



Healthy Outcomes from Positive Experiences (HOPE): Positive Childhood Experiences and Adult Substance Use

Montana Statewide Data from the CDC's Behavioral
Risk Factor Surveillance System



W UNIVERSITY *of* WASHINGTON

EXECUTIVE SUMMARY

Study of the Associations between Positive Childhood Experiences And Adult Substance Use Behaviors

PURPOSE OF THE STUDY: The purpose of the study is to answer the question, “Do positive childhood experiences (PCEs) have a buffering impact on adult substance use behaviors?”

INTRODUCTION & CONTEXT: Childhood is a critical stage in human development, and what happens in childhood experientially doesn’t stay in childhood physically or mentally. A large body of research details the harmful and lasting impacts of child abuse, maltreatment, neglect and other traumatic childhood experiences as they manifest in negative adult health outcomes. Far less is known about the long-term adult health correlates of the positive experiences occurring in childhood such as feeling safe and protected by an adult at home, feeling a sense of belonging in high school, feeling supported by friends, having at least two nonparent adults who took a genuine interest, feeling able to talk to family about feelings, enjoying participating in community events, and feeling family stood by you during difficult times.

In 2019, the original investigation of Bethell, Jones, Gombojav, Linkenbach and Sege entitled, “*Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample, Associations Across Adverse Childhood Experience Levels,*” published in JAMA Pediatrics, demonstrated that PCEs are correlated with lower rates of adult mental and relational health disorders, and that the correlation existed regardless of the number of adverse childhood experiences (ACEs) reported by participants. This 2022 study seeks to expand this field of inquiry on the buffering effect of PCEs by examining possible correlations with adult substance use behaviors found in data collected from the 6,495 English and Spanish-speaking participating in the 2019 Montana Behavioral Risk Factor Surveillance System (BRFSS) phone survey. This BRFSS survey did not collect data on ACEs, only PCEs.

SUMMARY OF KEY FINDINGS: The answer to the question posed by this study is, “Yes, positive childhood experiences do have a buffering impact on adult substance use behaviors, specifically cigarette, alcohol and illicit substance use.” The 2019 MT BRFSS data indicate that the positive adult outcomes of PCEs extend beyond lower risks of physical and mental health to include a lower likelihood of cigarette and illicit drug use and lower likelihood of problem drinking behaviors. Key findings include:

- 1. A positive community norm exists in Montana regarding positive childhood experiences reported by adults.** Most Montana adults report experiencing each of the PCEs often or very often in their childhoods. The strongest of these norms include 90.8% feeling safe and protected by an adult at home, 82.8% feeling supported by friends in high school, and 81.4% feeling their family stood by them during difficult times in childhood.
- 2. The more total PCEs reported, the lower the prevalence of having ever been a cigarette smoker.** Those who reported having experienced the highest levels of PCEs demonstrated a 68% reduced risk of having been a cigarette smoker compared to those who reported having experienced the lowest levels of PCEs. This relationship also exists across each individual PCE with the greatest risk reductions being tied to “feeling family stood by them during difficult times” (46% reduced risk of having been a cigarette smoker), “feeling safe and protected by an adult in their home” (45% reduced risk), and “enjoying participating in community traditions” (42% reduced risk).
- 3. The more total PCEs reported, the fewer alcoholic beverages consumed in the past 30 days.** Of those who reported drinking in the past 30 days, those having experienced the highest levels of PCEs reported consuming 26% fewer drinks than those who reported the lowest levels of PCEs. All PCEs except “having two nonparent adults take a genuine interest” were associated with significantly fewer drinks (12%-19% fewer) consumed in the past month.

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4. **The more total PCEs reported, the fewer drinks consumed per occasion.** Those experiencing the highest levels of PCEs reported consuming 12% fewer drinks per occasion than those who reported the lowest levels of PCEs. Specific PCEs correlated to this significant reduction in drinks per occasion include “feeling safe and protected by an adult in their home,” “enjoyed participating in community traditions,” and “felt family stood by them during difficult times.”

5. **Those who reported the lowest levels of PCEs reported more incidents of binge drinking in the past month.** Those experiencing the fewest PCEs reported 25-26% more binge drinking occasions than those who reported experiencing moderate to high levels of PCEs. The most salient positive childhood experiences to this outcome include “feeling a sense of belonging at high school,” and “feeling safe and protected by an adult in their home.”

6. **The fewer total PCEs reported, the higher the maximum number of drinks consumed in a single occasion.** Compared to those who experienced the most PCEs, those with the fewest reported consuming 9% more drinks during their heaviest drinking occasion in the past 30 days. The most salient positive childhood experiences to this outcome include “feeling safe and protected by an adult in their home” (13% fewer drinks reported), and “felt family stood by them during difficult times” (9% fewer drinks reported).

7. **Those experiencing the most PCEs reported the lowest prevalence of lifetime illicit drug use.** Those who reported experiencing the highest levels of PCEs reported 71% lower odds of lifetime illicit drug use (i.e., cocaine, including crack, heroin, methamphetamine, also known as meth, crank, or ice, hallucinogens, inhalants, stimulants, and sedatives) compared to those reporting the lowest levels of PCEs. Across ALL the PCEs, those who endorsed the given childhood experience often or very often were at significantly lower odds of having ever used an illicit drug, with those who felt safe and protected by an adult in their home often or very often having a 61% reduced risk.

RECOMMENDATIONS:

- **Efforts to promote the existing positive community norm of PCEs in Montana** could help raise awareness of these critical buffering experiences in childhood, increase understanding of the power and prevalence of PCEs, increase positive parenting practices, increase safe and supportive adult involvement in the lives of children, increase efforts to promote belonging among high school students, and increase prevalence of and participation in positive community events and traditions.
- **Funding and promotion of evidence-based programs and services and promising practices that include education about positive childhood experiences (home visiting programs, positive parenting classes, etc.) is critical to seeing these long-term, positive health outcomes realized .** The initial investment of empowering parents and other adults with the knowledge and skills to provide these PCEs to the children in their lives and community is likely to produce a high return on investment due to the fact that most of the PCEs included in this survey do not require a monetary investment by parents and community members to implement.
- **Making equitable adjustments in the processes and policies of systems** that fund and promote these programs and services as needed will ensure that all families have proportionate access to needed supports and the resulting positive outcomes .

Background on HOPE

- Models for understanding health and wellness have often been overly focused on adverse aspects of health (e.g., disease, stress, abuse) with little attention given to positive aspects.
- Increasingly, health and wellbeing are being considered through a positive conceptualization, emphasizing that health and wellbeing encompass *more* than the absence of disease and adversities (Misselbrook, 2014).
- Based on the *science of the positive* (Linkenbach, 2016), a new framework is emerging for systematically examining health benefits of positive life experiences – **H.O.P.E. = Healthy outcomes of positive experiences.**

Childhood Experiences

- Childhood is a key stage in human development with clear etiological links between youth experiences and indices of health and wellbeing later in the lifespan.
- A large literature on **negative** childhood experiences supports the harmful and lasting impacts of child abuse, maltreatment, neglect, and other toxic factors on children and the long-term lasting impacts into adulthood.
- Far less is known about long-term correlates of **positive** childhood experiences, which is a critical gap that is being addressed by the present research project.

Data Source

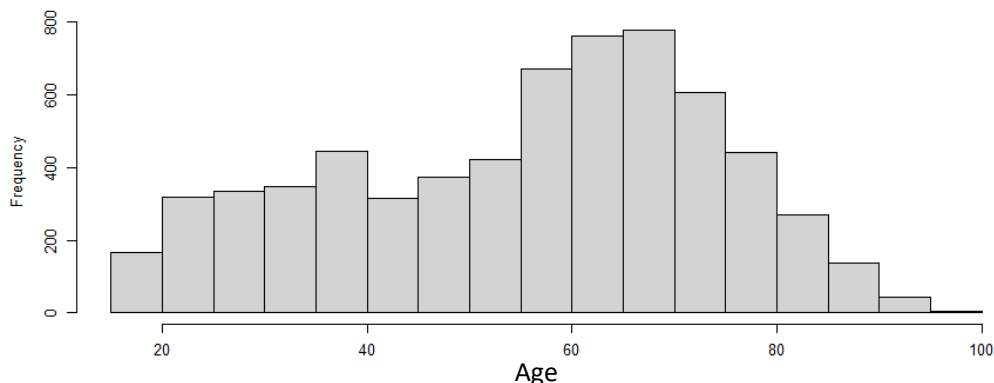
Data were collected through the 2019 Montana Behavioral Risk Factor Surveillance System (BRFSS), which is a cross-sectional telephone survey of English and Spanish-speaking adults 18 or older, conducted with technical and methodological guidance from the CDC. One adult per household is randomly selected to be interviewed, and recruitment entails calls to both cellphones and landlines. Data are weighted using a post-stratification adjustment raking procedure to increase generalizability of the data. Additional details of the Montana BRFSS procedures are available online (<https://dphhs.mt.gov/publichealth/BRFSS/FAQDataUsers>).

Sample Demographics (Total Sample Size = 6,495)

Race/Ethnicity*			Birth Sex	
<u>White</u>	<u>AIAN</u>	<u>Hispanic/Other</u>	<u>Female</u>	<u>Male</u>
5,485	493	517	3,306	3,189
(85.5%)	(7.6%)	(8.0%)	(50.9%)	(49.1%)

***Note:** AIAN = American Indian and Alaska Native. Other race/ethnicity categories were collected but are not publicly available.

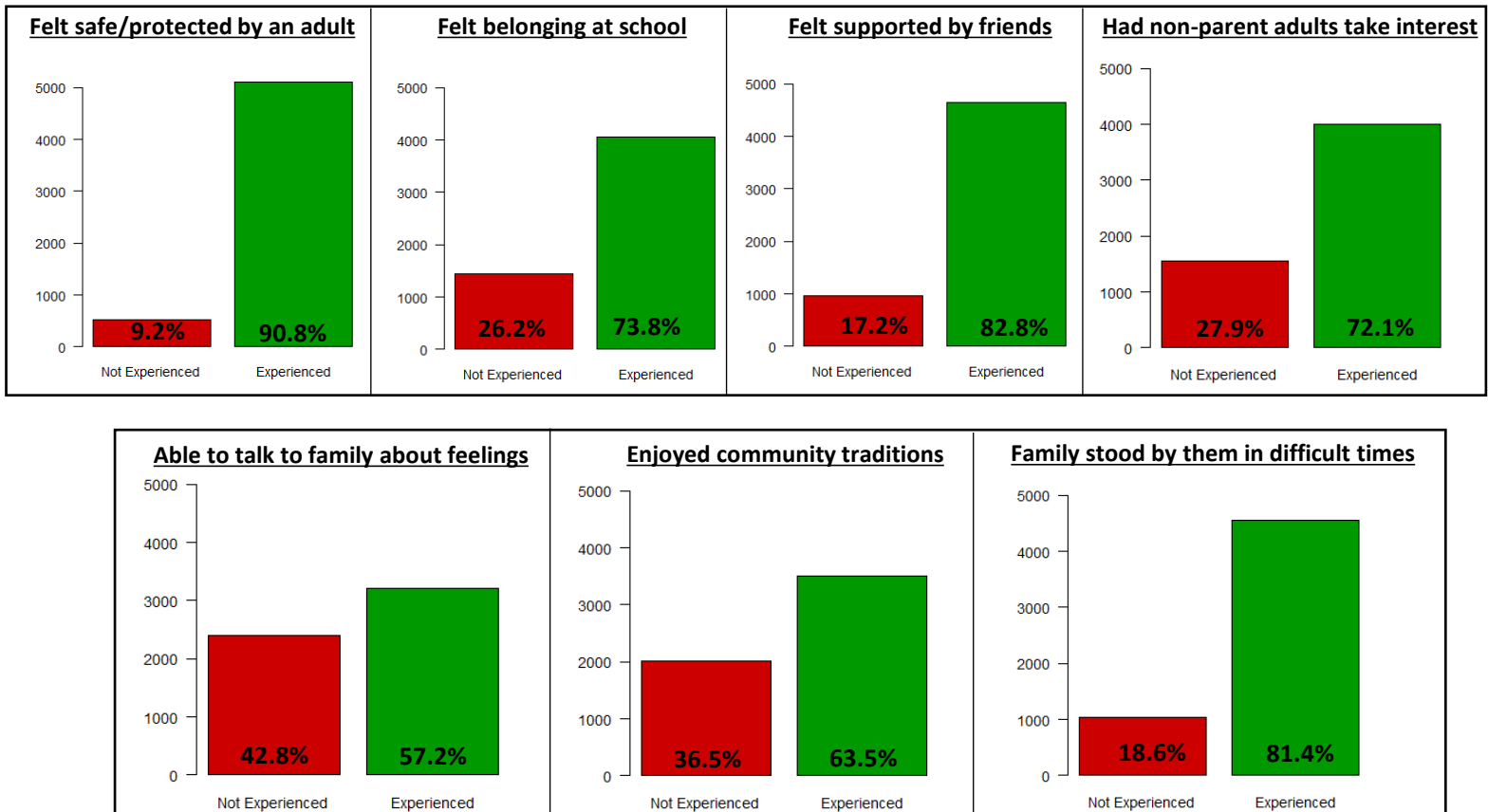
AGE: Respondents ranged in age from 18 to 98 years old. Mean age was 55.9 (SD = 18.4)



Measuring Positive Childhood Experiences (PCE)

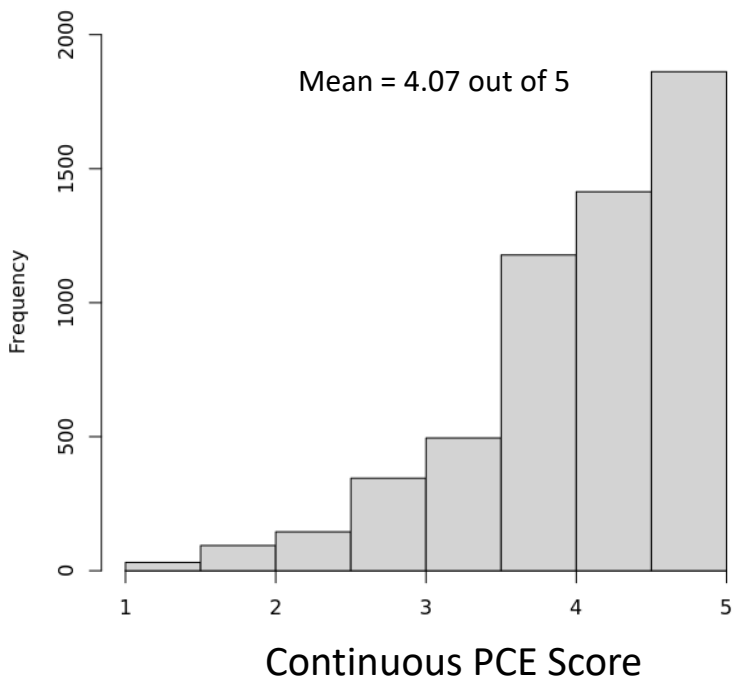
- The 7-item PCE scale was used to ask respondents about positive childhood experiences retrospectively (Bethell et al., 2019).
- Items asked how often or how much participants felt/experienced the following when they were a child:
 - Felt safe and protected by an adult in their home.**
 - Felt a sense of belonging at high school.**
 - Felt supported by friends.**
 - Had at least two nonparent adults who took genuine interest in them.**
 - Felt able to talk to family about feelings.**
 - Enjoyed participating in community traditions.**
 - Felt family stood by them during difficult times.**
- Response options ranged from 1 = “Never” to 5 = “Very often” / “All of the time”.
- PCE scores were operationalized in two ways; first as a continuous measure from a composite of all seven items ($\alpha = 0.82$), and then as a sum score from dichotomizing each item at 1 = “Very often” or “Often” vs. 0 = “Never”, “Rarely”, or “Sometimes” before summing.

Overview of Each PCE (Yes = “Very often” or “Often”)

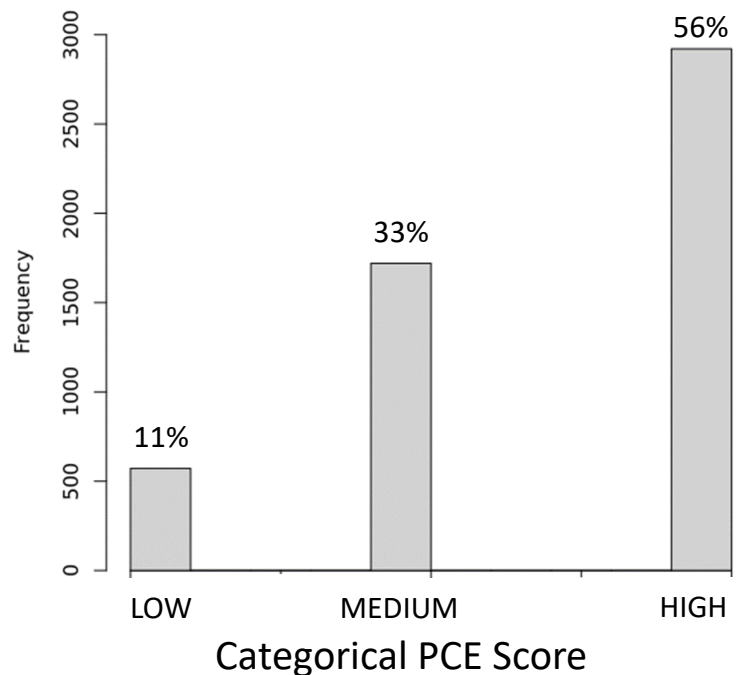


Positive Community Norms

Composite score of PCEs



Categorical score of PCEs



Using these Data to Inform a Positive Community Norms Approach

- Data from the Montana BRFSS indicate that, in retrospect, a positive norm existed whereby most respondents generally felt positively about their childhood.
 - When calculated as an average score across all PCE items, the mean score was 4.07 out of 5, suggesting respondents endorsed frequently experiencing these positive experiences, on average.
 - When calculated as a sum score and broken into high, medium, and low PCE categories, over half of the respondents were in the high PCE category and an additional 33% were in the medium PCE category.
 - While this is encouraging, it also shows that just over 10% of respondents were in the low PCE category, highlighting a small but important subgroup for which very few positive experiences were reported. Thus, there is a need to identify strategies for those low in PCEs.
- Taken together, these findings can be used to strengthen efforts at both individual and community levels to further build and foster positive community norms.
- The more accurately individuals perceive the positive norms of their peers and other important referent groups, the more likely they are to behave in positive, healthy, and pro-social ways (Perkins, 2003).
- Efforts to promote positive norms regarding PCEs could increase community-level buy-in towards promoting positive parenting norms, and is highlighted by the Centers for Disease Control and Prevention (CDC) as one of four key strategies for promoting safe, stable nurturing relationships and environments as part of the *Essentials for Childhood Framework*.

Childhood Experiences are a Salient Predictor of Substance Use in Adulthood

- In our efforts to expand the *science of the positive* framework, the initial focus of our research using the Montana BRFSS data was to examine associations between PCEs and substance use behaviors in adulthood (i.e., tobacco and alcohol use indices).
- Adverse childhood experiences have consistently shown to be a risk factor for substance use behaviors during adolescence and adulthood (e.g., Leza et al., 2021). Nevertheless, comparatively few studies have examined the theorized prosocial pathway for substance use behaviors from a social development theory perspective (Catalano & Hawkins, 1996), in which **PCEs may protect against substance use behaviors across the lifespan.**

Study Hypothesis

- Informed by social development theory (Catalano & Hawkins, 1996) and emerging findings of healthy outcomes from positive experiences (e.g., Bethell et al., 2019), we hypothesized that PCEs would generally be protective against indices of substance use during adulthood.

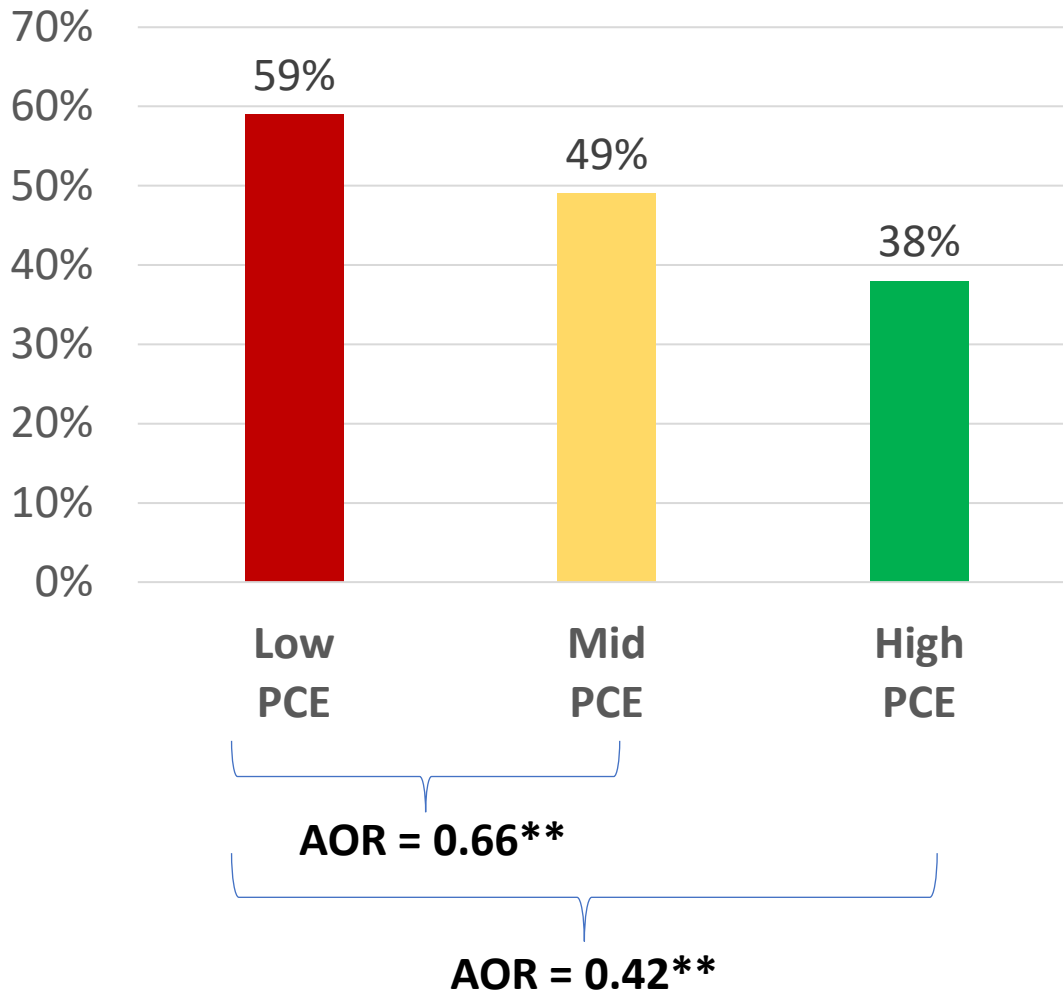
Overview of Substance Use Behaviors in Montana BRFSS Sample

Substance Use Behavior	Percent or Mean
Ever Smoked 100+ Cigarettes (Y/N)	43.63%
Current Smoker (Y/N)	15.16%
Any Drinks in Past 30 Days (Y/N)	56.90%
Total Number of Drinks in Past 30 Days †	26.00
Drinks per Occasion in Past 30 Days †	2.24
Binge Drinking Occasions in Past 30 Days †	3.73
Max # of Drinks in an Occasion in Past 30 Days †	3.65
Any Lifetime Illicit Drug Use	16.60%

Note: Binge drinking is defined as 5 or more drinks on an occasion for men and 4 or more drinks on an occasion for women . † Alcohol quantity measures only include participants who reported >0 drinks in past 30 days.

PCEs and Substance Use Behaviors: Lifetime Smoking Status

Lifetime Smoking (100+ Cigarettes)



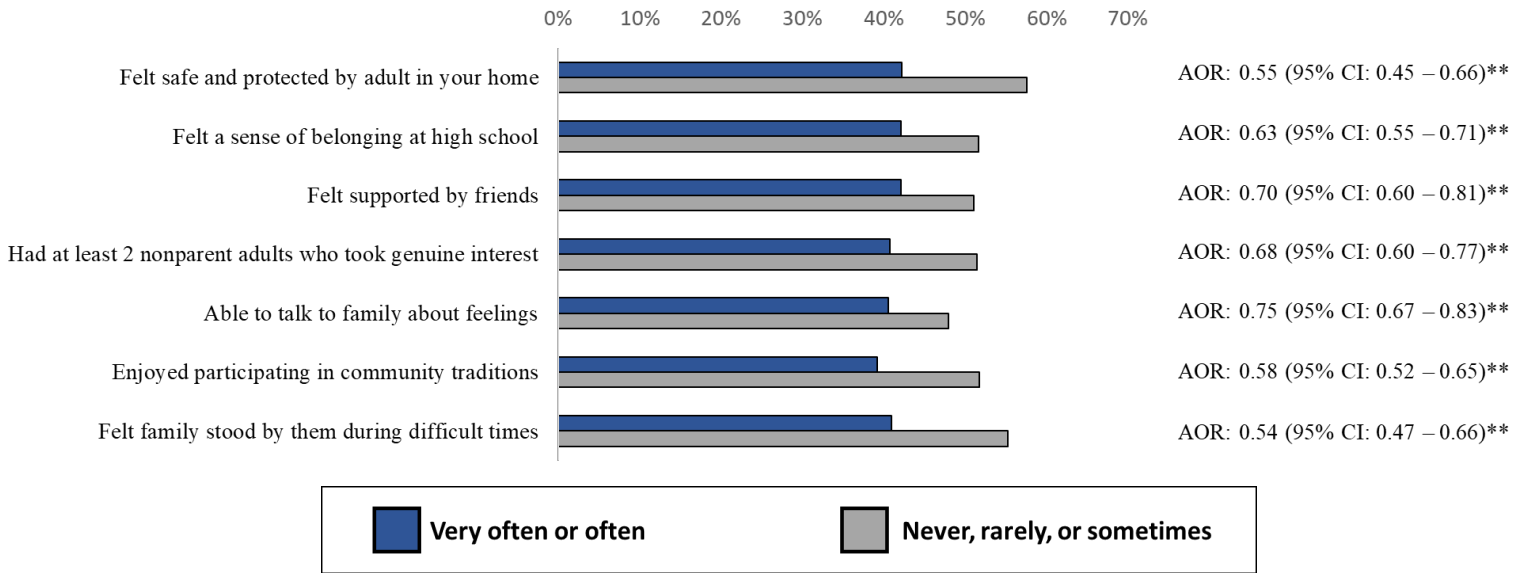
Lifetime Smoking Status

- Those in the high PCE category had the lowest prevalence of lifetime smoking status (38%).
- Compared to the low PCE group, those in the medium PCE group had a 44% reduced risk of having ever been a smoker, and those in the high PCE group had a 68% reduced risk of having ever been a smoker.

Note: AOR = Adjusted odds ratio derived from logistic regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

PCEs and Substance Use Behaviors: Lifetime Smoking Status

Smoked at Least 100 Cigarettes in Lifetime



Lifetime Smoking Status

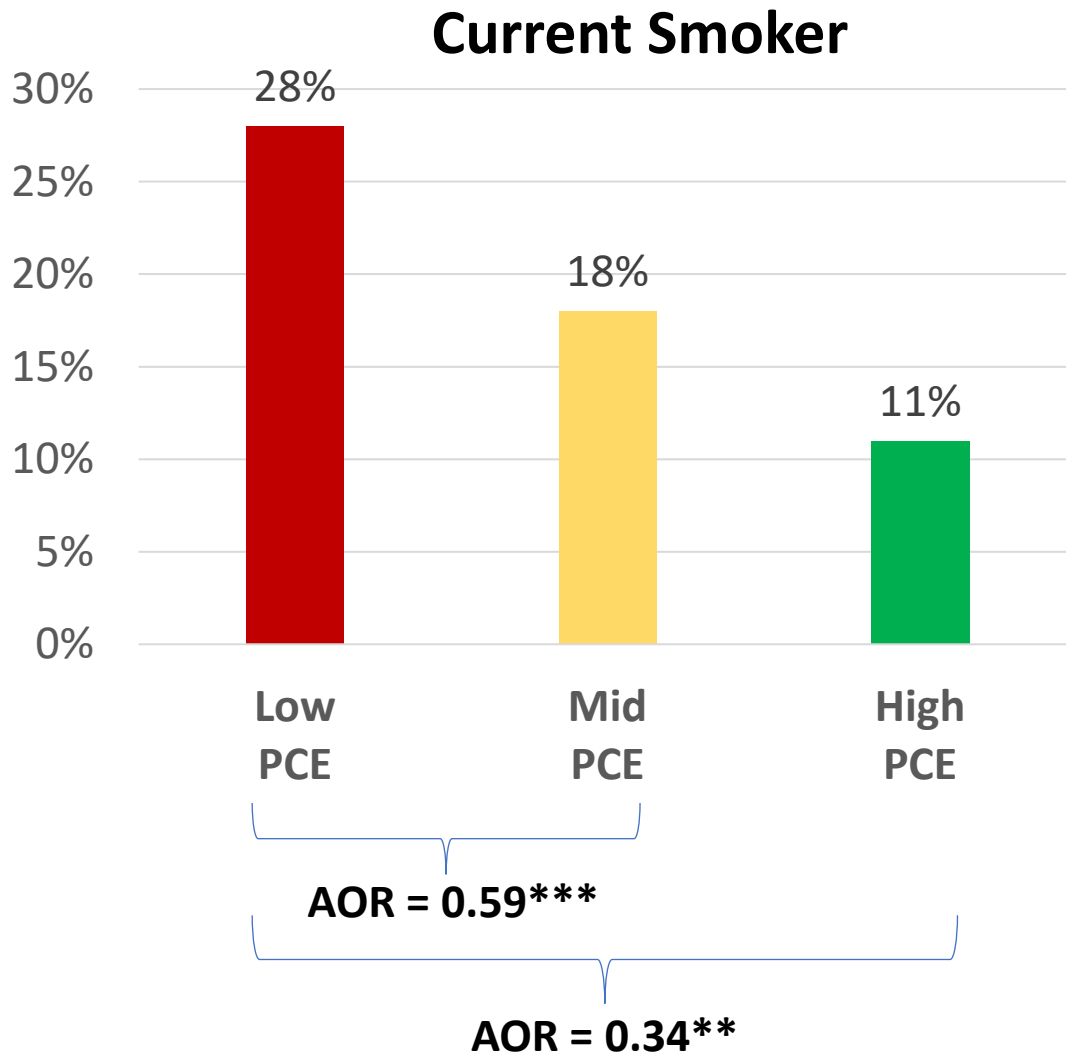
- Across **ALL** the PCEs, those who endorsed the given childhood experience (often or very often) were at significantly lower odds of having ever been a smoker.
- Said differently, those who did **not** endorse the positive experiences were at greater risk of having ever been a smoker.

Interpreting these effects:

1. Those who felt safe and protected by an adult in their home had a **45% reduced risk** of having ever been a smoker.
2. Those who felt a sense of belonging at high school had a **37% reduced risk** of having ever been a smoker.
3. Those who felt supported by friends had a **30% reduced risk** for having ever been a smoker.
4. Those who had at least 2 nonparent adults take a genuine interest had a **32% reduced risk** of having ever been a smoker.
5. Those who were able to talk to family about their feelings had a **25% reduced risk** of having ever been a smoker.
6. Those who enjoyed participating in community traditions had a **42% reduced risk** of having ever been a smoker.
7. Those who felt family stood by them during difficult times had a **46% reduced risk** of having ever been a smoker.

Note: AOR = Adjusted odds ratio derived from logistic regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

PCEs and Substance Use Behaviors: Current Smoking Status

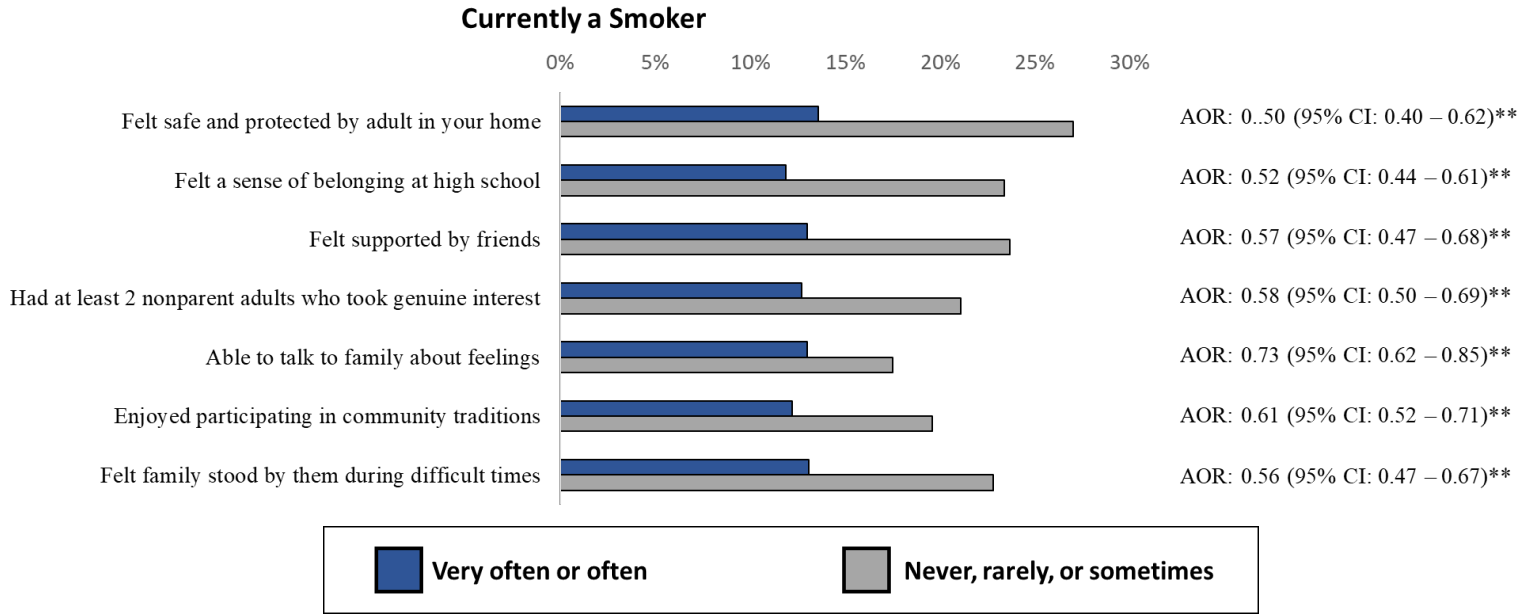


Current Smoking Status

- Those in the high PCE category had the lowest prevalence of current smoking status (11%).
- Compared to the low PCE group, those in the medium PCE group had a 41% reduced risk of currently being a smoker, and those in the high PCE group had a 66% reduced risk of currently being a smoker.

Note: AOR = Adjusted odds ratio derived from logistic regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

PCEs and Substance Use Behaviors: Current Smoking Status



Current Smoking Status

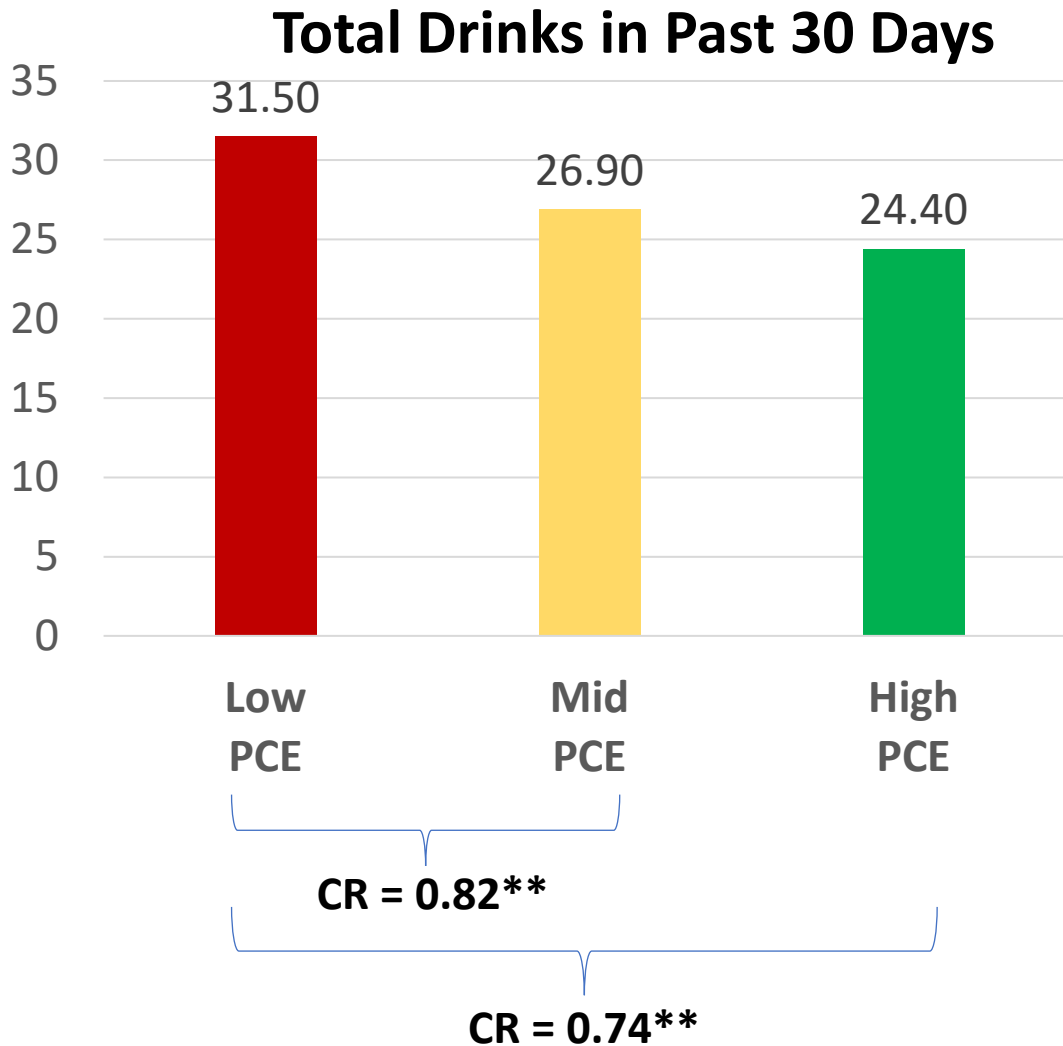
- Across **ALL** the PCEs, those who endorsed the given childhood experience (often or very often) were at significantly lower odds of currently being a smoker.
- Said differently, those who did **not** endorse the positive experiences were at greater risk of currently being a smoker.

Interpreting these effects:

1. Those who felt safe and protected by an adult in their home had a **50% reduced risk** of currently being a smoker.
2. Those who felt a sense of belonging at high school had a **48% reduced risk** of currently being a smoker.
3. Those who felt supported by friends had a **43% reduced risk** of currently being a smoker.
4. Those who had at least 2 nonparent adults take a genuine interest had a **42% reduced risk** of currently being a smoker.
5. Those who were able to talk to family about their feelings had a **27% reduced risk** of currently being a smoker.
6. Those who enjoyed participating in community traditions had a **39% reduced risk** of currently being a smoker.
7. Those who felt family stood by them during difficult times had a **44% reduced risk** of currently being a smoker.

Note: AOR = Adjusted odds ratio derived from logistic regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

PCEs and Substance Use Behaviors: Alcohol Use



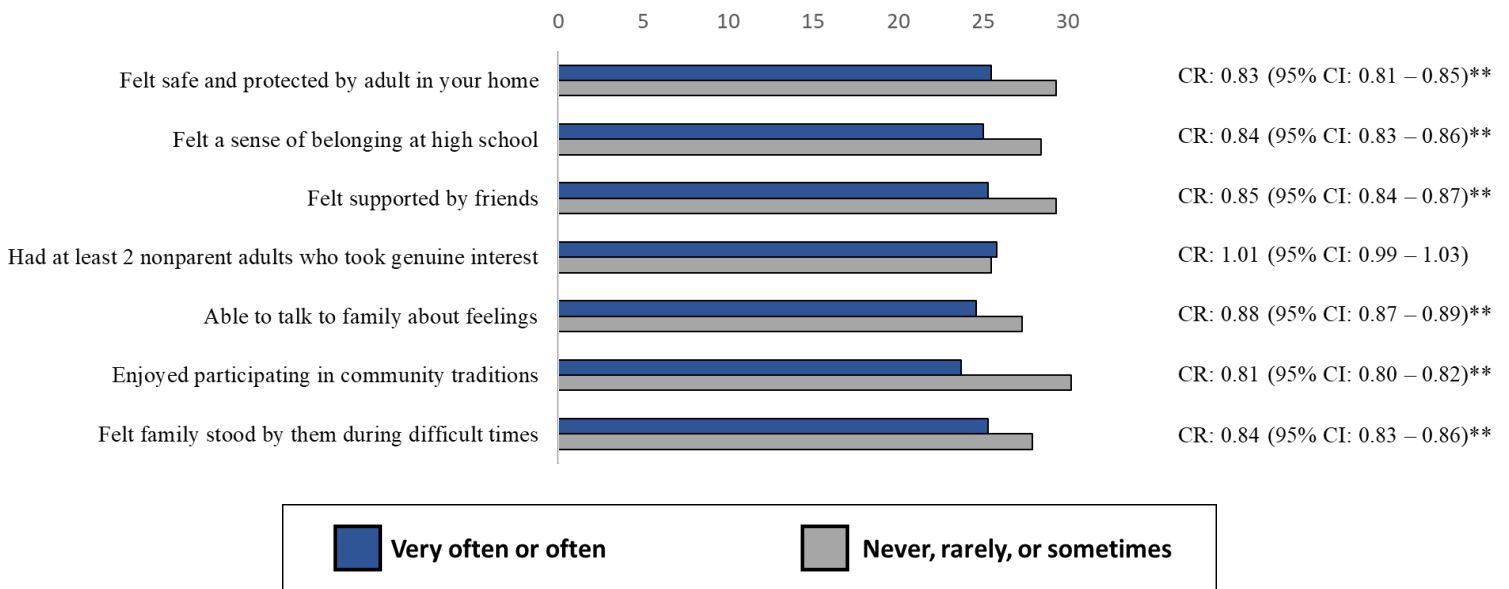
Total Drinks Consumed in Past 30 Days (among those who drank at all in past month)

- Those in the high PCE category reported the lowest past-month drinking (~24 drinks, on average).
- Compared to the low PCE group, those in the medium PCE group reported 18% fewer drinks, and those in the high PCE group reported 26% fewer drinks.

Note: CR = Count ratio derived from Poisson count regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

PCEs and Substance Use Behaviors: Alcohol Use

Total Number of Drinks in Past 30 Days



Total Drinks Consumed in Past 30 Days (among those who drank at all in past month)

- Except for having 2 non-parent adults take a genuine interest, all other PCEs were associated with significantly fewer drinks consumed in the past month.
- Said differently, those who did **not** endorse the positive experiences were at greater risk of using greater quantities of alcohol.

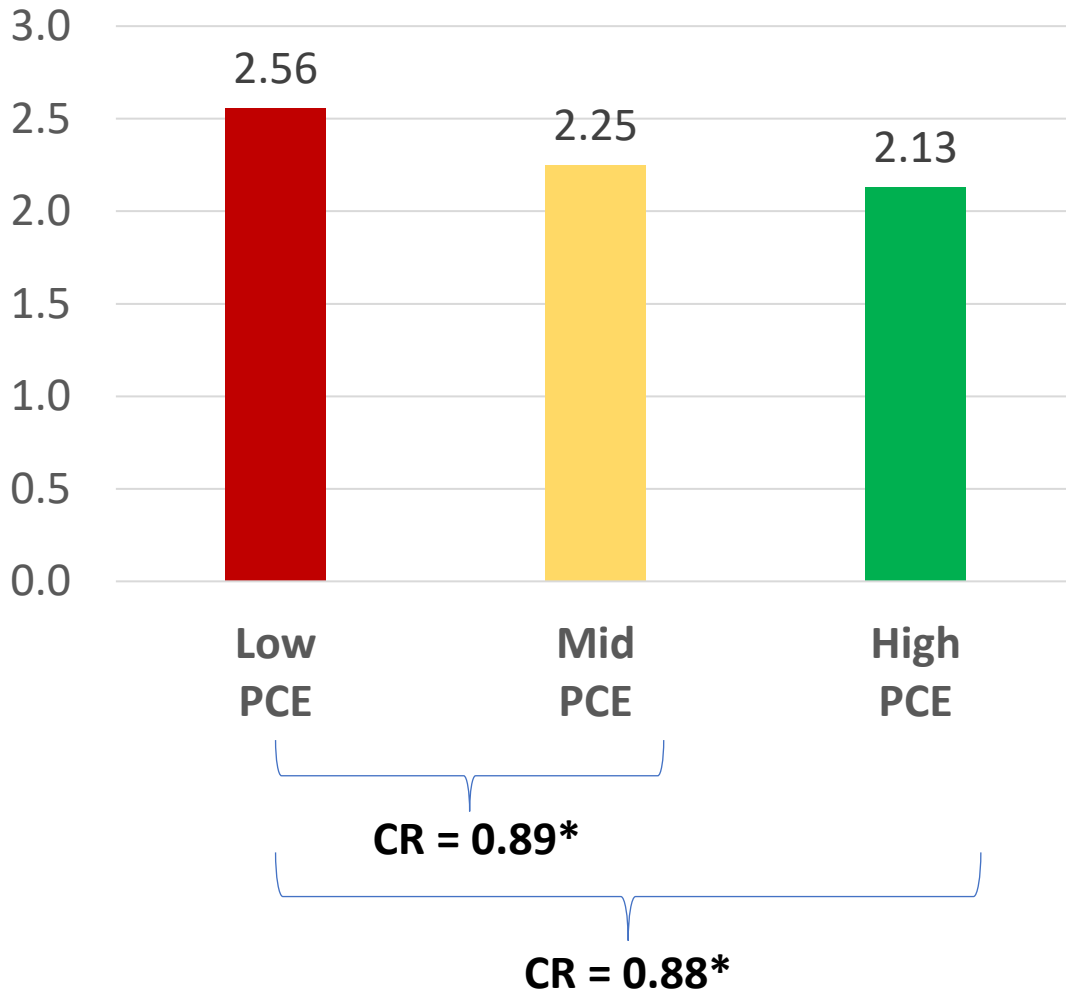
Interpreting these effects:

1. Those who felt safe and protected by an adult in their home reported **17% fewer drinks** in the past month.
2. Those who felt a sense of belonging at high school reported **16% fewer drinks** in the past month.
3. Those who felt supported by friends reported **15% fewer drinks** in the past month.
4. Those who were able to talk to family about their feelings reported **12% fewer drinks** in the past month.
5. Those who enjoyed participating in community traditions reported **19% fewer drinks** in the past month.
6. Those who felt family stood by them during difficult times reported **16% fewer drinks** in the past month.

Note: CR = Count ratio derived from Poisson count regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

PCEs and Substance Use Behaviors: Alcohol Use

Drinks Per Occasion



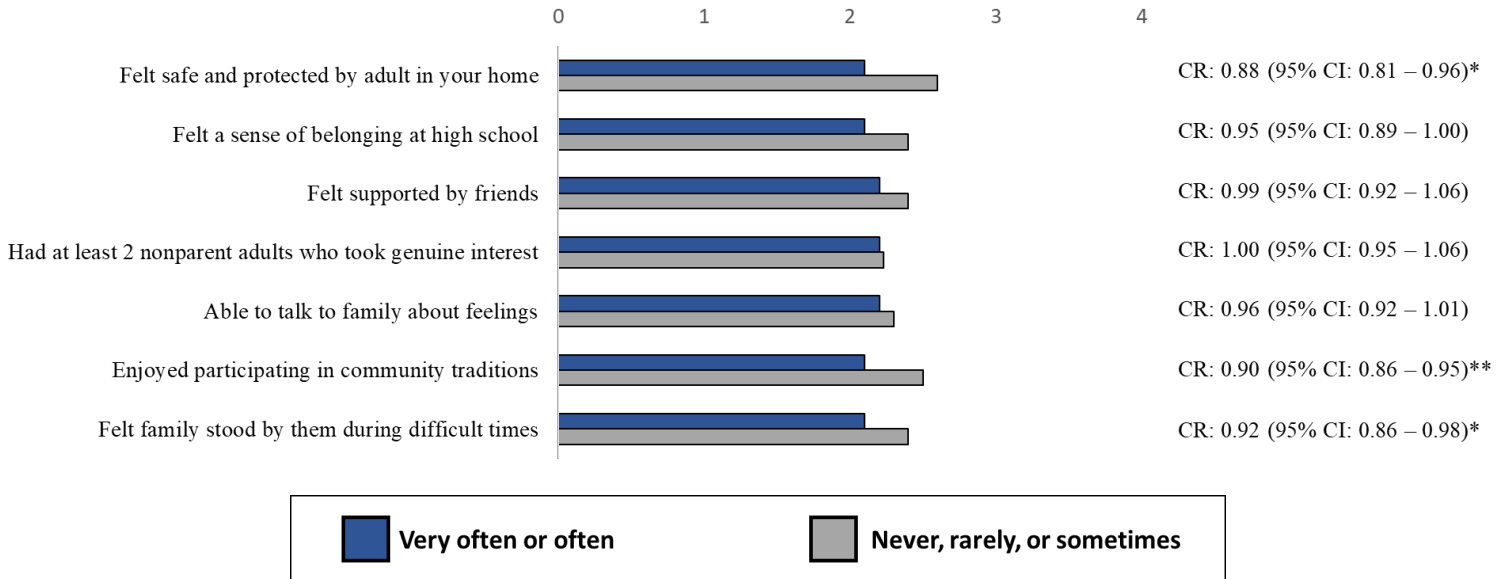
Drinks per Occasion (among those who drank at all in past month)

- Those in the high PCE category reported the lowest number of drinks per occasion (2.13 drinks, on average).
- Compared to the low PCE group, those in the medium PCE group reported 11% fewer drinks per occasion, and those in the high PCE group reported 12% fewer drinks per occasion.

Note: CR = Count ratio derived from Poisson count regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

PCEs and Substance Use Behaviors: Alcohol Use

Drinks Per Occasion in Past 30 Days



Drinks per Occasion (among those who drank at all in past month)

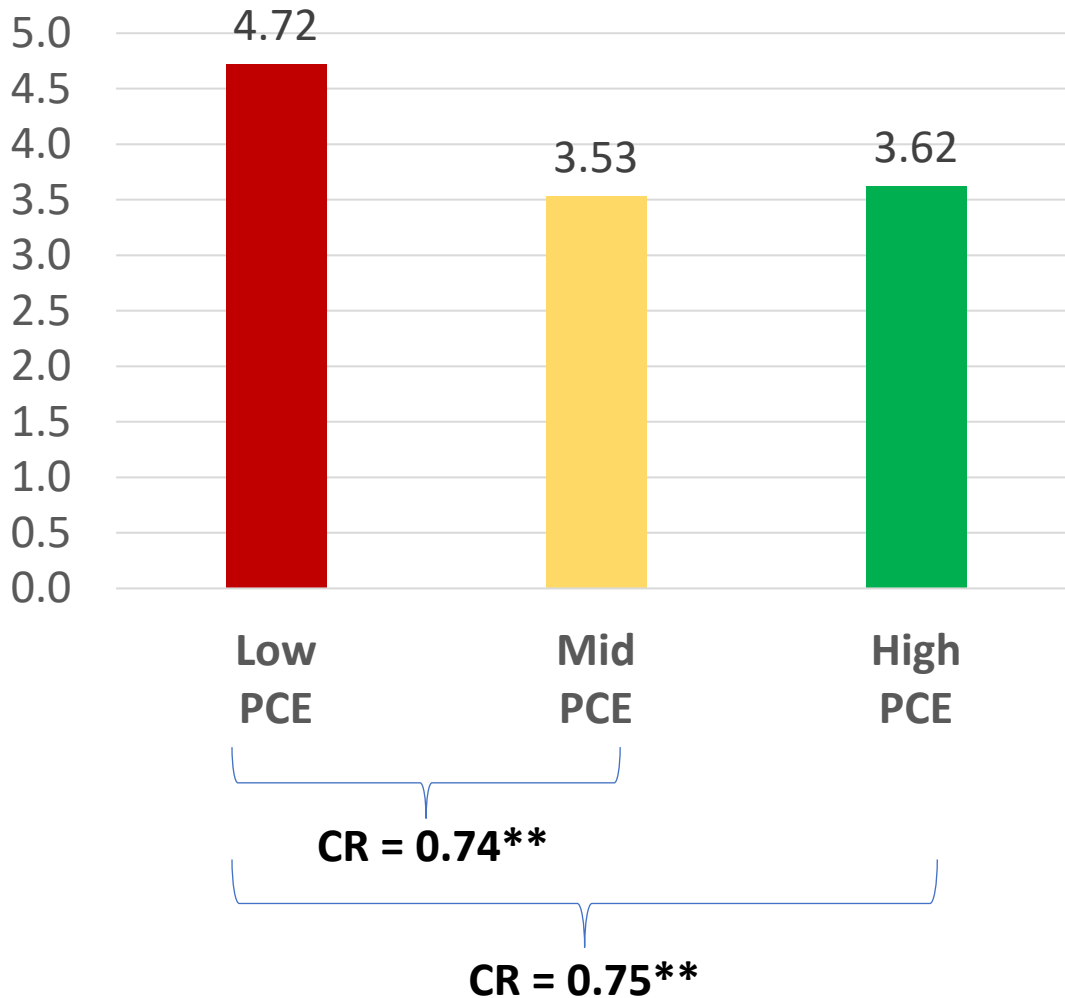
- Those felt safe and protected by an adult in their home, those enjoyed participating in community traditions, and those who felt their family stood by them during difficult times reported significantly fewer drinks per occasion, on average, relative to those who did not experience these PCEs.
- Said differently, those who did **not** endorse these three positive experiences were at greater risk of using greater quantities of alcohol when they would drink.

Interpreting these effects:

1. Those who felt safe and protected by an adult in their home reported **12% fewer drinks** per occasion in the past month.
2. Those who enjoyed participating in community traditions reported **10% fewer drinks** per occasion in the past month.
3. Those who felt family stood by them during difficult times reported **8% fewer drinks** per occasion in the past month.

Note: CR = Count ratio derived from Poisson count regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

Binge Drinking Occasions



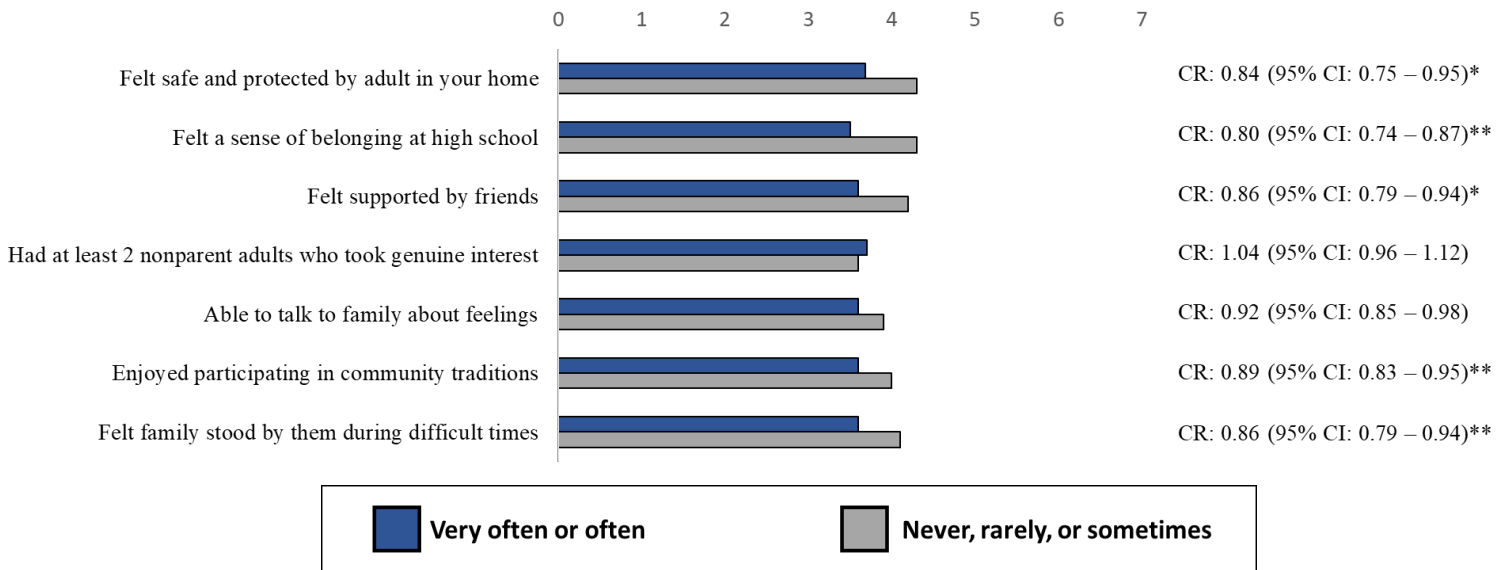
Binge Drinking Occasions (among those who drank at all in past month)

- Those in the medium and high PCE categories reported significantly fewer binge drinking occasions than those in the low PCE category.
- Compared to the low PCE group, those in the medium PCE group reported 26% fewer binge drinking occasions, and those in the high PCE group reported 25% fewer binge drinking occasions.

Note: CR = Count ratio derived from Poisson count regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

PCEs and Substance Use Behaviors: Alcohol Use

Number of Binge Drinking Occasions in Past 30 Days



Binge Drinking Occasions (among those who drank at all in past month)

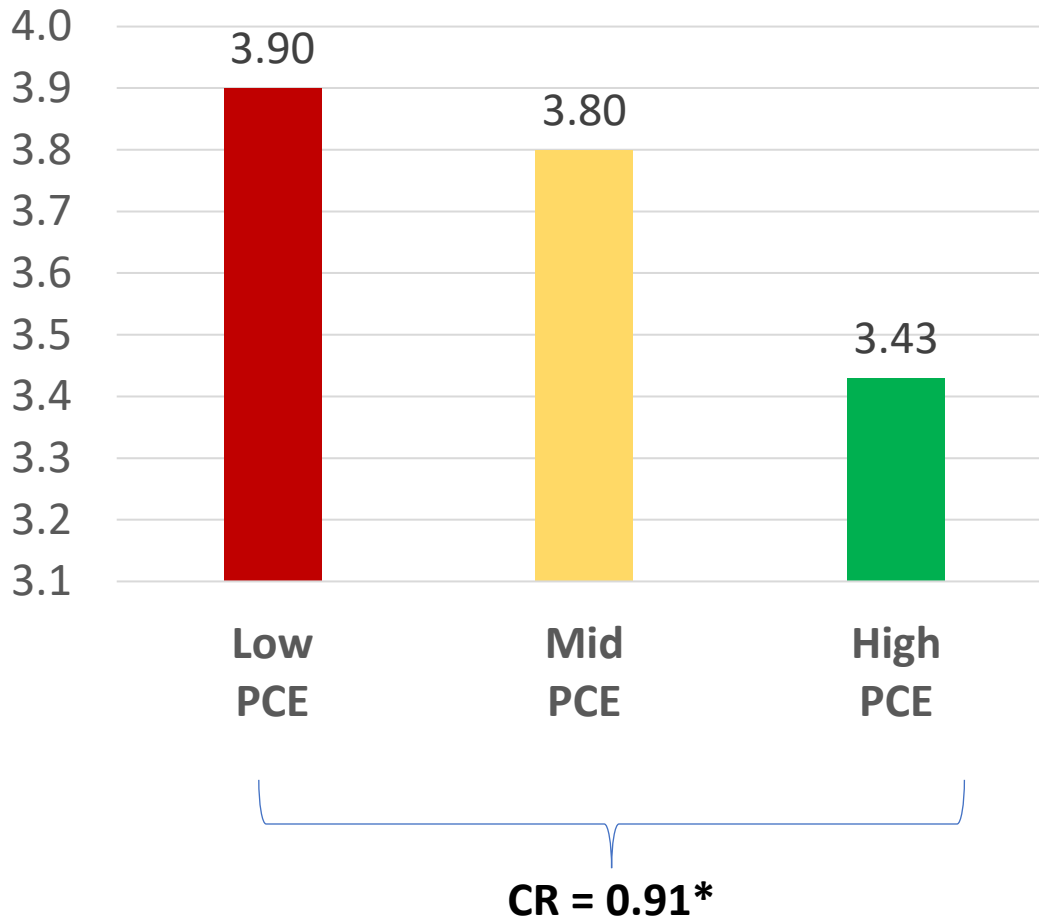
- Except for having 2 adults take a genuine interest, and being able to talk to family about feelings, all other PCEs were associated with significantly fewer binge drinking occasions, on average, relative to those who did not experience these PCEs.
- Said differently, those who did **not** endorse these positive experiences were at greater risk of engaging in binge drinking occasions.

Interpreting these effects:

1. Those who felt safe and protected by an adult in their home reported **16% fewer** binge drinking occasions.
2. Those who felt a sense of belonging at high school reported **20% fewer** binge drinking occasions.
3. Those who felt supported by friends reported **14% fewer** binge drinking occasions.
4. Those who enjoyed participating in community traditions reported **11% fewer** binge drinking occasions.
5. Those who felt family stood by them during difficult times reported **14% fewer** binge drinking occasions.

Note: CR = Count ratio derived from Poisson count regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

Max # of Drinks in an Occasion



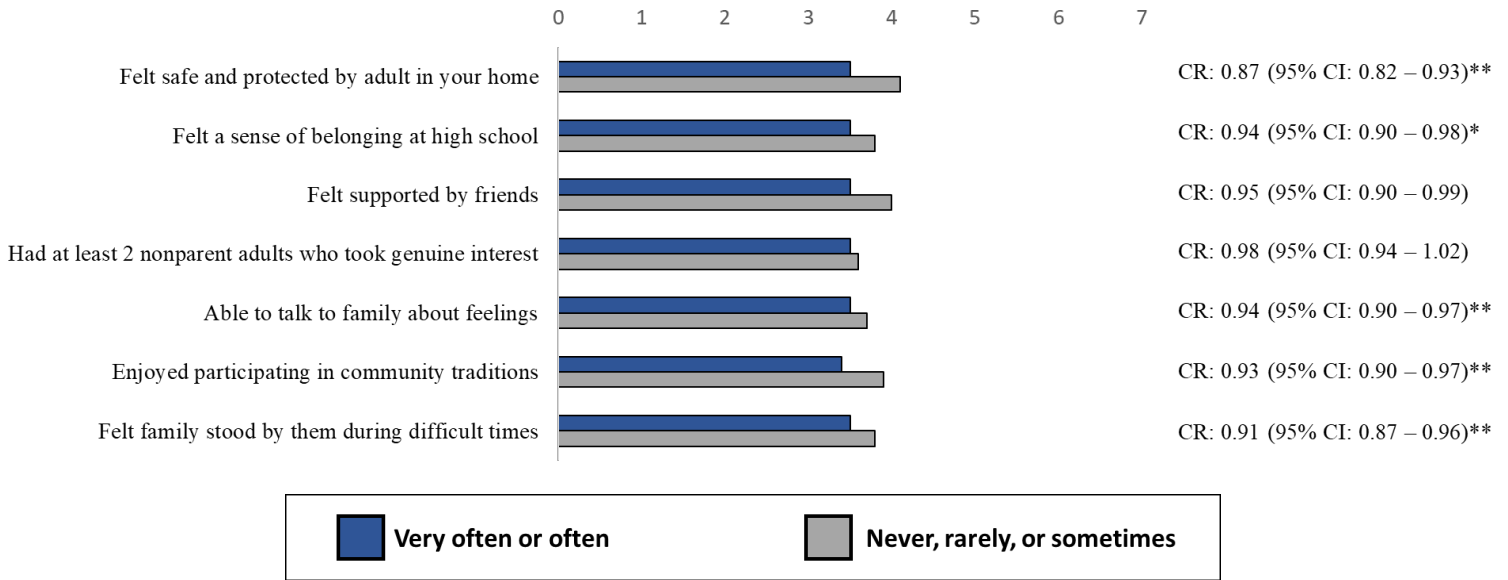
Maximum Number of Drinks in an Occasion in Past 30 Days (among those who drank at all in past month)

- Those in the high PCE category reported the lowest maximum number of drinks in an occasion in the past month (3.43 drinks, on average).
- Compared to the low PCE group, those in the high PCE group reported 9% fewer drinks during their heaviest drinking occasion.

Note: CR = Count ratio derived from Poisson count regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

PCEs and Substance Use Behaviors: Alcohol Use

Maximum Drinks on a Single Occasion in Past 30 Days



Maximum Number of Drinks in an Occasion in Past 30 Days (among those who drank at all in past month)

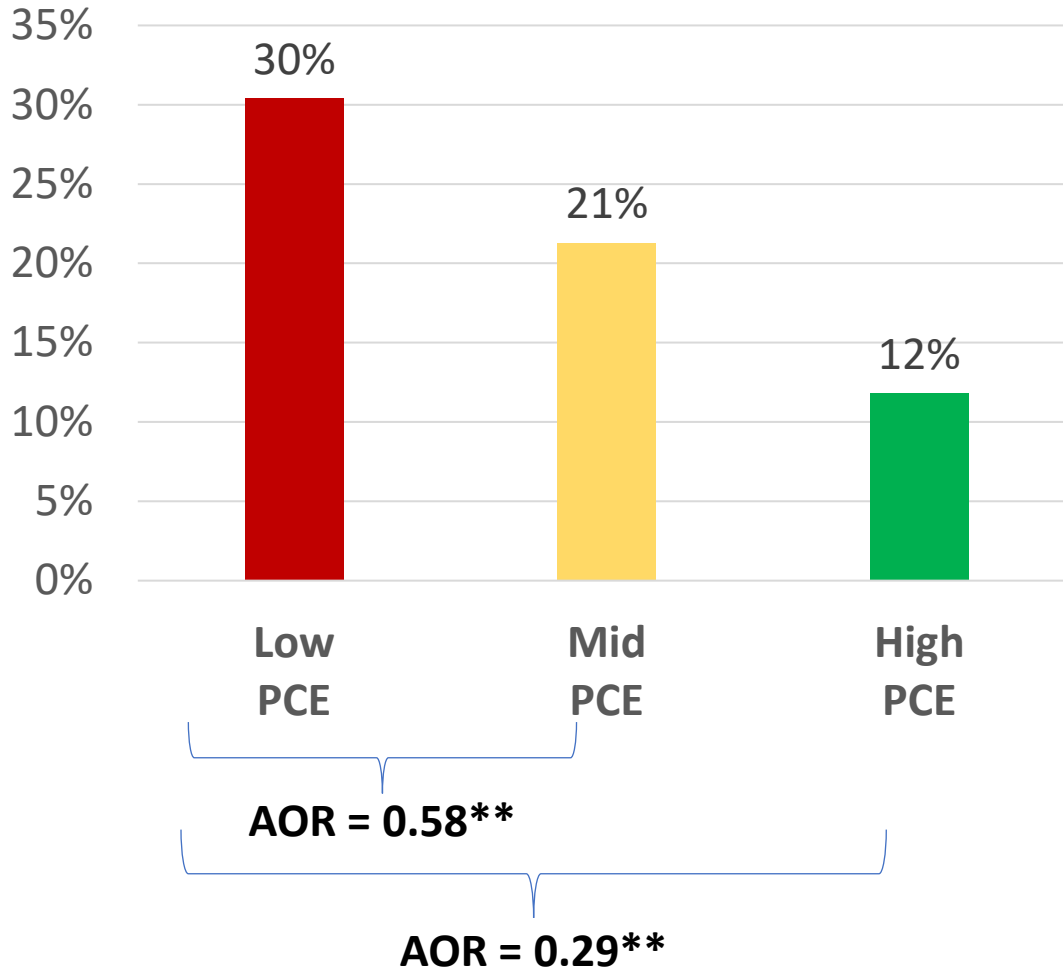
- Except for having 2 adults take a genuine interest, and feeling supported by friends, all other PCEs were associated with significantly fewer drinks consumed during the heaviest drinking occasion, relative to those who did not experience these PCEs.
- Said differently, those who did **not** endorse these positive experiences were at greater risk of engaging in heavier peak alcohol use.

Interpreting these effects:

1. Those who felt safe and protected by an adult in their home reported **13% fewer** drinks in their max drinking occasion.
2. Those who felt a sense of belonging at high school reported **6% fewer** drinks in their max drinking occasion.
3. Those who were able to talk to family about their feelings reported **6% fewer** drinks in their max drinking occasion.
4. Those who enjoyed participating in community traditions reported **7% fewer** drinks in their max drinking occasion.
5. Those who felt family stood by them during difficult times reported **9% fewer** drinks in their max drinking occasion.

Note: CR = Count ratio derived from Poisson count regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

Lifetime Use of Any Illicit Drug



Any Lifetime Use of Illicit Drugs (i.e., cocaine, including crack, heroin, methamphetamine, also known as meth, crank, or ice, hallucinogens, inhalants, stimulants, and sedatives).

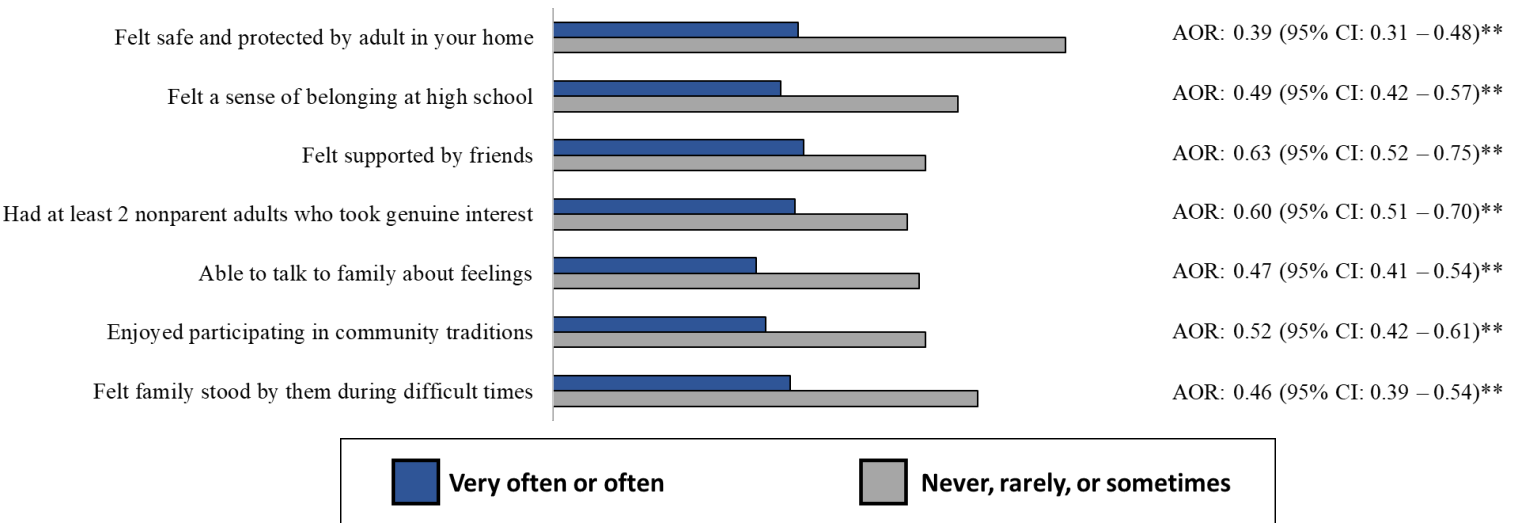
- Those in the high PCE category reported the lowest prevalence of lifetime illicit drug use (12%).
- Compared to the low PCE group, those in the mid PCE group reported 42% lower odds of lifetime illicit drug use, and those in the high PCE group reported 71% lower odds of lifetime illicit drug use.

Note: AOR = Adjusted odds ratio derived from logistic regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

PCEs and Substance Use Behaviors: Illicit Drug Use

Lifetime Use of Any Illicit Drug

0% 5% 10% 15% 20% 25% 30% 35%



Any Lifetime Use of Illicit Drugs (i.e., cocaine, including crack, heroin, methamphetamine, also known as meth, crank, or ice, hallucinogens, inhalants, stimulants, and sedatives).

- Across **ALL** the PCEs, those who endorsed the given childhood experience (often or very often) were at significantly lower odds of having ever used an illicit drug.
- Said differently, those who did **not** endorse the positive experiences were at greater risk of having ever used an illicit drug.

Interpreting these effects:

1. Those who felt safe and protected by an adult in their home had a **61% reduced risk** of having ever used an illicit drug.
2. Those who felt a sense of belonging at high school had a **51% reduced risk** of having ever used an illicit drug.
3. Those who felt supported by friends had a **37% reduced risk** for having ever used an illicit drug.
4. Those who had at least 2 nonparent adults take a genuine interest had a **40% reduced risk** of having ever used an illicit drug.
5. Those who were able to talk to family about their feelings had a **53% reduced risk** of having ever used an illicit drug.
6. Those who enjoyed participating in community traditions had a **48% reduced risk** of having ever used an illicit drug.
7. Those who felt family stood by them during difficult times had a **54% reduced risk** of having ever used an illicit drug.

Note: AOR = Adjusted odds ratio derived from logistic regression model controlling for age at time of survey, birth sex, race/ethnicity, and annual household income. Values >1 indicate positive association and values < 1 indicate inverse/negative associations. *p < .01, **p < .001.

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