



# Building Healing Systems:

## Trauma-Informed/Healing-Centered Organizational Transformation

Adverse and Positive Childhood  
Experiences by Gender among Youths



# Behavioral Health Administration & Universities Partnership



## **UM SOM Psychiatry Department**

- Division of Child and Adolescent Psychiatry (DCAP)
- Systems Evaluation Center (SEC)



## **Bowie State University**

- Department of Behavioral Sciences and Services

# Maryland Childhood Trauma and ACEs

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The data for today's presentation comes from the 2021 **Youth Behavioral Risk Survey/Youth Tobacco Survey (YRBS/YTS)** conducted with Maryland Middle and High School Students

*YRBS data is available due to the efforts of:*

- The Maryland Department of Health: Prevention and Health Promotion Administration Center for Tobacco Prevention and Control
- The Maryland youth who participated in the surveys used in this project

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- Summary of Behavioral Health Findings
- Potential Action Steps



# Building Healing Behavioral Health Systems:

Key Take Aways



# Key Take Aways

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- Almost all relationships across ACEs, PCEs and behavioral health indicators were statistically significant, showing a strong relationship of the impact of ACEs and PCEs on behavioral health in both male and female students.
- In general, more females than males experience all ACEs, with the exception of household incarceration, witnessing community violence in middle school and domestic violence in high school.

# Key Take Aways

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- **Positive Childhood Experience mitigate the impact of ACEs** and are associated with reducing risk from specific ACEs for females and males.
  - Household Domestic Violence is the ACE most impacted by PCEs, with females experiencing more risk reduction than males (M=81%; F=88%)
  - The Ability to Talk to an Adults (MS) or a Member of Their Family (HS) decreased the most risk for emotional abuse at (54-80%)
    - Middle school males experienced more reduced risk than females (M=73%; F=54%)
    - High school females experienced more reduced risk than males (F=80%, M=72%)

# Key Take Aways

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- **Positive Childhood Experience mitigate the impact of ACEs**  
*(continued)*
  - Food Security is the PCE that reduces the most risk with ACEs at 32-88%.
    - Food security has a larger risk reduction with bullying for females (52-58%) compared to males (37-55%), with the exception of electronic bullying in middle school students, which is slightly higher for males (F=32%, M=37%).
  - Safety at School (and to/from) in high school students is associated with a gender differences with household mental illness (F=56%, M=44%) and household substance use (F=52%, M=39%)



# Key Take Aways

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- **More females than males experience ACEs**
  - At least one ACE by 10-15% (MS: F=47%, M=31%; HS: F=56%, M=43%)
  - 3+ ACEs by 4-6 % (MS: F=9%, M=3%; HS: F=11%, M=8%)
- **Having three or more ACEs is associated with gender differences for increased mental health risks in middle school students**
  - Middle school females with 3+ ACEs are at a much higher risk of depression at 7.9 times compared to 5.6 times for males.
  - Despite having a lower risk of depression than females, middle school males with 3+ ACEs have a higher risk of suicidal ideation, making a suicide plan or attempting suicide.

# Key Take Aways

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- **Having three or more ACEs is associated with gender differences for increased substance use risk**
  - Middle school males are more likely to currently use marijuana (10.3 times) than females (7.7 times)
  - High school students have similar risk of trying pain medication but females have higher risk of trying heroin (8.2 times) compared to males (5.8 times) and males have a higher risk of trying injected drugs (M=4.3 times with F=2.4 times)
  - Males are more likely than females to try cocaine. The risk for middle school males is more than 2.5 times that of females (M=6.9 times, F=2.6 times), and high school males at 1.5 times that found in females (M=6.9 times, F=2.6 times)
  - High school females are slightly more likely than males to try methamphetamines, but males are more likely than females to try ecstasy

# Key Take Aways

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- **Although a higher proportion of females experience ACEs, the risk for behavioral health impact varies by gender**
  - More females than males experience mental health and substance use challenges, while males are more likely to experience concurrent mental health and substance use challenges
- **Gender differences also exist for the risk introduced by specific ACEs**
  - Emotional Abuse tends to introduce more risk for mental health challenges in females
  - Bullying tends to introduce more risk for mental health challenges in males
  - Domestic violence tends to introduce more risk for substance use challenges in males



# Building Healing Behavioral Health Systems:

Focused Data Study Methods



# Methods: Data Source

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- 2021 Middle School and High School Youth Risk Behavior Survey/Youth Tobacco Survey (YRBS/YTS)
- Maryland collaborates with the Centers for Disease Control and Prevention (CDC) to collect behavioral risk data through school systems using different surveys for middle-school and high-school students.
- Data received from the Maryland Department of Health: Prevention and Health Promotion Administration Center for Tobacco Prevention and Control.

# Methods: Sample

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- The Positive Childhood Experiences (PCEs) analysis only includes students with behavioral health challenges, to best explore the impact of PCEs on these individuals.
- The remainder of the analyses includes all students to best understand the impact of each ACE across behavioral health indicators for individuals with behavioral health challenges compared to those without.
- All findings reported in this analysis are statistically significant unless otherwise stated.

# Methods: Identifying Gender

- This report includes gender differences based on student reported gender identity with options of male and female.
- Transgender status was not included because it is only asked of high school students, and the small proportion of transgender students (3%) was insufficient to conduct analyses.
- See the companion analysis of ACEs and LGBTQ status for high school students for more information.

**Q2. What is your sex?**

**Female**

**Male**

**Q9: 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?**

**No, I am not transgender**

**Yes, I am transgender**

**I am not sure if I am transgender**

**I do not know what this question is asking**

# Methods: Identifying Individuals with Behavioral Health Challenges

Mental Health
<b>Mental Health Quality of Life</b> “not good” most of the time or always <i>(past 30 days)</i>
<b>Depressive Episode</b> <i>(past 12 months)</i>
<b>Suicidal Ideation</b> <i>(past 12 months HS; lifetime MS)</i>
<b>Suicide Plan</b> <i>(past 12 months; lifetime MS)</i>
<b>Suicide Attempt</b> <i>(past 12 months; lifetime MS)</i>

Current Substance Use
<b>Alcohol Use</b> <i>(past 30 days)</i>
<b>Binge Drinking</b> <i>(past 30 days HS only)</i>
<b>Marijuana Use</b> <i>(past 30 days)</i>



Substance Use (ever)
<b>Any Current Substance Use</b> <i>(past 30 days)</i>
<b>Prescription Pain Medicine</b> <i>(lifetime)</i>
<b>Cocaine</b> <i>(lifetime)</i>
<b>Heroin</b> <i>(lifetime HS only)</i>
<b>Methamphetamines</b> <i>(lifetime HS only)</i>
<b>Ecstasy</b> <i>(lifetime HS only)</i>



# Methods: ACEs available for Analysis

## ACE Surveys

### Household ACEs

#### Kaiser-Permanente<sup>a</sup>

1. Emotional Abuse
2. Physical Abuse
3. Sexual Abuse
4. Emotional Neglect
5. Physical Neglect
6. Parental Separation or Divorce
7. Household Domestic Violence
8. Household Substance Abuse
9. Household Mental Illness
10. Household Incarceration

### Community ACEs

#### Philadelphia Urban Expansion<sup>b</sup>

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

Indicates Items Available for Analysis in the Maryland YRBS/YTS data

<sup>a</sup>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.

source: [FindingsfromPhiladelphiaACESurveyandComparedACEQuestions.pdf](#)

# Methods: Identifying ACEs

- The original Kaiser ACE questions asked if individuals ever experienced each ACE with response options of Yes or No
- ACEs are counted in the YRBS/YTS when the following conditions are met:

ACE	YRBS/YTS Options	ACE counted if
<ul style="list-style-type: none"><li>• Emotional Abuse</li><li>• Household Domestic Violence</li></ul>	Never Rarely Sometimes Most of the Time Always	Most of the time Always
<ul style="list-style-type: none"><li>• Household Substance Use</li><li>• Household Mental Illness</li><li>• Household Incarceration</li><li>• Bullied at School</li><li>• Electronic Bullying</li></ul>	Yes No	Yes

# Methods: ACE Count Threshold for Adverse Health Outcomes

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- The original 10-item Kaiser-Permanente ACE study found that an ACE count of 4 or more ACEs is implicated in poor health outcomes in adulthood
- The YRBS/YTS only collects 5 of the original Kaiser-Permanente ACEs, and 2 from the Philadelphia study
- Only the 5 Kaiser-Permanente items in the ACE counts for this analysis.
- Because fewer ACE items are collected in the YRBS/YTS, this analysis uses an ACE count of 3 or more ACEs as a threshold for increased poor outcomes in adulthood.

# Methods: PCEs available for Analysis

## 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.

## PCE-like Experiences in YRBS/YTS

1. Participation in Extracurricular Activities at school such as sports, band, drama, clubs, or student government.
2. Feeling safe at school and on your way to or from school.
3. Having Food Security:
  1. Not worried that your food would run out before you got money to buy more.
  2. Did not run out of food when your family did not have the money to buy more.

Indicates Items Available for Analysis in the Maryland YRBS/YTS data

# Methods: Measurement of Increased Risk

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- Analysis included measuring the increased risk of having each ACE or decreased risk of each PCE with each behavioral health category or indicator
- Risk is measured by an odds ratio that indicates how many times more or less likely individuals are to have a specified ACE and behavioral health category or indicator
- The risks in this report are **not causal, they are associations**. For example, when discussing mental health and a specific ACE
  - **SAY**: There is a relationship between having experienced an ACE and experiencing mental health challenges
  - **NOT**: Experiencing an ACE causes mental health challenges

# Methods: Caveats

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- The YRBS/YTS uses 3 or more ACEs (of 5 collected) as a threshold for implications in adult health outcomes instead of the traditional 4 or more ACEs (of the 10 collected) by Kaiser-Permanente. As a result, findings on high ACE counts may or may not be comparable to other, publicly- available research.
- Some adverse outcomes for ACEs may not surface until adulthood. This report includes data collected from middle and high school students. Because individuals may develop mental health or substance use issues after high school, the proportions for behavioral health outcomes will likely increase during adulthood.

# Methods: Caveats

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- The YRBS does not collect all ACE items, and Not all ACEs are collected in the YRBS, and some missing ACE items may occur more for females
  - Philadelphia ACE item: Experiencing Discrimination due to gender
  - Kaiser ACE item: Sexual abuse
- These missing ACEs may cause females to be underrepresented in analyses for high ACE (>3) counts

# Methods: Caveats

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- Generally, ACE counts only include adverse events that occurred in childhood (before the age of 18).
- The YRBS/YTS asks students if they have ever experienced each ACE, without specifying events occurring in childhood, prior to age 18.
  - This analysis includes responses from 1,792 18-year-old students (6.4% of the weighted responses).
- It is possible that some ACEs reported by 18-year-old students were only experienced in adulthood and should not be counted as an adverse *childhood* experience.





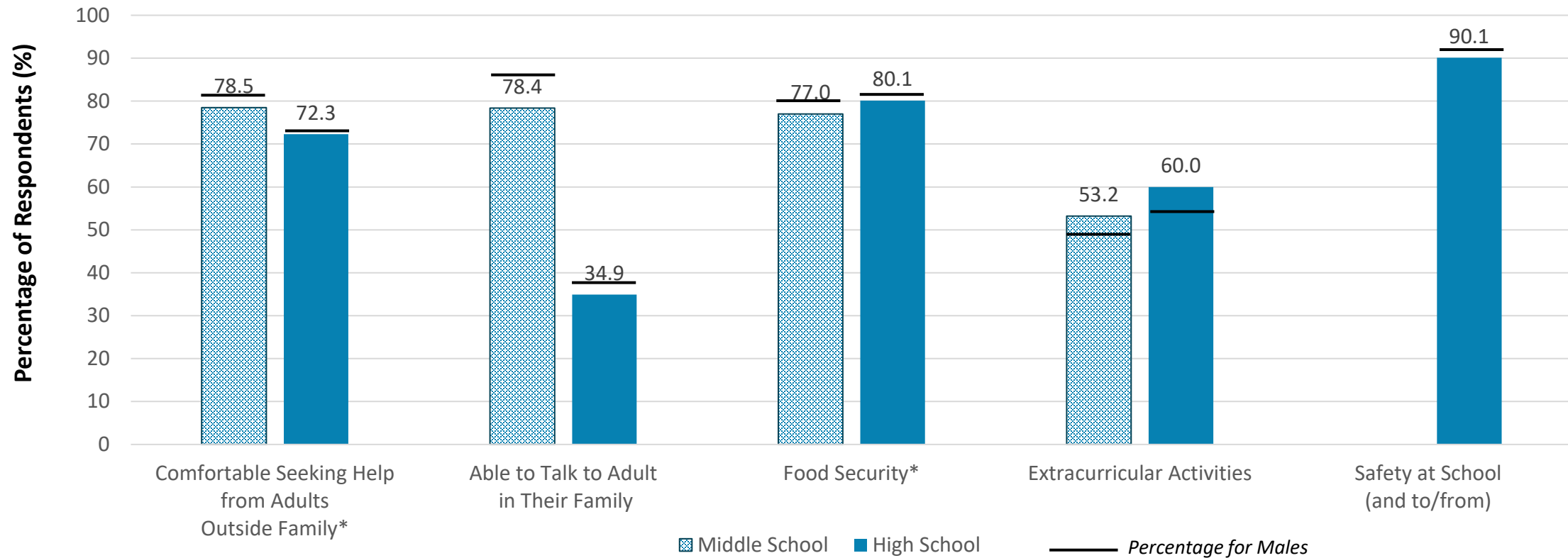
# Building Healing Behavioral Health Systems:

Positive Childhood Experiences (PCEs) by Gender



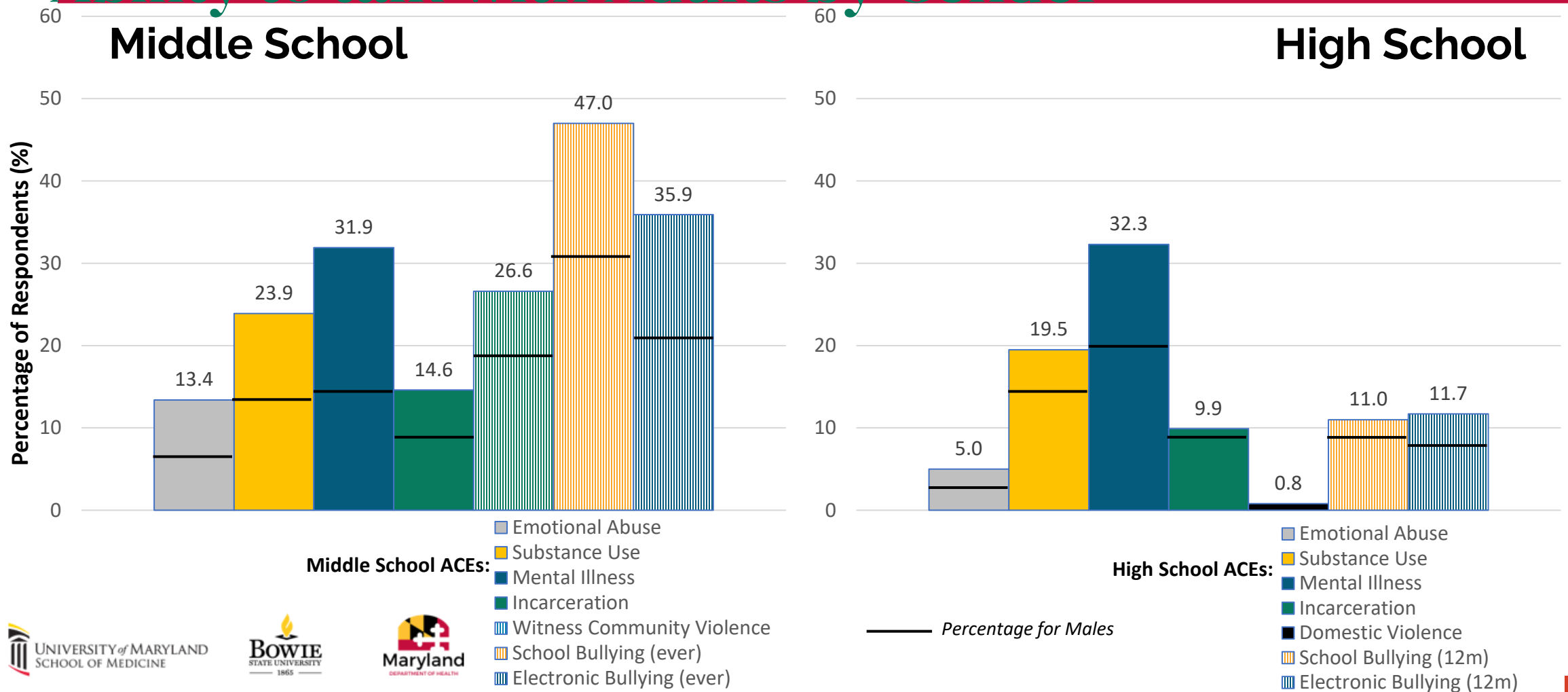
# Positive Childhood Experiences (PCEs) and Gender

A comparable proportion of males and females experience PCEs



\* Gender differences not statistically significant for High School Students with Comfortable Seeking Help from Adults Outside Family and Food Security

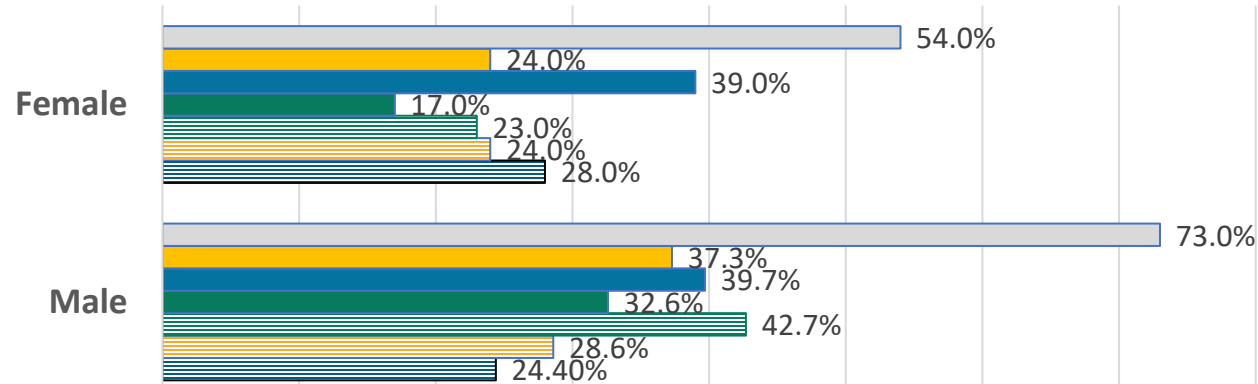
# PCEs and ACEs: Ability to talk with Adults by Gender



# PCEs associated with reduced risk of ACEs

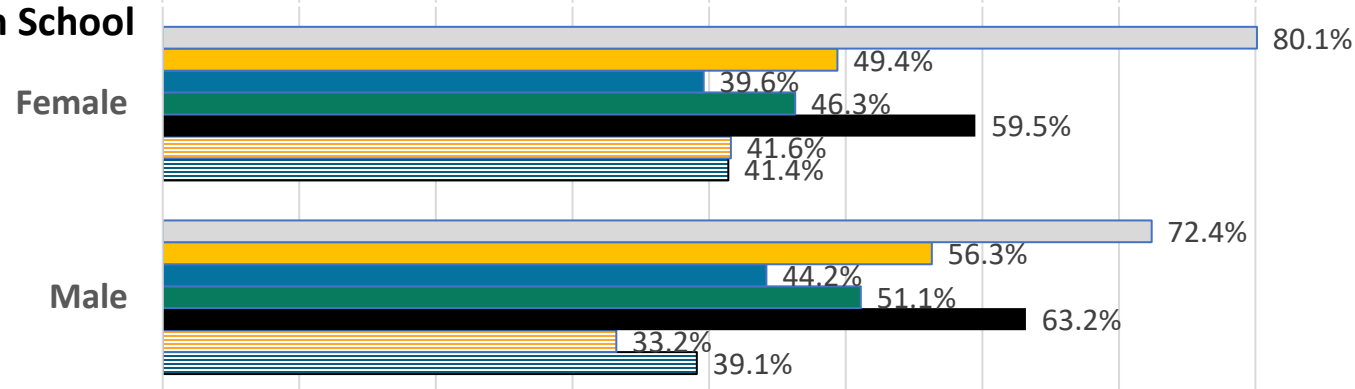
## Ability to talk with Adults by Gender

### Middle School



The ability to talk with adults is associated with more reduced risk with emotional abuse middle school males than females by almost 20%. In high school students, females have more reduced risk with emotional abuse than males by about 8%.

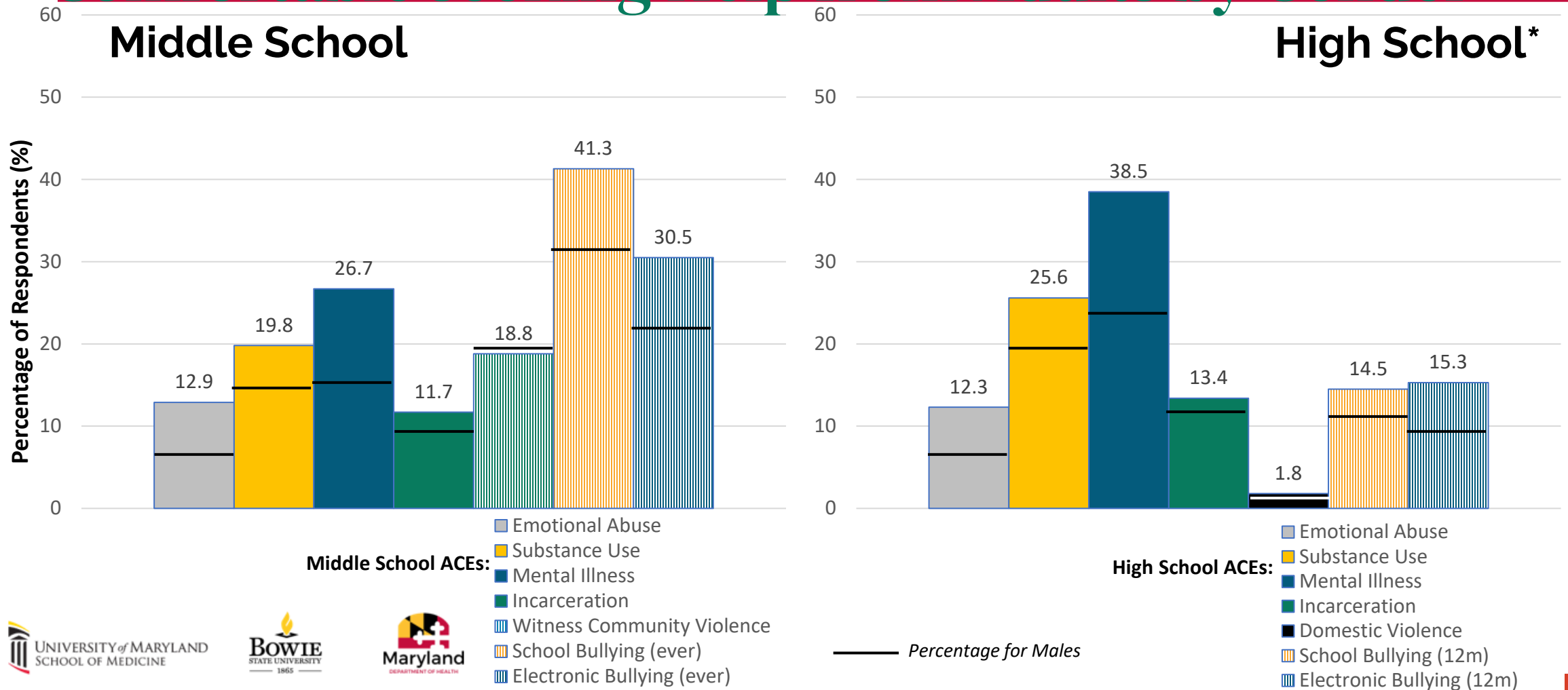
### High School



- ACEs:**
- Emotional Abuse
  - Substance Use
  - Mental Illness
  - Incarceration
  - Witnessed Community Violence
  - Domestic Violence
  - School Bullying
  - Electronic Bullying

Risk Increase (x times)

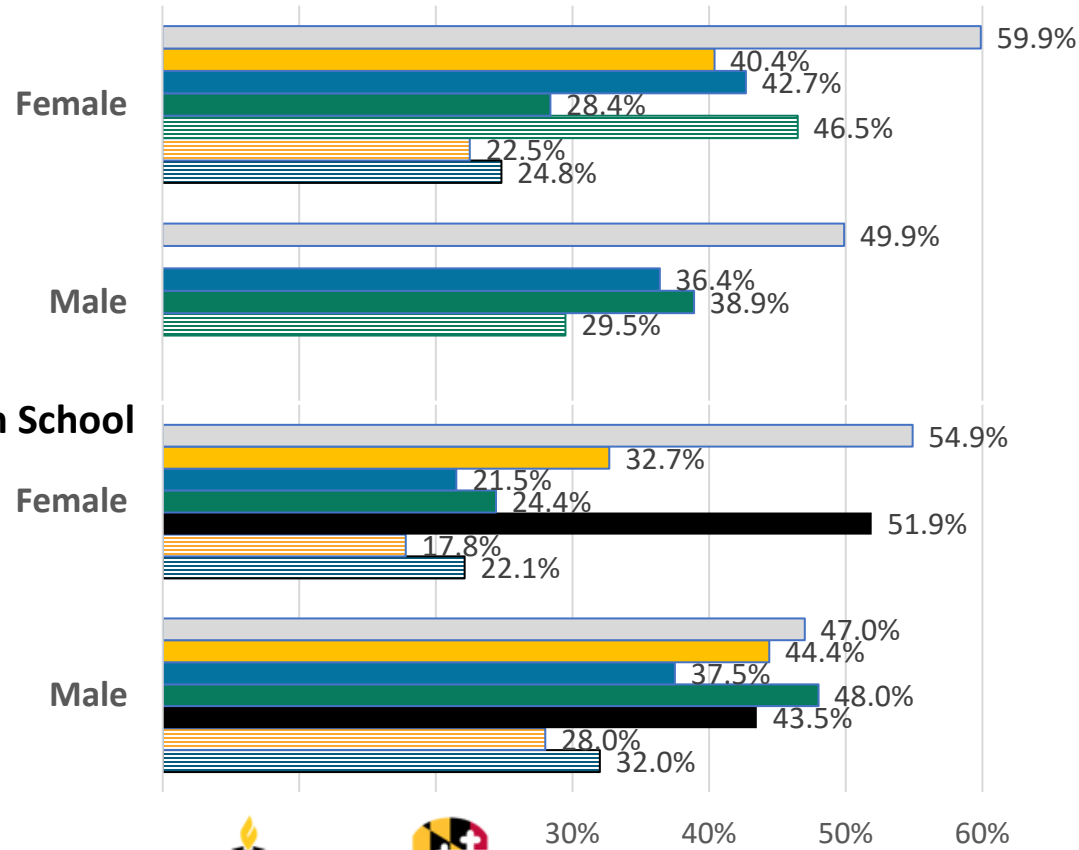
# PCEs and ACEs: Comfortable seeking Help from Adults by Gender



# PCEs associated with reduced risk of ACEs

## Comfortable seeking Help from Adults by Gender

### Middle School



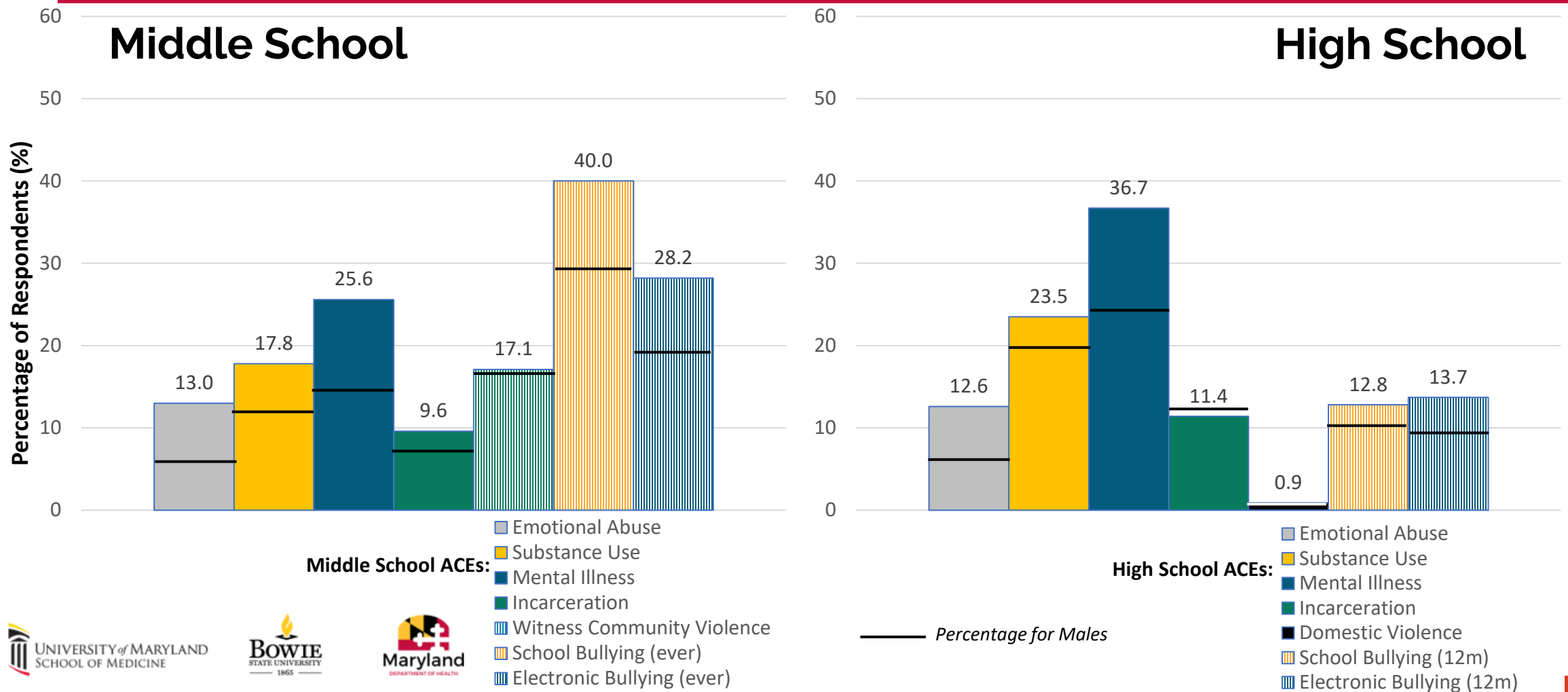
Being comfortable seeking help from adults is associated with more reduced risk with emotional abuse for females than males.

For middle school students, females experience greater risk reduction from most ACEs, but for high school students, males experience greater risk reduction that females for most ACEs.

- ACEs:**
- Emotional Abuse
  - Substance Use
  - Mental Illness
  - Incarceration
  - Witnessed Community Violence
  - Domestic Violence
  - School Bullying
  - Electronic Bullying

Risk Increase (x times)

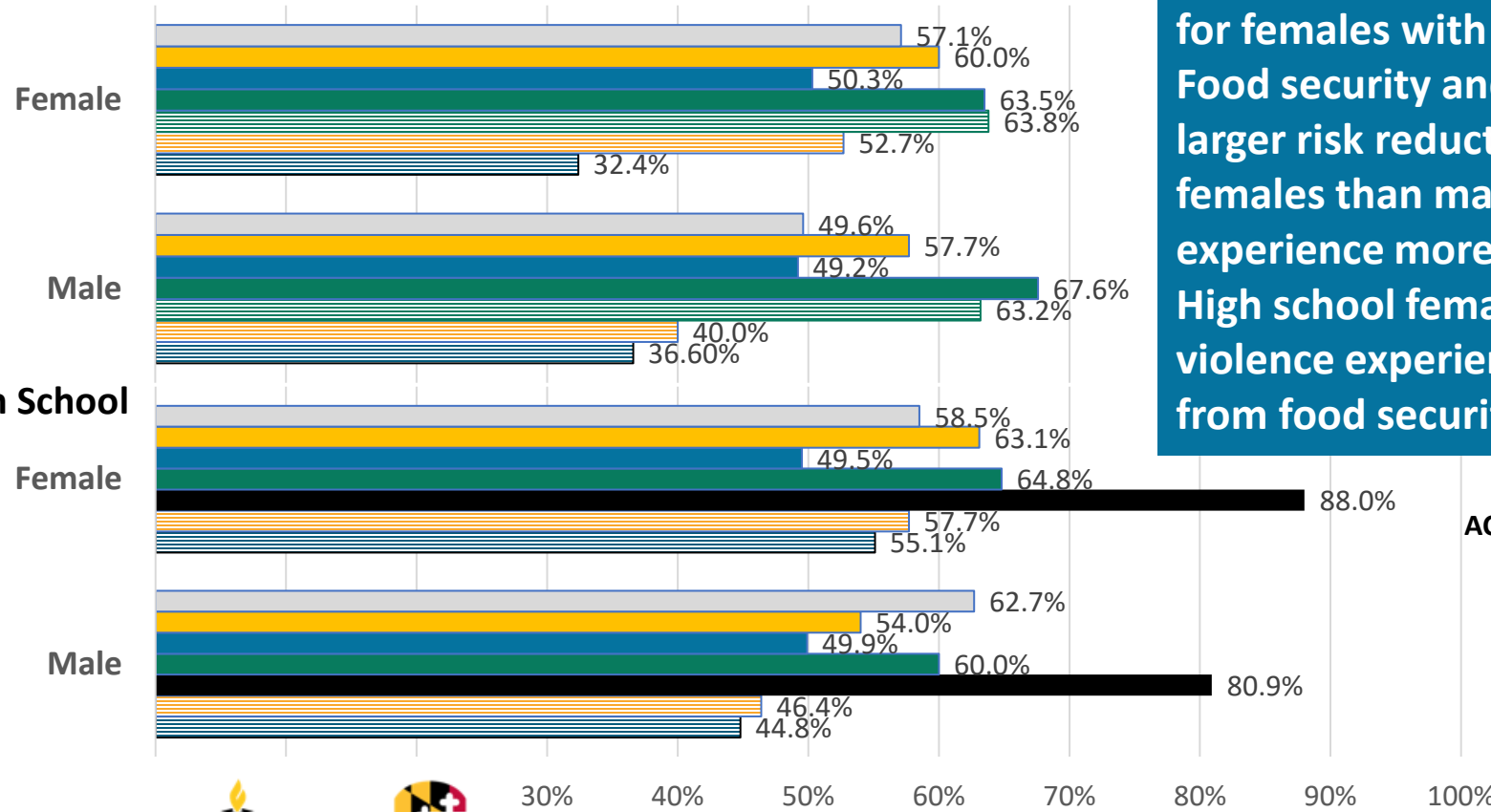
# PCEs and ACEs: Food Security by Gender



# PCEs associated with reduced risk of ACEs

## Food Security by Gender

### Middle School



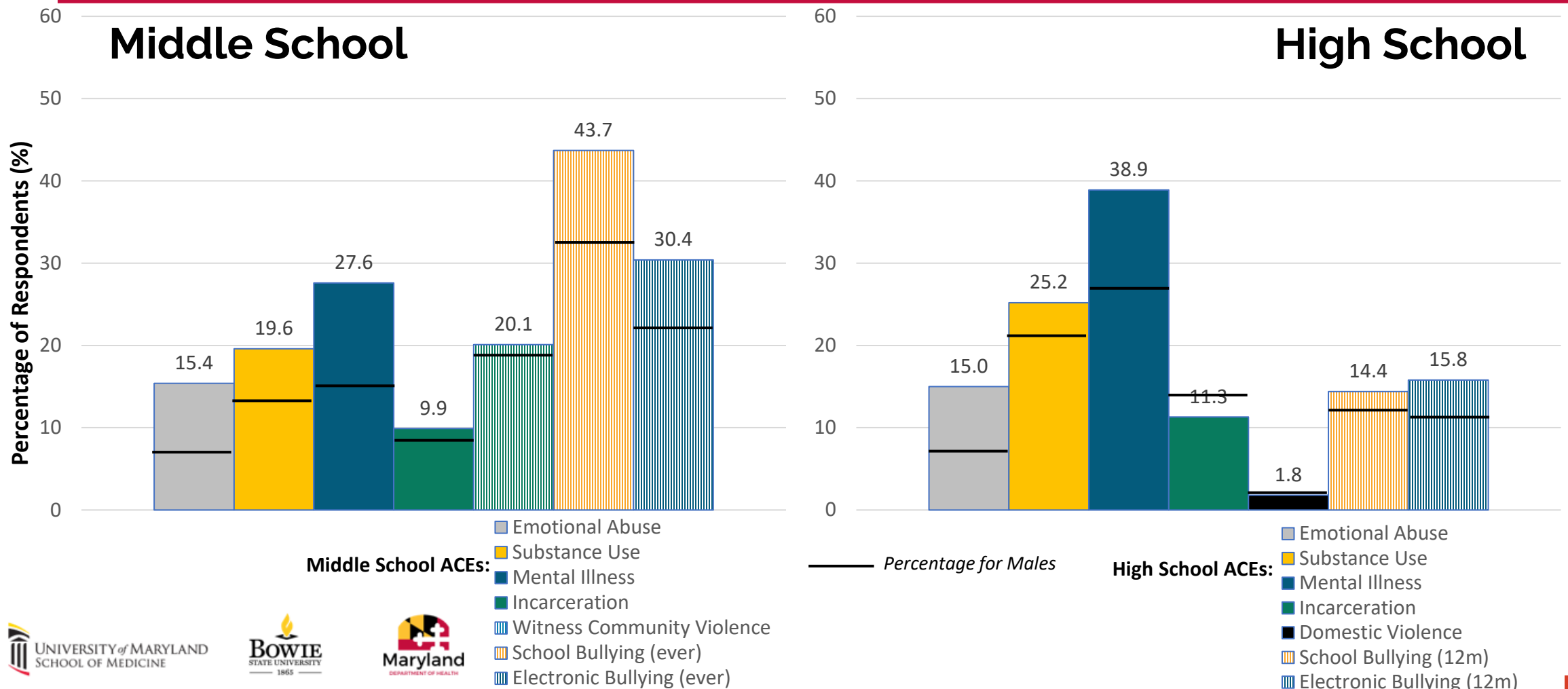
Food security has a larger risk reduction for females with bullying. Food security and emotional abuse have a larger risk reduction for middle school females than males, but high school males experience more risk reduction. High school females with domestic violence experience more risk reduction from food security than males.

- ACEs:**
- Emotional Abuse
  - Substance Use
  - Mental Illness
  - Incarceration
  - Witnessed Community Violence
  - Domestic Violence
  - School Bullying
  - Electronic Bullying

Risk Increase (x times)



# PCEs and ACEs: Extracurricular Activities and Gender\*

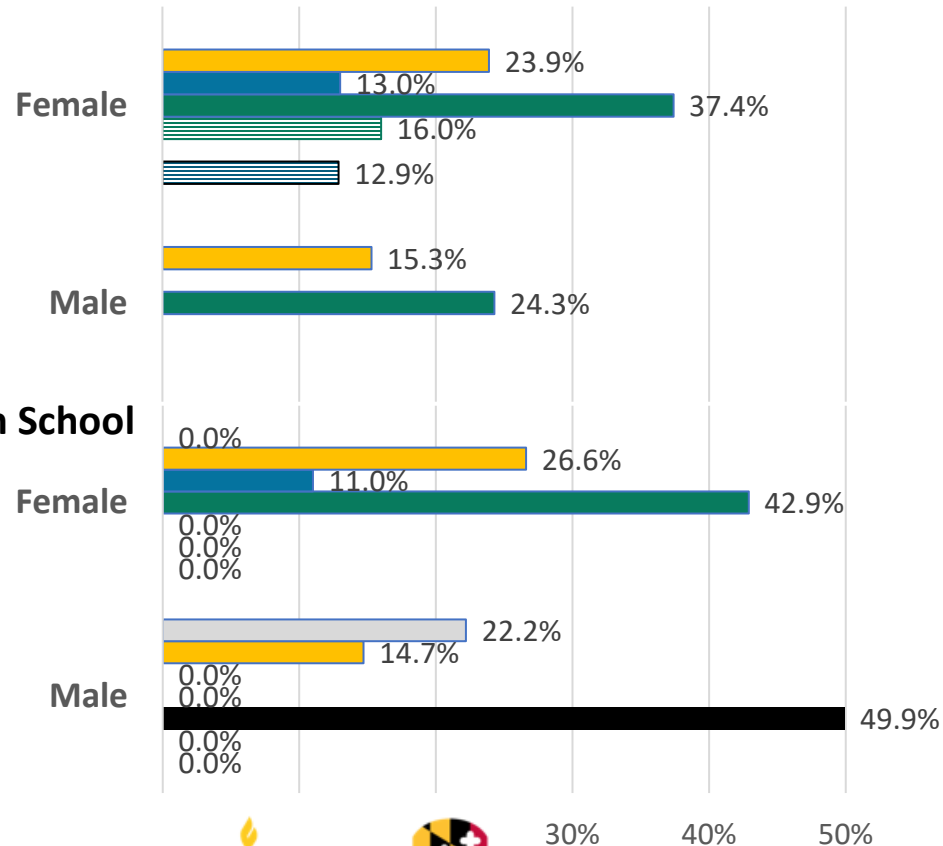


\* not statistically significant for household mental illness in males, , witnessing community violence, domestic violence, or electronic bullying in all students and not statistically significant for school bullying in high school students

# PCEs associated with reduced risk of ACEs

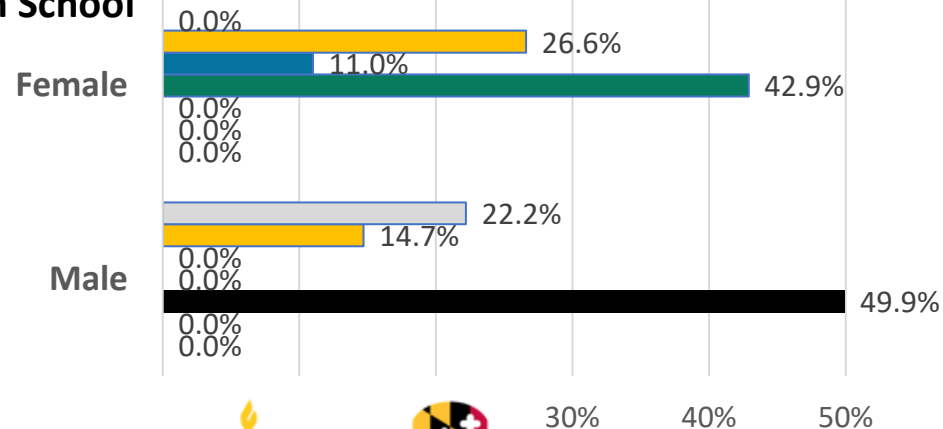
## Extracurricular Activities by Gender\*

### Middle School



Participating in extracurricular activities is associated with reduced risk with household incarceration in all females and high school males (24-43%), and with domestic violence in high school males (49.4%)

### High School



- ACEs:**
- Emotional Abuse
  - Substance Use
  - Mental Illness
  - Incarceration
  - Witnessed Community Violence
  - Domestic Violence
  - School Bullying
  - Electronic Bullying

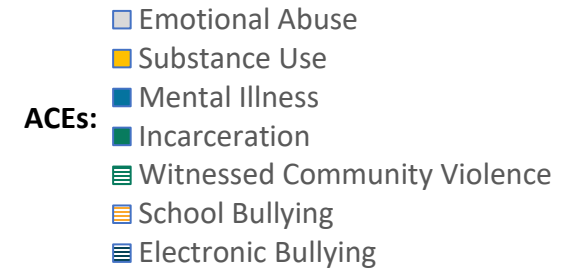
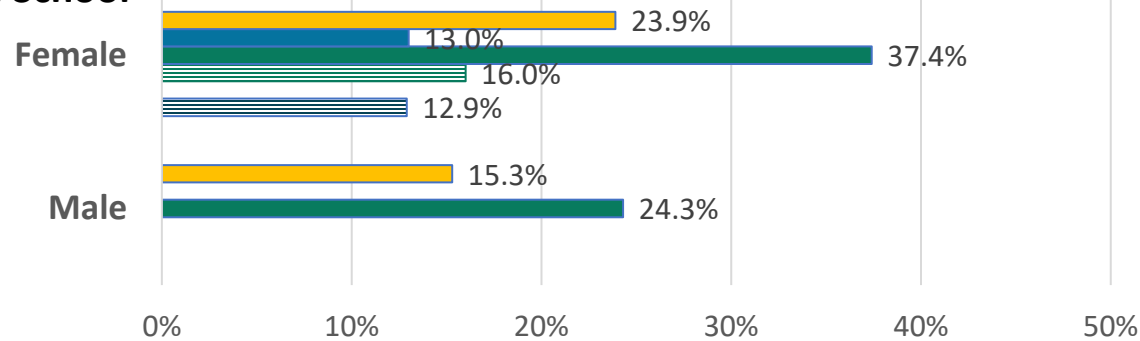
Risk Increase (x times)

\* not statistically significant for emotional abuse, household mental illness, witnessing community violence or electronic bullying in all students and not statistically significant for school bullying in high school students

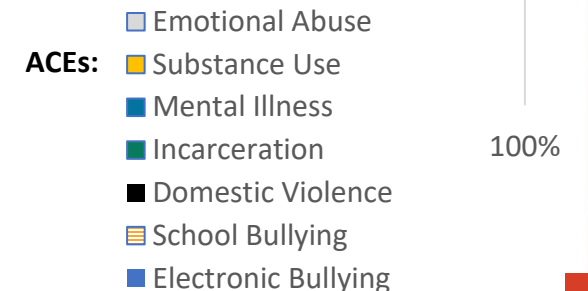
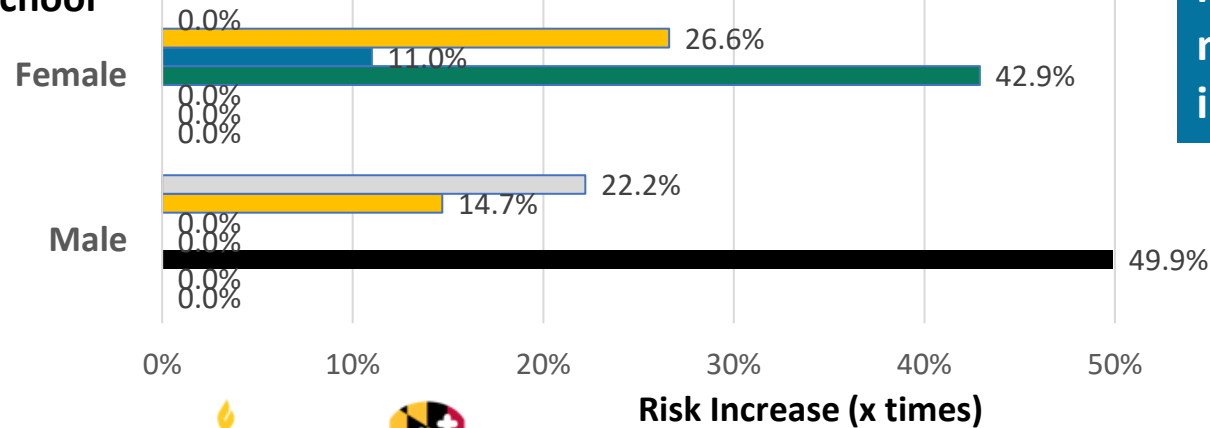
# PCEs associated with reduced risk of ACEs

## Extracurricular Activities by Gender\*

### Middle School



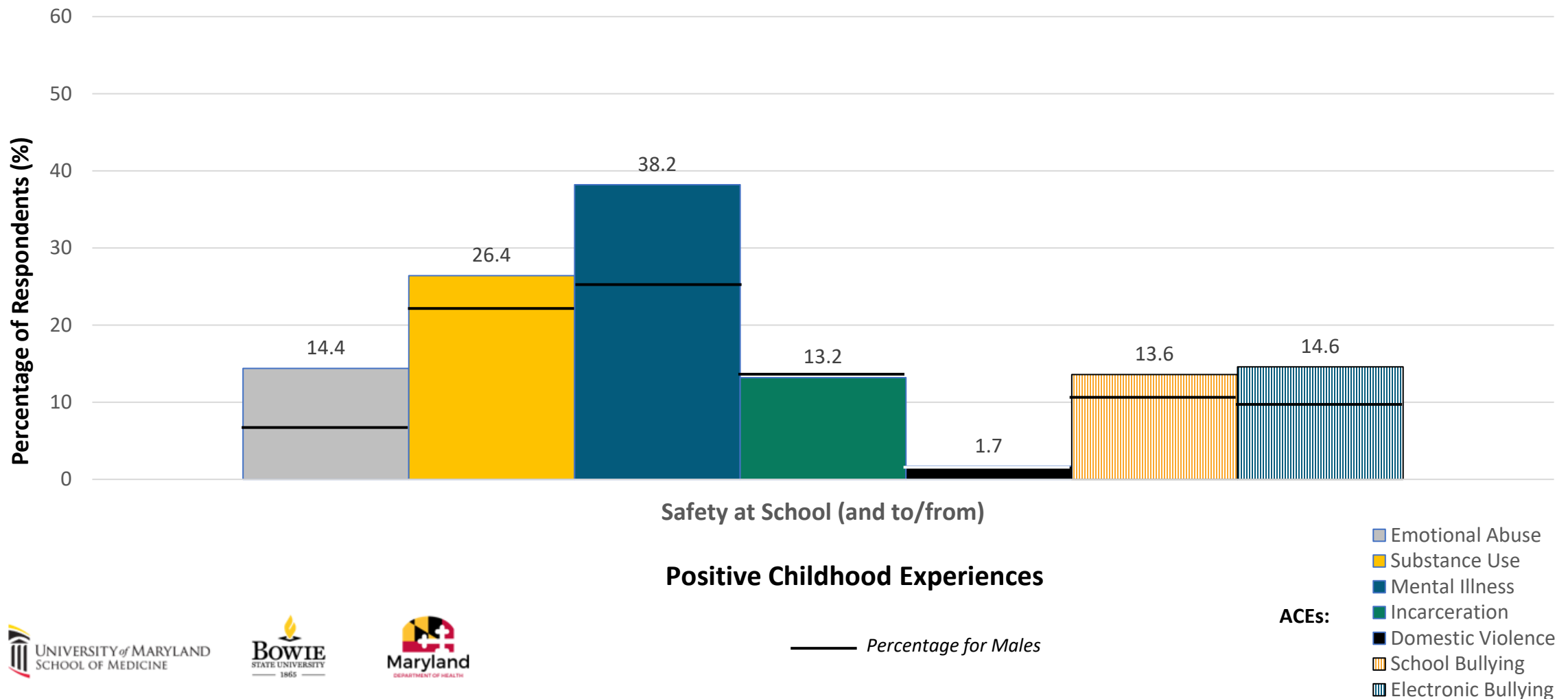
### High School



Participating in extracurricular activities is associated with reduced risk with household incarceration in all females and high school males (24-43%), and with domestic violence in high school males (49.4%)

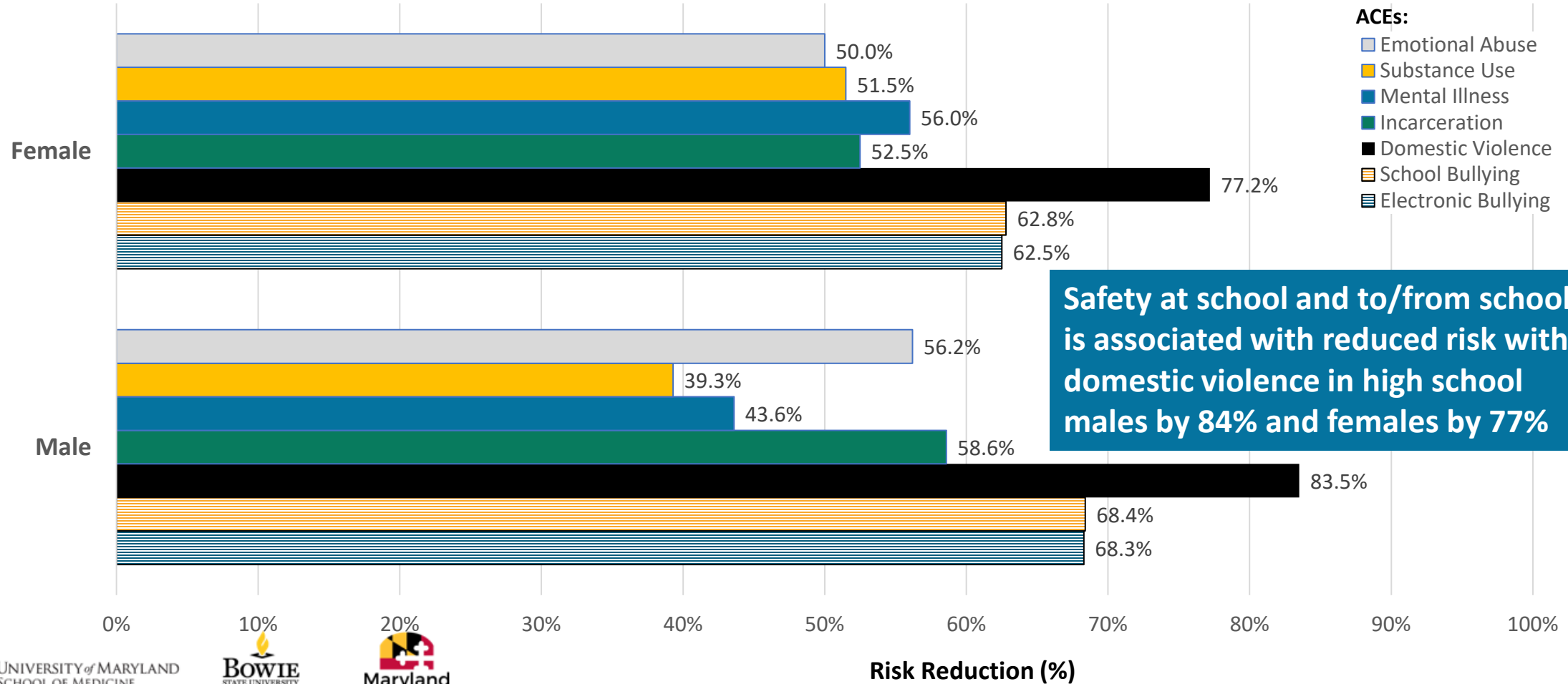
\* not statistically significant for emotional abuse, household mental illness, witnessing community violence or electronic bullying in all students and not statistically significant for school bullying in high school students

# PCEs and ACEs: Safety at School (and to/from) and Gender (High School only)



# PCEs associated with reduced risk of ACEs

## Safety at School (and to/from) by Gender (High School only)



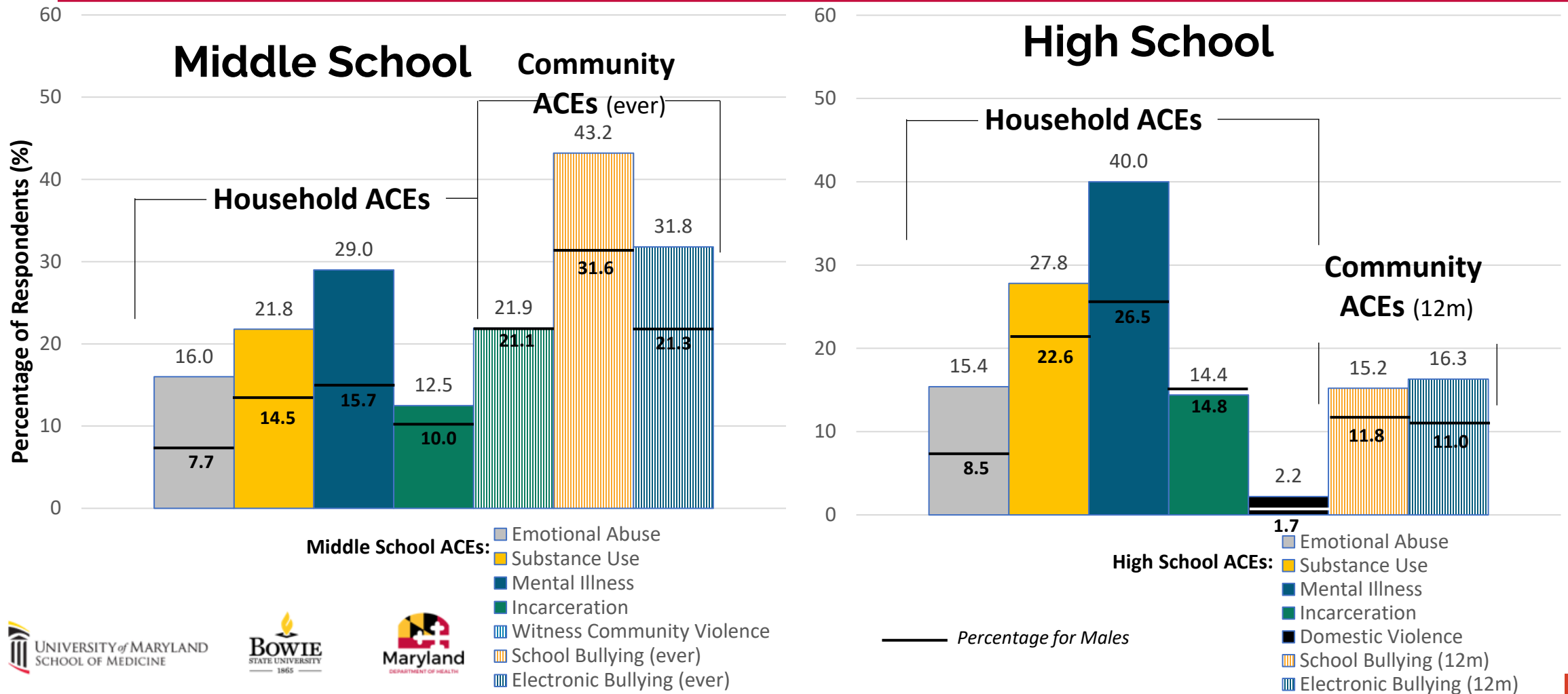


# Building Healing Behavioral Health Systems:

Behavioral Health and  
Adverse Childhood Experiences by Gender

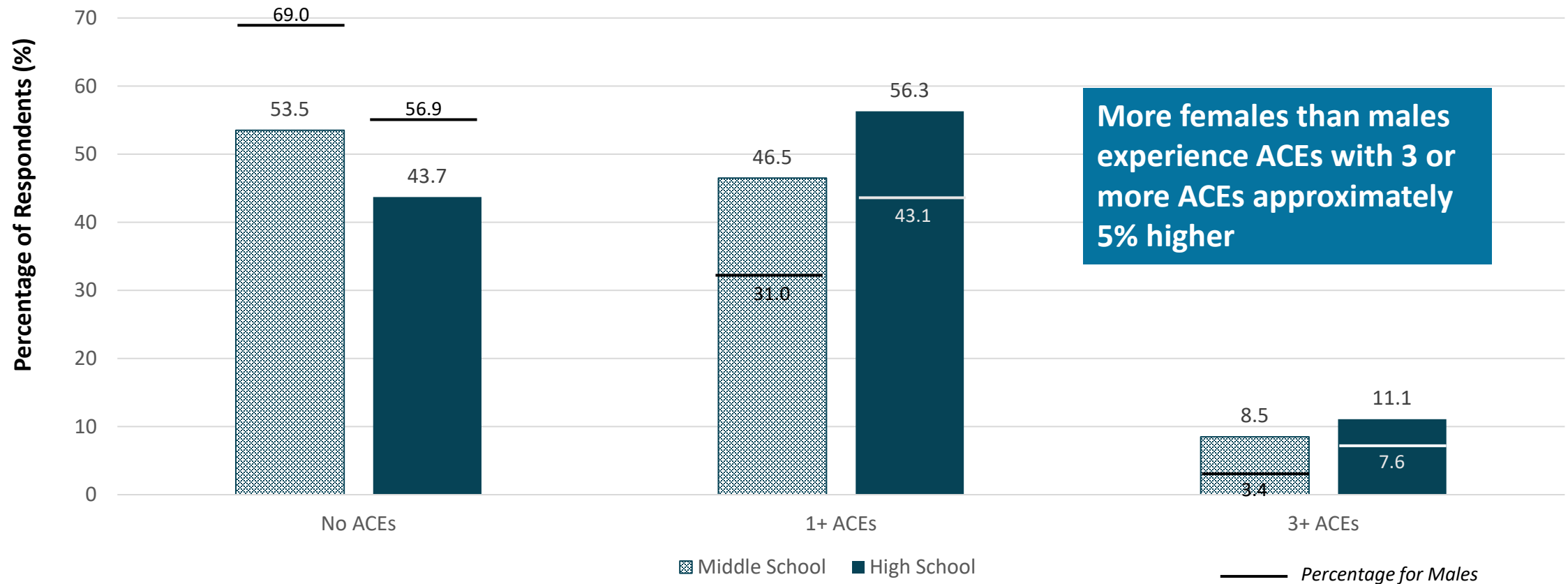


# ACEs by Gender among Students



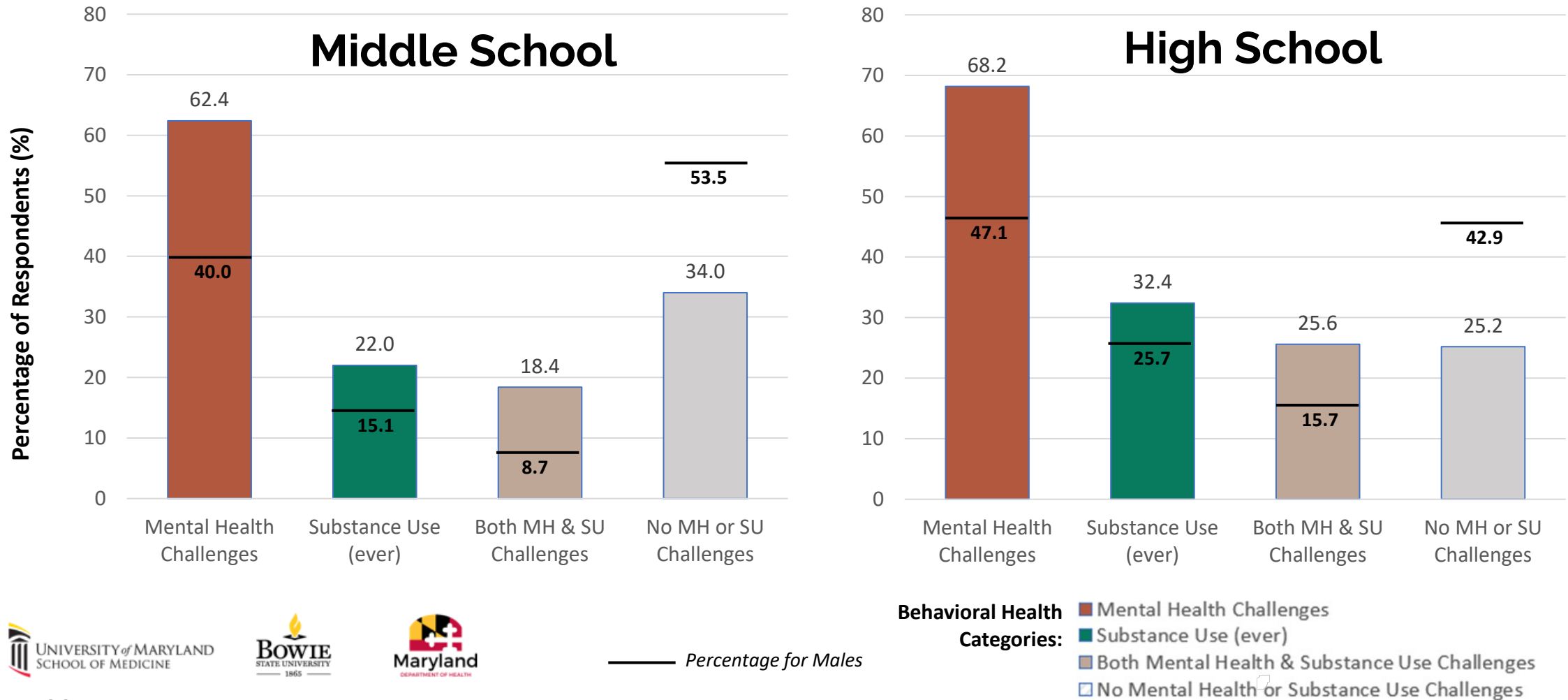
# ACE Counts by Gender

Individuals with higher ACE counts are more likely to experience health challenges

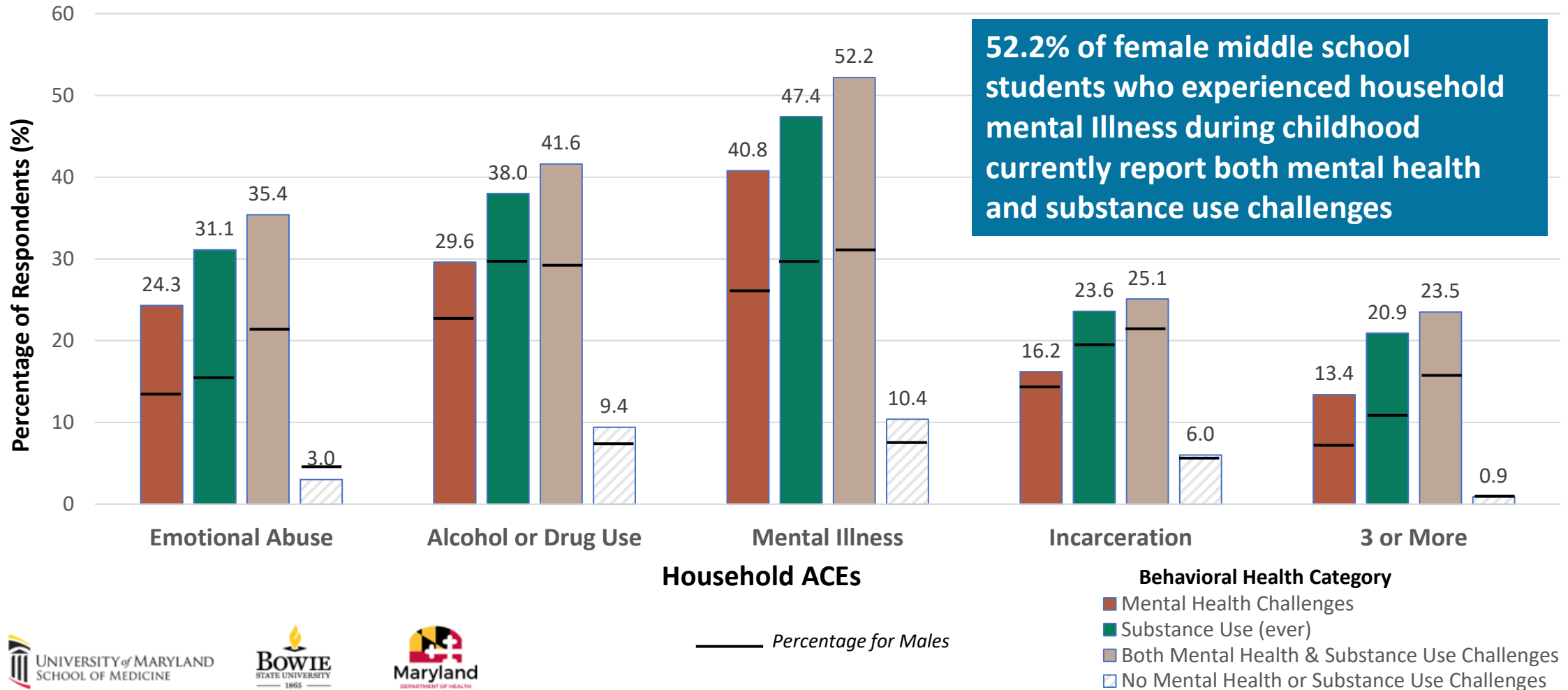




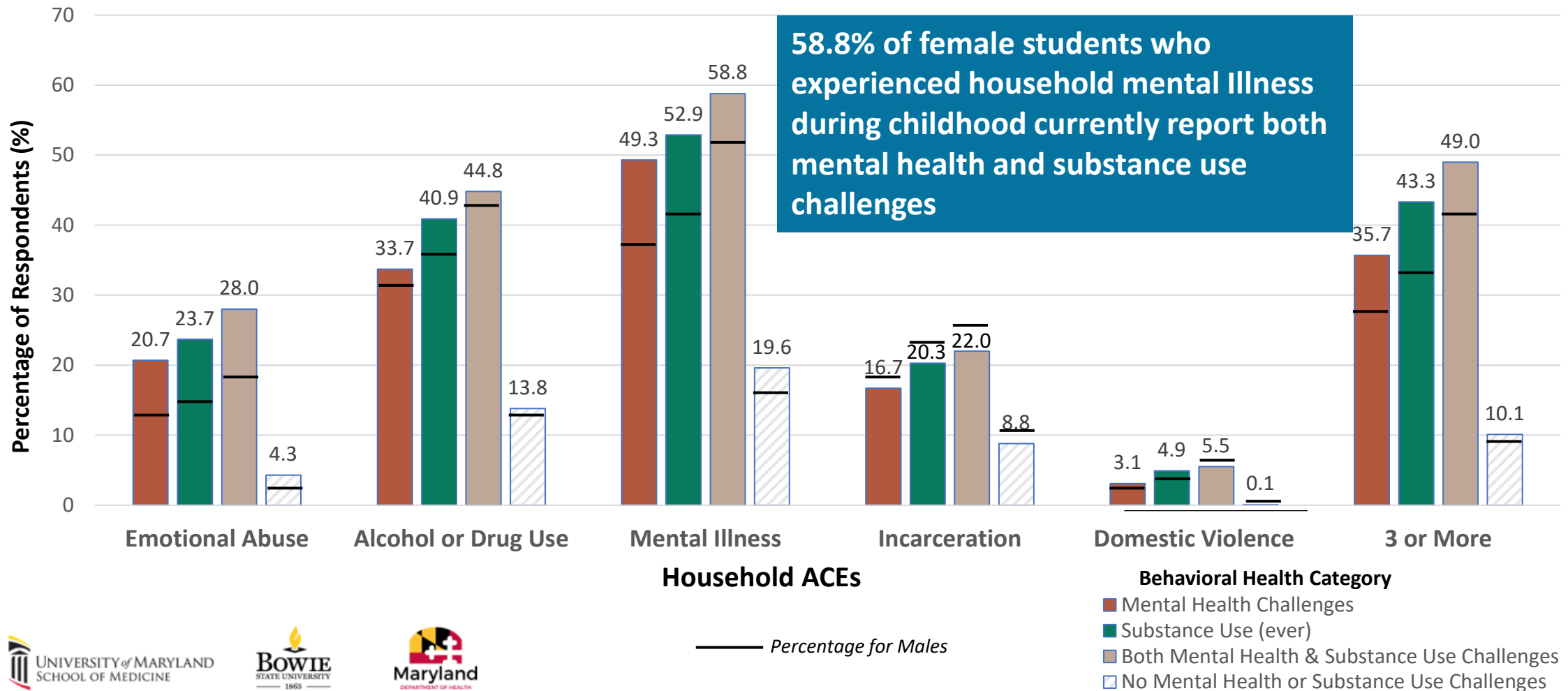
# Behavioral Health by Gender among Students



# Household ACEs and Behavioral Health by Gender (Middle School)

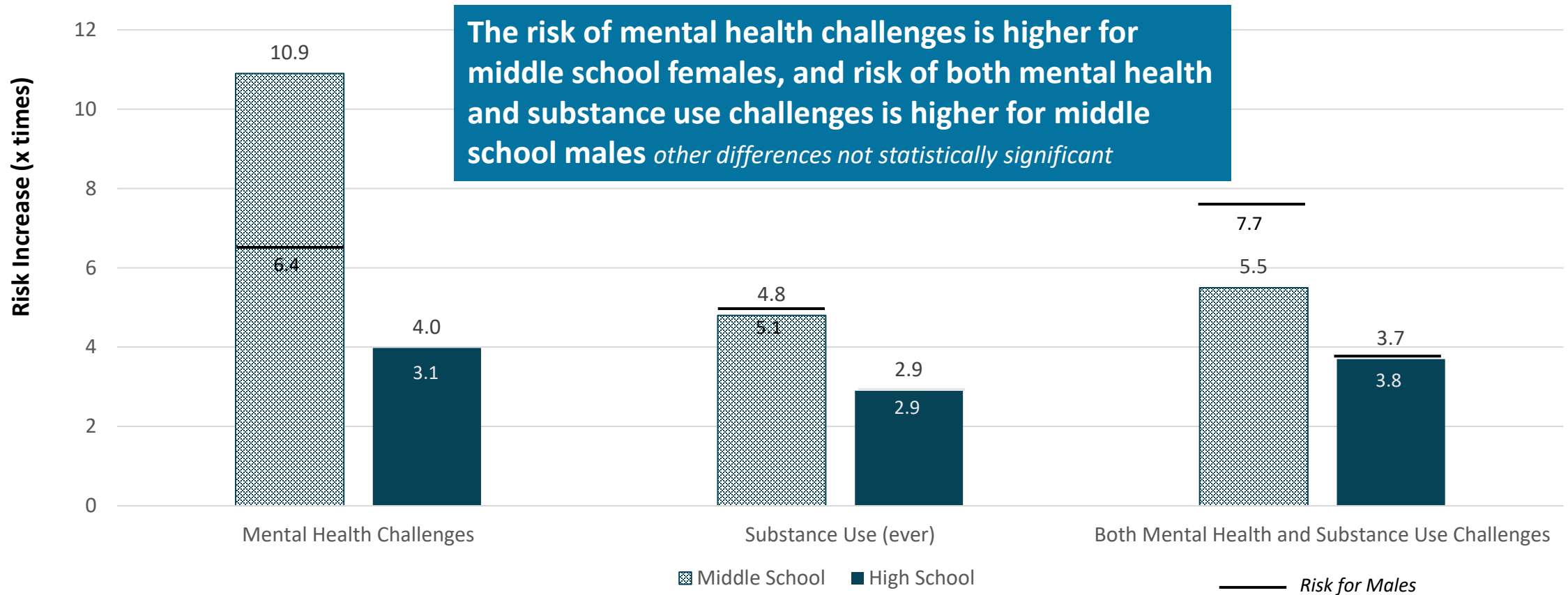


# Household ACEs and Behavioral Health by Gender (High School)

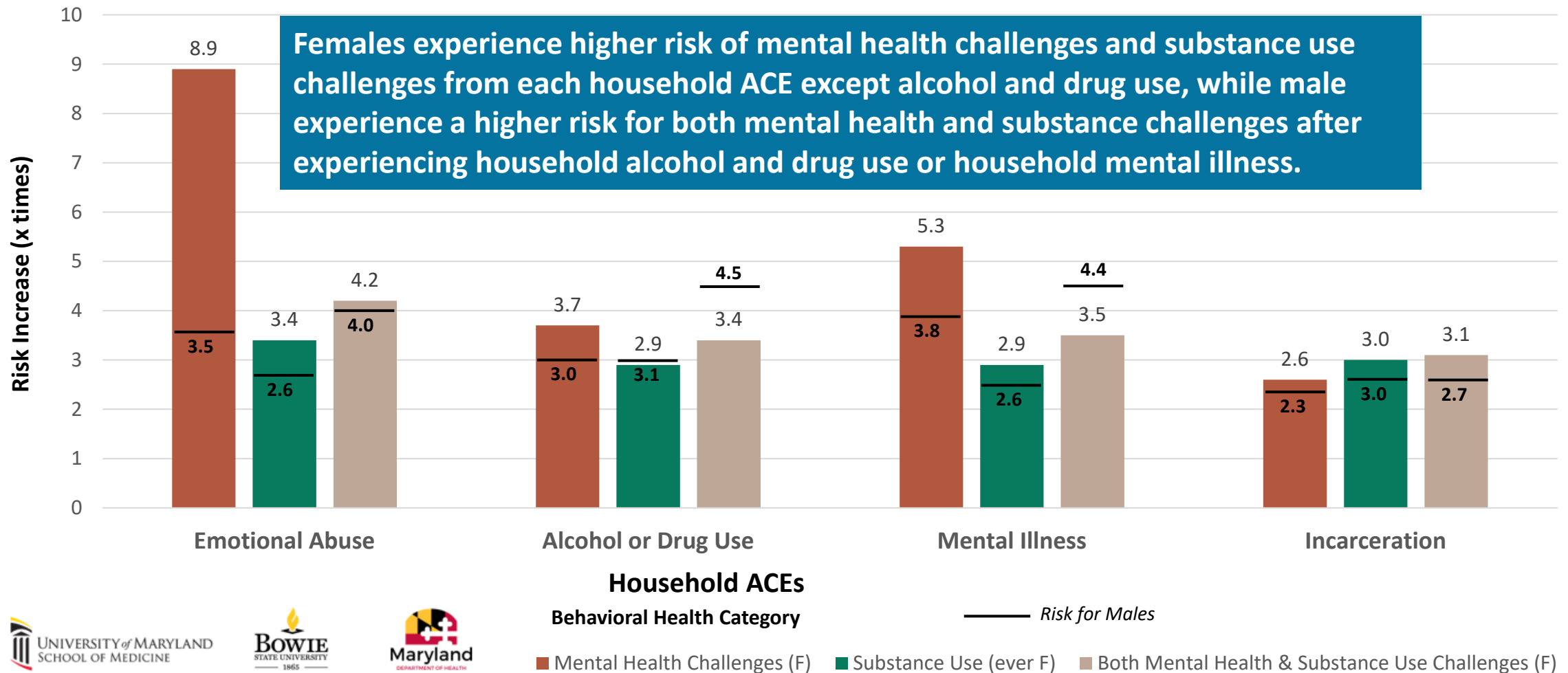


# 3+ ACEs and Behavioral Health Risks

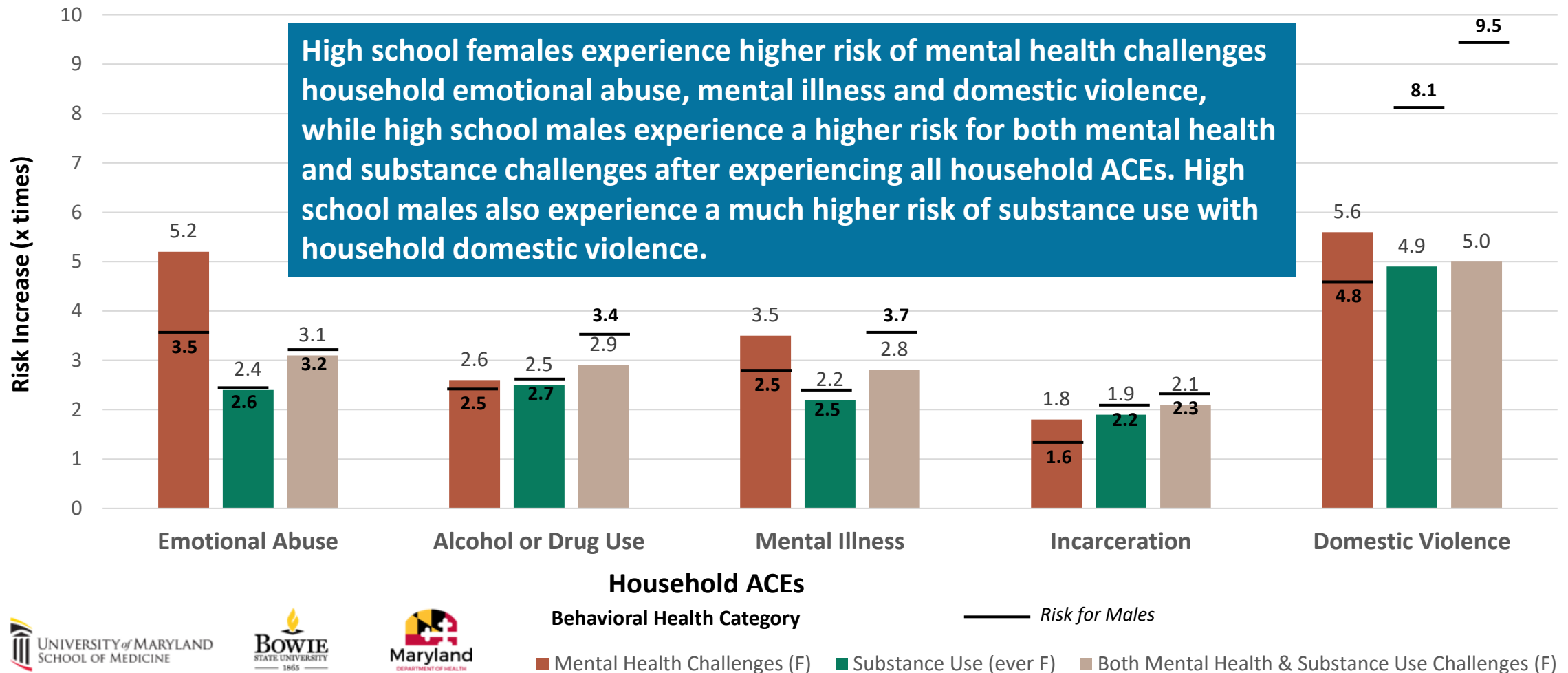
Individuals with 3+ ACEs are more likely to experience behavioral health challenges



# Household ACEs and Increased Risk of Behavioral Health Challenges by Gender in Middle School

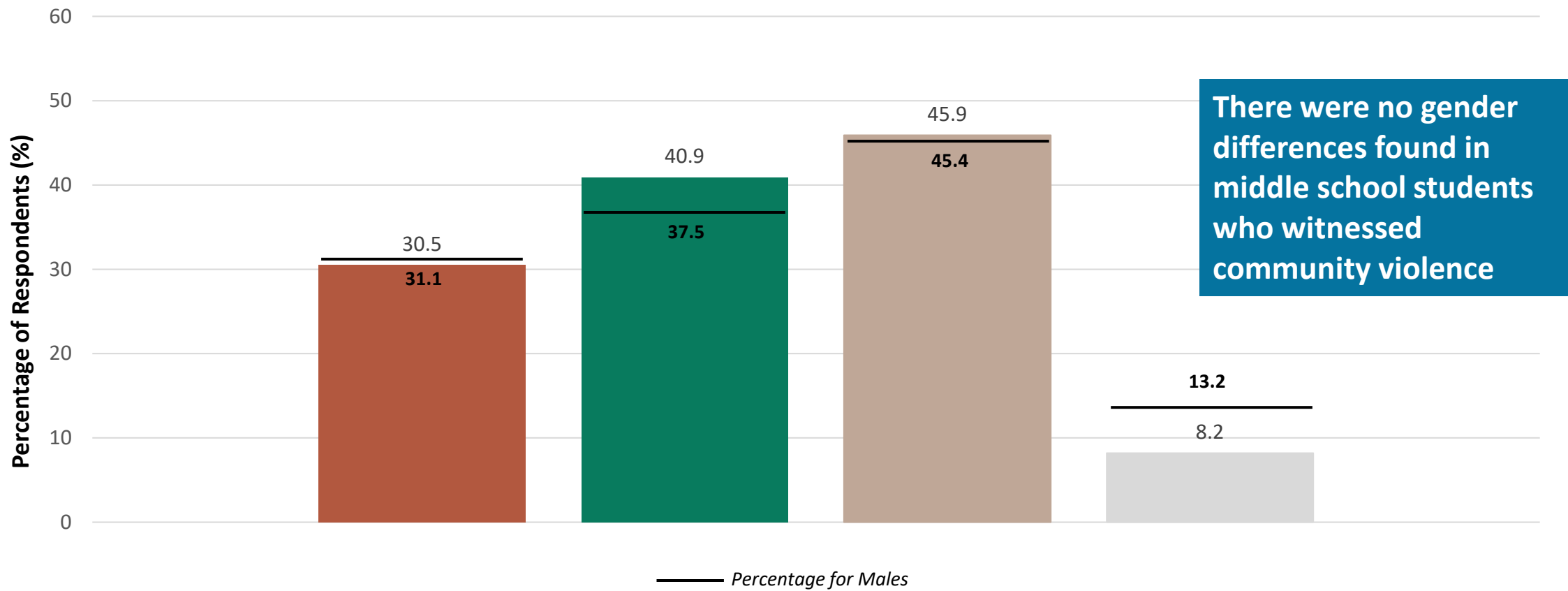


# Household ACEs and Increased Risk of Behavioral Health Challenges by Gender in High School



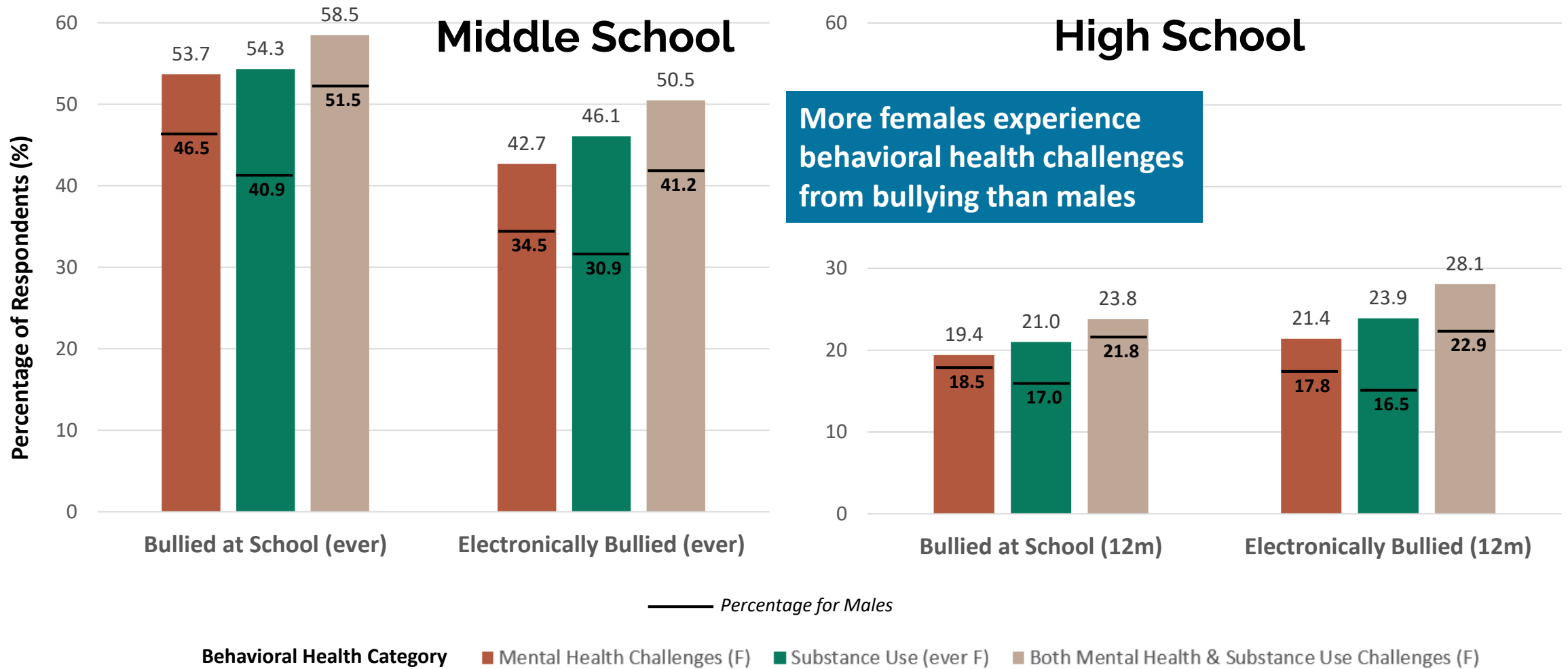
# Community ACEs and Behavioral Health

## Witnessing Community Violence by Gender (Middle School only)



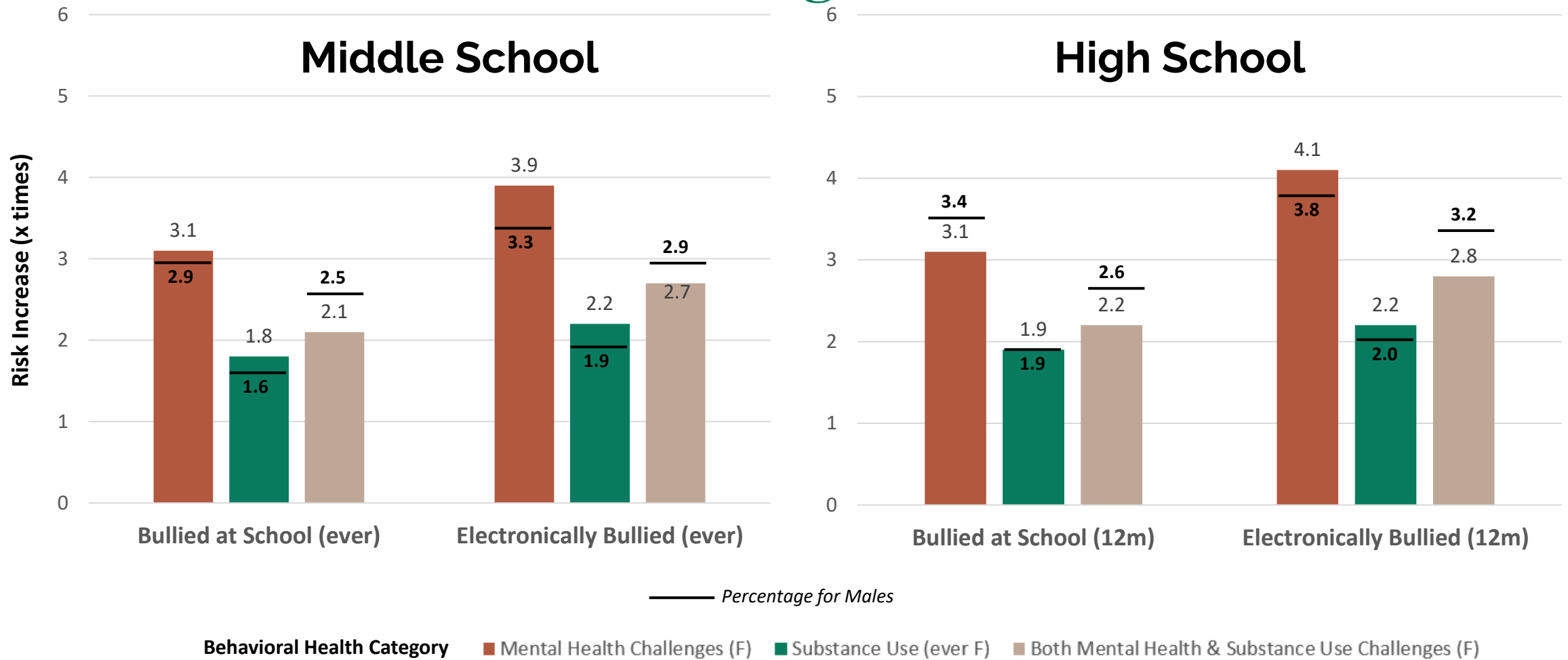
There were no gender differences found in middle school students who witnessed community violence

# Community ACEs and Behavioral Health: Bullying





# Bullying increases risk of Behavioral Health Challenges



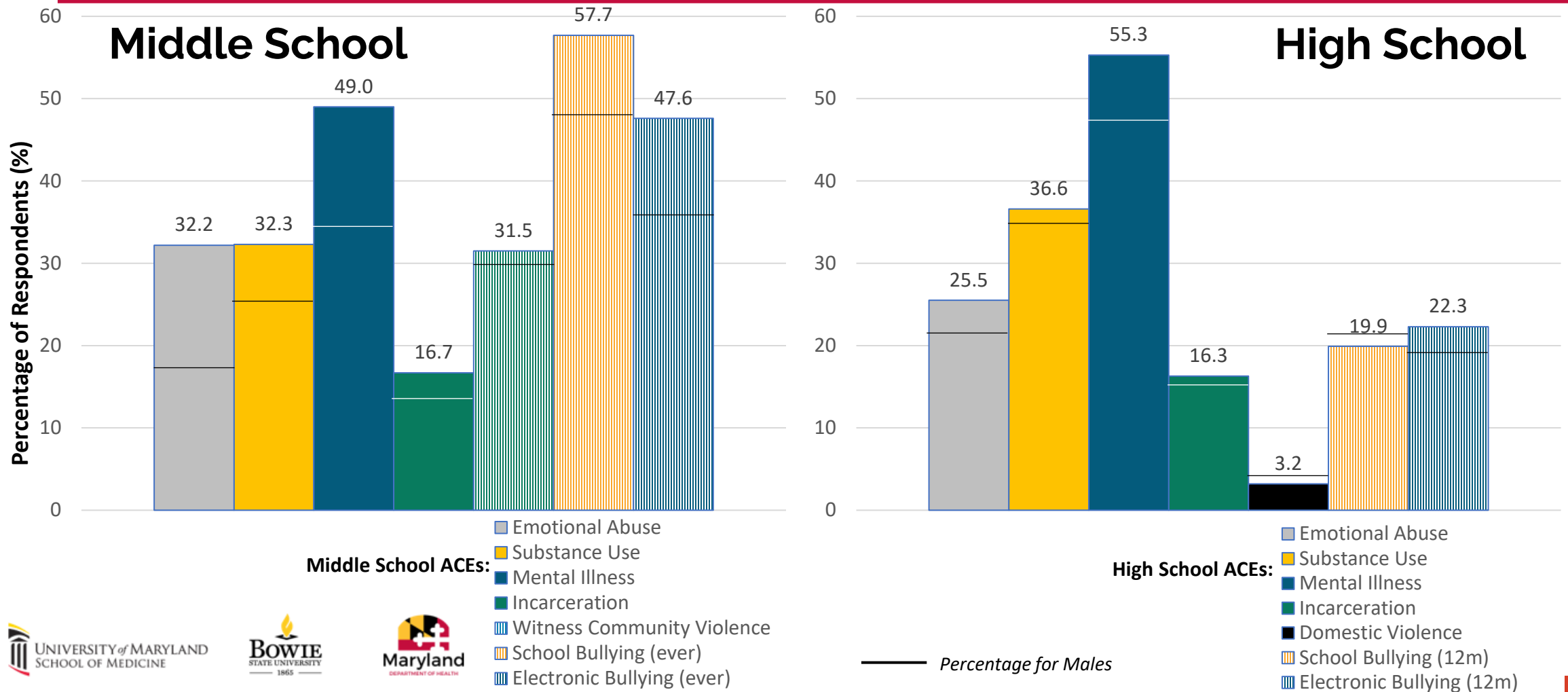


# Building Healing Behavioral Health Systems:

Mental Health Indicators and  
Adverse Childhood Experiences by Gender

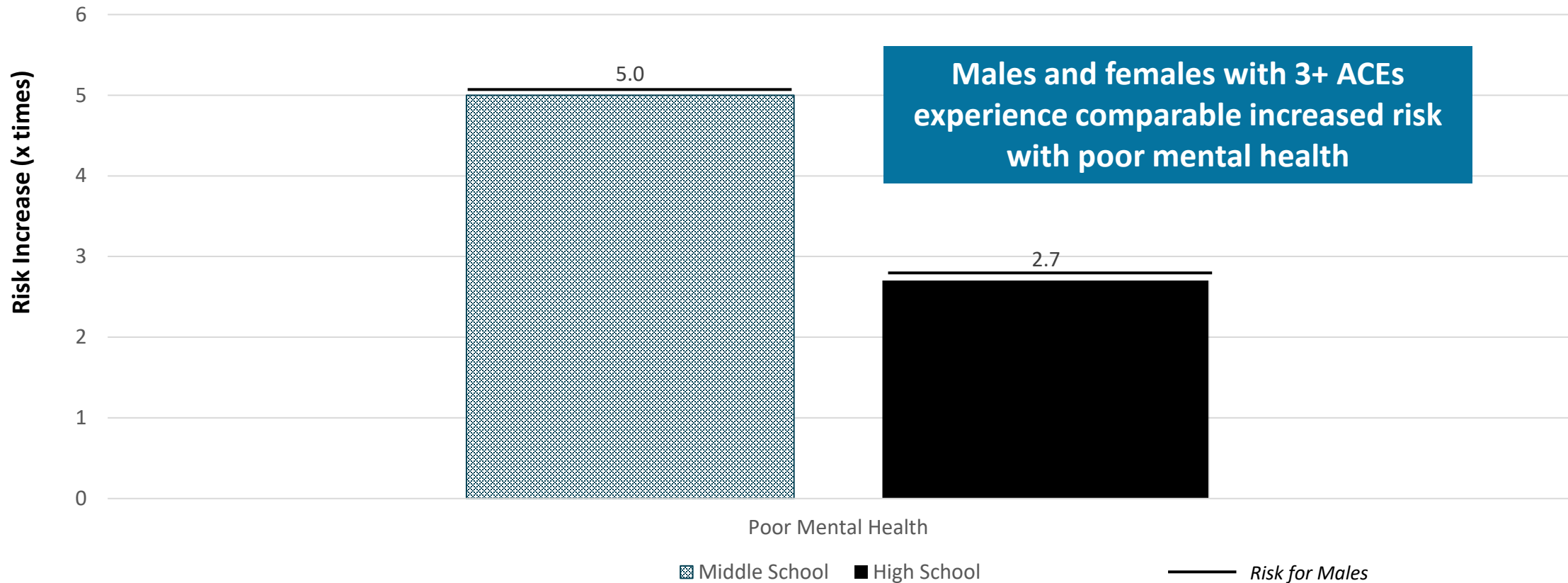


# Poor Mental Health and ACEs and Gender

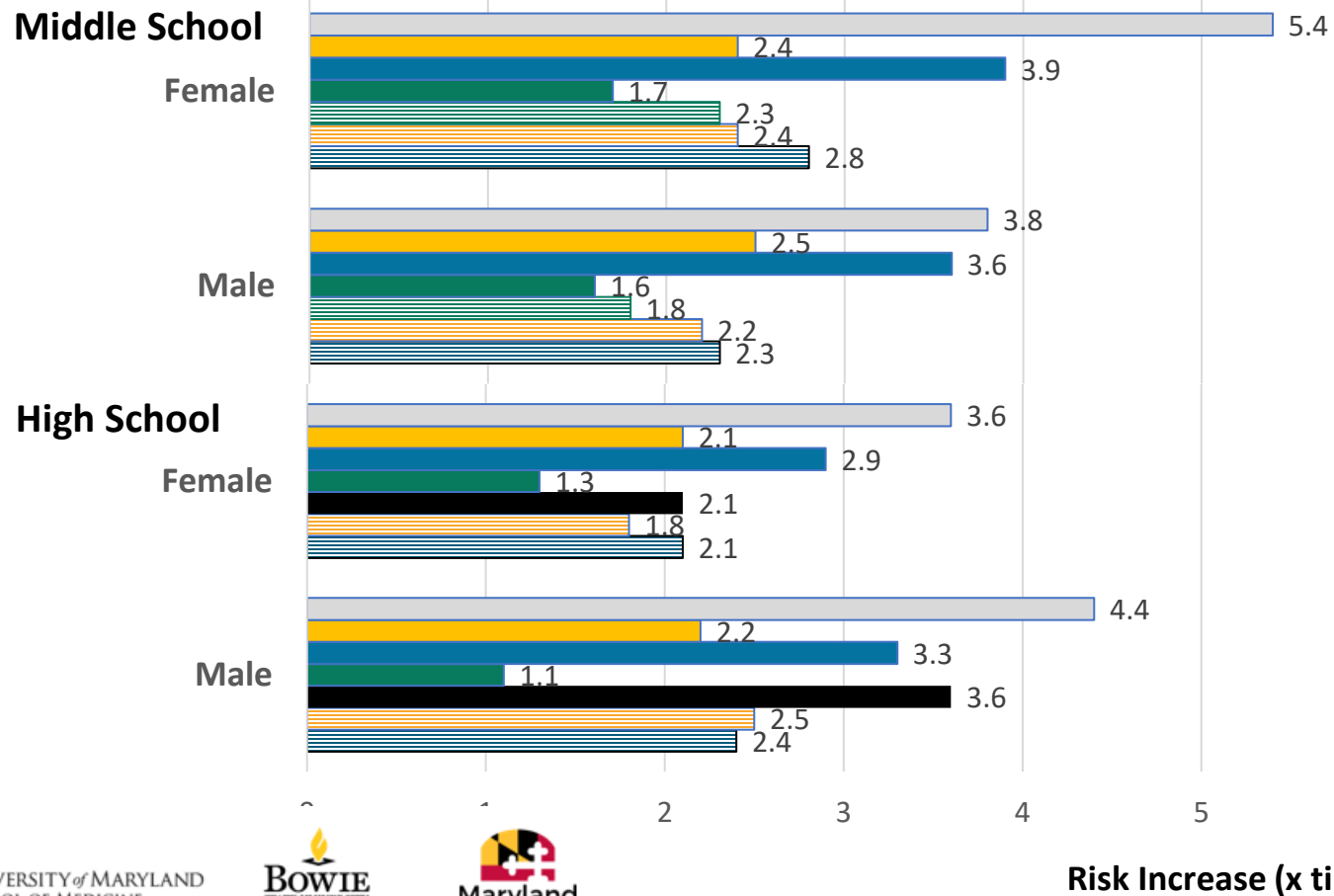


# 3+ ACEs, Poor Mental Health, and Gender

Individuals with 3+ ACEs are more likely to experience poor mental health



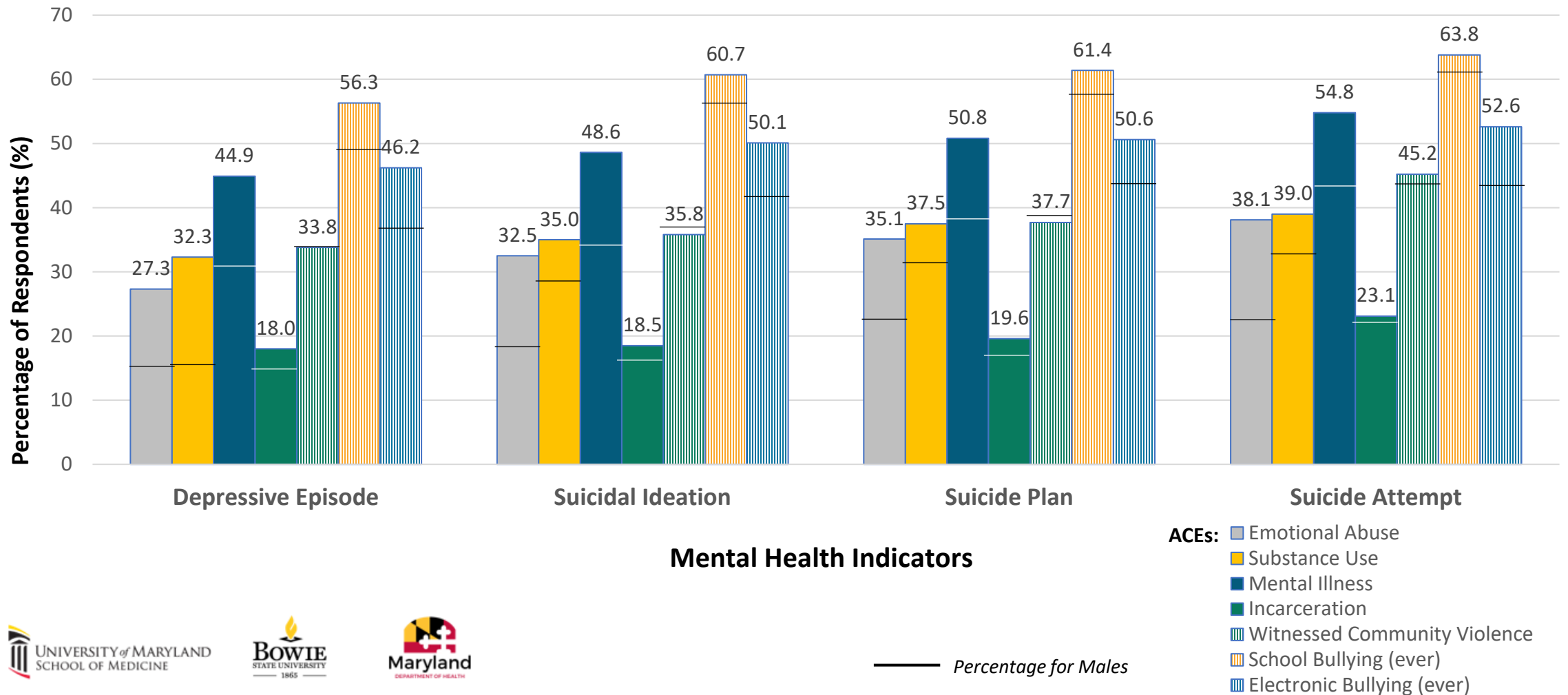
# ACEs associated with Increased Risk of Poor Mental Health by Gender



Poor mental health is most highly associated emotional abuse. Middle school females with emotional abuse have a higher risk with poor mental health than males, but high school males with emotional abuse have a higher risk than females.

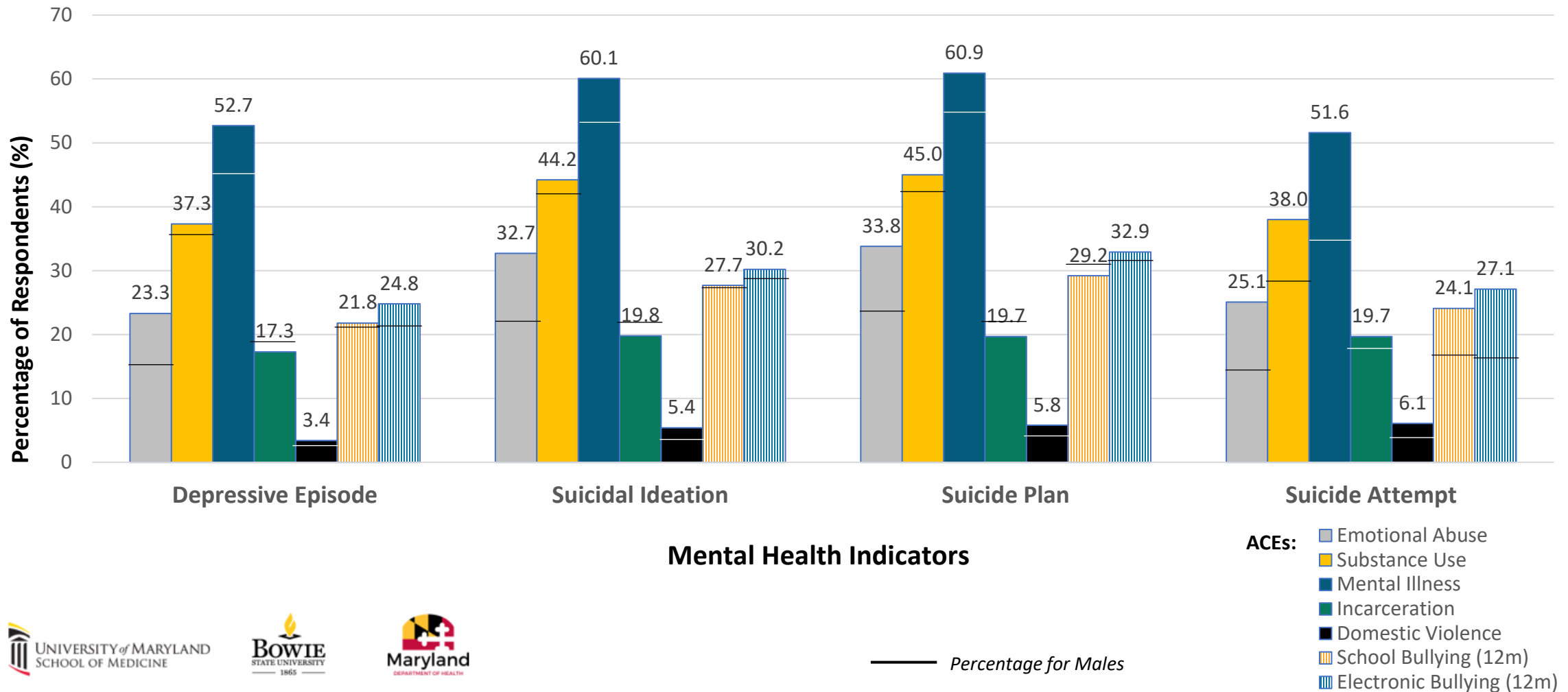
- ACEs:
- Emotional Abuse
  - Substance Use
  - Mental Illness
  - Incarceration
  - Witnessed Community Violence
  - Domestic Violence
  - School Bullying
  - Electronic Bullying

# Mental Health Indicators, ACEs, and Gender (Middle School)



# Mental Health Indicators, ACEs and Gender

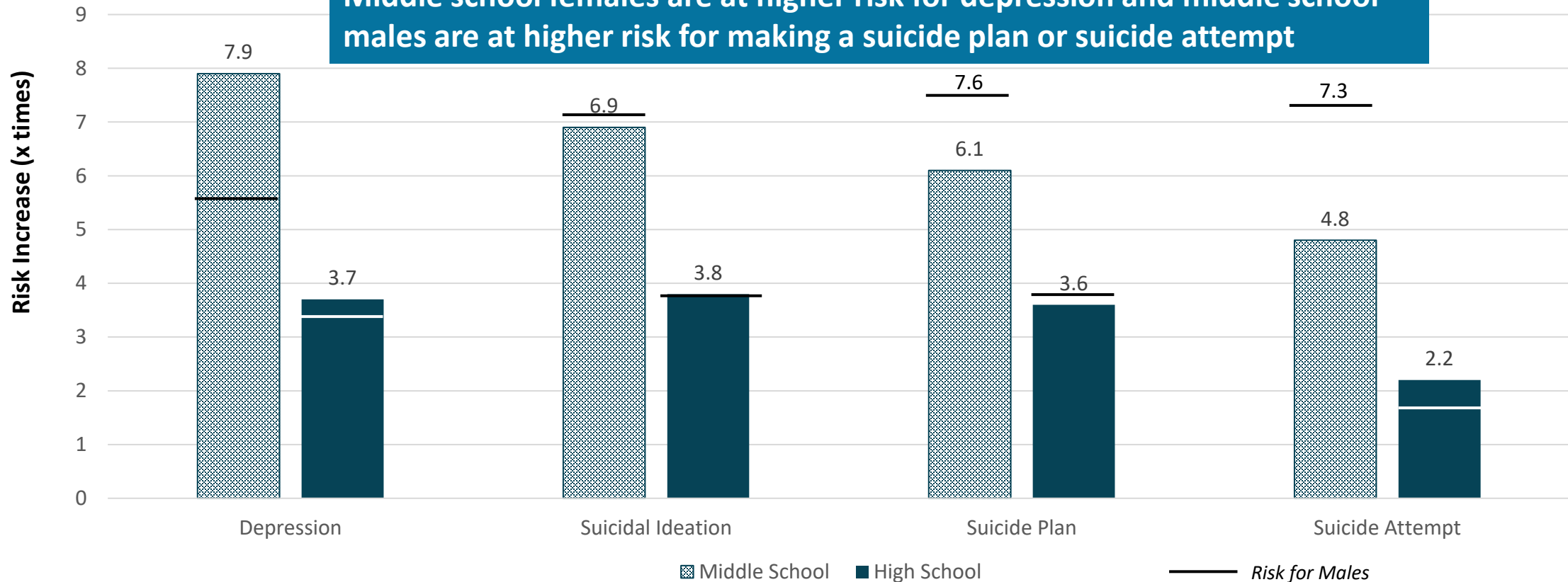
## (High School)



# 3+ ACEs, Mental Health Risks, and Gender

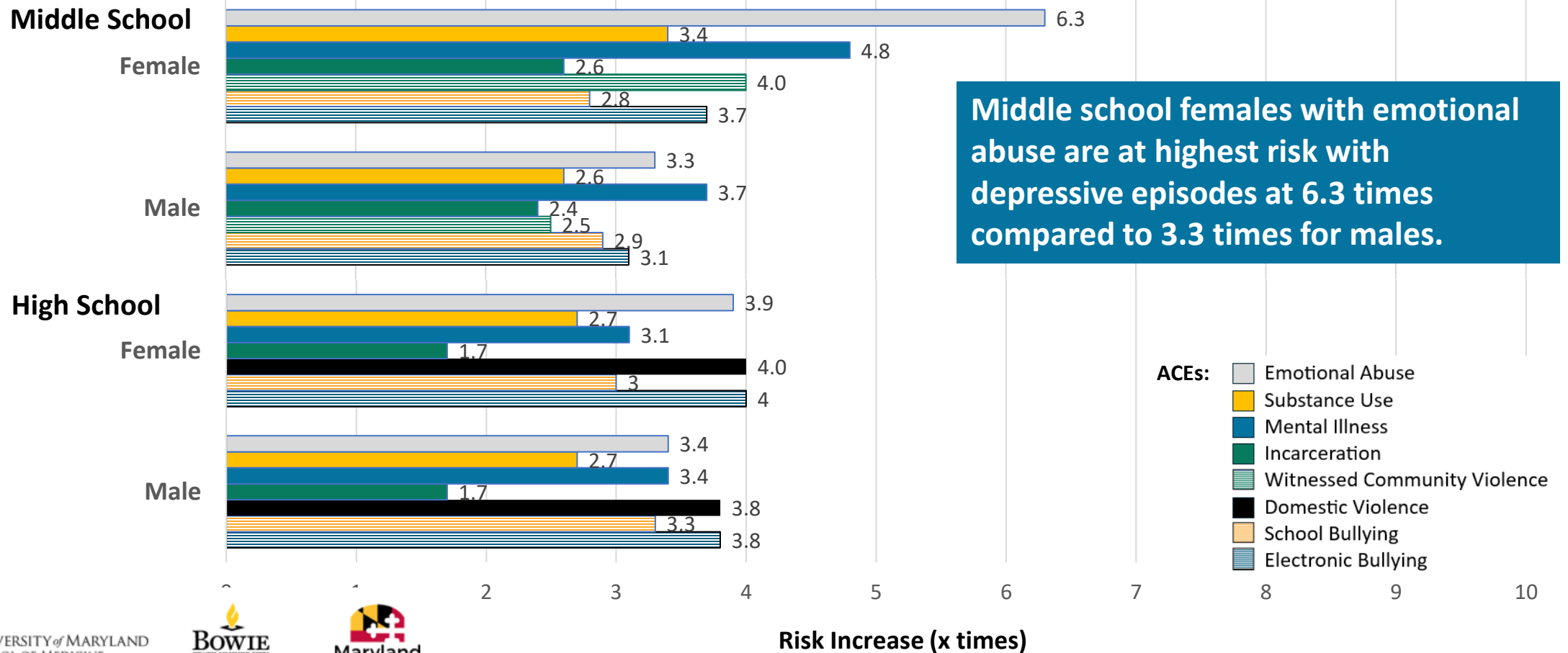
Individuals with 3+ ACEs are more likely to experience mental health challenges

Middle school females are at higher risk for depression and middle school males are at higher risk for making a suicide plan or suicide attempt



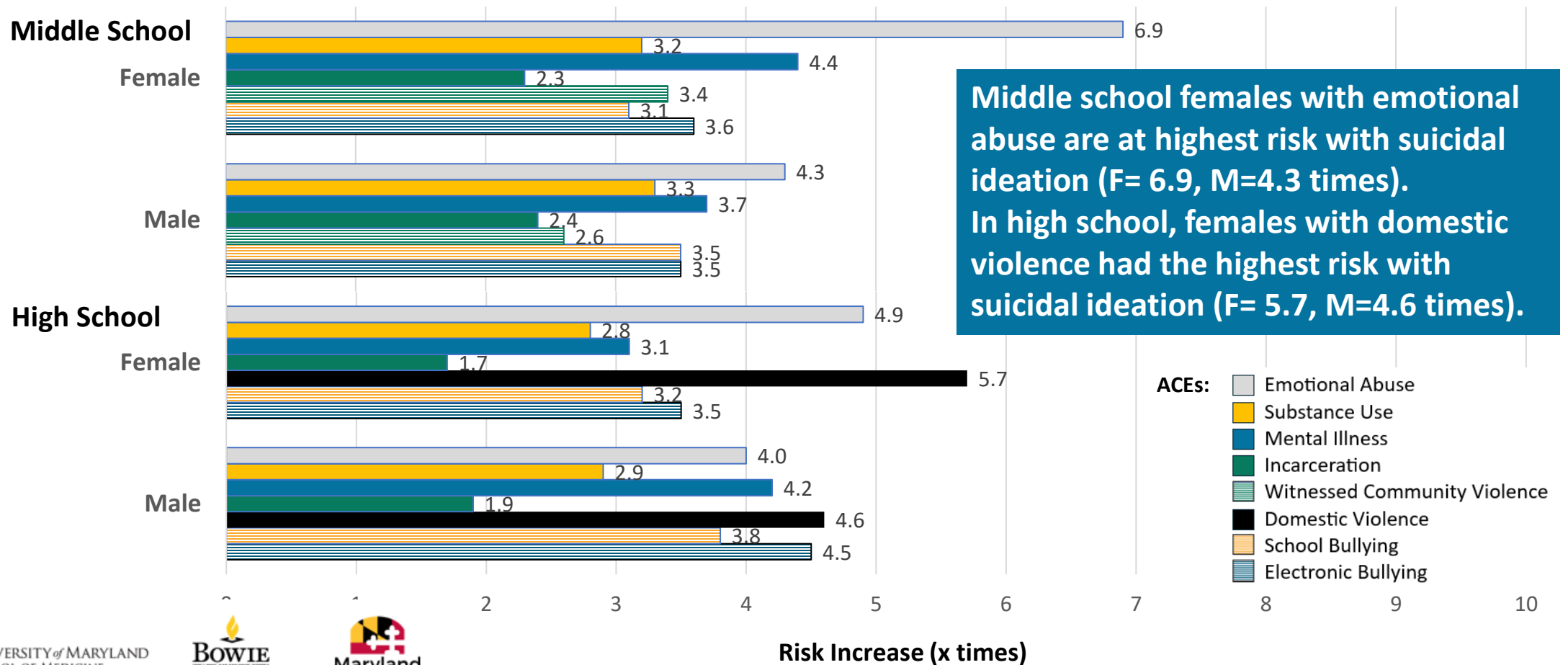


# ACEs associated with Increased Risk of Depressive Episode by Gender



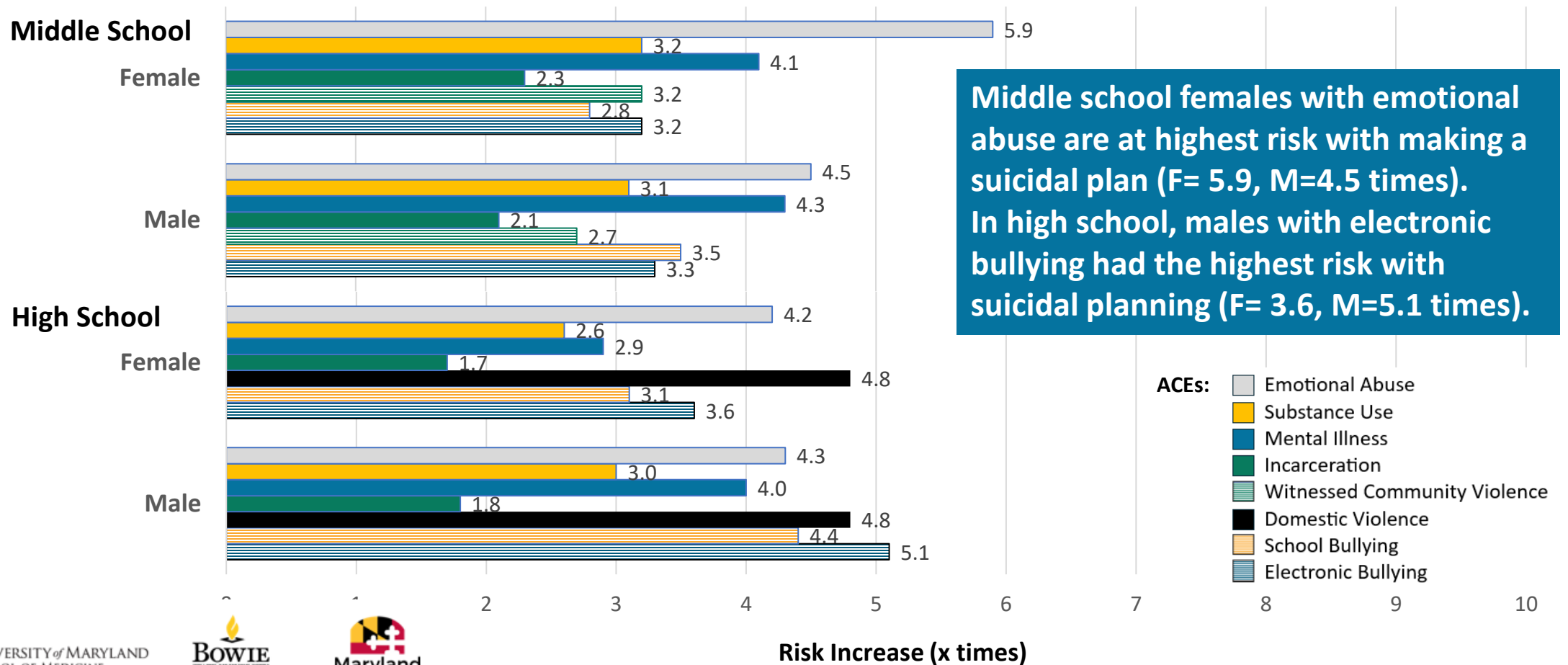
Middle school females with emotional abuse are at highest risk with depressive episodes at 6.3 times compared to 3.3 times for males.

# ACEs associated with Increased Risk of Suicidal Ideation by Gender



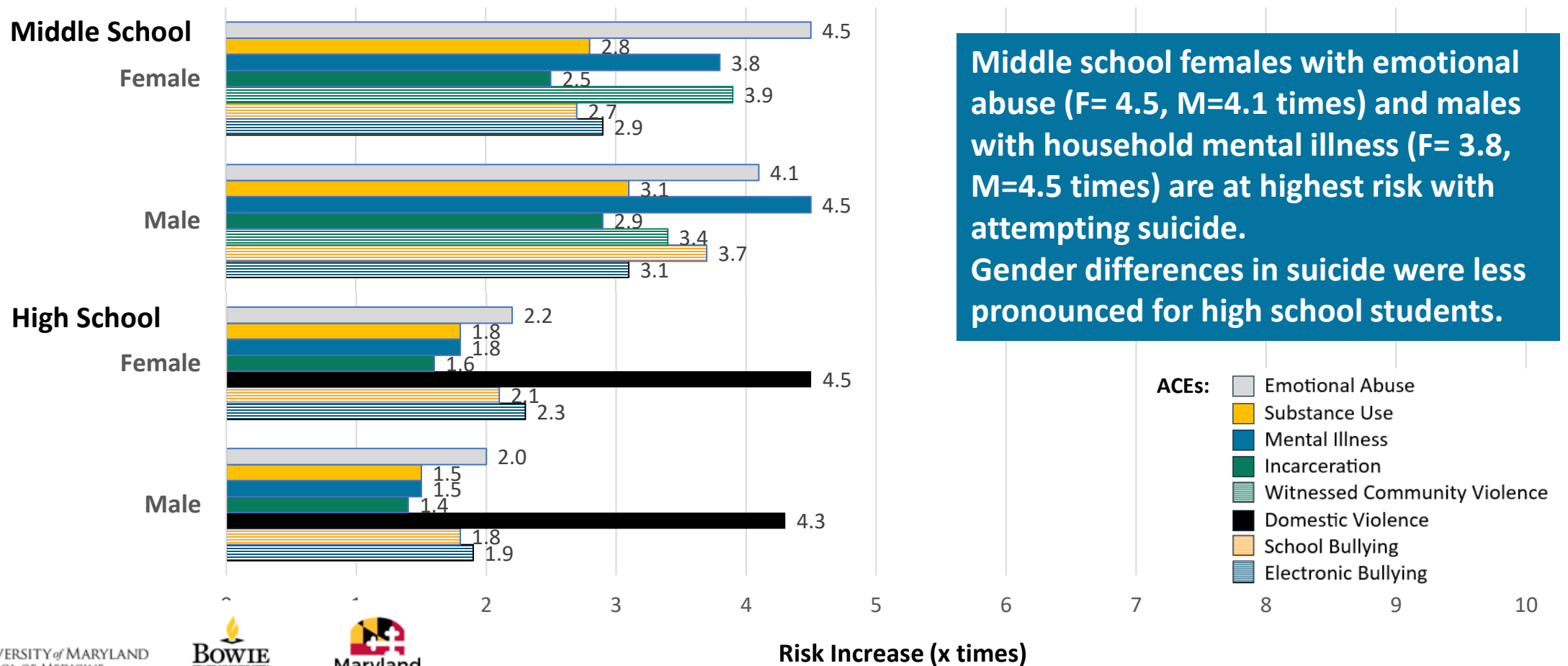
Middle school females with emotional abuse are at highest risk with suicidal ideation (F= 6.9, M=4.3 times). In high school, females with domestic violence had the highest risk with suicidal ideation (F= 5.7, M=4.6 times).

# ACEs associated with Increased Risk of Suicidal Plan by Gender



Middle school females with emotional abuse are at highest risk with making a suicidal plan (F= 5.9, M=4.5 times). In high school, males with electronic bullying had the highest risk with suicidal planning (F= 3.6, M=5.1 times).

# ACEs associated with Increased Risk of Suicidal Attempt by Gender



Middle school females with emotional abuse (F= 4.5, M=4.1 times) and males with household mental illness (F= 3.8, M=4.5 times) are at highest risk with attempting suicide. Gender differences in suicide were less pronounced for high school students.

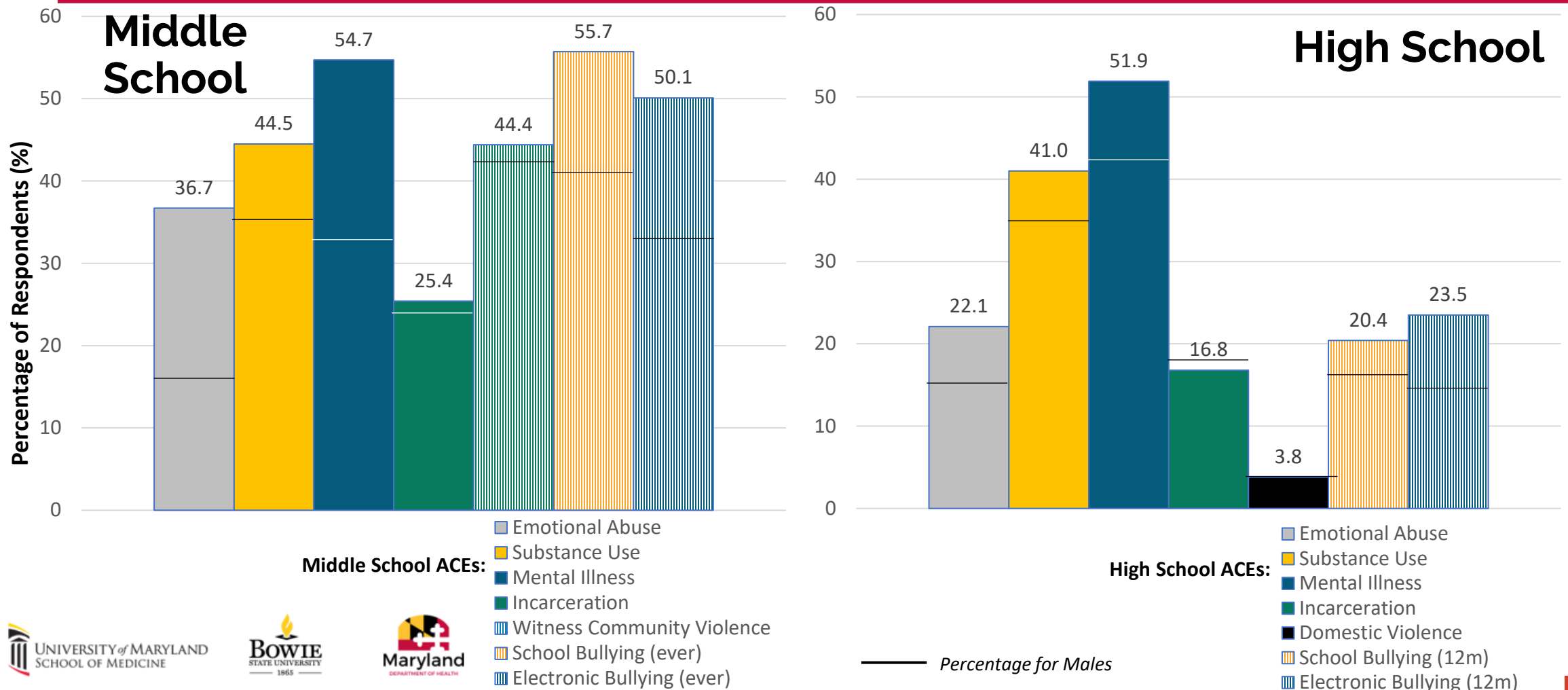


# Building Healing Behavioral Health Systems:

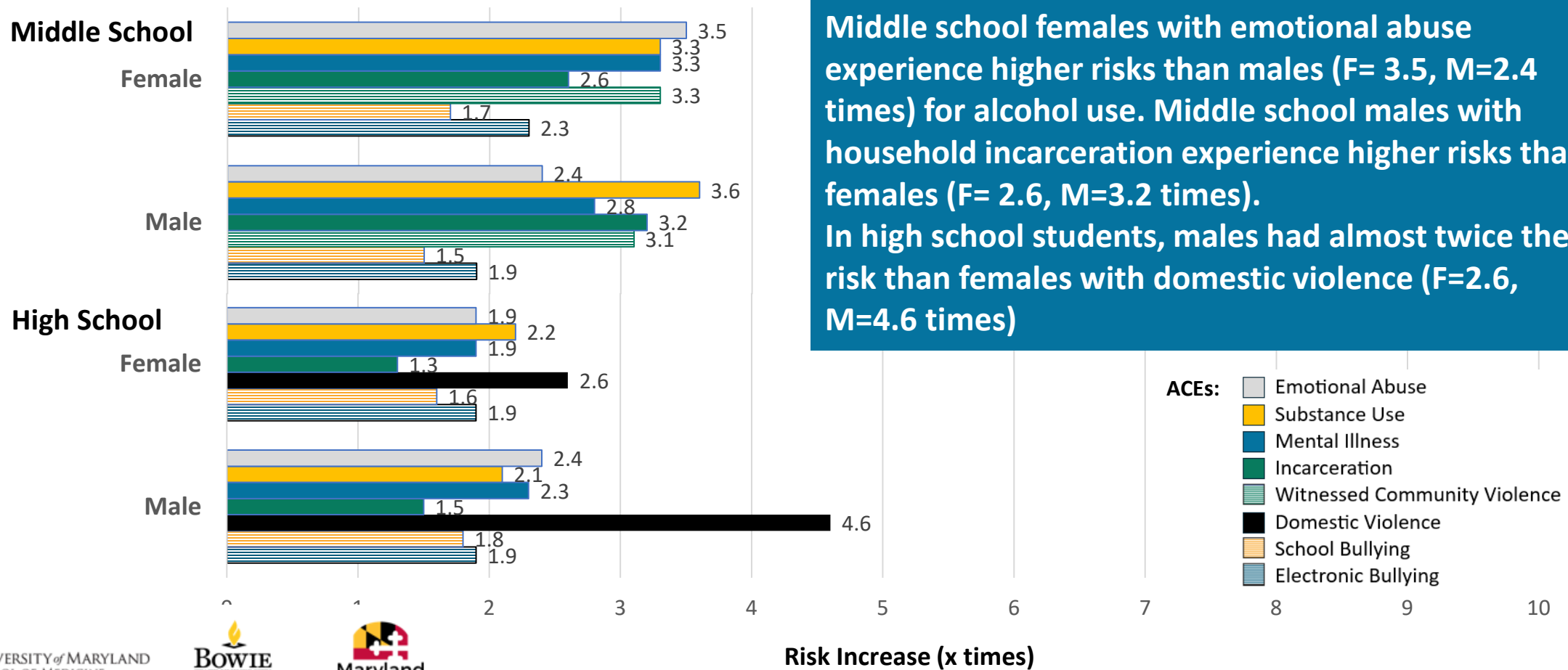
Substance Use Challenges and Adverse Childhood Experiences by Gender



# Current Alcohol Use and ACEs

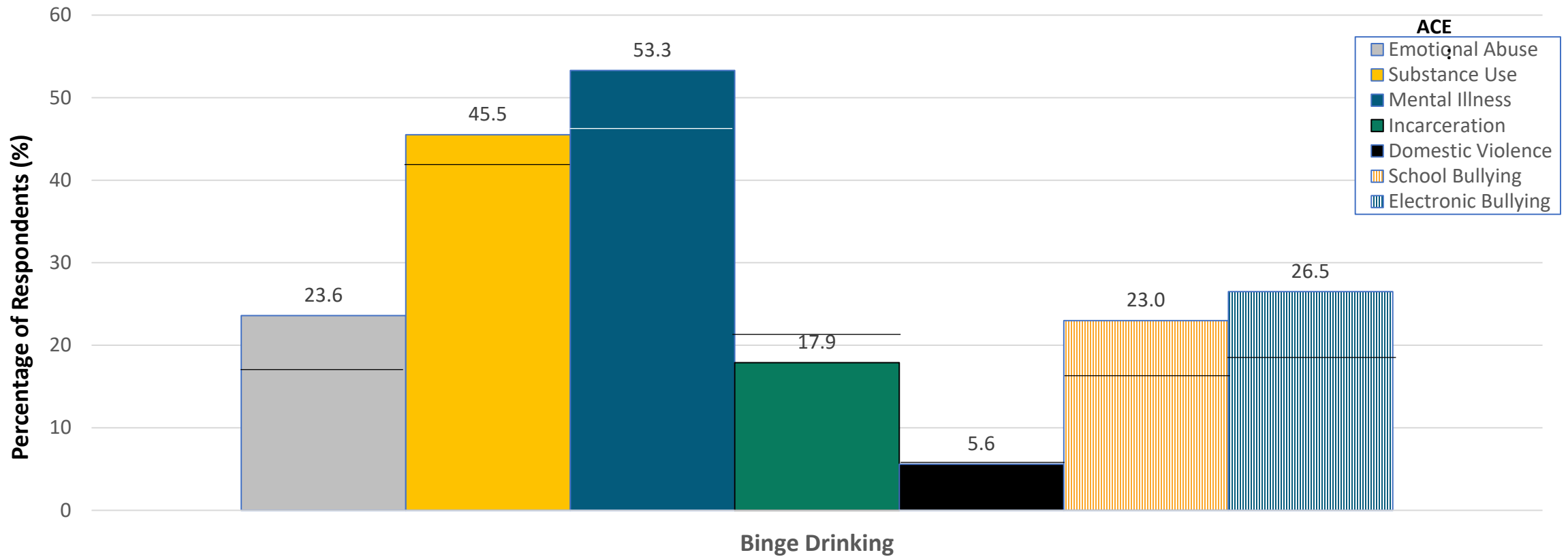


# ACEs associated with Increased Risk of Current Alcohol Use by Gender



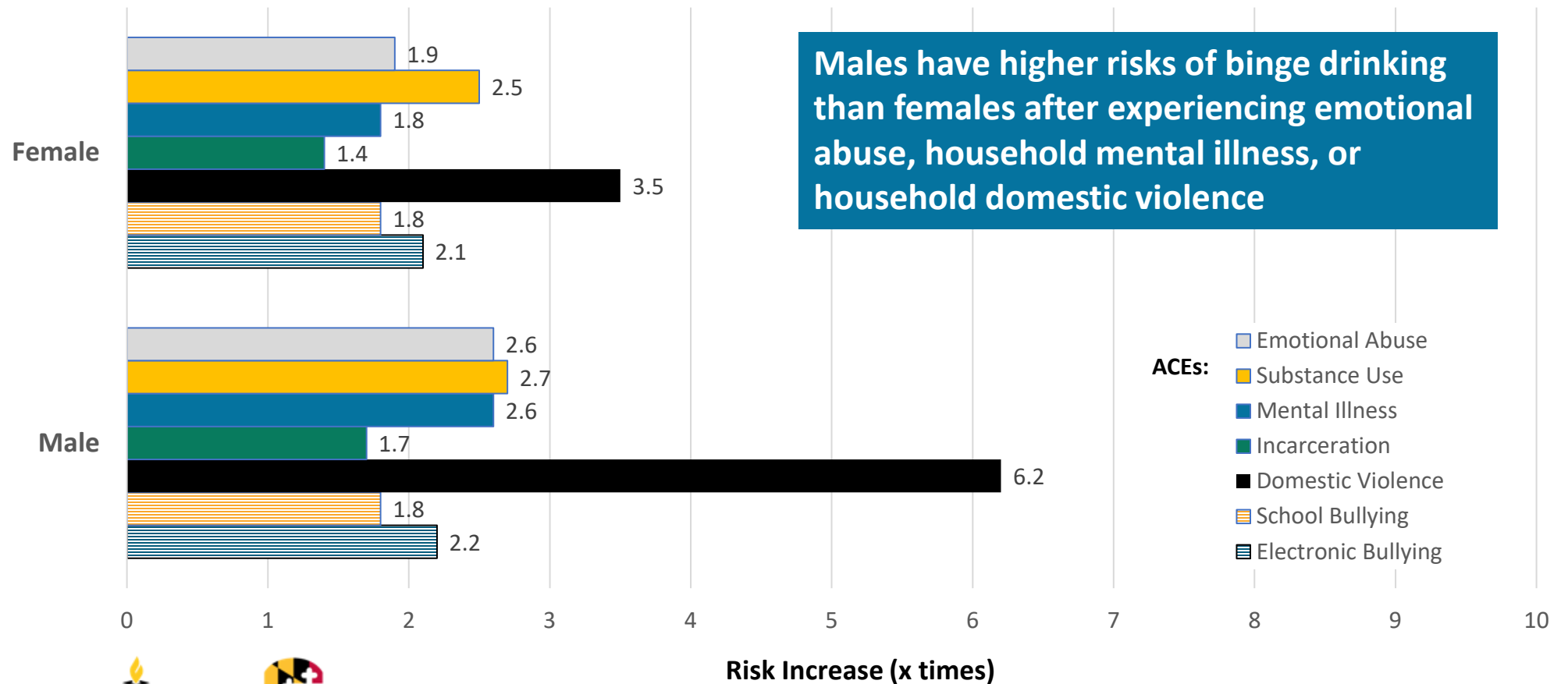
Middle school females with emotional abuse experience higher risks than males (F= 3.5, M=2.4 times) for alcohol use. Middle school males with household incarceration experience higher risks than females (F= 2.6, M=3.2 times). In high school students, males had almost twice the risk than females with domestic violence (F=2.6, M=4.6 times)

# Binge Drinking and ACEs (High School only)

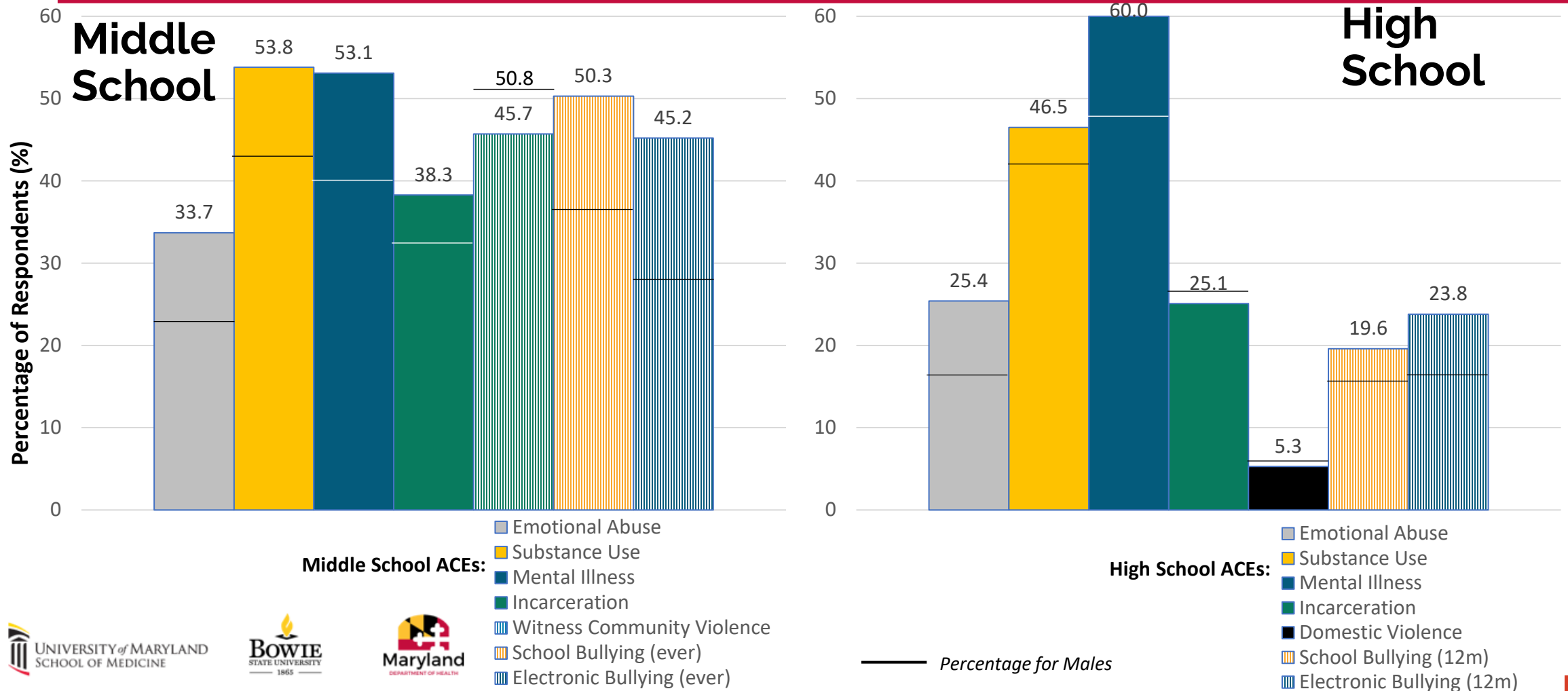




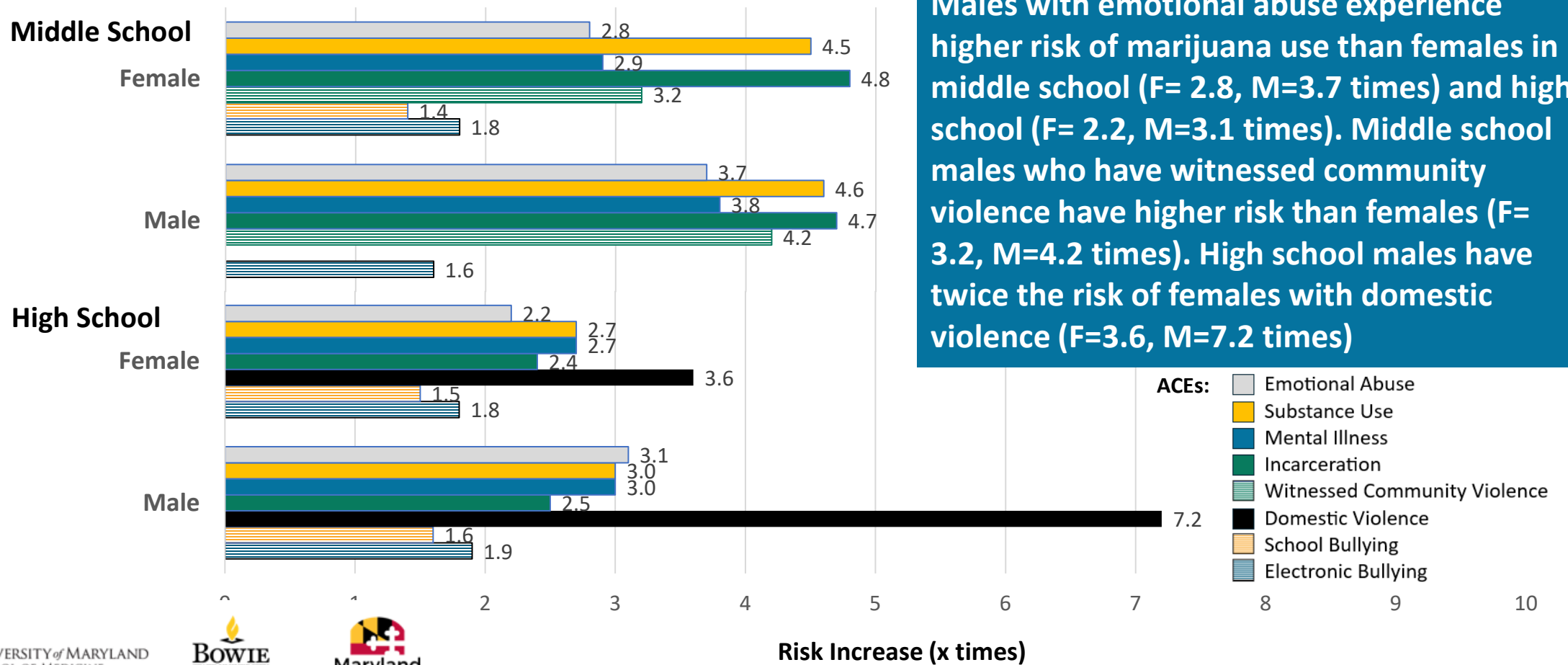
# ACEs associated with Increased Risk for Binge Drinking by Gender (High School only)



# Current Marijuana Use and ACEs



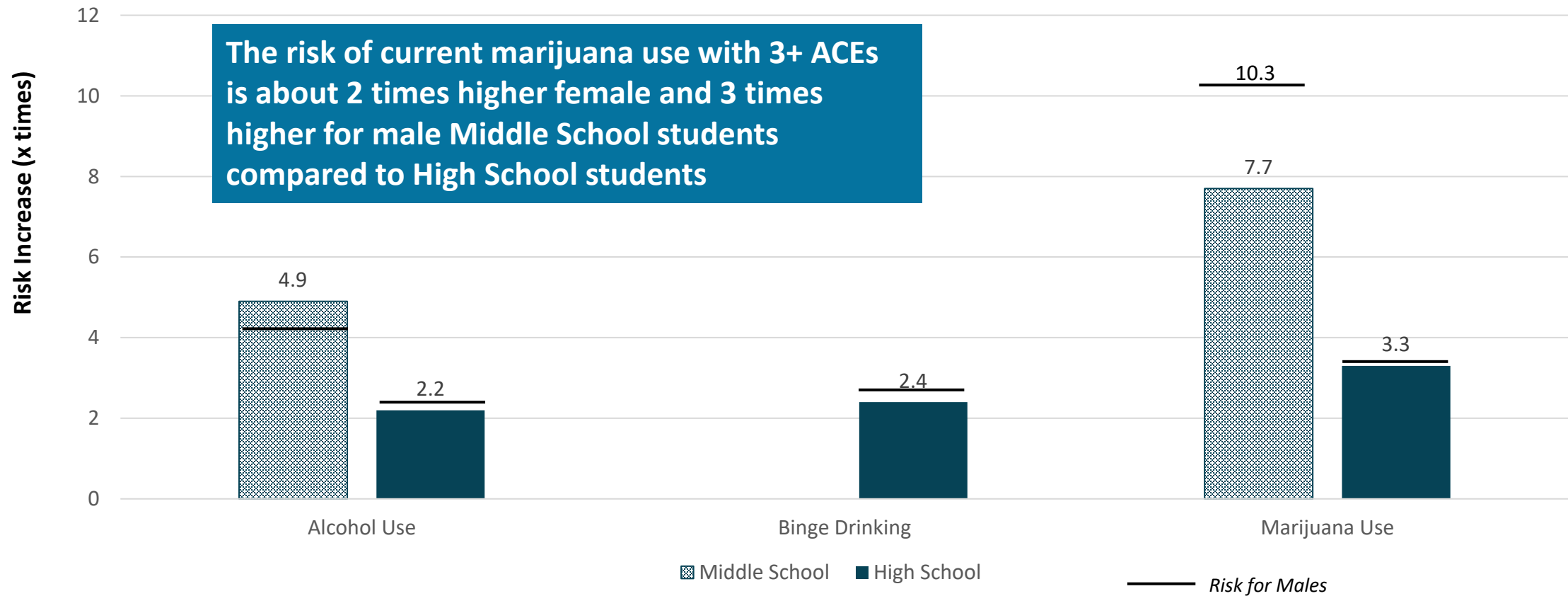
# ACEs associated with Increased Risk of Current Marijuana Use by Gender\*



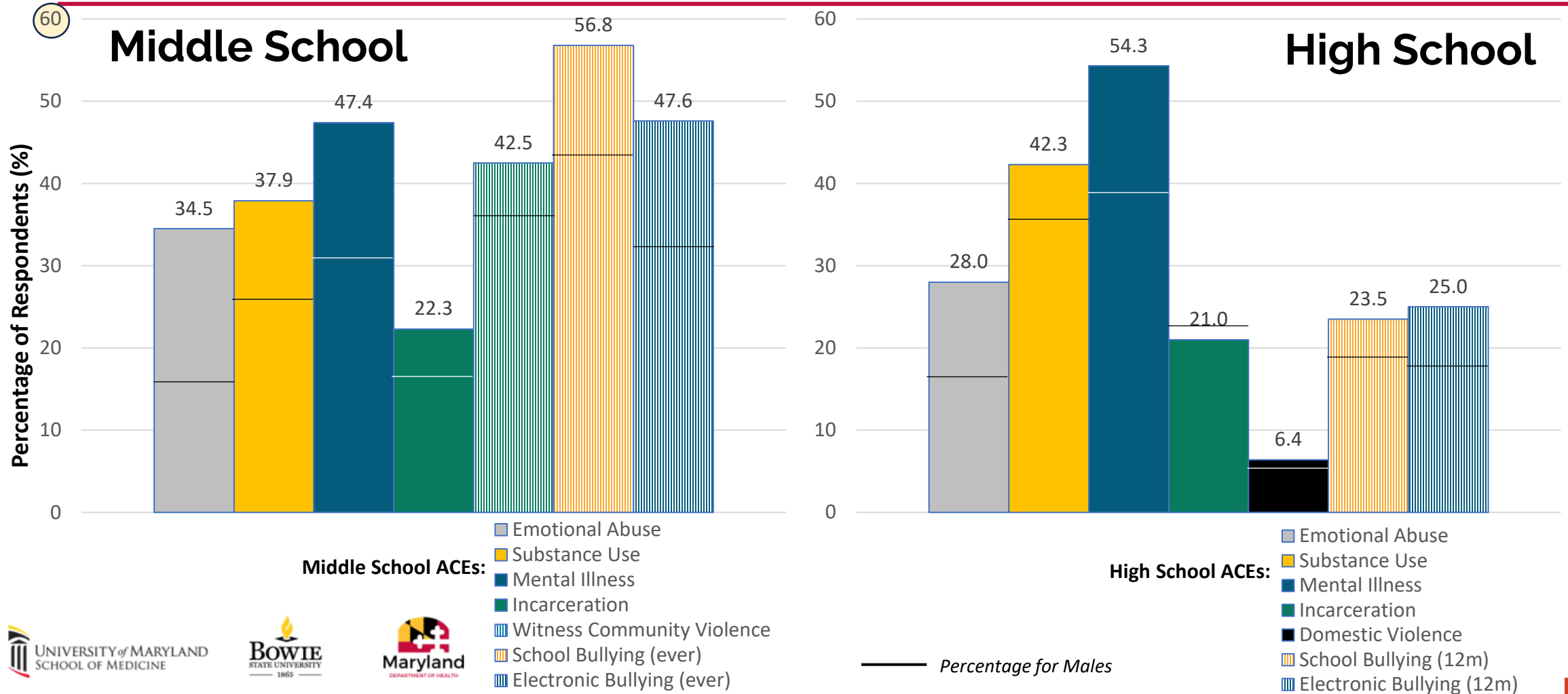
Males with emotional abuse experience higher risk of marijuana use than females in middle school (F= 2.8, M=3.7 times) and high school (F= 2.2, M=3.1 times). Middle school males who have witnessed community violence have higher risk than females (F= 3.2, M=4.2 times). High school males have twice the risk of females with domestic violence (F=3.6, M=7.2 times)

# 3+ ACEs, Current Substance Use, and Gender

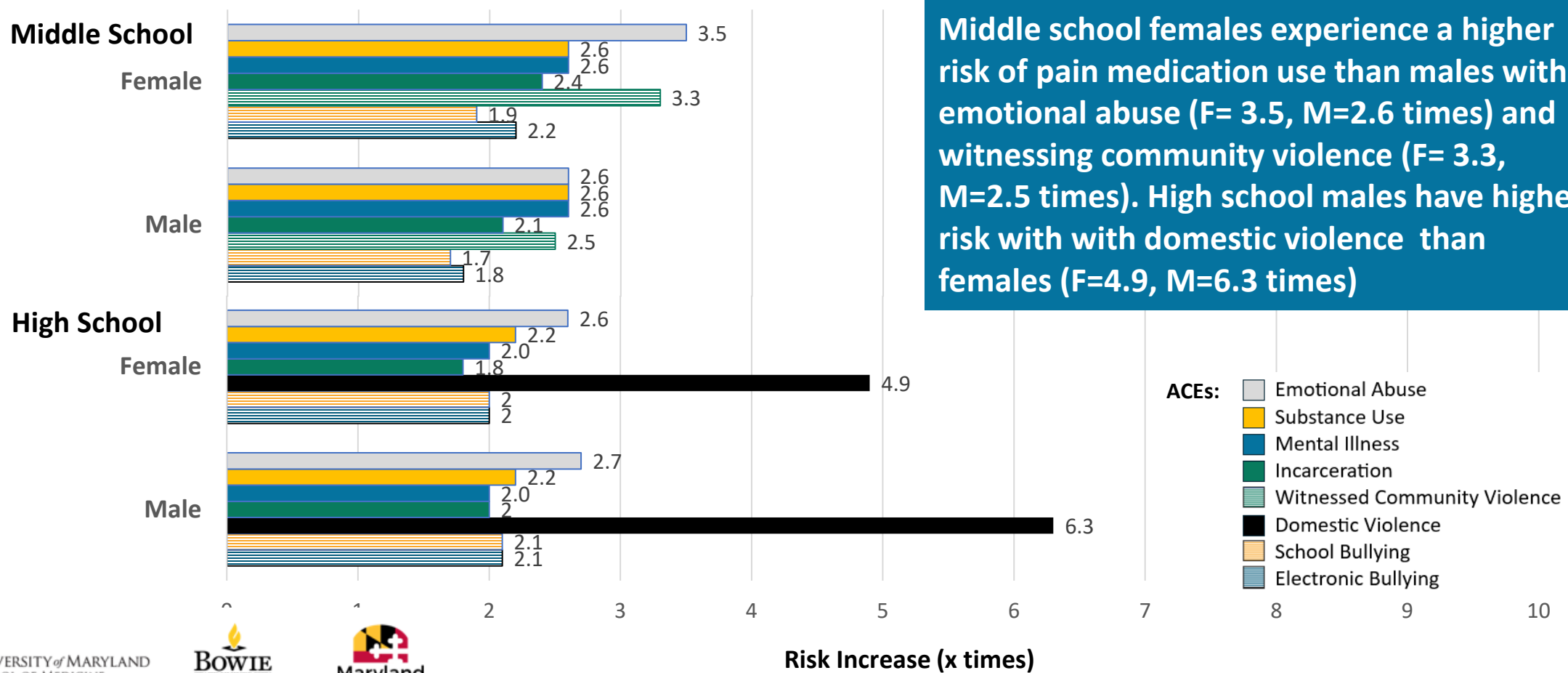
Individuals with 3+ ACEs are more likely to currently use substances



# Pain Medication Use (ever), ACEs and Gender

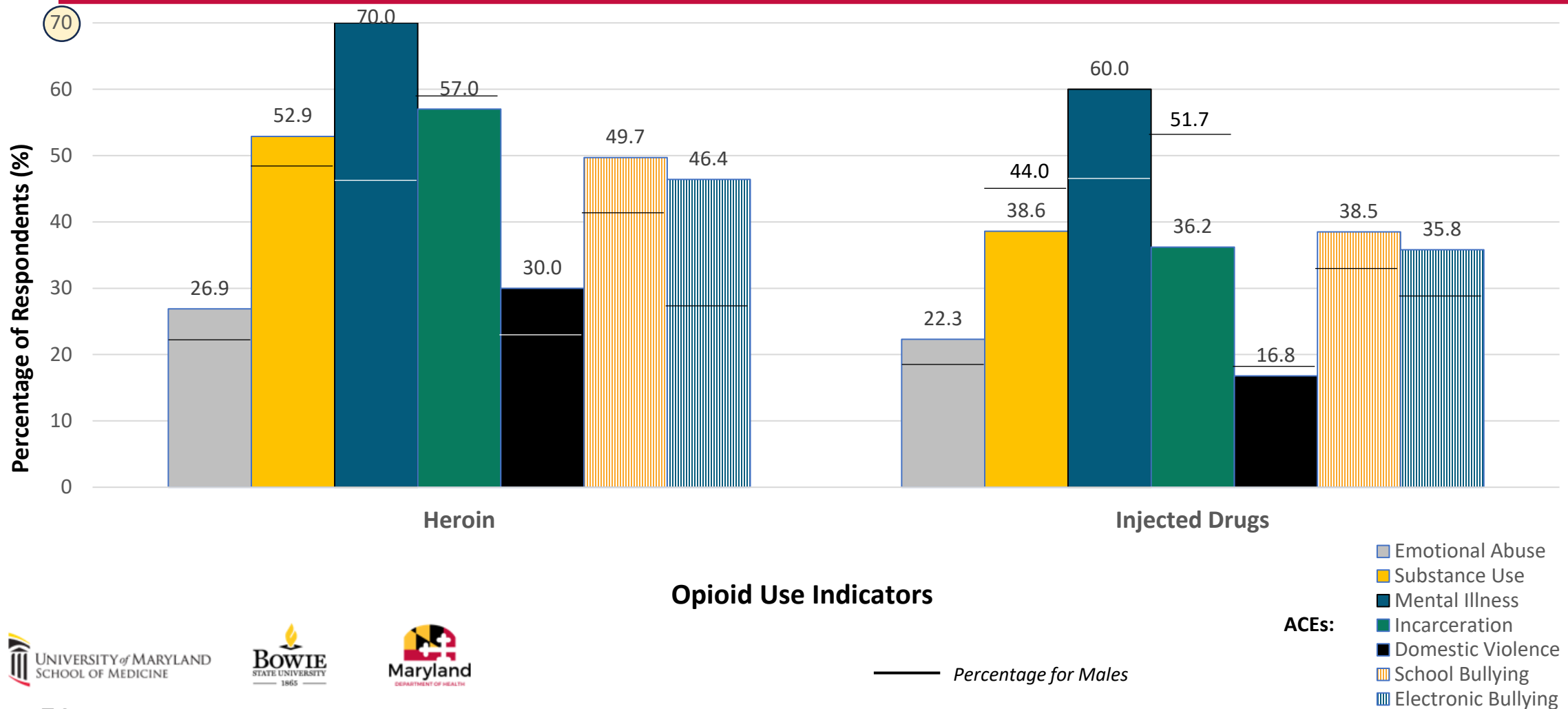


# ACEs associated with Increased Risk of Pain Medication Use (ever) by Gender



Middle school females experience a higher risk of pain medication use than males with emotional abuse (F= 3.5, M=2.6 times) and witnessing community violence (F= 3.3, M=2.5 times). High school males have higher risk with with domestic violence than females (F=4.9, M=6.3 times)

# Heroin & Injected Drugs (ever), ACEs, and Gender (High School only)



## Opioid Use Indicators

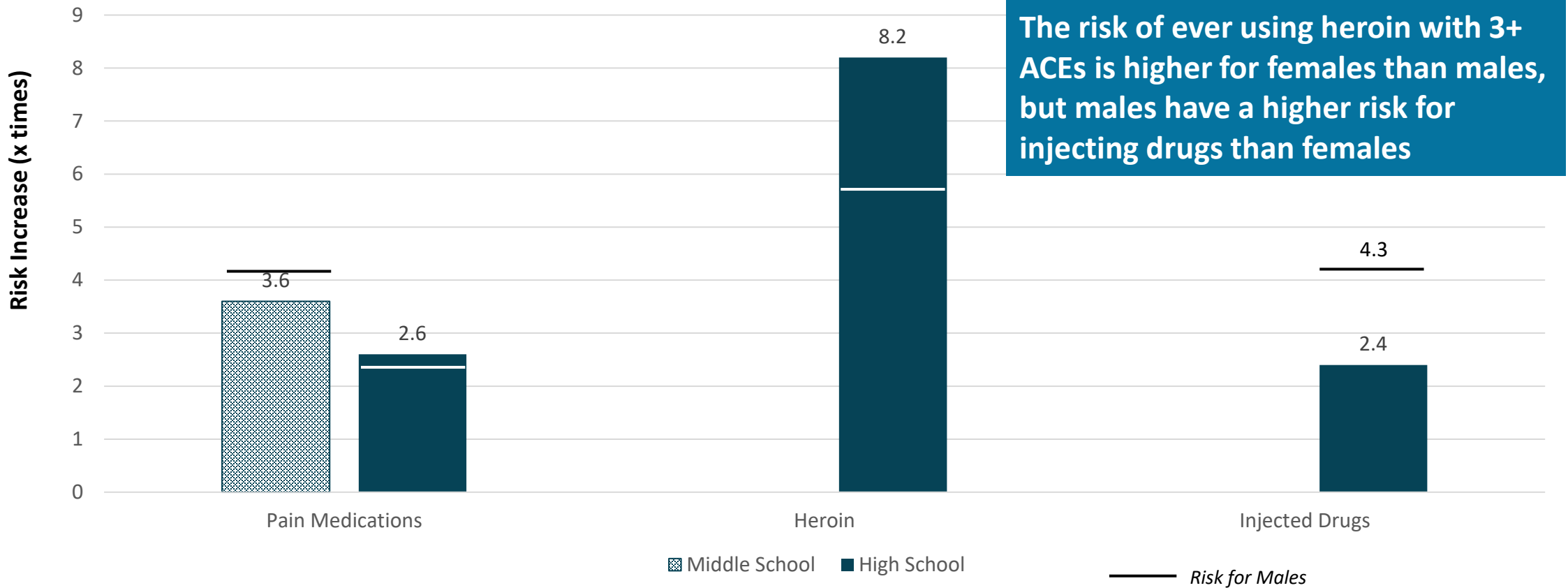
# ACEs associated with increased risk of Heroin and Injected Drug Use (ever) by Gender (High School only)



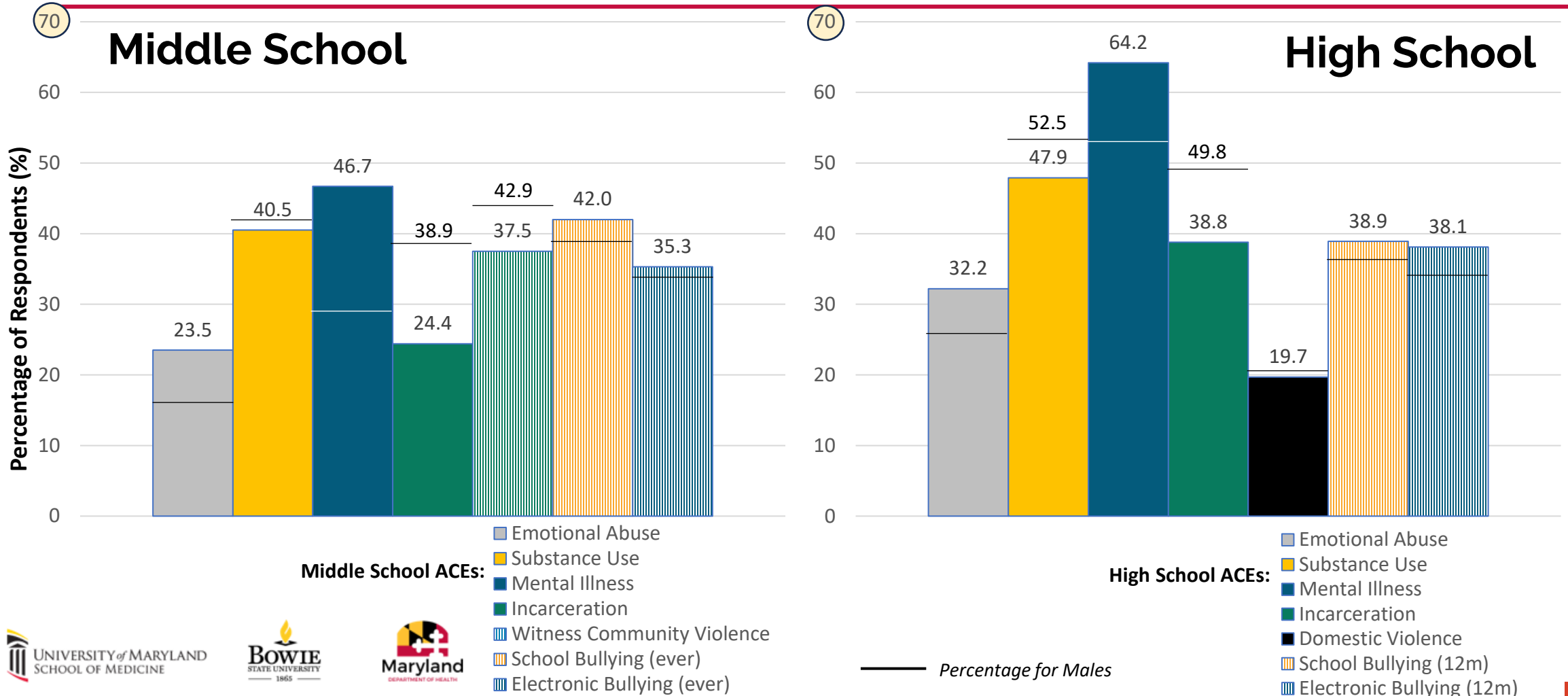


# 3+ ACEs, Opioid Use (ever), and Gender

Individuals with 3+ ACEs are more likely to try opioids or inject drugs

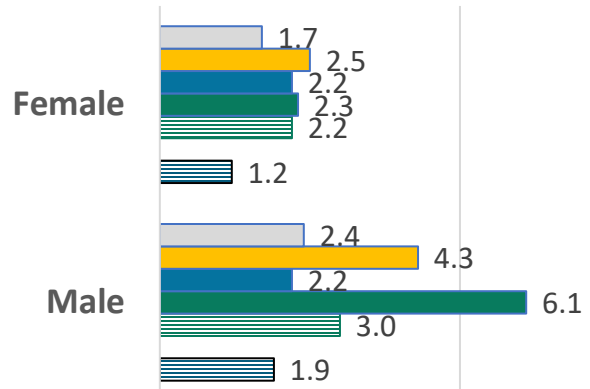


# Cocaine Use (ever) and ACEs



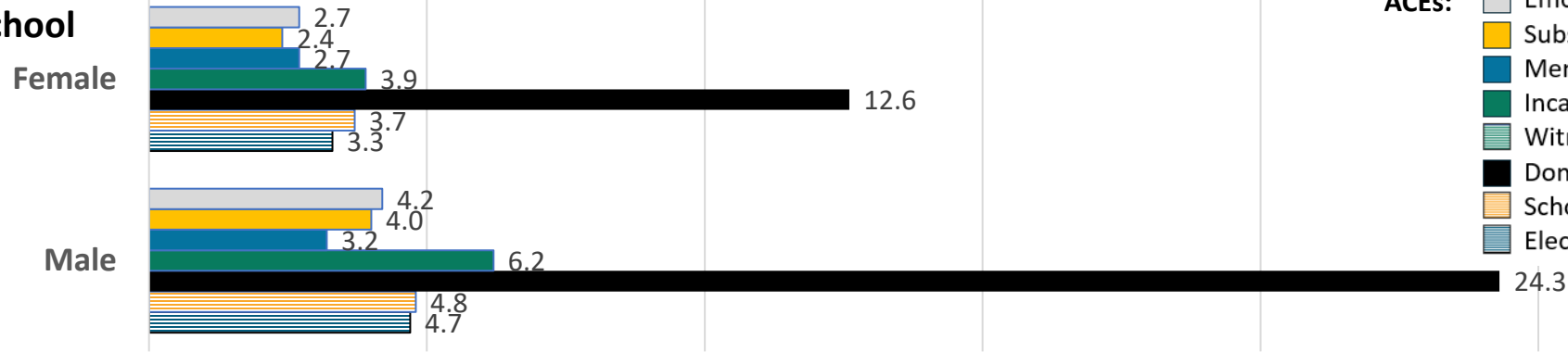
# ACEs associated with increased risk of Cocaine Use (ever) by Gender\*

## Middle School



For pain medication use (ever), middle school females experience higher risks than males with emotional abuse (F= 3.5, M=2.6 times) and witnessing community violence (F= 3.3, M=2.5 times). High school males have higher risk with with domestic violence than females (F=4.9, M=6.3 times)

## High School



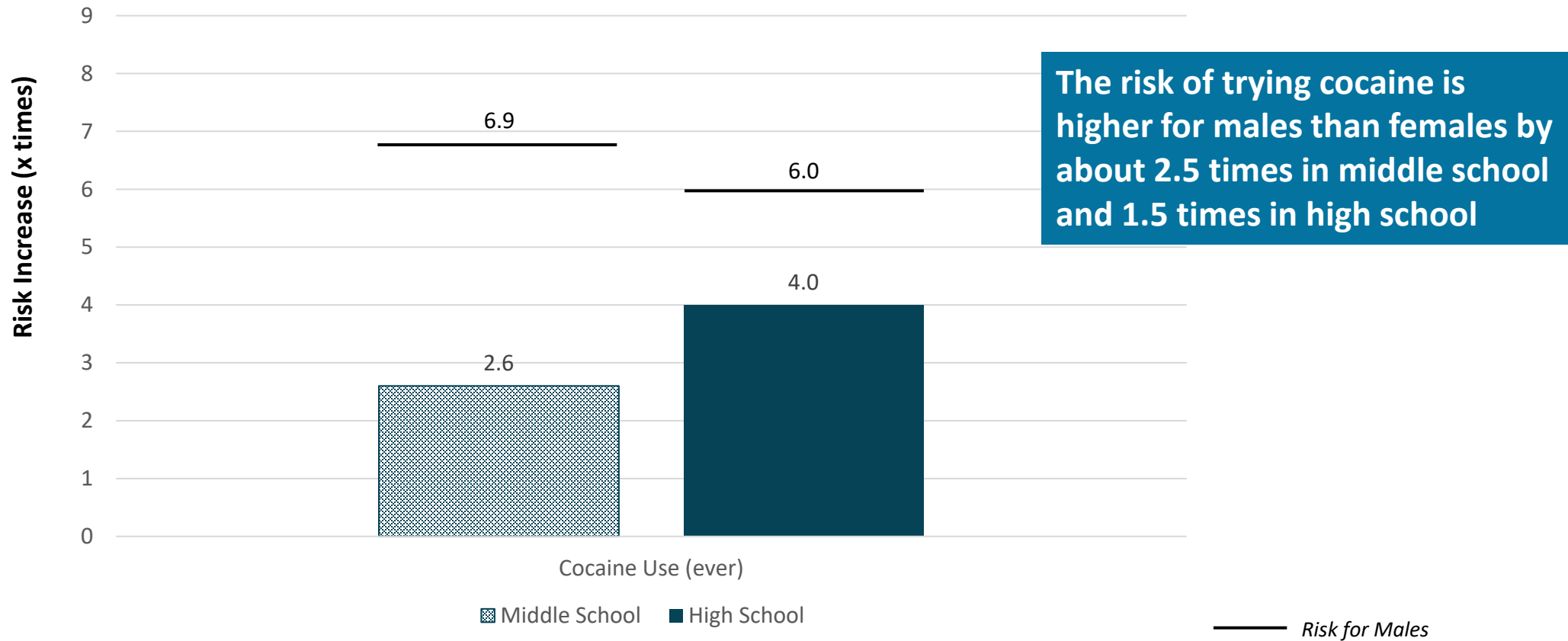
- ACEs:
- Emotional Abuse
  - Substance Use
  - Mental Illness
  - Incarceration
  - Witnessed Community Violence
  - Domestic Violence
  - School Bullying
  - Electronic Bullying

10 15 20 25 30

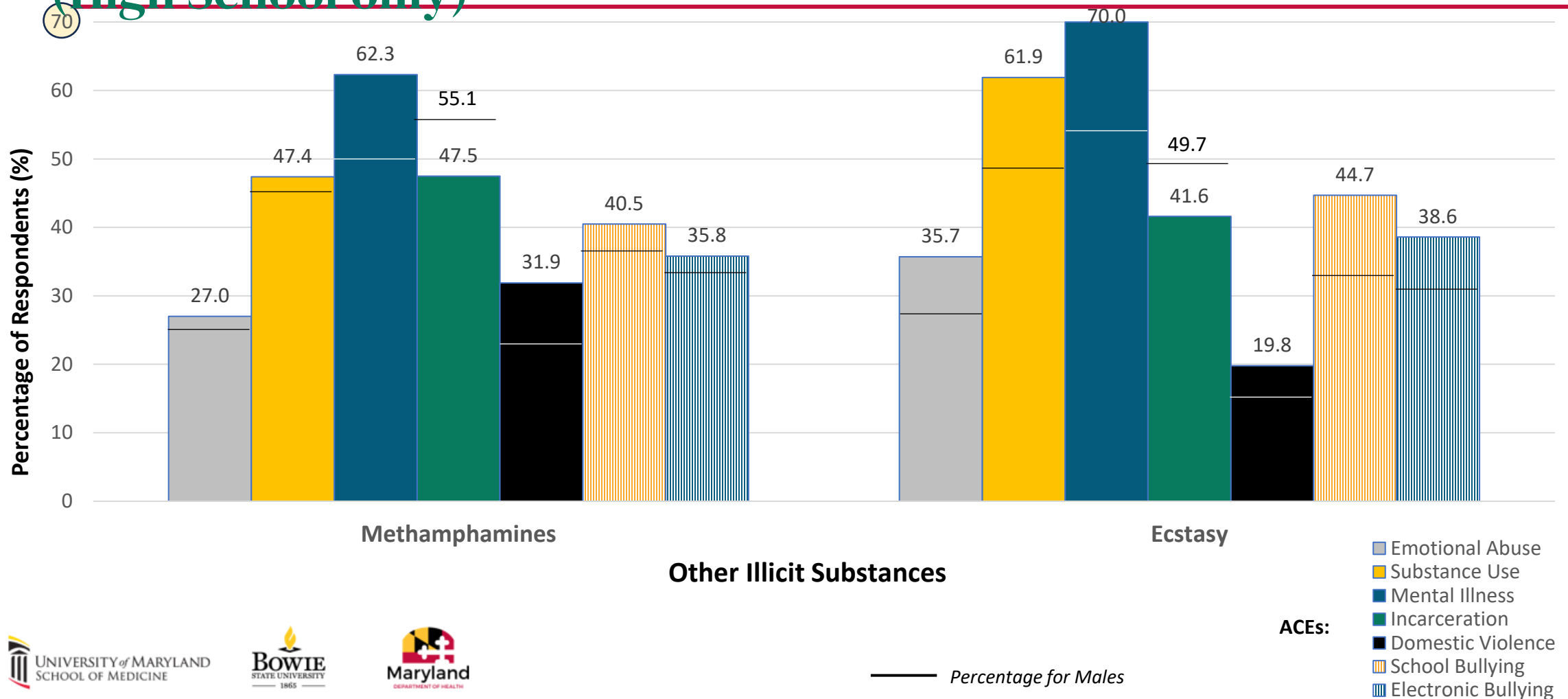
Risk Increase (x times)

# 3+ ACEs and Cocaine Use (ever)

Individuals with 3+ ACEs are more likely to try cocaine



# Other Illicit Substance Use (ever) and ACEs (High School only)

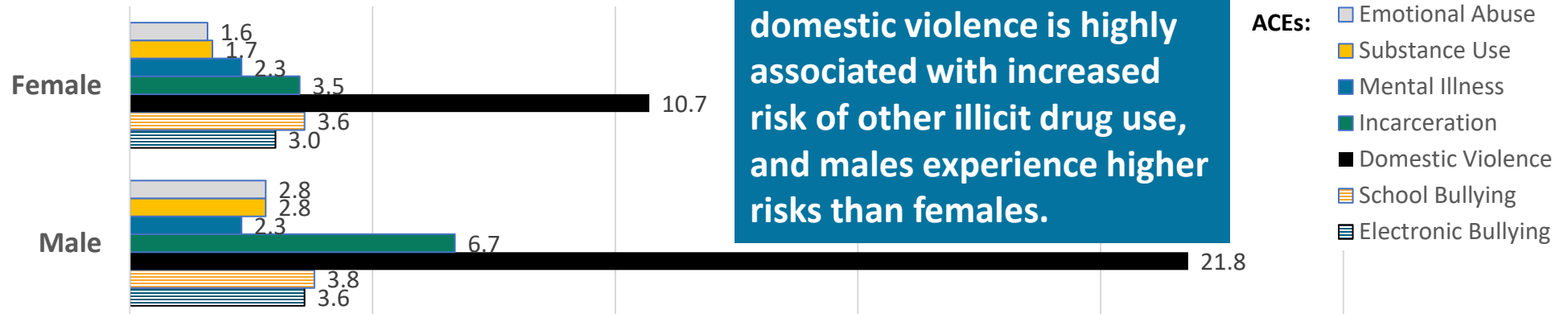


# ACEs associated with increased risk of Other Illicit Drug Use (ever) by Gender (High School only)

## Methamphetamines



## Ecstasy



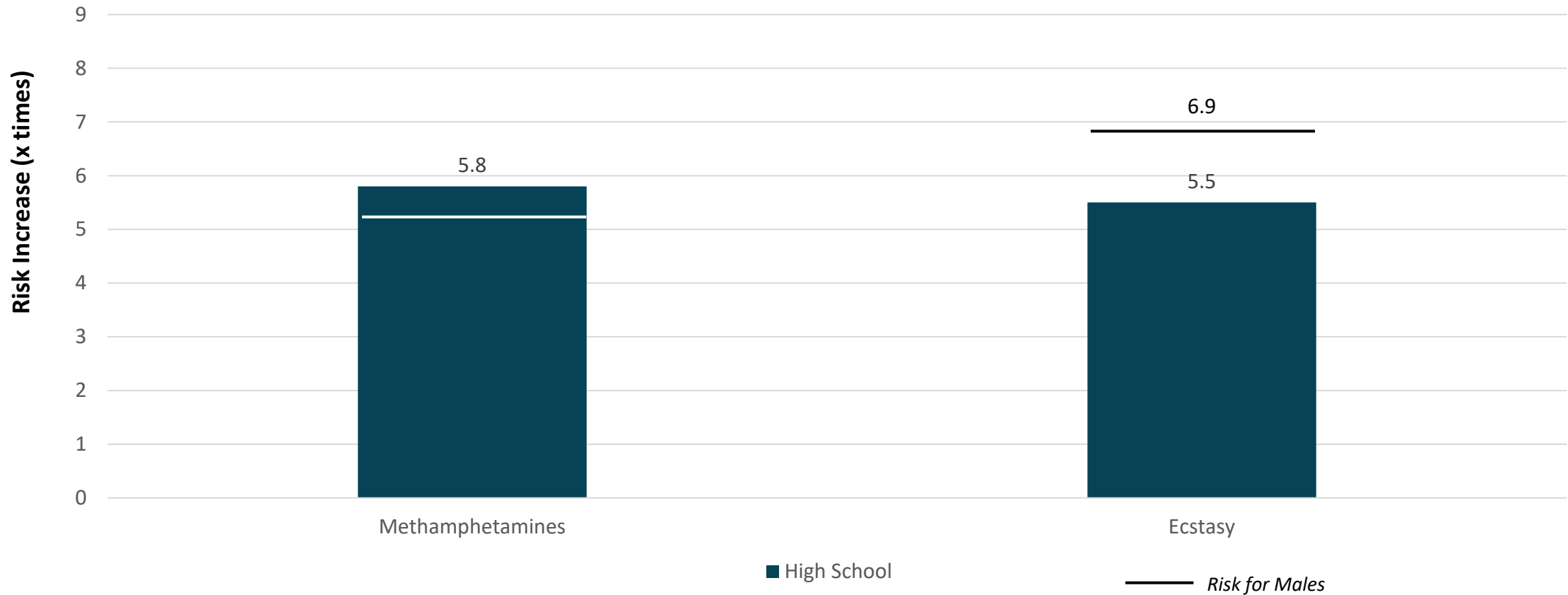
Experiencing household domestic violence is highly associated with increased risk of other illicit drug use, and males experience higher risks than females.

- ACEs:
- Emotional Abuse
  - Substance Use
  - Mental Illness
  - Incarceration
  - Domestic Violence
  - School Bullying
  - Electronic Bullying

Risk Increase (x times)

# 3+ ACEs, Other Illicit Substance Use, and Gender (ever – High School only)

High school students with 3+ ACEs are more likely to try other illicit substances





# Building Healing Behavioral Health Systems:

Summary of Behavioral Health Impact by ACE





# Summary of Behavioral Health Impact by ACE: Emotional Abuse: Middle School and High School Students



**15-16%**  
of female students  
experienced **Emotional Abuse** compared to  
**8-9%** of males

Female students who have experienced emotional abuse are more likely to experience **Mental Health Challenges** by **9 and 5 times** compared to **3.5 times** for males



Females are more likely to have a **Depressive Episode**  
Females: **6 and 4 times**  
Males: **3 and 3 times**



## The Ability to Talk to a Member of Their Family

is associated with decreased risk with emotional abuse by

Gender	Middle School	High School
Female	54%	80%
Male	73%	72%

# Summary of Behavioral Health Impact by ACE: Household Substance Use: Middle School and High School Students



Males who experienced household substance use are more likely to experience **Both Substance Use and Mental Health Challenges**

Males: **4.5** and **3.4** times  
Females: **3.4** and **2.9** times



Males are more likely to **try Cocaine**

Males: **6** and **6** times  
Females: **2** and **4** times



**Food Security** is associated with decreased risk with household substance use by

**53%** and **47%**

Gender	Middle School	High School
Female	60%	63%
Male	58%	54%

**22%** and **28%**  
of female students live with **Household Substance Use** compared to **15%** and **23%** of males

# Summary of Behavioral Health Impact by ACE: Household Mental Illness: Middle School and High School Students



**29%** and **40%**

female students live with **Household Mental Illness** compared to **16%** and **27%** of males

Females are more likely to experience **Mental Health Challenges**  
Females **5** and **3.5** times  
Males **4** and **3** times



Males are more likely to experience **Both Mental Health and Substance Use Challenges**  
Females **3.5** and **3** times  
Males **4** and **4** times



**Safety At (to/from) School**

(High School only) is associated with more decreased risk with household mental illness for females **56%** than males **44%**

# Summary of Behavioral Health Impact by ACE: Household Incarceration: Middle School and High School Students



**13%** and **14%**  
female students experience  
**Household Incarceration**  
compared to  
**10%** and **14%** of males

Middle school females (**2.6-3.1**) are more likely to experience all behavioral health indicators than males (**2.3-2.7**), but high school males are more likely to use substances and experience both mental health and substance use challenges (**2.1-2.3**) than high school females (**1.9-2.1**)



Males are also **6-8 times**  
more likely to  
**Try Cocaine, Methamphetamines or Ecstasy** compared to females at **2-6**  
times



**Food Security** is associated with decreased risk with household incarceration

Gender	Middle School	High School
Female	64%	65%
Male	68%	60%

# Summary of Behavioral Health Impact by ACE: Witnessed Community Violence (Middle School only)

Male and female students are

**4 times**  
more likely to experience  
**Both Mental Health and  
Substance use Challenges**



**Food Security** is associated  
with decreased risk with  
witnessing community  
violence for males and  
females by about

**63%**



**21%**  
of male and female students  
have  
**Witnessed Community  
Violence**



Males are **4.2 times**  
more likely to **use marijuana** (females 3.2)

Females are **3.3 times**  
more likely to **misuse pain medication**  
(males 2.5)

# Summary of Behavioral Health Impact by ACE: Household Domestic Violence (High School only)



Female are **6 times** more likely to experience **Mental Health Challenges** (males 5)

Males are **10 times** more likely to experience **both Mental Health and Substance Use Challenges** (females 5)



Males are **28 times** more likely to **try heroin** (females 22)

and **24 times** more likely to **try methamphetamines** (females 13)



**Food Security** is associated with decreased risk with household domestic violence for

females by **88%**

and males by **81%**

Although only **2.2%** of female and **1.7%** of male students experience **Household Domestic Violence** the impact on behavioral health is substantial

# Summary of Behavioral Health Impact by ACE: School and Electronic Bullying **Middle School Only (Ever)**



**43%**  
of female

**32%**  
of male

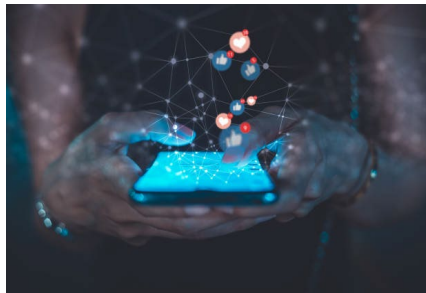
students experience  
**School Bullying**

Female students are most likely to experience **Mental Health Challenges** at **3.1-3.9 times** (2.9-3.3 for males)

Male students are **2.5-2.9 times** more likely to experience **Both Mental Health and Substance Use Challenges** (2.1-2.7 for females)



**Food Security** is associated with decreased risk with electronic bullying for females by **53%** and males by **40%**



**32%**  
of female

**21%**  
of male

students experience  
**Electronic Bullying**



Males experiencing school bullying are **3.7 times** more likely to **Attempt Suicide** (2.7 for females)

# Summary of Behavioral Health Impact by ACE: School and Electronic Bullying **High School Only (12 month)**



**15%**  
of female

**12%**  
of male

students experience  
**School Bullying**

Male students who experience bullying are **4.4-5.1 times** more likely to **Plan a Suicide Attempt** (3.1-3.6 times for females)



**Food Security** is associated with decreased risk of school bullying for females by **58%** and males by **45%**



**16%**  
of female

**11%**  
of male

students experience  
**Electronic Bullying**



Males who are bullied are **5 times** more likely to **Try Cocaine** (3.3-3.7 times for females)





# Building Healing Behavioral Health Systems:

Summary of Findings by Gender



# Summary of Findings

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- More females than males experience all ACEs, with the exception of household incarceration, witnessing community violence in middle school and domestic violence in high school.
- Almost all relationships across ACEs, PCEs and behavioral health indicators were statistically significant, showing a strong relationship of the impact of ACEs and PCEs on behavioral health in students.
- More females than males experience mental health and substance use challenges, with males are more likely to experience concurrent mental health and substance use challenges

# Summary of Findings:

## Positive Childhood Experiences (PCEs)

- A comparable number of male and female students experience PCEs, and PCEs are associated with reduced risk with almost all ACEs for both genders
  - The exception is extracurricular activities in middle school which is associated with an increased risk of bullying.
- PCEs are associated with reducing risk introduced by specific ACEs for both genders.
- A higher proportion of females who experience ACEs report being able to talk to an adult or being comfortable seeking help from an adult.
- The Ability to Talk to an Adults (MS) or a Member of Their Family (HS) decreased the most risk for emotional abuse (MS: F=54%, M=73%; HS F=80%, M=72%) with the largest gender difference found in middle school.

# Summary of Findings:

## Positive Childhood Experiences (PCEs)

- Food security tends to have larger risk reduction with bullying for females (52-58%) compared to males (37-55%), with the exception of electronic bullying in middle school students, which is slightly higher for males (F=32%, M=37%).
- Participating in extracurricular activities is associated with reduced risk with household incarceration in all females and high school males (24-43%), and with domestic violence in high school males (49.4%)
- Safety at School (and to/from) in high school students is associated with a gender differences with household mental illness (F=56%, M=44%) and household substance use (F=52%, M=39%)

## Summary of findings: Positive Childhood Experiences (PCEs) and ACEs

- Household Domestic Violence is the ACE most impacted by PCEs (M=81%; F=88%), and Food Security is the PCE most impacting ACEs (32-88%)
- PCEs decrease risk from Domestic Violence
  - Food security showed the most decreased risk (M=81%, F=88)
  - Safety at school (and to/from) reduced risk by 77% for females and 84% for males
  - Participating in extracurricular activities reduced risk with household domestic violence in males by 50%, with no statistical differences for females.

# Summary of findings:

## ACE Counts, Behavioral Health and Gender

- More females than males experience at least one ACE by 10-15%, and more females than males have experienced 3+ ACEs by approximately 5 percent
- Middle school females are more likely to experience mental health challenges (11 times) than males (6.4 times), but middle school males are more likely to experience both mental health and substance use challenges at 7.7 times compared to 5.5 times a for females. In high school, students with 3+ ACEs experienced similar risks of behavioral health challenges.

# Summary of findings:

## 3+ ACEs, Mental Health, and Gender

- Middle school females with 3+ ACEs are at a much higher risk of depression at 7.9 times compared to 5.6 times for males.
- Despite having a lower risk of depression than females, middle school males with 3+ ACEs have a higher risk of suicidal ideation, making a suicide plan or attempting suicide.
- In high school, the risk differences between genders are more moderate, with no difference in risk between genders for suicidal ideation.

# Summary of findings:

## 3+ ACEs, Substance Use and Gender

- Middle school males are more likely to currently use marijuana (10.3 times) than females (7.7 times)
- High school students have similar risk of trying pain medication but females have higher risk of trying heroin (8.2 times) compared to males (5.8 times) and males have a higher risk of trying injected drugs (M=4.3 times with F=2.4 times)
- Males are more likely than females to try cocaine. The risk for middle school is more than 2.5 times that of females (M=6.9 times, F=2.6 times), and high school males at 1.5 times that found in females (M=6.9 times, F=2.6 times)
- High school females are slightly more likely than males to try methamphetamines , but males are more likely than females to try ecstasy.



# Summary of findings:

## Mental Health Indicators and ACEs

- More females with Household Mental Illness reported experiencing all mental health indicators than any other ACE (F=45-61%, M=31-48%)
- Specific ACEs are associated with increasing risk for mental health challenges by up to 6.9 times for females and 5.1 times for males
- Emotional Abuse was most often highly associated with risk of poor mental health with females having higher risk in middle school (F=5.4, M=3.8); however, males have a higher risk with emotional abuse and poor mental health in high school (F=3.6, M=4.4).
- Household Incarceration is least associated with increased mental health challenges, and findings were comparable across gender (F=1.3-2.6, M=1.1-2.4).

## Summary of findings: Current Substance Use and ACEs

- More females with Household Mental Illness reported experiencing all current substance use indicators than males than for any other ACE. This is followed by Household Substance Use with reduced gender differences in high school.
- Specific ACEs are associated with increasing risk for current alcohol or marijuana use by up to 7.2 times in males and 4.8 times in females
- Household Domestic Violence is most strongly associated with higher risk of students' current substance use for all substances in males by 4.6-7.2 times and females by 2.6-3.6 times.

## Summary of findings: Lifetime Opioid Use and ACEs

- Household Mental Illness occurred with opioid use more frequently for females (47-70%) than males (30-48%),
- Household incarceration occurred with injecting drugs more frequently for males (52%) than females (36%)
- Specific ACEs are associated with increasing risk for ever using other illicit substances by up to 29 times in males and 24 times in females
- Household Domestic Violence is very strongly associated with higher risk of opioid use in males (6.3 – 28.0 times) than females (4.9-22.1 times).
- Household Incarceration is also strongly associated with trying heroin for males (9.3 times) compared to females (8.2 times) with similar findings for injecting drugs (M=6.7 times, F=3.5 times).

## Summary of findings: Lifetime Cocaine Use and ACEs

- Household Mental Illness occurred with cocaine use more frequently for females (MS: 47%, HS: 64%) than males (MS: 29%, HS: 53%),
- Household incarceration occurred more frequently for males (MS: 39%, HS: 50%) than females (MS: 24%, HS: 39%)
- Witnessing community violence occurred more frequently in males (43%) than females (38%) among middle school students who tried cocaine
- Household Domestic Violence is very strongly associated with higher risk of cocaine use in males (24 times) than females (13 times).
- Household Incarceration is also strongly associated with trying cocaine for males (6 times MS and HS) compared to females (MS: 2 times, HS 4 times).

# Summary of findings: Lifetime Other Illicit Substance Use (Methamphetamines and Ecstasy) and ACEs

- Household mental illness occurred with opioid use more frequently for females (62-70%) than males (50-53%), followed by household substance use for ecstasy (F=62%, M=48%)
- Household incarceration occurred in individuals who tried other illicit substance more frequently for males (50-55%) than females (42-48%)
- Specific ACEs are associated with increasing risk for ever using other illicit substances by up to 29 times in males and 24 times in females
- Household Domestic Violence is very strongly associated with higher risk of methamphetamine use in males (29 times) than females (24 times). Similar findings exist for trying ecstasy with risks for males twice that as those found for females (M=22, F=11).
- Household Incarceration is also strongly associated with trying other illicit substances for males (7-8 times) compared to females (4-6 times).



# Building Healing Behavioral Health Systems:

Potential Action Steps



# Potential Action Steps: Interventions

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- Expand mental health screening for middle school males with 3+ ACEs to ask about suicidal ideation even in the absence of reporting depression
- Expand substance use screening for students with 3+ ACEs with a particular emphasis on
  - Current Marijuana use in middle school in males
  - Heroin use in high school females and injected drug use in high school males
  - Methamphetamine use in high school females and ecstasy use in high school males.

# Potential Action Steps: Interventions

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- Offer interventions for youths exposed to Household Domestic Violence at the earliest ages with a particular emphasis on males, including:
  - Promoting meeting basic needs, such as food security, as a prevention strategy associated with mitigated risk of being exposed to domestic violence.
  - Safety planning and positive relationship skills;
  - Anger management and conflict resolution skills;



# BHS Data to Action Toolkit

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- Building Healing Systems (BHS) Data-to-Action toolkit

<https://www.healingsystemsdata.org/>



Please contact us! :)

[Karen McNamara - kmcnamar@som.umaryland.edu](mailto:kmcnamar@som.umaryland.edu)

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