students in Maine.

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As a result of the calculated combined LGBTQ+ variable, 25.5% of Maine high school students identified as LGBTQ+ in 2023, which is approximately 13,860 high school students in Maine.

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This slide shows the historical trend of these various measures over time.

The blue line is showing the prevalence of gay, lesbian, bisexual students in Maine since 2011 with a notable change between 2019 and 2021 when additional responses options were added including describing their sexual identity some other way or questioning their sexual identity, hence the break in the trend line between 2019 and 2021 and the significant jump in prevalence in 2021 and 2023 when those two response options are accounted for;

the orange line is showing the prevalence of transgender students in Maine since 2017;

and the yellow line for 2021 and 2023 is showing the combined prevalence of LGBTQ+ among our Maine high school students.

NOTE: The overall prevalence of LGBTQ+ in 2023 is slightly lower than the prevalence of LGBQ estimate because those measures are based on slightly different underlying denominators meaning that a student could have answered one question but not the other, but as long as they gave a valid response option to the question they answered (meaning they indicated any response besides not understanding what the question was asking) then they were included in the denominator. So, there are more total students in the denominator of the combined LGBTQ+ measure than in either of the sexual orientation or gender identity questions separately.

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RISK FACTORS/BEHAVIORS

- **MENTAL HEALTH**
 - Depression (felt sad or hopeless almost everyday for 2 or more consecutive weeks in the past 12 months)
 - Suicide ideation (seriously considered suicide in the past 12 months)
- **SUBSTANCE USE**
 - Current cigarette use
 - Current marijuana use
 - Current e-vapor product use
- **VICTIMIZATION**
 - Safety at school
 - Bullied on school property past 12 months
 - Offensive comments b/c of perceived sexual orientation
 - Lifetime forced sexual intercourse
 - 4 or more Adverse Childhood Experiences (ACEs)
 - Threat of violence in home

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For this analysis, we examined a variety of risk factors and risk behaviors including:

- Mental health including depressive symptoms and suicide ideation
- Substance use including current cigarette, marijuana and e-vapor product use
- And victimization including whether they felt safe at school, had been bullied on school property in the past year, had received offensive comments or attacks b/c of their perceived sexual orientation or gender expression, had ever been forced to have sexual intercourse, had experienced 4 or more adverse childhood experiences, or had ever considered leaving home due to violence or a threat of violence in their home.

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PROTECTIVE FACTORS

- **FAMILY SUPPORT**
 - Familial love and support
 - Parents help you succeed
 - **SCHOOL SUPPORT**
 - People at school cares about/encourages students
 - **COMMUNITY SUPPORT**
 - Matter to people in community
 - Support from other adults
- Examined each of these protective factors among **LGBTQ+** students and their effect on risk behaviors including:
- **mental health outcomes**
 - **substance use**

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We also examined a number of protective factors as well including:

- family supports such as having familial love and support, and parents who help you succeed
- having people at school who care about and encourages them
- feeling like they matter to people in their community and have support from other adults outside of their home

We examined each of these protective factors among LGBTQ+ students and their effect on risk behaviors including mental health outcomes and substance use.

RESULTS



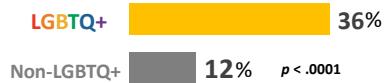
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RISK: Mental Health

LGBTQ+ students are more likely to face mental health challenges.



LGBTQ+ students are **3x** as likely to have seriously considered suicide in the past year



2021: LGBTQ+, 36%; Non-LGBTQ+, 12%



LGBTQ+ students are more than **2x** as likely to have felt sad or hopeless for 2 or more weeks in the past year



2021: LGBTQ+, 62%; Non-LGBTQ+, 25%

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Based on 2-way cross tabulation and chi-square analyses, we found that LGBTQ+ students are more likely to face mental health challenges than non-LGBTQ+ students as they are 3 times as likely to have seriously considered suicide in the past year (36% of LGBTQ+ students) and more than twice as likely to have felt sad or hopeless for 2 or more weeks in the past year (60% of LGBTQ+ students).

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RISK: Substance Use

LGBTQ+ students are more likely to turn to harmful substance use.



Nearly 2X as likely to have smoked cigarettes in the past 30 days

2021: LGBTQ+, 9%; Non-LGBTQ+, 4%



More likely to have used marijuana in the past 30 days

2021: LGBTQ+, 24%; Non-LGBTQ+, 16%



More likely to have used an electronic vapor product the past 30 days

2021: LGBTQ+, 22%; Non-LGBTQ+, 16%



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We also found that LGBTQ+ students are more likely to engage in harmful substance use:

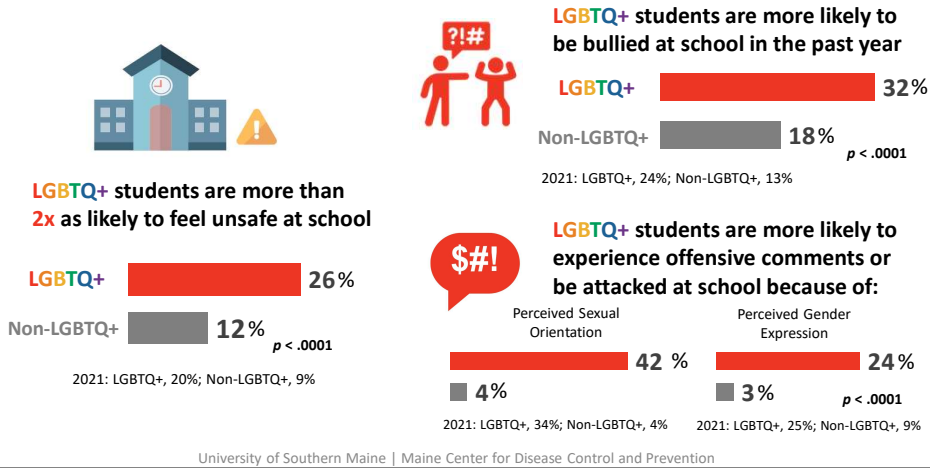
Nearly twice as likely to have smoked cigarettes in the past 30 days

And more likely to have used marijuana (a quarter of LGBTQ+ students) or an electronic vapor produce in the past 30 days (nearly 1/5 of LGBTQ+ students).

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RISK: Victimization

LGBTQ+ students experience more violence and discrimination at school than non-LGBTQ+ students.



LGBTQ+ high school students in Maine also experience more violence and discrimination at school than non-LGBTQ+ students where they are:

- More than twice as likely to feel unsafe at school (one-quarter of LGBTQ+ students – an increase since 2021 of one-fifth of LGBTQ+ students);
- And more likely to have been bullied at school in the past year (almost one-third of LGBTQ+ students – an increase since 2021 of one-quarter of LGBTQ+ students);
- And more likely to experience offensive comments or be attacked at school because of their perceived sexual orientation (an increase from 34% of LGBTQ+ students in 2021) or perceived gender expression.

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RISK: Victimization

LGBTQ+ students experience more violence outside of school and at home than non-LGBTQ+ students.



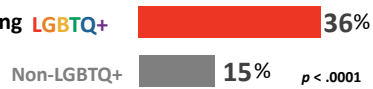
3x as likely to have been forced to have sexual contact in their lifetime

2021: LGBTQ+, 30%; Non-LGBTQ+, 9%



Over 2x as likely to consider leaving home due to violence/threat of violence in home

2021: LGBTQ+, 34%; Non-LGBTQ+, 16%



2x as likely to have 4+ adverse childhood experiences (ACEs)

2021: LGBTQ+, 42%; Non-LGBTQ+, 18%



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LGBTQ+ students are also more likely to experience violence outside of school and at home than non-LGBTQ+ students in Maine:

3x as likely to have been forced to have sexual contact in their lifetime

More than 2x as likely to consider leaving home due to violence or the threat of violence

2x as likely to have 4 or more adverse childhood experiences

All estimates similar to 2021.

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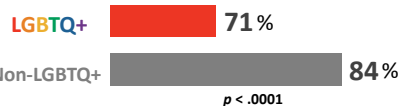
Protective Factors

LGBTQ+ students were less likely to have familial and community protective factors than non-LGBTQ+ students.



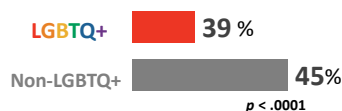
Less likely to receive love and support from family

2021: LGBTQ+, 69%; Non-LGBTQ+, 83%



Less likely to feel people at their school care about and encourage them

2021: LGBTQ+, 39%; Non-LGBTQ+, 47%



Less likely to feel they matter in their community

2021: LGBTQ+, 36%; Non-LGBTQ+, 57%



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Protective factors such as supportive relationships and caring environments can help students feel safe and enhance resiliency.

Overall, in terms of protective supports, we found that LGBTQ+ students were less likely to have familial and community supports than non-LGBTQ+ students.

- Less likely to receive love and support from family
- Less likely to feel people at their school cared about and encouraged them
- Less likely to feel they mattered in their community

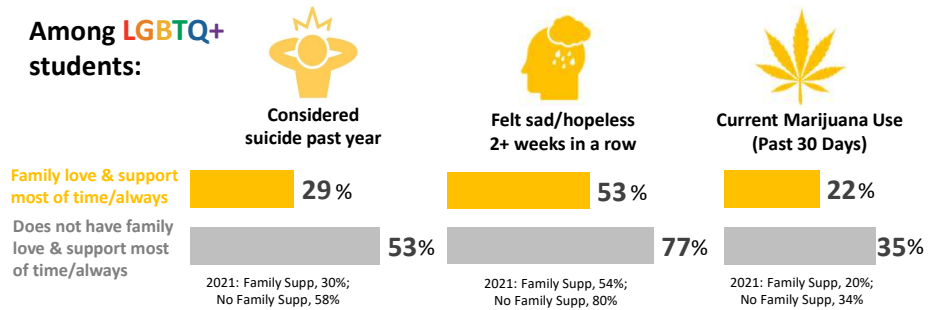
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PROTECTIVE: Family Support



LGBTQ+ students who indicated having support from family were less likely to report mental health challenges and substance use.

Among LGBTQ+ students:



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p < .0001

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However, based on 3-way cross tabulation and chi-square analyses, we found that despite LGBTQ+ students being less likely to have protective factors such as supportive relationships and caring environments, that when these supports are in place, LGBTQ+ students are less likely to experience mental health challenges and engage in substance use.

Here are a few highlights of our 3-way analyses by various protective and risk factors:

LGBTQ+ students who indicated they felt their family loved and supported them most or all of the time were less likely to have considered suicide in the past year, less likely to feel sad or hopeless for 2 or more weeks in the past year, and less likely to have used marijuana in the past month.

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PROTECTIVE: School Support



LGBTQ+ students who indicated they felt people at their school cared about them and encouraged them were less likely to report mental health challenges and substance use.

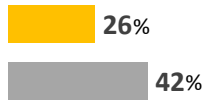
Among LGBTQ+ students:

Feels people at school care

Does not feel people at school care



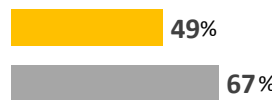
Considered suicide past year



2021: School Supp, 27%;
No School Supp, 46%



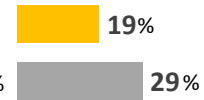
Felt sad/hopeless 2+ weeks in a row



2021: School Supp, 50%;
No School Supp, 70%



Current Marijuana Use (Past 30 Days)



2021: School Supp, 17%;
No School Supp, 29%

$p < .0001$ 23

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In terms of support at school, we found LGBTQ+ students who indicated they felt people at their school cared about and encouraged them were less likely to have seriously considered suicide in the past year or felt sad or hopeless for 2 or more weeks in a row in the past year. LGBTQ+ students who felt people at their school cared were also less likely to have used marijuana in the past month.

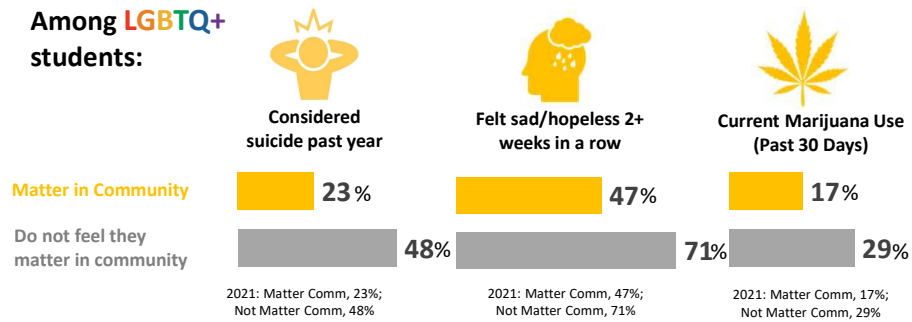
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PROTECTIVE: Matter in Community



LGBTQ+ students who indicated they felt they mattered in their community were less likely to report mental health challenges and substance use.

Among LGBTQ+ students:



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Lastly, in terms of community support, we found that LGBTQ+ students who indicated they felt they mattered in their community were less likely to have considered suicide or experience depressive symptoms in the past year and less likely to have used marijuana in the past month.

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CONCLUSIONS

- Significant health disparities exist among **LGBTQ+** high school students in Maine
- **LGBTQ+** students are more likely to experience physical, emotional and sexual violence than non-LGBTQ+ students
- **LGBTQ+** students are more likely to:
 - consider suicide, experience depressive symptoms, use illicit substances
- **LGBTQ+** students receive less support from adults than non-LGBTQ+ students
 - *However, the risk of mental health and substance use issues is mitigated among **LGBTQ+** students who do receive support from their family, school staff and feel they matter in their community*

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So what does all this mean?

We found that significant health disparities exist among LGBTQ+ high school students in Maine.

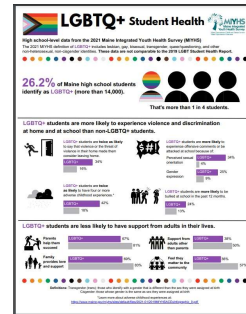
LGBTQ+ students are more likely to experience physical, emotional and sexual violence than non-LGBTQ+ students and are more likely to consider suicide, experience depressive symptoms and use harmful substances.

LGBTQ+ students feel they receive less support from their families, schools and communities however, the risk of mental health and substance use is mitigated among LGBTQ+ students when those supports are in place.

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LIMITATIONS + NEXT STEPS

- MIYHS only representative of Maine youth in school
- Cross-sectional survey - cannot make any statements about causation
- 2021 data brief on risk and protective factors among **LGBTQ+** high school students in Maine:
<https://www.maine.gov/miyhs/media/59>



The MIYHS is only representative of Maine youth in school so these findings may not apply to those youth not in school.

The MIYHS is a cross-sectional survey therefore we cannot make any statements about causation.

Next steps: currently working to update the 2021 infographic on Risk and Protective factors among Maine LGBTQ+ high school students but in the meantime the 2021 infographic is available on the MIYHS website.

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For More Information

Maine Integrated Youth Health Survey (MIYHS)

<https://www.maine.gov/miyhs/>

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