



Maryland Childhood Trauma and ACEs

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University of Maryland Systems Evaluation Center

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 - Center for Chronic Disease Prevention and Control
 - Center for Tobacco Prevention and Control
- The Maryland adults and youth who participated in the surveys used in this project

Report Overview

- What are Adverse Childhood Experiences?
- Introduction, Methods, and Sample
- ACEs and Childhood Household Challenges
- Other Youth Traumatic Experiences
- ACEs and Behavioral Health
- Youth Positive Childhood Experiences
- Summary and Potential Action Steps

*Maryland Childhood Trauma and
Adverse Childhood Experiences (ACEs)*

**What are Adverse Childhood
Experiences?**

What are Adverse Childhood Experiences?

ACE Overview

Childhood exposure to physical, emotional, or sexual abuse, neglect, and other stressors are known as adverse childhood experiences (ACEs)

- Experiencing violence, abuse, or neglect
- Witnessing violence
- Experiencing household substance misuse
- Experiencing household mental health problems
- Instability in the home (parental separation/divorce or household members in jail or prison)

Source:

https://www.cdc.gov/violenceprevention/aces/fastfact.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Fstudy%2Ffastfact.html

Jallah & Harding (2022)

What are Adverse Childhood Experiences?

ACE Surveys

Kaiser-Permanente^a

1. Emotional Abuse
2. Physical Abuse
3. Sexual Abuse
4. Emotional Neglect
5. Physical Neglect
6. Parental Separation or Divorce
7. Household Physical Abuse
8. Household Substance Abuse
9. Household mental illness
10. Household Incarceration

Philadelphia Urban Expansion^b

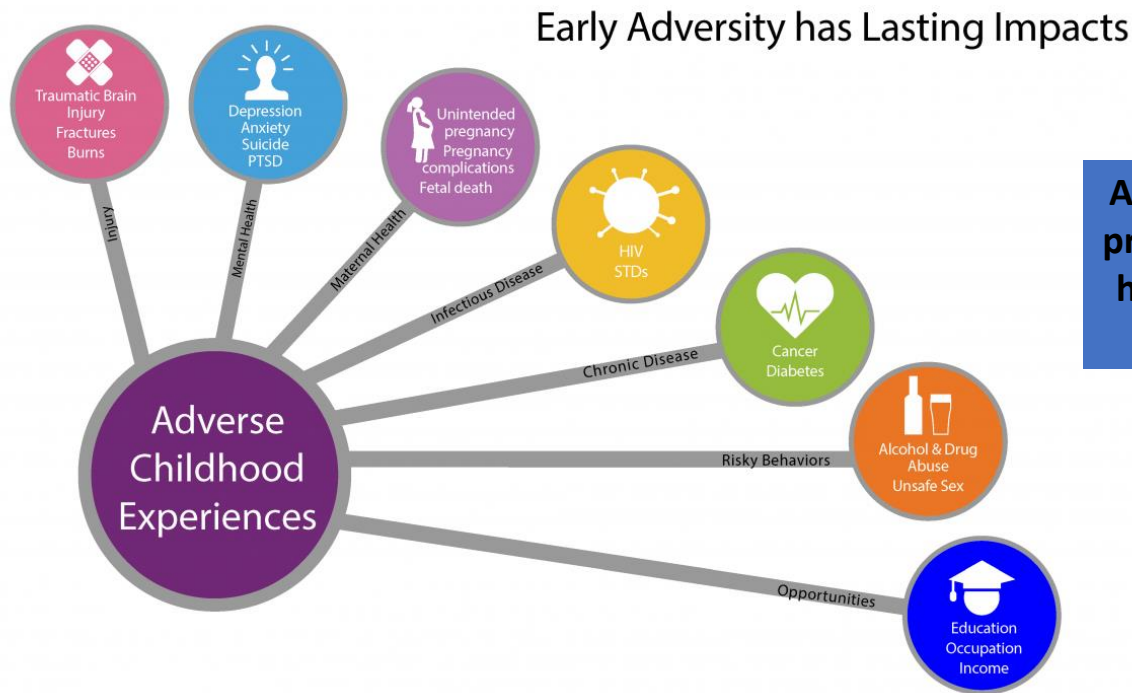
1. Witnessed Violence
2. Felt Discrimination
3. Adverse Neighborhood Experience
4. Bullied
5. Lived in Foster Care

^aFelitti, et al., (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ace) study. *American Journal of Preventive Medicine*, 14(4), 245–258.

^bSource: [FindingsfromPhiladelphiaACESurveyandComparedACEQuestions.pdf](#)

What are Adverse Childhood Experiences?

Negative Effects of ACEs



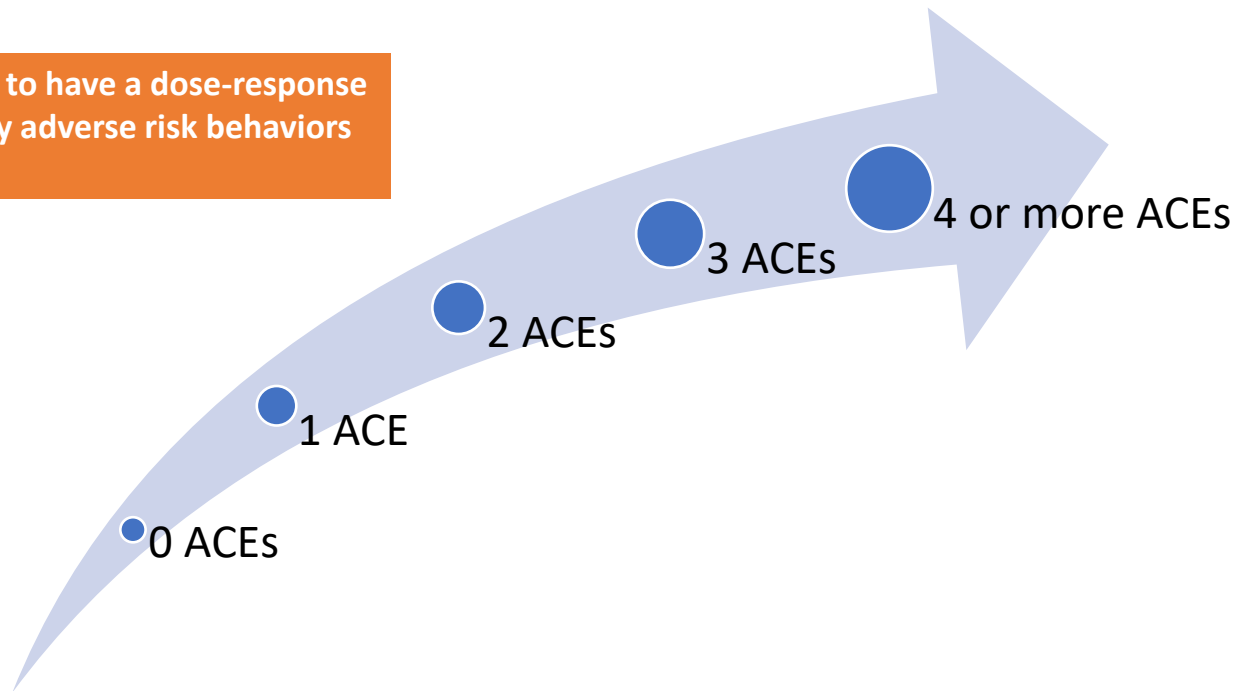
ACEs are linked to chronic health problems, early mortality, mental health problems, and substance use in adulthood.

Source:
https://www.cdc.gov/violenceprevention/aces/resources.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Ffacestudy%2Fresources.html
Jallah & Harding (2022)

What are Adverse Childhood Experiences?

Dose-Response Relationship

ACEs have been found to have a dose-response relationship with many adverse risk behaviors and disease outcomes



Felitti, et al., (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ace) study. *American Journal of Preventive Medicine*, 14(4), 245–258.

Jallah & Harding (2022)

What are Adverse Childhood Experiences?

ACE Prevention

Preventing ACEs	
Strategy	Approach
Strengthen economic supports to families	<ul style="list-style-type: none">• Strengthening household financial security• Family-friendly work policies
Promote social norms that protect against violence and adversity	<ul style="list-style-type: none">• Public education campaigns• Legislative approaches to reduce corporal punishment• Bystander approaches• Men and boys as allies in prevention
Ensure a strong start for children	<ul style="list-style-type: none">• Early childhood home visitation• High-quality child care• Preschool enrichment with family engagement
Teach skills	<ul style="list-style-type: none">• Social-emotional learning• Safe dating and healthy relationship skill programs• Parenting skills and family relationship approaches
Connect youth to caring adults and activities	<ul style="list-style-type: none">• Mentoring programs• After-school programs
Intervene to lessen immediate and long-term harms	<ul style="list-style-type: none">• Enhanced primary care• Victim-centered services• Treatment to lessen the harms of ACEs• Treatment to prevent problem behavior and future involvement in violence• Family-centered treatment for substance use disorders

The good news:
ACEs are preventable!

Centers for Disease Control and Prevention (2019). Preventing Adverse Childhood Experiences: Leveraging the Best Available Evidence. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

Jallah & Harding (2022)

*Maryland Childhood Trauma and
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**Introduction, Methods and
Sample**

Introduction

- The goal of this project is to describe and contextualize the prevalence of childhood trauma and ACEs in the State of Maryland.
- The project has two phases.
 - Phase 1 (this report) primarily uses publicly available aggregated data
 - Phase 2 (planned) will enable a “deeper dive” using various datasets upon which analyses can be conducted

Methods

- ▶ Data Sources:
 - ▶ Aggregated data available through the Centers for Disease Control and Prevention (CDC) and the Maryland Department of Health (MDH)
 - ▶ Administrative claims data for the Maryland Public Behavioral Health System (PBHS)
 - ▶ Literature/Internet Review

Methods

- ▶ Maryland collaborates with the Centers for Disease Control and Prevention (CDC) to collect behavioral risk data through two surveillance systems
 - Behavioral Risk Factor Surveillance System (BRFSS): collects data from adults via health-related telephone surveys
 - Youth Risk Behavior Survey (YRBS) and Youth Pandemic Behavior Survey (YPBS): collected through school systems using different surveys for middle-school and high-school students
- ▶ Each ACE item was matched across the BRFSS, YRBS High School and YRBS Middle School to compare like items, however
 - Some questions are not asked in every survey
 - Some questions are asked differently across each survey
 - Each survey includes a different number of ACE questions
 - 3 in YRBS Middle School
 - 4 in YRBS High School
 - 11 in BRFSS for Adults
- ▶ National and state data were extracted from publicly available aggregated reports for BRFSS (2018) and YRBS (2018/2019 school year).
 - The number of ACEs experienced by high-school students were unavailable in the 2018/2019 YRBS and were extracted from the 2021 Youth Pandemic Behavior Survey.

Methods – Items by Tool

Kaiser Permanente ACEs	BRFSS		YRBS High School		YRBS Middle School	
	US	MD	US	MD	US	MD
Emotional Abuse	X	X		X		
Physical Abuse	X	X				
Sexual Abuse	X	X				
Emotional Neglect						
Physical Neglect						
Parental Separation or Divorce	X	X				
Household Physical Abuse	X	X		X		
Household Substance Abuse						
Household mental illness	X	X		X		
Household Incarceration	X	X		X		

Methods – Items by Tool

Philadelphia Urban Expansion	BRFSS		YRBS High School		YRBS Middle School	
	US	MD	US	MD	US	MD
Witnessed Violence						
Felt Discrimination						
Adverse Neighborhood Experience						
Bullied			X	X		X
Lived in Foster Care						

Methods – Items By Tool

ACE-like Items	BRFSS		YRBS High School		YRBS Middle School	
	US	MD	US	MD	US	MD
Intimate Partner Violence	X	X		X		
Physical Dating Violence			X	X		X
Food Insecurity				X		X
Feel unsafe at school			X	X		
Physical Fighting			X	X		X
Carrying weapons			X	X		X

Methods

- ▶ Administrative claims data for the Maryland PBHS were available from 7/1/2018 through 5/31/2022
- ▶ Analysis includes diagnoses implicated in childhood trauma^a:
 - Reaction to Severe Stress and Adjustment (including PTSD)
 - Depression
 - Anxiety
 - Psychosis and Early Psychosis
 - Substance Use (Alcohol, Cannabis, Opioid, Other substance use)

^aMerrick et al. (2017), Oral et al. (2016)

Sample

- ▶ **Approximate number of individuals with childhood trauma**

Instrument		Maryland	Nationwide
BRFSS	Adult	Not available*	214,157
YRBS	Middle School	11,914	114,908
	High School	11,959	156,333

Due to missing data the sample size may vary slightly by question

- ▶ 12,793,052 claims were available, and 293,072 individuals with diagnoses implicated in childhood trauma were included the analysis

*Maryland BFRSS sample size not available in publicly aggregated reports

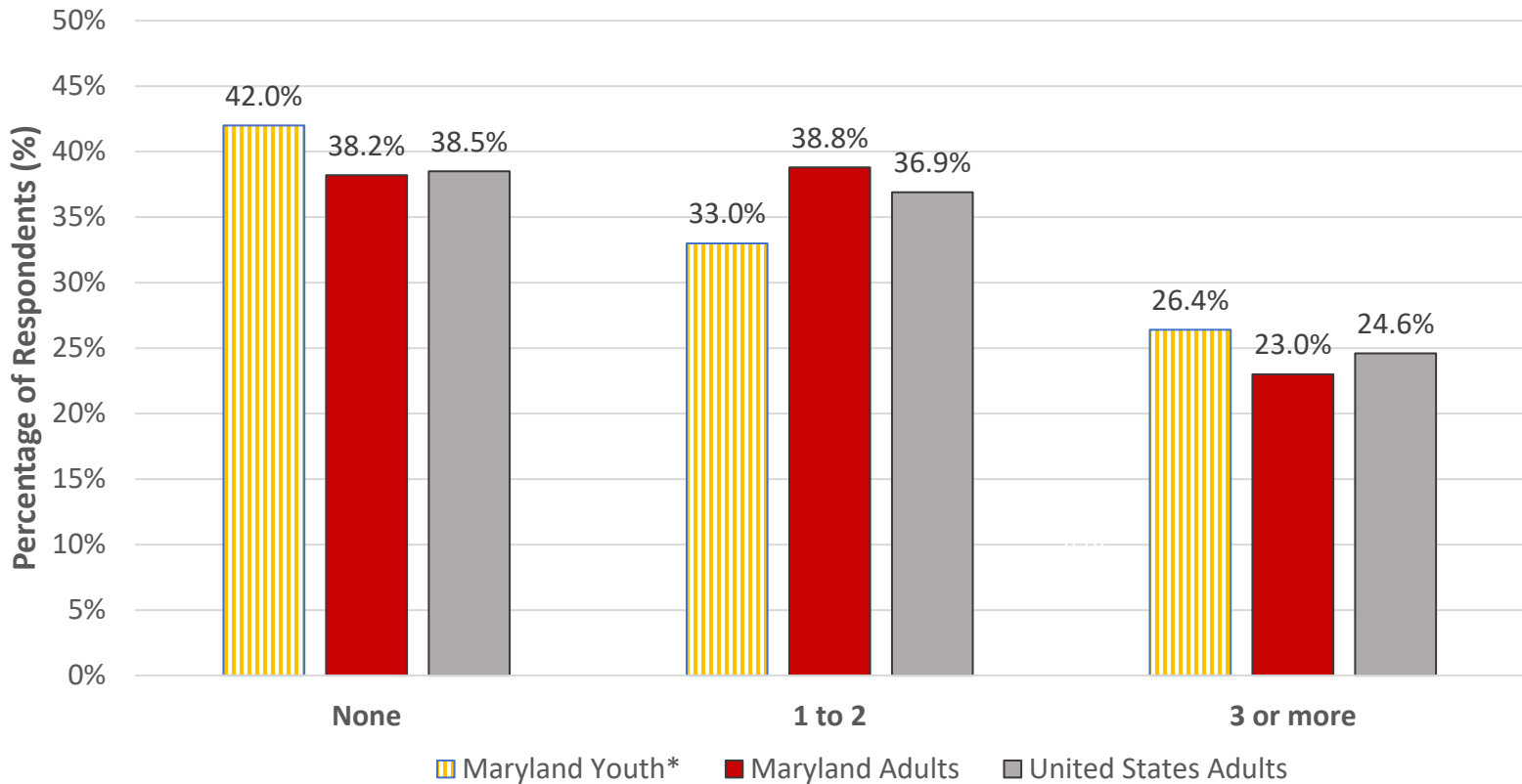
*Maryland Childhood Trauma and
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**ACEs and Childhood Household
Challenges: BRFSS and YRBS Data**

Data Available for ACEs and Childhood Household Challenges

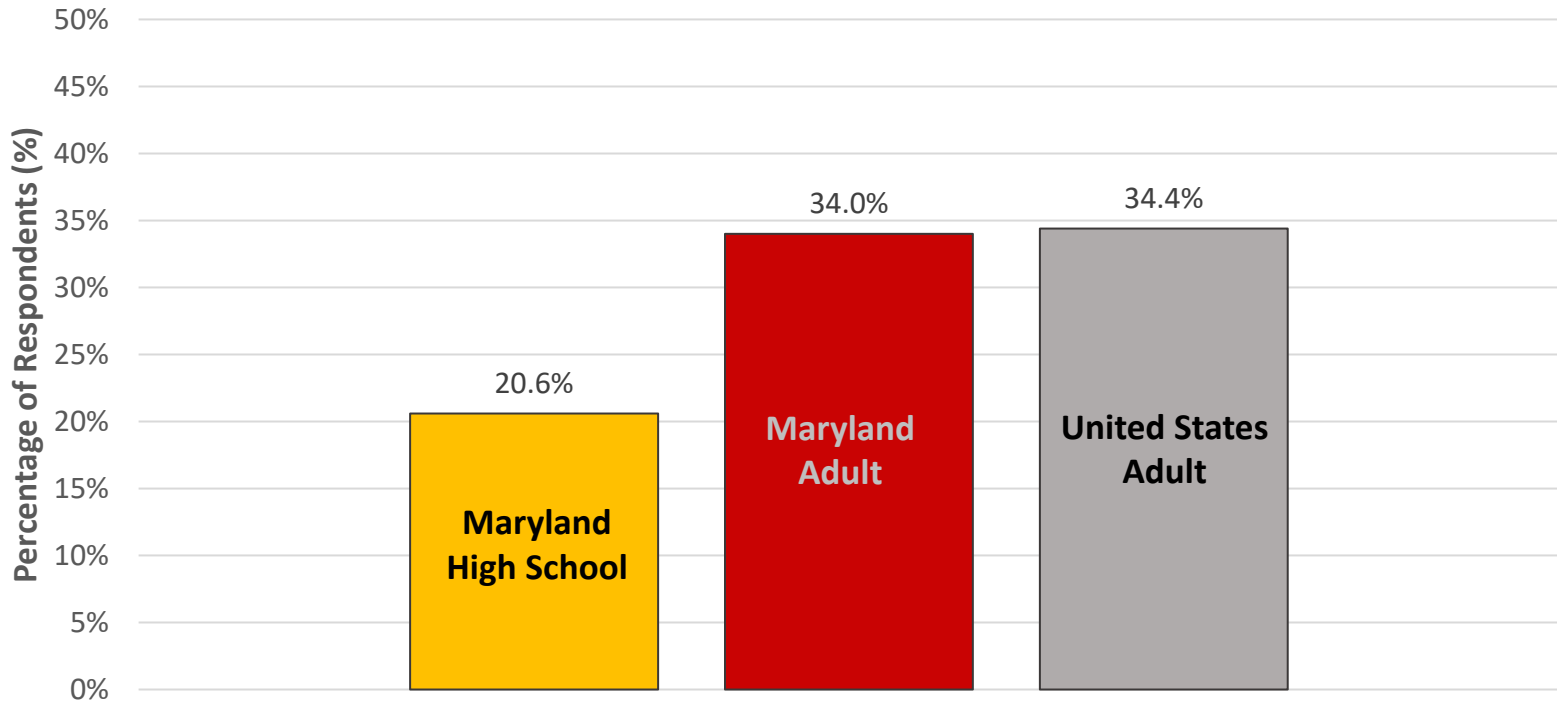
- Adult: Nationwide and Maryland (BRFSS)
- High School: Maryland (YRBS)
 - National YRBS data not available
- Middle School: YRBS data are not available for Childhood Household Challenges

Number of Childhood Trauma and Adverse Experiences

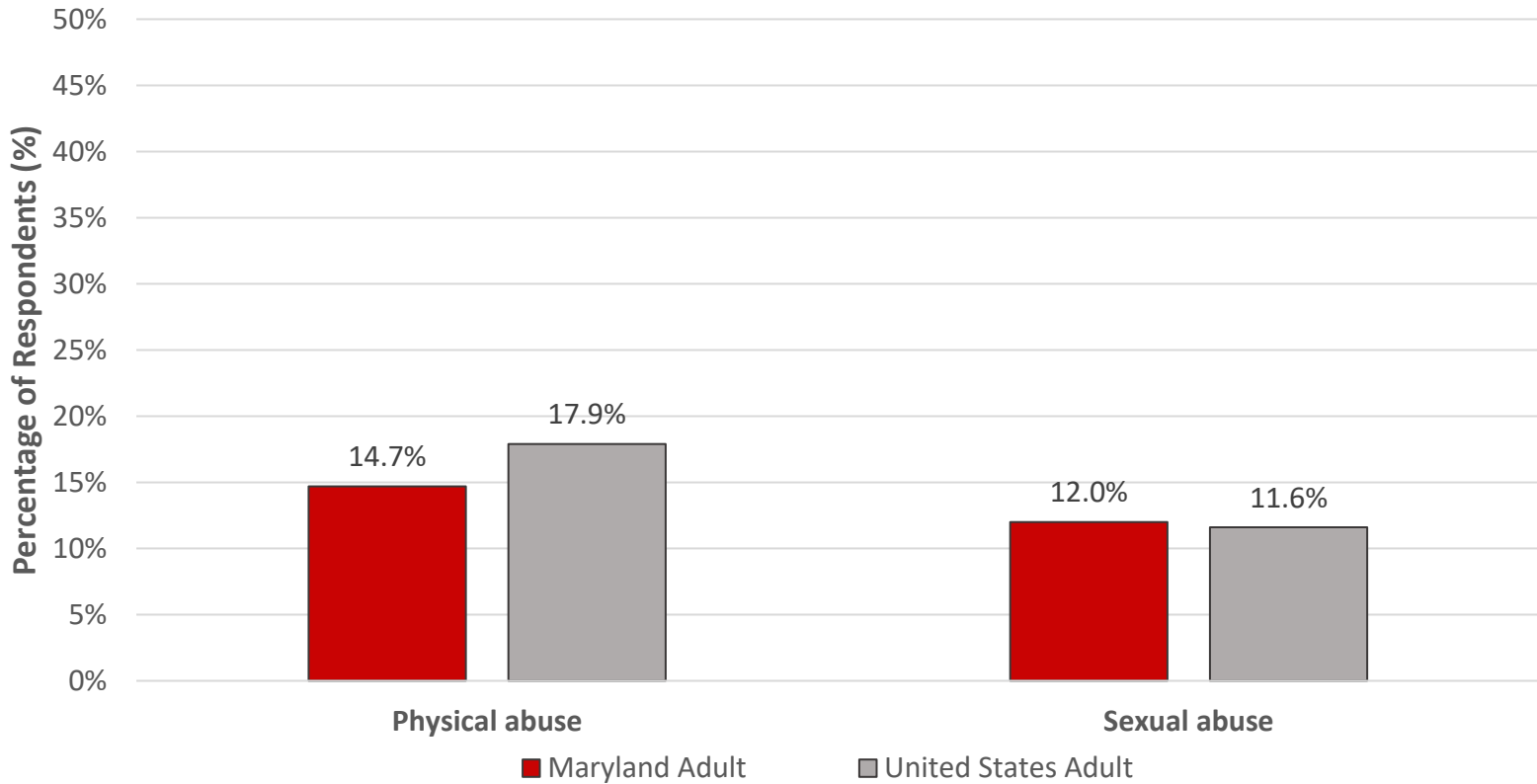


*from Youth Pandemic Behavior Survey (2021)

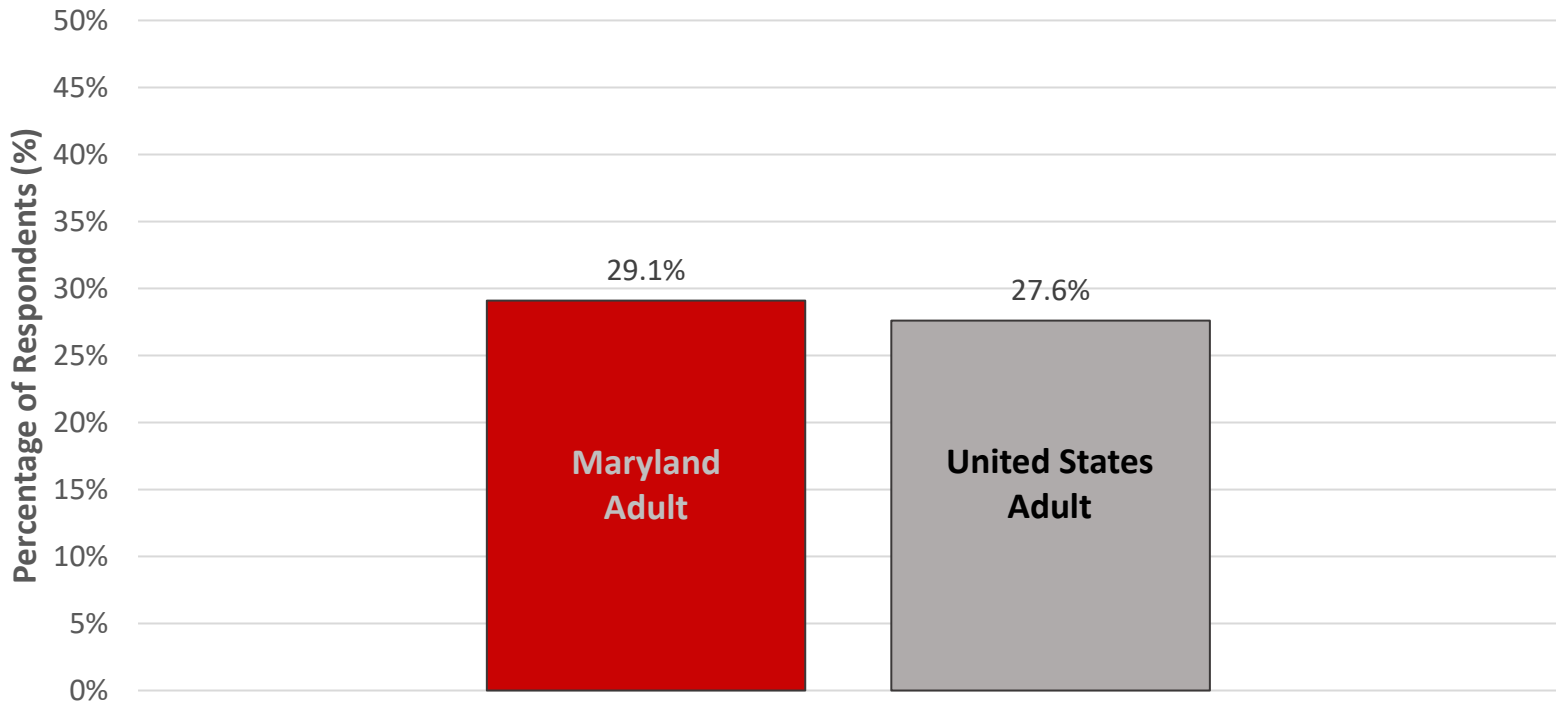
Childhood Emotional Abuse



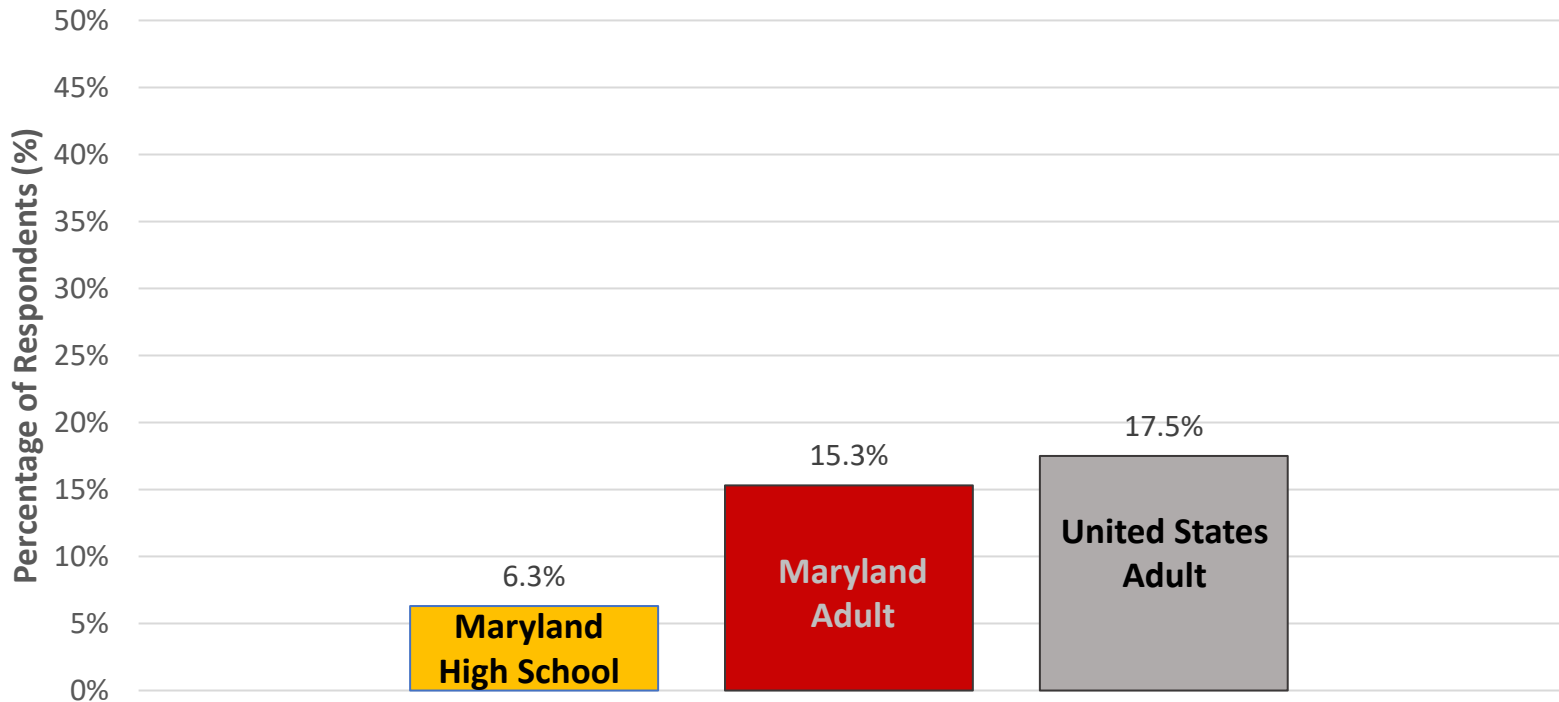
Childhood Physical & Sexual Abuse



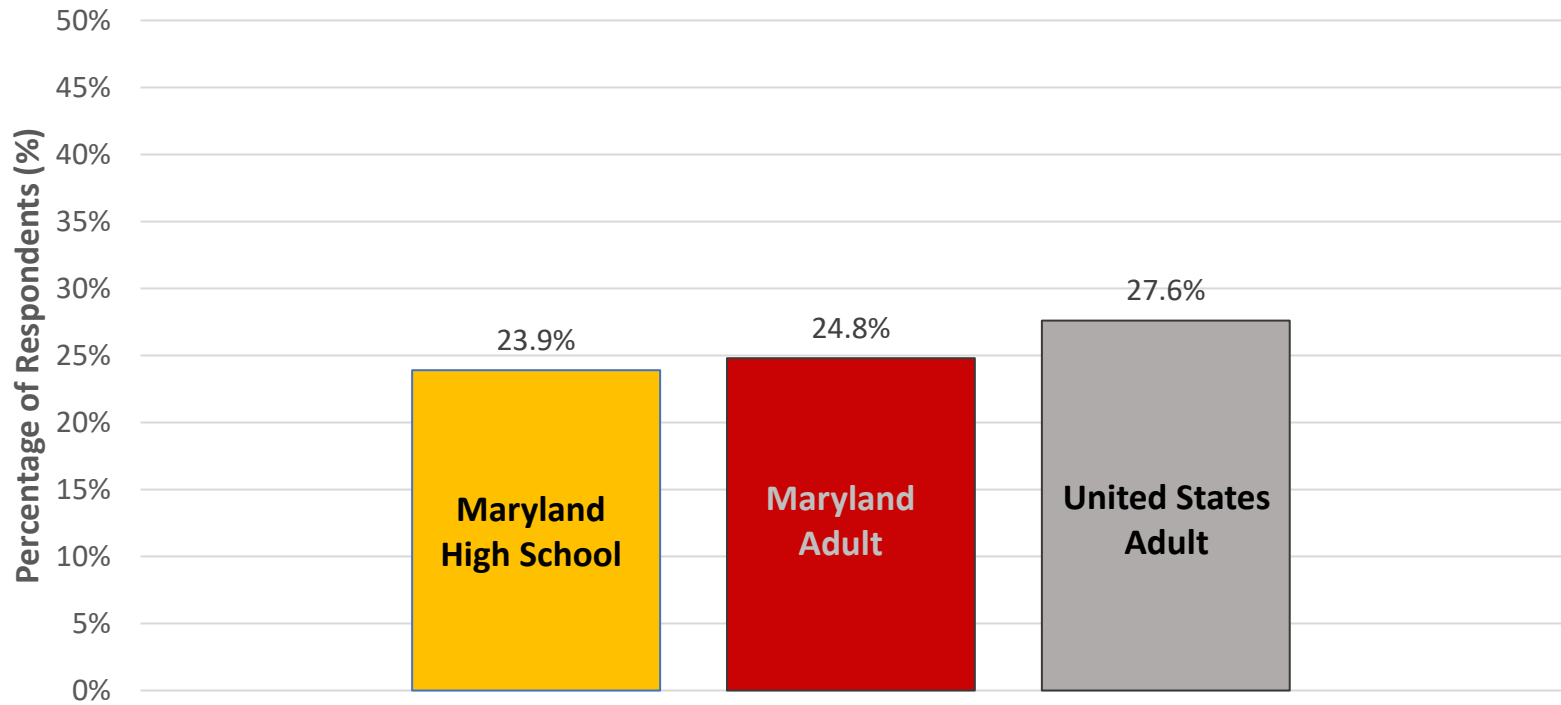
Childhood Household Challenges: Parental Divorce or Separation



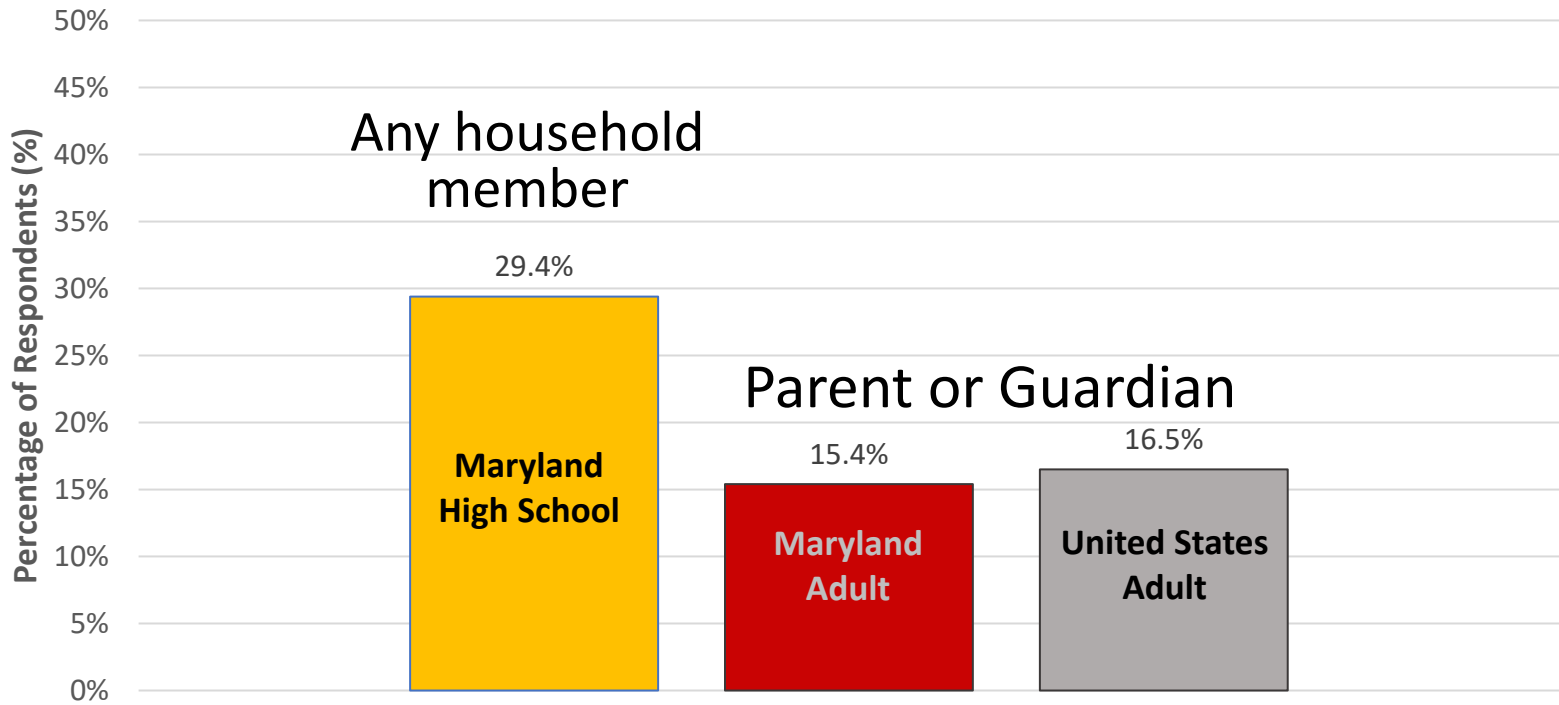
Childhood Household Challenges: Intimate Partner Violence



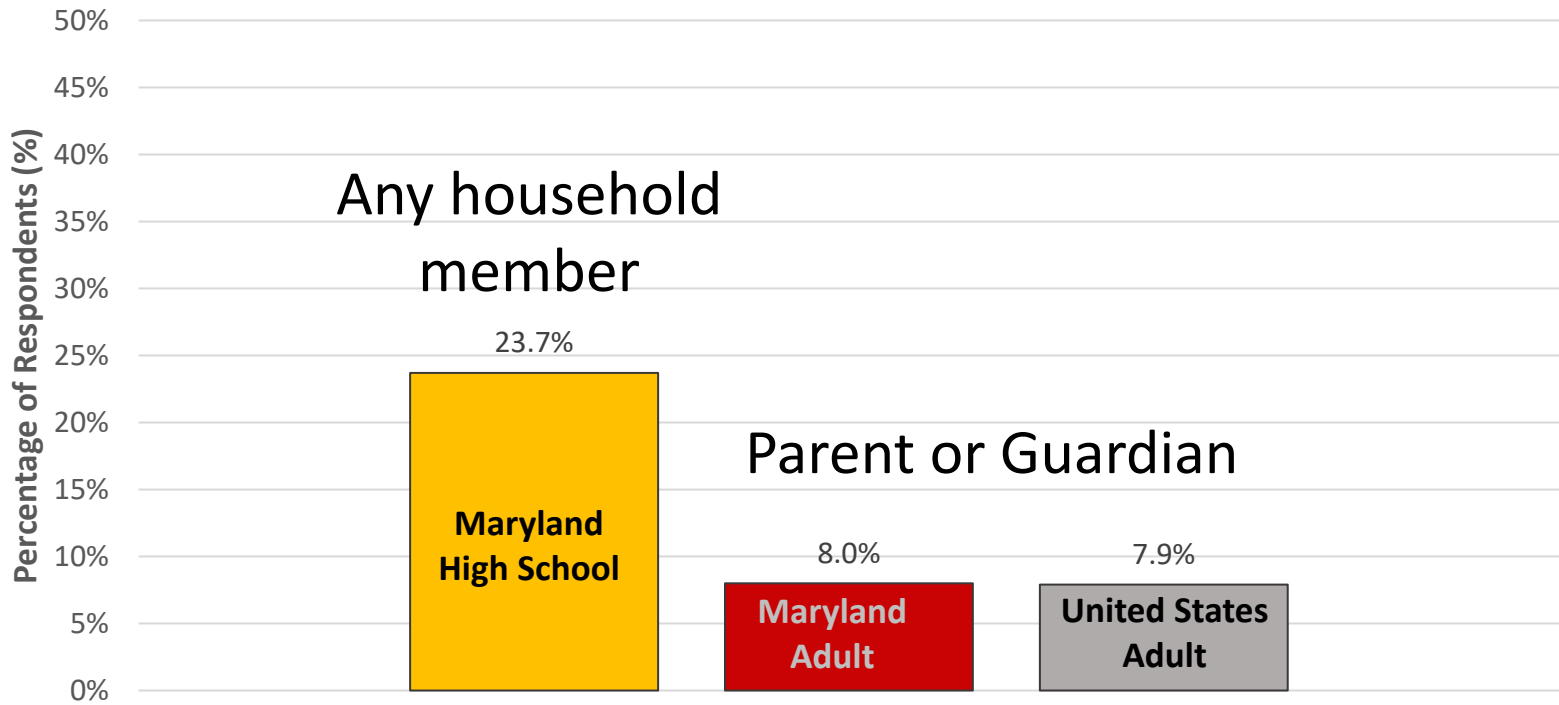
Childhood Household Challenges: Substance Abuse



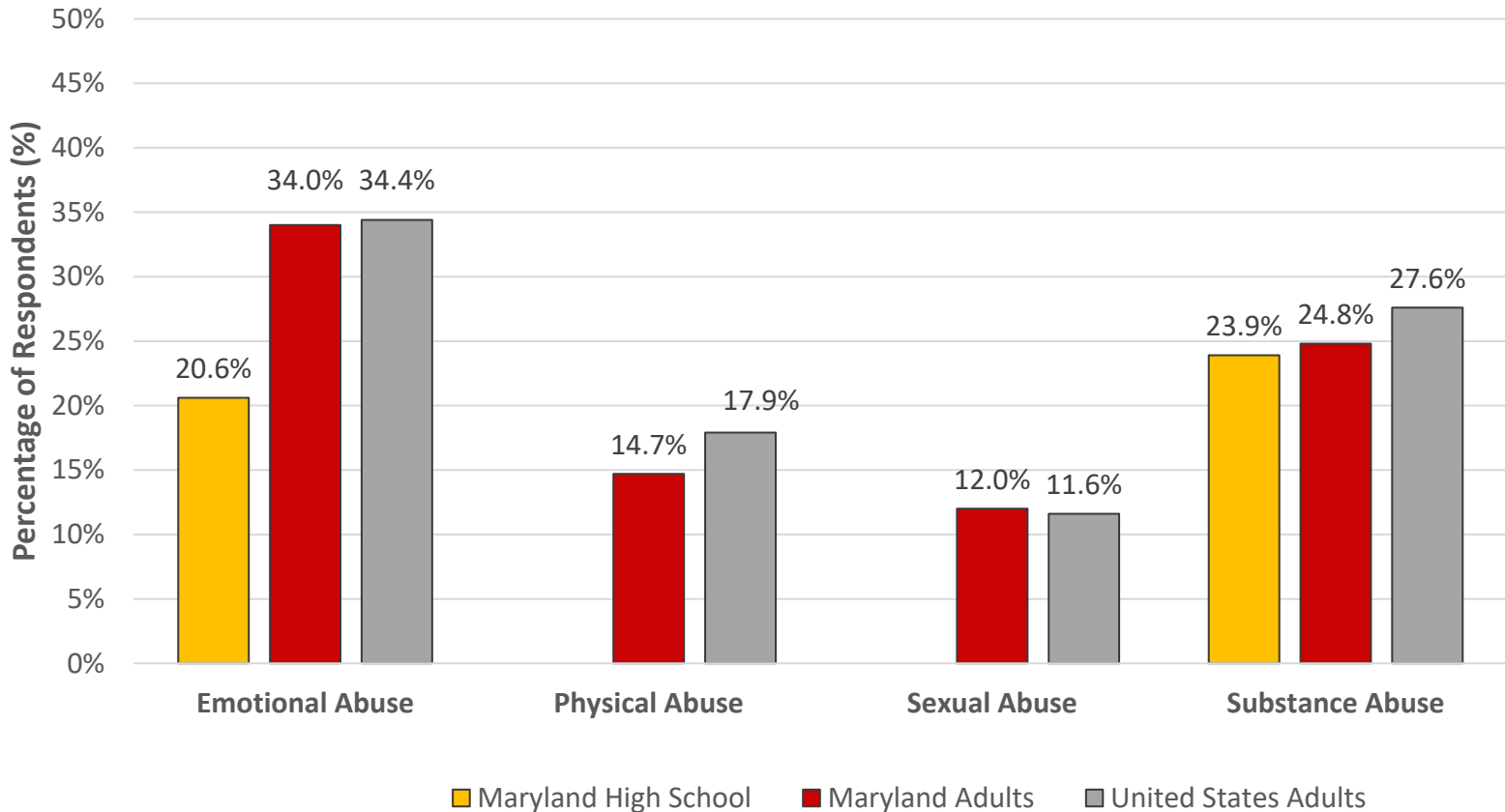
Childhood Household Challenges: Mental Illness



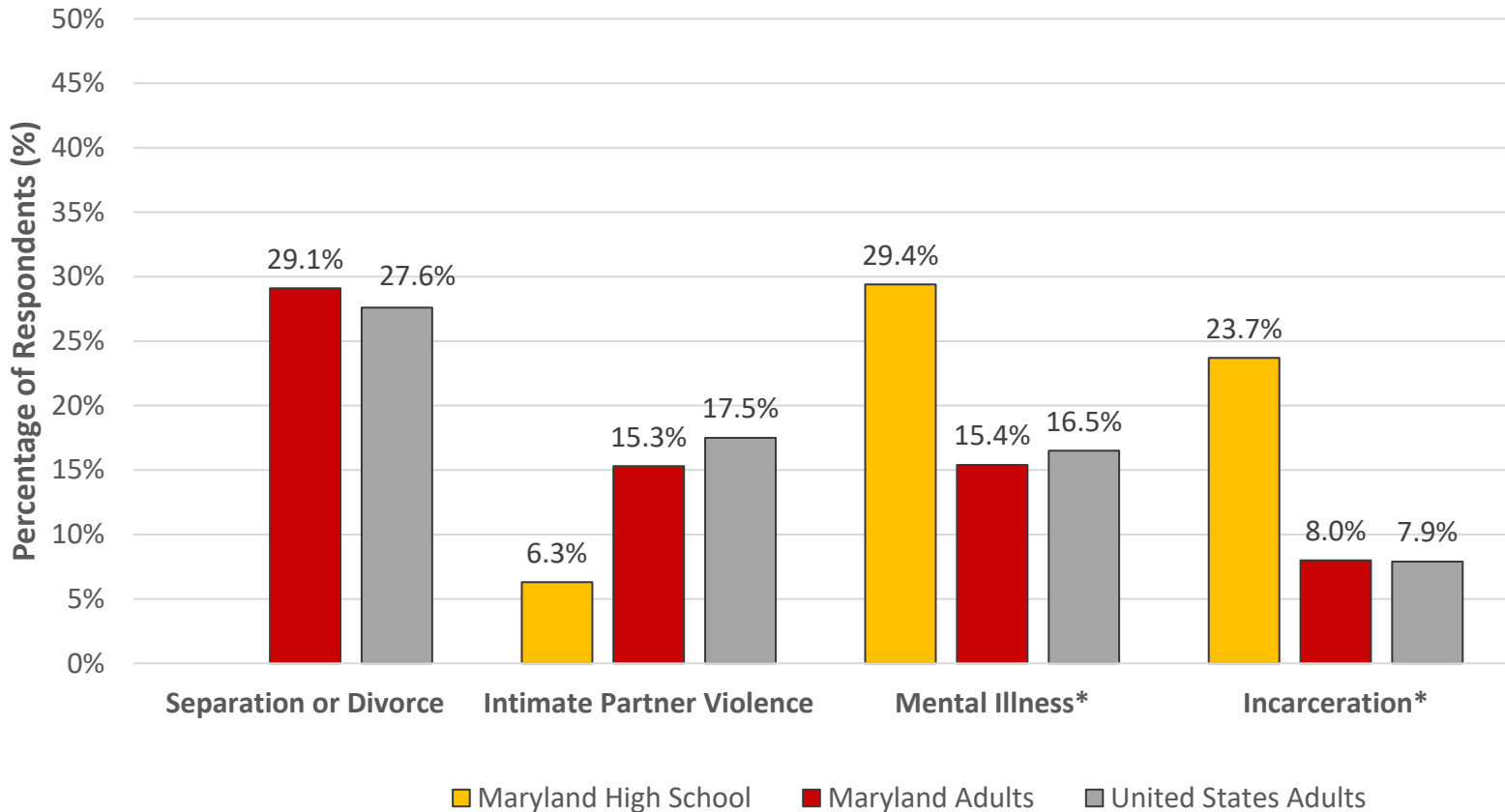
Childhood Household Challenges: Incarcerated Household Member



Overview Childhood Household Challenges



Overview Childhood Household Challenges



* Any household for youth, parent/guardian for adult

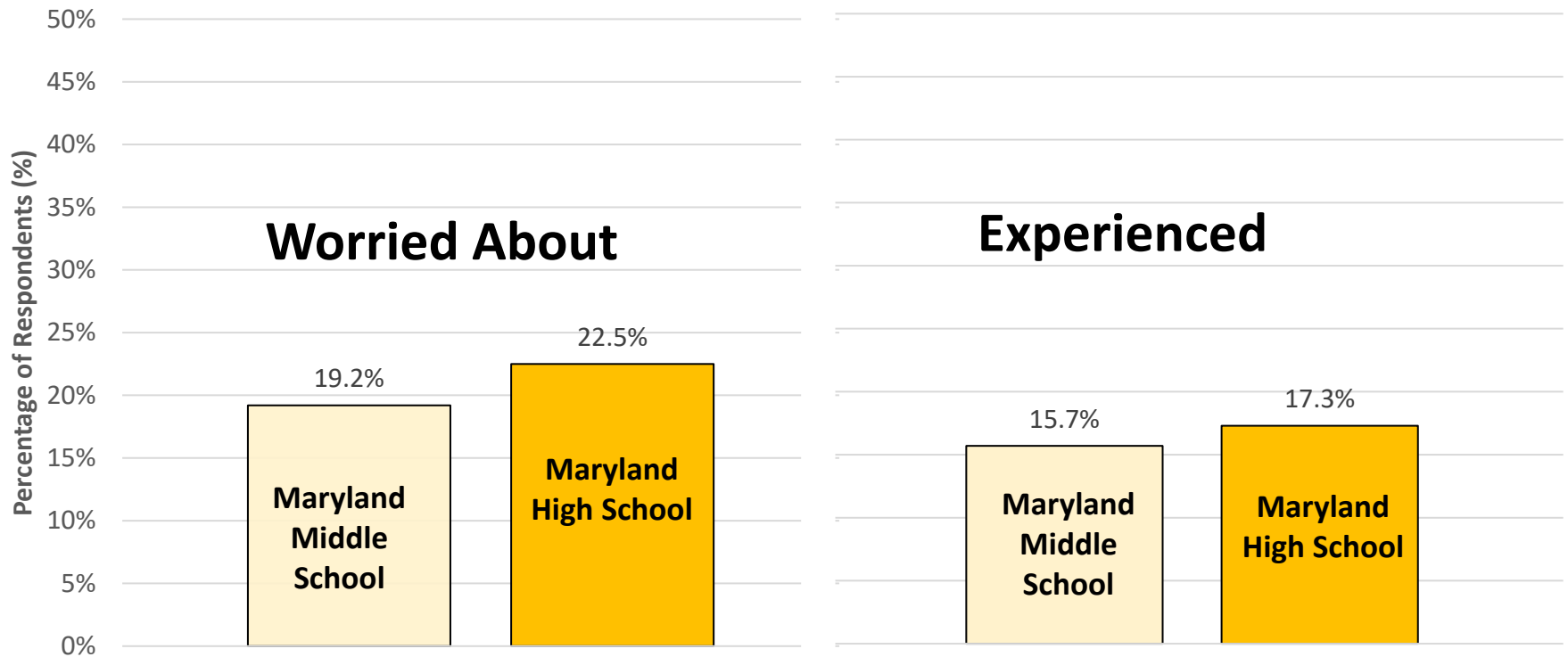
*Maryland Childhood Trauma and
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**YRBS: Other Traumatic
Experiences**

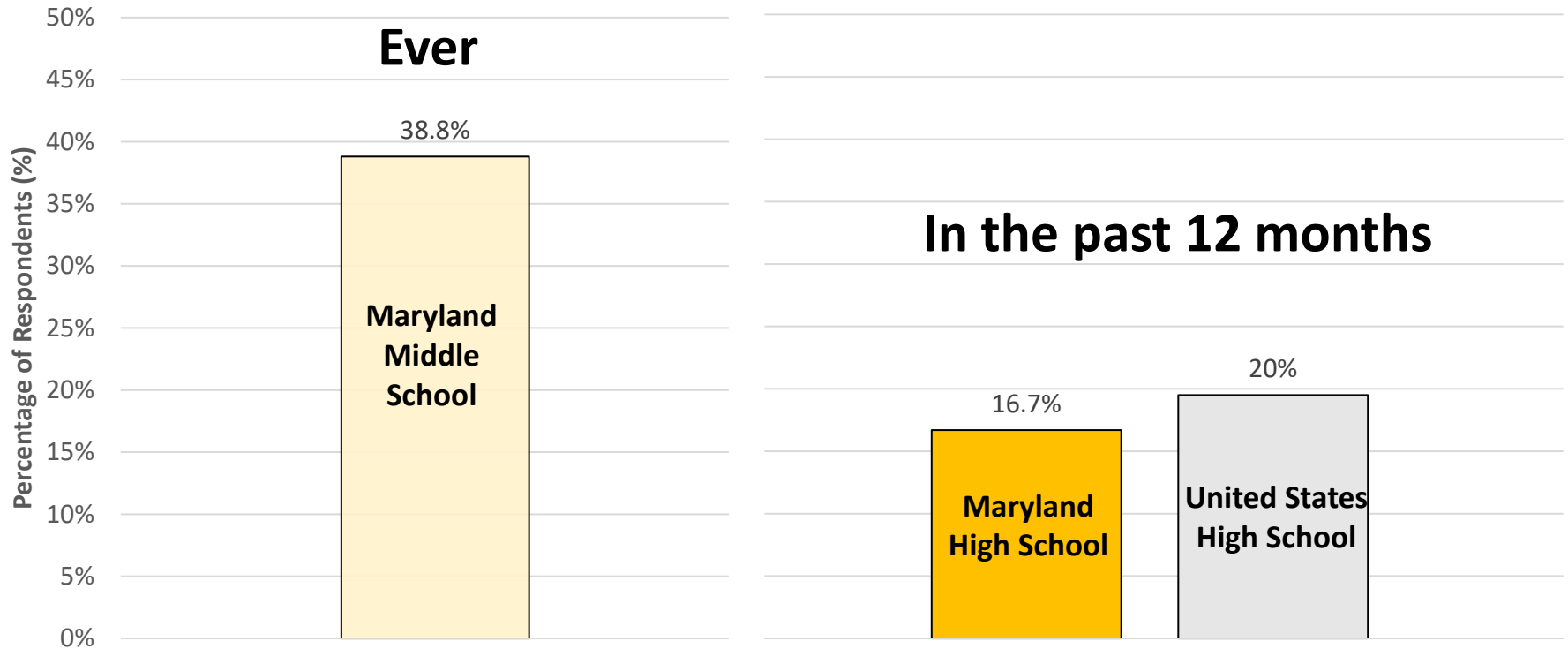
Data Available for YRBS: Other Traumatic Experiences

- High School: Nationwide and Maryland data
- Middle School: Maryland data
 - Middle School Nationwide data are not available

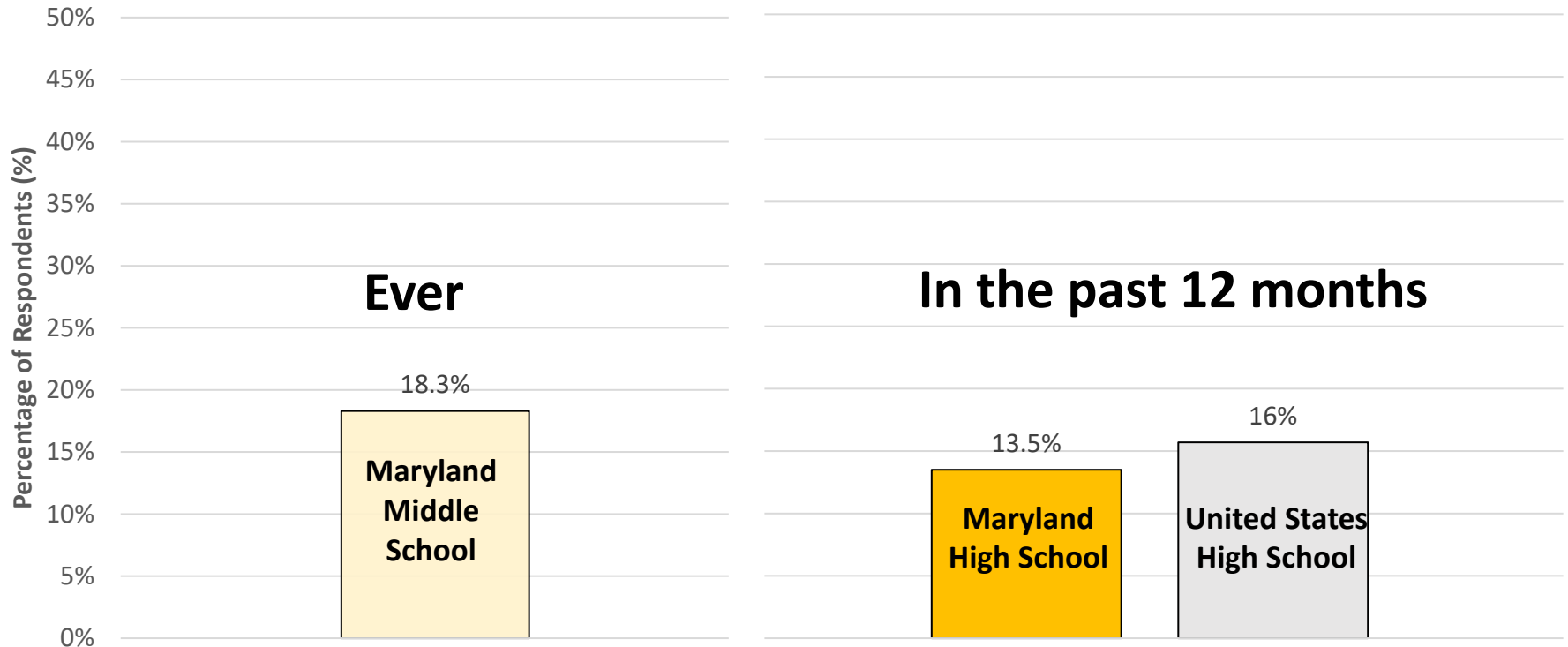
Youth Traumatic Experience: Food Insecurity Past 12 Months*



Youth Traumatic Experience: Bullied on School Property

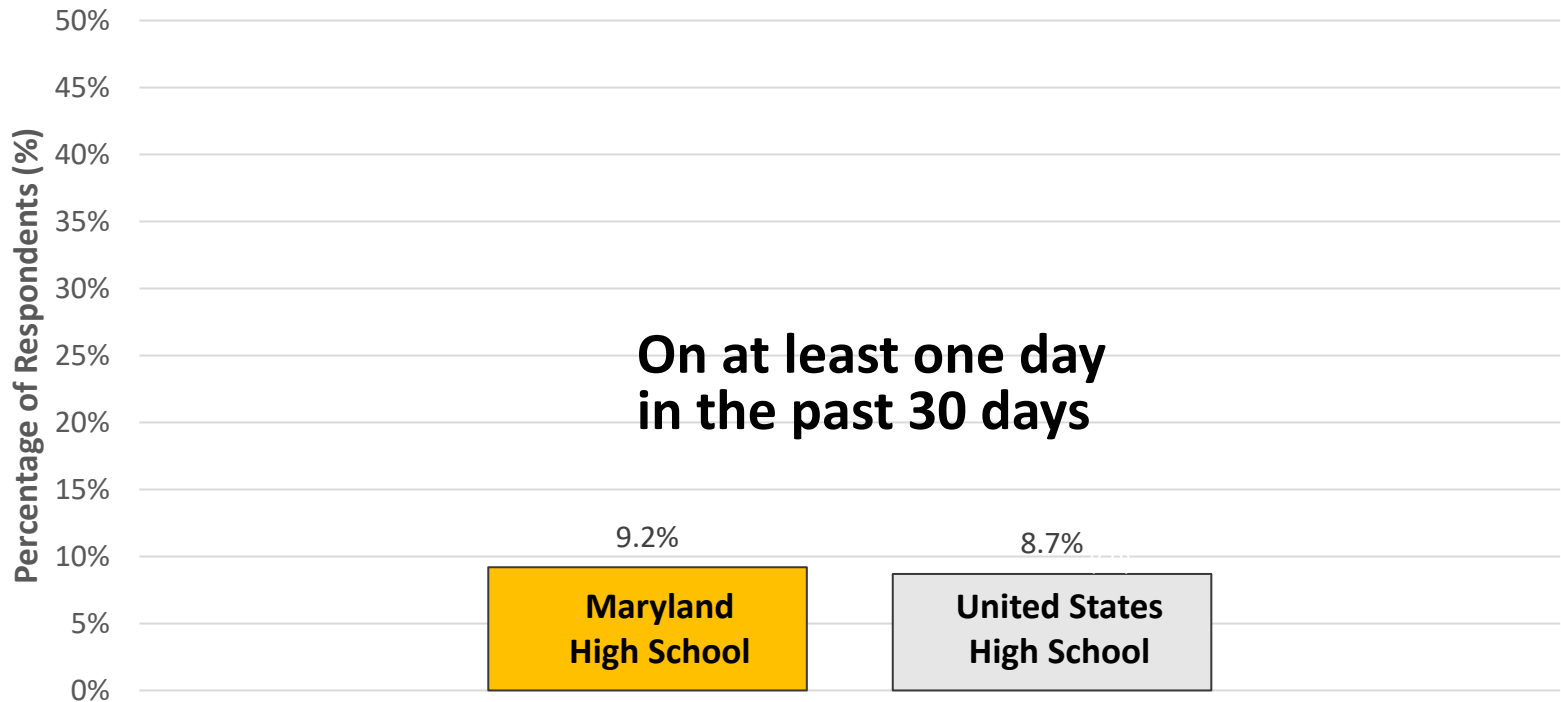


Youth Traumatic Experience: Electronically Bullied (e.g. texting or social media)



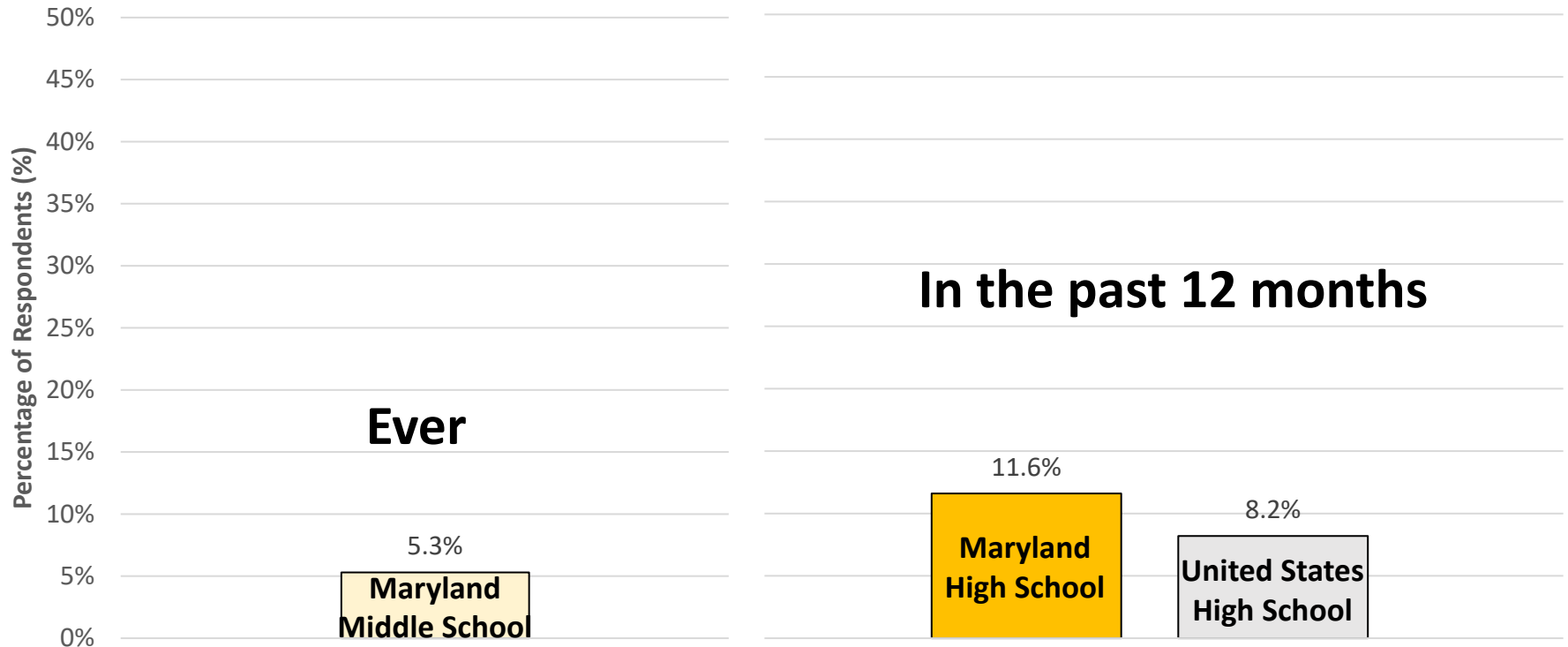
Youth Traumatic Experience:

Did not go to school because they felt unsafe at school or on their way to or from school

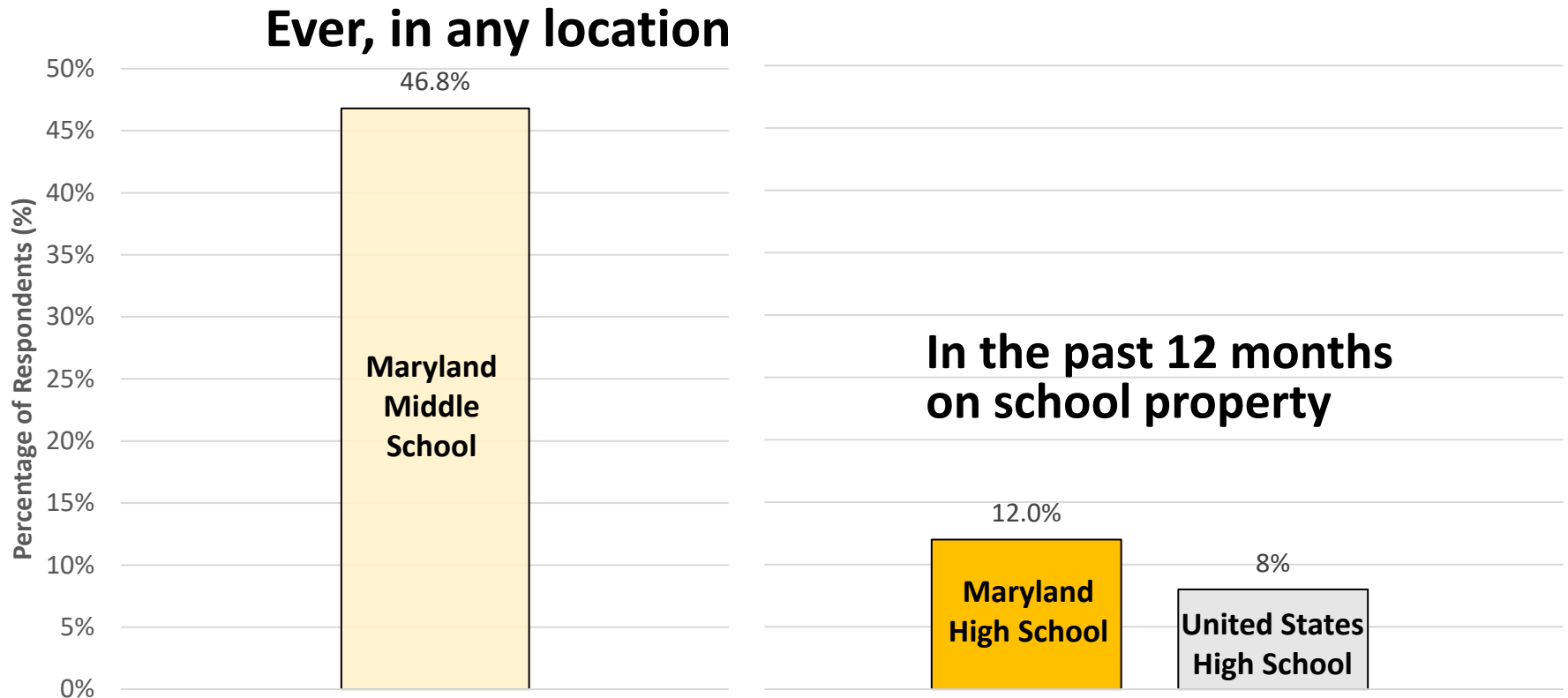


*Maryland High School data not available

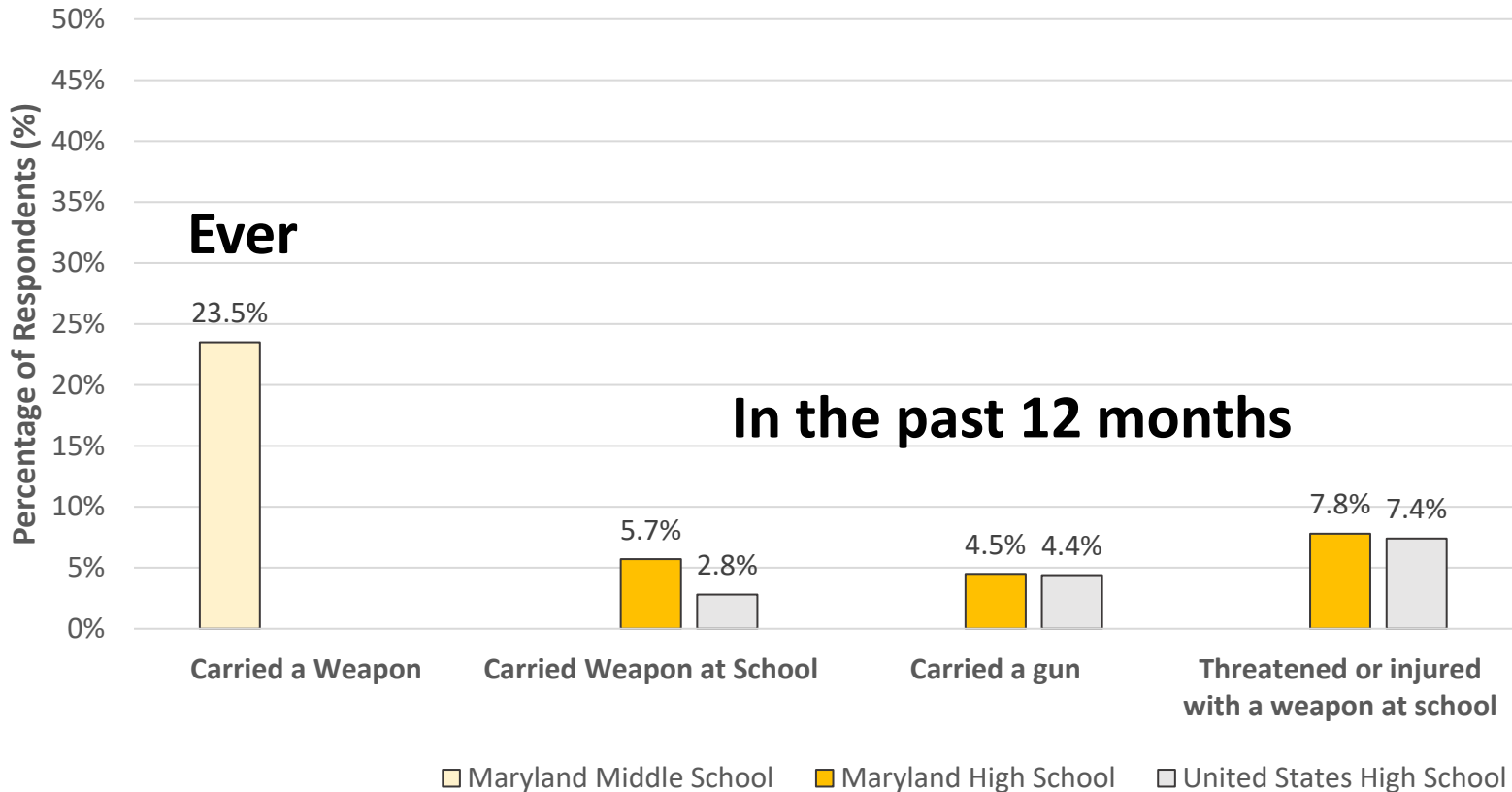
Youth Traumatic Experience: Physical Dating Violence



Youth Traumatic Experience: In a Physical Fight



Youth Traumatic Experience: Weapon-Related



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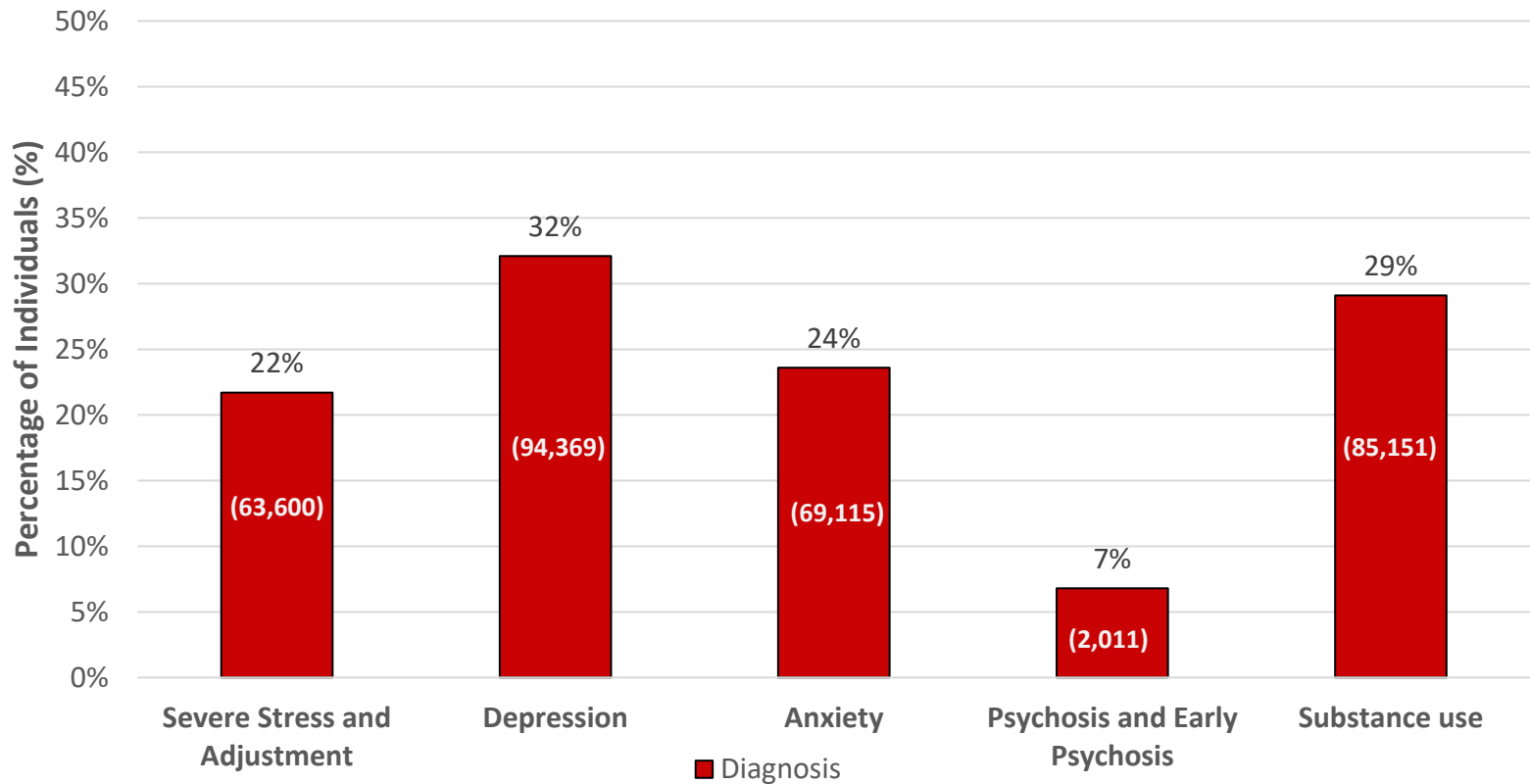
ACEs and Behavioral Health

ACEs and Behavioral Health Nationwide

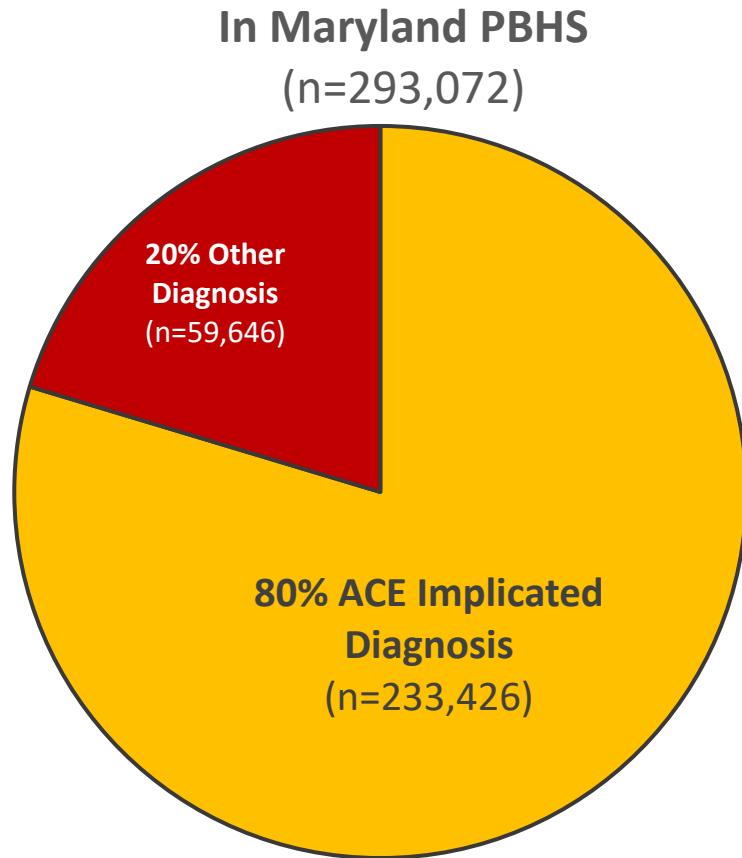
- Evidence suggests a strong and cumulative impact of ACEs on the behavioral health and functioning of adults
- ACEs contribute to increased frequency of the following diagnoses:
 1. Reaction to Severe Stress and Adjustment (including PTSD)
 2. Depression
 3. Anxiety
 4. Psychosis and Early Psychosis
 5. Substance Use (Alcohol, Cannabis, Opioid , Other substance use)

ACE Behavioral Health Diagnoses in Maryland PBHS

(n=293,072)



ACE Behavioral Health Diagnoses



CDC estimates **16%** of individuals in the US have 4+ ACEs, resulting in long term health impacts.

This implies that ACE prevention in Maryland could reduce the number of individuals with ACE Implicated diagnoses by approximately **37,350** individuals

This could mean up to a **14%** reduction in individuals requiring behavioral health services in Maryland

ACEs and Behavioral Health Nationwide

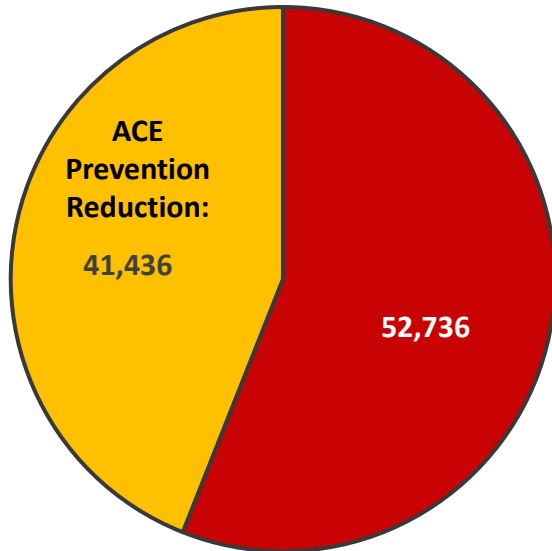
- According to the CDC, preventing ACEs could reduce the number of adults with
 - Depression by as much as 44%
 - Heavy drinking by as much as 24%

CDC Vital Signs November 2019

Potential Impact of ACEs Prevention in Maryland PBHS

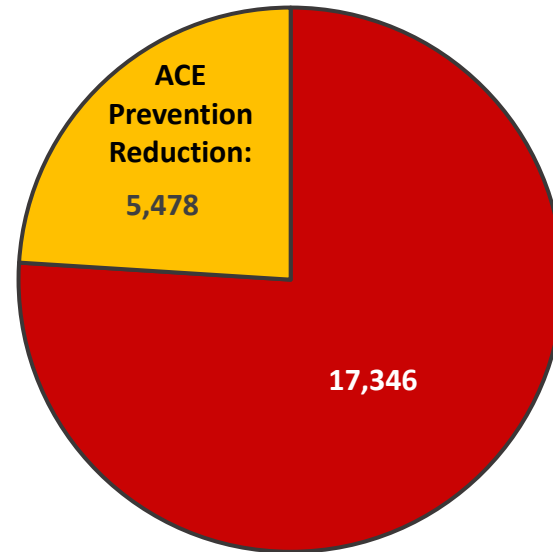
44% Reduction in Depression

(n=94,172)



24% Reduction in Heavy Drinking

(n=22,824)



*Maryland Childhood Trauma and
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**Youth Positive Childhood
Experiences**

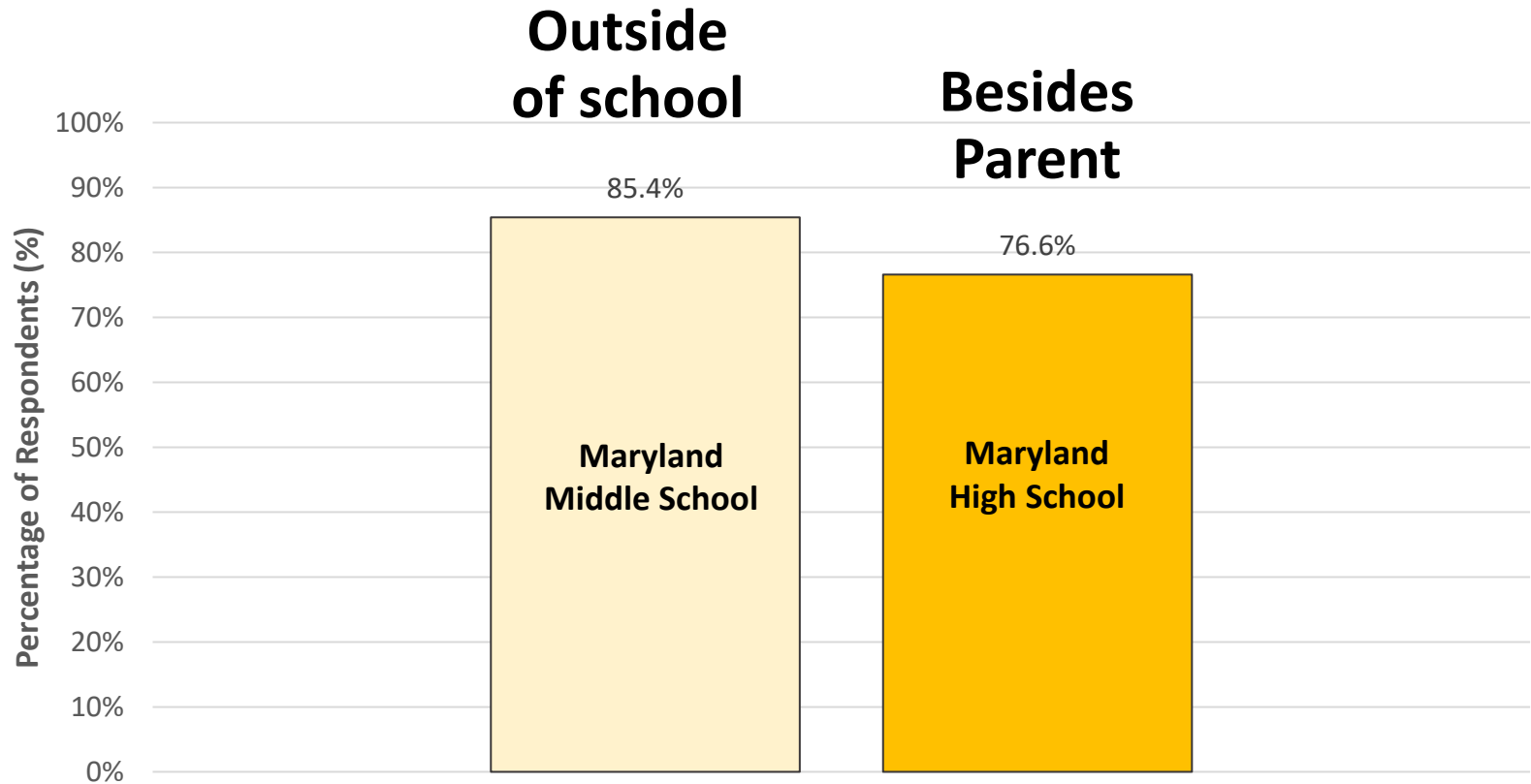
Positive Childhood Experiences

1. Being able to talk openly to a family member or as a family about feelings and feel heard, accepted and supported.
2. Belief that family stood by them during difficult times.
3. Feeling safe and protected by an adult in the home.
4. Feeling supported by friends.
5. Having a sense of belonging and connection with a larger group who has “got your back” (e.g. school, church, clubs, neighborhood, etc.).
6. Enjoyment of participation in community traditions.
7. Relationship with at least one non-parent adult who takes genuine interest in you.

Positive childhood experiences show a dose-response relationship with adult depression and/or poor mental health, as well as adult-reported social and emotional support

Bethell, C., Jones, J., Gombojav, N., Linkenbach, J., & Sege, R. (2019). Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample. *JAMA Pediatrics* published online 2019 Sep 9.
Positive Childhood Experiences source: <https://www.childandadolescent.org/positive-childhood-experiences/>

Youth Positive Childhood Experience: At Least One Supportive Adult Relationship



*Maryland Childhood Trauma and
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Summary and Action Steps

Summary: Number of Childhood Traumatic Experiences and Types of Trauma *based on ACE Survey Questions*

- The proportion of individuals and number of childhood trauma and adverse experiences among Maryland adults is comparable to national proportions.
- The proportion of Maryland adults who have experienced the following childhood traumas are comparable to national levels:
 - emotional abuse
 - sexual abuse
 - household mental illness
 - an incarcerated household member

Summary: Most Frequently Reported Childhood Trauma

based on ACE Survey Questions

- The Childhood Trauma Experiences most frequently reported by Maryland adults are:
 - experiencing emotional abuse in childhood (34%)
 - parental separation and divorce (29.1%)
 - household substance abuse (24.8%)
- The Childhood Trauma Experiences most frequently reported by high school students are:
 - household substance abuse (23.9%)
 - any household mental illness (29.4%)
 - incarceration of any household member (23.7%)

Summary: Types of Childhood Trauma

based on ACE Survey Questions

Physical Abuse, Household Substance Use, and Parental Separation or Divorce

- Fewer Maryland adults (14.7%) reported experiencing physical abuse than nationwide (17.9%)
- Fewer Maryland high school students (23.9%) and Maryland adults (24.8%) reported experiencing childhood household substance abuse than nationwide (27.6%)
- Slightly more Maryland adults (29.1%) report parental divorce or separation during childhood than nationwide (27.6%)

Summary: Types of Childhood Trauma

ACE-like Item

Intimate Partner Violence in Adults and Physical Dating Violence in Youth

- Slightly fewer Maryland adults (15.3%) report intimate partner violence than nationwide (17.5%).
- Compared to Maryland adults, Maryland high school students were 9% less likely to experience intimate partner violence.
- A larger proportion of Maryland high school students (11.6%) experienced physical dating violence in the past 12 months compared to nationwide (8.2%).

Summary: Types of Childhood Trauma

based on ACE Survey Questions

Bullying

- **At School:** In the 12 months prior to the survey, Maryland high school students were less likely to report experiencing bullying on school property (16.7%) than nationwide (20%), with 38.8% of Maryland middle school students report ever having been bullied on school property
- **Electronically:** Rates of electronic bullying were lower than school bullying. In the 12 months prior to the survey, Maryland high school students were less likely to report experiencing electronic bullying (13.5%) than nationwide (16%), with 18.3% of Maryland middle school students report ever having been electronically bullied

Summary: Types of Childhood Trauma

ACE-like Item

Food Insecurity

- Youths in high school were slightly more likely to report food insecurity with
 - 22.5% of high school students reporting feeling worried about food availability compared to 19.2% of middle school students and
 - 17.3% of high school students reporting experiencing insufficient food availability compared to 15.7% of middle school students

Summary: Types of Childhood Trauma

ACE-like Item

Youth School Safety, Physical Fighting, and Weapons

- The proportion of high school students in Maryland (9.2%) who did not go to school because they felt unsafe at school or on their way to or from school was comparable to nationwide (8.7%)
- A larger proportion of Maryland high school students (12.0%) were in a physical fight on school property in the past 12 months compared to nationwide (8.0%), with 46.8% of Maryland middle school students reporting ever having been in a physical fight at any location.
- A slightly higher proportion of Maryland high school students carried a weapon at school (5.7%) compared to nationwide (2.8%). Proportions of high school students who carried a gun anywhere or were threatened or injured with a weapon at school were comparable to national rates.
- Almost a quarter (23.5%) of middle school students report having ever carried a weapon.

Summary: Prevalence of ACE Diagnoses in PBHS

- ACEs are known to contribute to an increased frequency of the following diagnoses, these proportions are found in the Maryland PBHS:
 - 32% Depression
 - 29% Substance Use (Alcohol, Cannabis, Opioid , Other substance use)
 - 24% Anxiety
 - 22% Reaction to Severe Stress and Adjustment (including PTSD)
 - 7% Psychosis and Early Psychosis
- ACE prevention in Maryland could reduce the number of individuals requiring behavioral health services in the public system by 14% based on CDC estimates including
 - 44% reduction in depression and
 - 24% reduction in heavy drinking

Summary: Youth Positive Childhood Experience

- Having a supportive adult relationship is a positive childhood experience known to mitigate the impact of adverse childhood experiences.
 - 85.4% of Maryland middle school students report having at least one supportive adult relationship outside of school.
 - 76.6% of Maryland high school students report having at least one supportive adult relationship beside their parent

Potential Action Steps:

Data-to-Action Toolkit

- Integrate the resources from this report into the Building Healing Behavioral Health Systems (BHBHS) Data-to-Action toolkit, currently being developed.
- Deploy a Data-to-Action toolkit to provide resources that can help professionals working in public services build systems that are trauma-informed, healing-centered and equitable.
 - **Trauma-informed** Trauma-informed care occurs when all parties involved recognize and respond to the impact of traumatic stress on those who have contact with an organization.
 - **Healing-centered:** Healing-centered engagement expands how we think about responses to trauma and offers more holistic approach to fostering well-being.
 - **Equitable:** Equity is reflected in fair treatment, access, opportunity, and advancement for all people, while simultaneously striving to identify and eliminate barriers that prevent the full participation of some.

Potential Action Steps:

Data-to-Action Toolkit Contents

- Describe risk and protective factors, such as Positive Childhood Experiences (PCEs)
- Offer information on evidence-based treatments for trauma to support healing for people who have experienced trauma
- Include educational resources on antiracism for both individuals and organizations
- Provide resources on secondary traumatic stress to support people who work to build healing systems

Potential Action Steps:

Data-to-Action Toolkit Contents

- Important definitions, such as trauma and Adverse Childhood Experiences (ACEs)
- Describe what Maryland is doing to build healing systems
- Offer resources related to preventing and healing trauma and adversity in Maryland
- Describe an overview of health disparities and how ACEs relate to social determinants of health, including health disparity data in Maryland

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Maryland Behavioral Risk Factor Surveillance System (2020) Adverse Childhood Experiences (ACEs) in Maryland: Data from the 2018 Maryland BRFSS Statewide and county-level estimates for non-institutionalized Maryland adults age 18+ Data Tables ONLY Prepared January 2020 by <http://phpa.dhmh.maryland.gov/ccdpc/Reports/Pages/brfss.aspx>

Maryland Department of Health Center for Tobacco Prevention and Control (2018). Youth Risk Behavior Survey Results Maryland High School Survey State Level Data, 2018-2019 Detail Tables - Weighted Data from: <https://health.maryland.gov/phpa/ccdpc/Reports/Documents/2018%20YRBS%20YTS%20Reports/Maryland/2018MDH%20Detail%20Tables.pdf>

Maryland Department of Health Center for Tobacco Prevention and Control (2018) Youth Risk Behavior Survey Results Maryland High School Survey State Level Data, 2018-2019 Detail Tables - Weighted Data from: <https://health.maryland.gov/phpa/ccdpc/Reports/Documents/2018%20YRBS%20YTS%20Reports/Maryland/2018MDM%20Detail%20Tables.pdf>

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