



## Washington HYS Adverse Childhood Experiences (WAH-ACEs)

### What are Adverse Childhood Experiences (ACEs)?

- Adverse Childhood Experiences, or ACEs, are indicators of severe childhood stressors and family dysfunction that occur during a person's first 18 years of life.
- The original research study on ACEs was conducted from 1995 to 1997 and found that ACEs can have lasting negative effects on health, behaviors, and life potential. For example, people who experienced four or more ACEs showed increased health risks for alcoholism, drug use, depression, suicide attempt, smoking, cancer, and additional negative long term health outcomes.<sup>1</sup>
- The original ACEs study questions were developed to ask adults about experiences during their lifetime. Since then, many studies have explored how we can best measure ACEs and their influence on health.

### Some of the most commonly reported ACEs include:

- Physical, sexual, and emotional abuse
- Emotional or physical neglect
- Alcohol or other substance abuse in the home
- Mental illness, depression, or suicidal behaviors in the home
- Incarceration of a family member
- Witnessing intimate partner violence
- Parental divorce or separation

### The WAH-ACEs Score

The Healthy Youth Survey (HYS) has collected ACEs-related data since the survey was founded.\*

Over time, the ACEs-related questions on HYS have evolved in response to feedback from schools, communities, research, and policy. For example, items related to dating violence and bullying were suggested as relevant sources of trauma for school-aged youth.

WAH-ACEs combines the following 11 questions asked on Form B of the HYS to give students a score.

**PLEASE NOTE:** The WAH-ACEs score does not include all adverse experiences a child may be exposed to.

For example, racism, poverty, and discrimination are examples of childhood adversity<sup>2</sup> and are not included in the WAH-ACEs score.

1. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP, Marks JS. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med.* 1998 May;14(4):245-58. doi: 10.1016/s0749-3797(98)00017-8. PMID: 9635069.

2. Bruner C. ACE, Place, Race, and Poverty: Building Hope for Children. *Acad Pediatr.* 2017 Sep-Oct;17(7S):S123-S129. doi: 10.1016/j.acap.2017.05.009. PMID: 28865644.

\* Students participating in the HYS are provided resources for support if any survey questions are distressing to answer.

Adverse Childhood Experiences (WAH-ACEs)

**WAH-ACEs on Healthy Youth Survey Form B**

1.	I feel safe during school.
2.	During the past 30 days, on how many days did you not go to school because you felt you would be unsafe on your way to and from school ?*
3.	Bullying is when one or more students threaten, spread rumors about, hit, shove, or otherwise hurt another student over and over again. It is not bullying when two students of about the same strength or power argue or fight or tease each other in a friendly way. In the last 30 days, how often have you been bullied?*
4.	During the past 12 months, did someone you were dating or going out with ever limit your activities, threaten you, or make you feel unsafe in any other way? **
5.	In the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon.) **
6.	Have you ever been in a situation where someone made you engage in kissing, sexual touch or intercourse when you did not want to?
7.	Not counting TV, movies, video games, and sporting events, have you seen an adult hit, slap, punch, shove, kick, or otherwise physically hurt another adult more than one time?
8.	Has an adult ever physically hurt you on purpose (like pushed, slapped, hit, kicked or punched you), leaving a mark, bruise or injury?
9.	How often does a parent or adult in your home swear at you, insult you, put you down or humiliate you?
10.	Are your current living arrangements the result of losing your home because your family cannot afford housing?
11.	How often in the past 12 months did you or your family have to cut meal size or skip meals because there wasn't enough money for food? **

**\*1+ days in past 30 days, \*\* in past 12 months**

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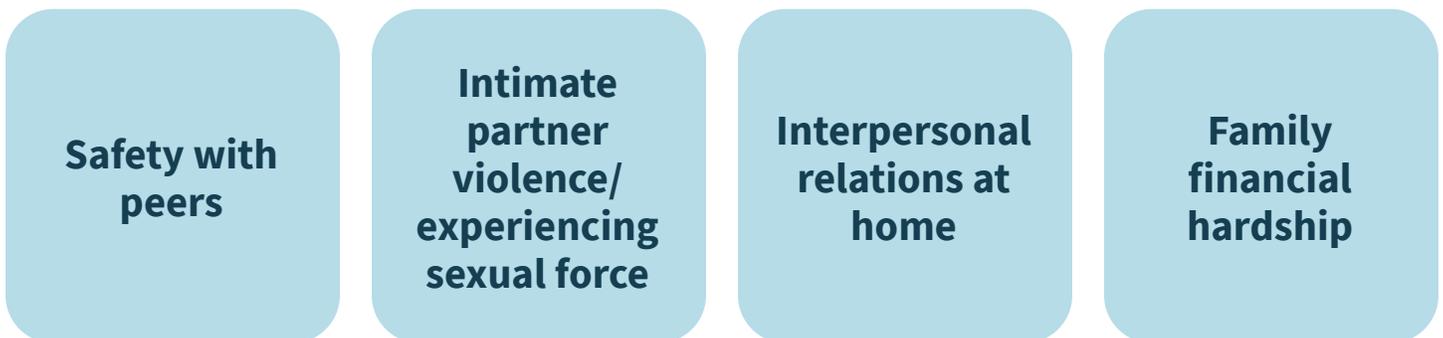
### Why and how were these 11 questions chosen?

The HYS Planning Committee conducted a review of public health, social work, and psychology literature on adverse experiences among children, youth, and young adults and the association with short and long-term effects on their health and wellbeing. Given that the foundational literature around ACEs was among adults, looking more broadly at adolescent health research was an important step to ensure any additional concepts important to youth with recent exposures were identified.

Questions were selected from the HYS that addressed topics identified in the literature review, including intimate partner violence, physical or sexual abuse by an adult, safety in school, bullying, and financial hardship, among other topics. Some adverse experiences identified in the literature were not captured in HYS questions and could therefore not be included in WAH-ACEs (e.g., neglect).

### Deciding how to calculate the WAH-ACEs score

There are several ways to represent groups of variables related to a single broader concept. A principal component analysis (PCA) was used to determine the simplest and most accurate way to interpret the concept of adverse experiences in the HYS data using all of the questions identified as part of the literature review. The PCA revealed 11 variables that grouped together into **four distinct domains**:



The PCA results showed that while these domains were identifiable, the correlations between individual questions were not sufficiently strong to use the PCA method to create a simplified score. Instead, it was determined that the most accurate and interpretable way to represent these 11 variables was to create a score for each student where their answers were added up based on the presence or absence of the adverse experience (dichotomization).

For each question, a student could get a value of 0 or 1 and these were added up to create their final score.

**Adverse Childhood Experiences (WAH-ACEs)****Interpreting WAH-ACEs**

**WAH-ACEs measures the overall adverse experiences a student reported on the survey. In other words, how many of the 11 WAH-ACEs items did they experience?**

In the scientific literature, ACEs are usually shown in categories such as 0, 1, 2, 3, 4+ ACEs. This is because as the number of ACEs increases, the number of people who report that number of ACEs decreases. When you reach the highest possible scores, the numbers are often too small to report. This is why tables and figures in the fact sheet use 0 through 4+ as categories. Presenting results in these categories makes them easier to interpret while still showing how increasing WAH-ACEs are generally linked to other negative experiences.

Sometimes students do not answer all questions on the survey; the WAH-ACEs score accounts for any missing answers to give schools and districts a more precise picture of what their students are experiencing.

- For example, if a student did not answer whether they receive free and or reduced lunch at school, their response will be estimated based on their responses to other questions and the responses of other students in the state through a technique called multiple imputation. This technique accounts for those missing answers by estimating students' score from their other survey responses.
- The final summary WAH-ACEs score makes it easier to understand relationships between WAH-ACEs overall and other questions on the survey.

Remember that HYS is a survey taken at one point in time. Causal conclusions cannot be drawn from these results. When reviewing WAH-ACEs results, it would not be correct to say that childhood adversity caused something to happen or that something else in the survey causes childhood adversity to occur. Instead, it is more appropriate to describe how WAH-ACEs is related to the presence of other things youth might report on the survey.

**Why is WAH-ACEs relevant to schools and communities?**

**Because childhood adversities are often preventable.**

- Children who experience childhood adversities and trauma can also experience toxic levels of stress, which in turn can affect learning and have negative short- and long-term consequences for health.<sup>3</sup>
- Educators of children with more adverse exposures may also experience secondary or vicarious traumatic stress as a result.<sup>4</sup>
- Positive childhood experiences, such as interpersonal experiences with family, friends, and in school and communities may reduce risks associated with ACEs, despite co-occurring adversities.<sup>5, 6, 7</sup>

3. Franke HA. Toxic Stress: Effects, Prevention and Treatment. *Children (Basel)*. 2014;1(3):390-402. Published 2014 Nov 3. doi:10.3390/children1030390

4. Suniya S, Luthar & Skyler H. Mendes. Trauma-informed schools: Supporting educators as they support the children. *International Journal of School & Educational Psychology*. 2020 April;8(2): 147-157. doi: 10.1080/21683603.2020.1721385

5. Sege RD. Reasons for HOPE. *Pediatrics*. 2021 May;147(5):e2020013987. doi: 10.1542/peds.2020-013987. PMID: 33879519.

6. Sege RD, Harper Browne C. Responding to ACEs With HOPE: Health Outcomes From Positive Experiences. *Acad Pediatr*. 2017 Sep-Oct;17(7S):S79-S85. doi: 10.1016/j.acap.2017.03.007. PMID: 28865664.

7. Bethell C, Jones J, Gombojav N, Linkenbach J, Sege R. Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample: Associations Across Adverse Childhood Experiences Levels. *JAMA Pediatr*. 2019;173(11):e193007. doi:10.1001/jamapediatrics.2019.3007

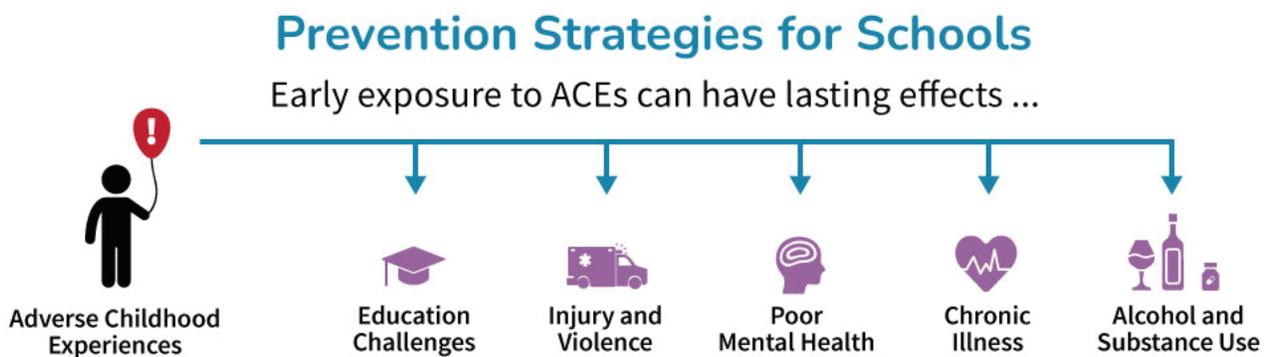
**Adverse Childhood Experiences (WAH-ACEs)**

**Preventing childhood adversities**

Early intervention can help prevent or reduce some of the short- and long-term harmful effects that youth may experience as a result of adverse exposures. Below is a table summarizing ways that schools, youth programs, and communities can make a difference!

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

Adapted from <https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf>



... but **prevention** and **early intervention** can help.

- ✓ Create a nurturing school environment
- ✓ Enhance school safety and reduce violence and bullying
- ✓ Promote positive relationships with peers and adults
- ✓ Support family stability
- ✓ Develop community connection

## Adverse Childhood Experiences (WAH-ACEs)

To learn more about preventing childhood adversities, visit these resources:

- **Centers for Disease Control and Prevention (CDC) ACEs website**  
<https://www.cdc.gov/violenceprevention/aces/index.html>
  - **CDC’s ACEs Prevention**  
<https://www.cdc.gov/violenceprevention/aces/fastfact.html>
- **Washington State Department of Health ACEs website**  
<https://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/PublicHealthSystemResourcesandServices/LocalHealthResourcesandTools/MaternalandChildHealthBlockGrant/AdverseChildhoodExperiences>
- **Office of Superintendent of Public Instruction’s Trauma Informed Schools resource page**  
<https://www.k12.wa.us/trauma-informed-schools>
- **Washington Health Care Authority’s Community Prevention and Wellness Initiative**  
[https://www.theathenaforum.org/community\\_prevention\\_and\\_wellness\\_initiative\\_cpwi](https://www.theathenaforum.org/community_prevention_and_wellness_initiative_cpwi)
- **The National Child Traumatic Stress Network Guide for Education and Therapy**  
<https://www.nctsn.org/interventions/trauma-affect-regulation-guide-education-and-therapy>

**For more details about WAH-ACEs, use the QxQ, Frequency Reports, or Fact Sheets on AskHYS.net**

**Legal requirements:** Federal and Washington state regulations prohibit discrimination against LEP individuals who are Deaf, DeafBlind, Hard of Hearing, or visually impaired. Read **HCA Policy 01-27** “Language Access Services” and **Policy 01-30** “Equal Access to Services for Individuals with Disabilities” for more information. If you have a question about an accommodation, please contact the Healthy Youth Survey study Principal Investigator, at [Healthy.Youth@doh.wa.gov](mailto:Healthy.Youth@doh.wa.gov) or call toll free (877-HYS-7111).