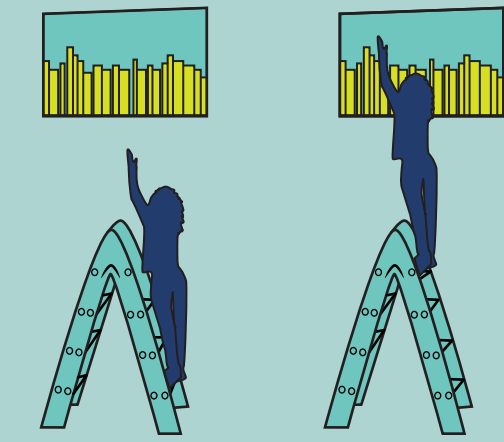


# CHILD HOMELESSNESS & TOXIC STRESS: FAR-REACHING CONSEQUENCES

## HOW CHRONIC STRESS & HOMELESSNESS IMPACT THE DEVELOPING BRAIN

Adverse childhood experiences (ACEs) such as poverty and homelessness can cause chronic stress during childhood. Typically, the more adversity a child experiences (the higher their 'ACE score'), the higher their risk for long-term negative consequences.

Chronic stress is powerful because it can alter brain circuits, causing the child's stress response system to go on high alert, unable to shut off. This impairs the pre-frontal cortex, hurting executive function. It also hurts the hippocampus. In turn, a child's ability to learn, regulate their emotions and behaviors, and interact in socially appropriate ways is diminished. This helps explain some of the academic outcomes we see in children who are homeless.



Children who are homeless are 4x more likely to have a developmental delay than stably housed peers.<sup>6</sup>

The **pre-frontal cortex** is involved with:

- solving complex problems
- rich thought
- emotion and personality expression<sup>1</sup>

It is also the home of 'executive function.'<sup>2</sup> Executive function refers to a suite of cognitive activities such as:

- paying attention
- remembering details
- planning
- information processing<sup>3</sup>

These are all functions hurt by toxic stress in childhood.

The **amygdala** is an almond shaped brain region responsible for:

- detecting harmful or scary environmental stimuli
- activating our stress response system, which can impair the prefrontal cortex<sup>4</sup>

When this happens we are less able to:

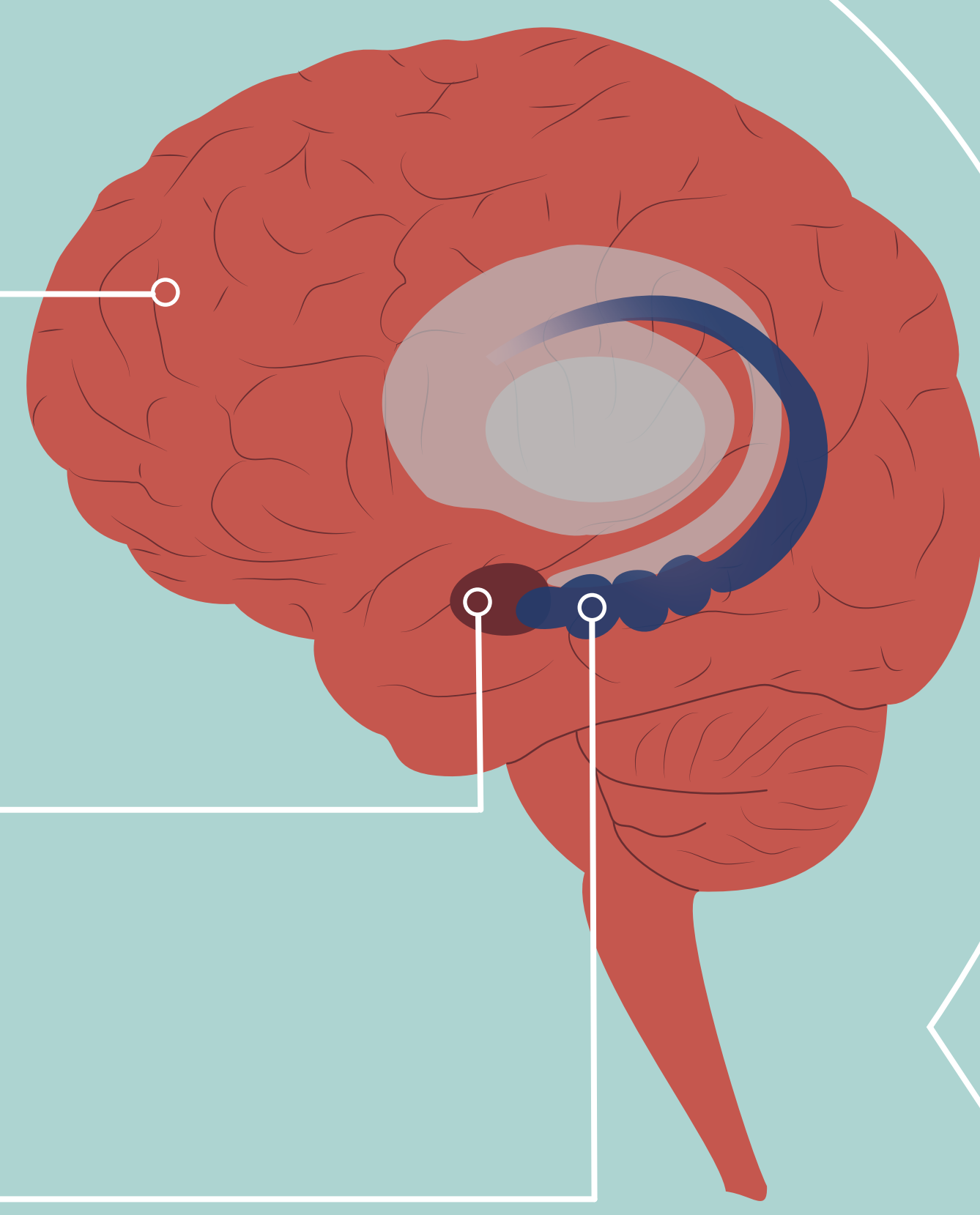
- think rationally
- control our emotions
- engage in effective planning<sup>5</sup>

The **hippocampus** is important for memory formation, and is essential to learning. It is also affected by chronic toxic stress. This means that stress can:

- cause memory impairment<sup>4,5</sup>
- hurt knowledge acquisition

Changes in the hippocampus have been linked to:

- anxiety disorders



75% of children who are homeless under the age of 5 have a developmental delay in speech.<sup>7</sup>

Children who are homeless have 3x the rate of emotional-behavioral disorders than children who are stably housed.<sup>8</sup>

Children who are homeless have 2x the rate of learning disabilities.<sup>9</sup>

Half of children who are homeless experience anxiety, depression and withdrawal.<sup>9</sup>

## PREVALENCE OF STUDENT HOMELESSNESS



The number of schoolchildren who are homeless in Washington state. This is an 82% increase since the 2006-07 school year.<sup>10</sup>



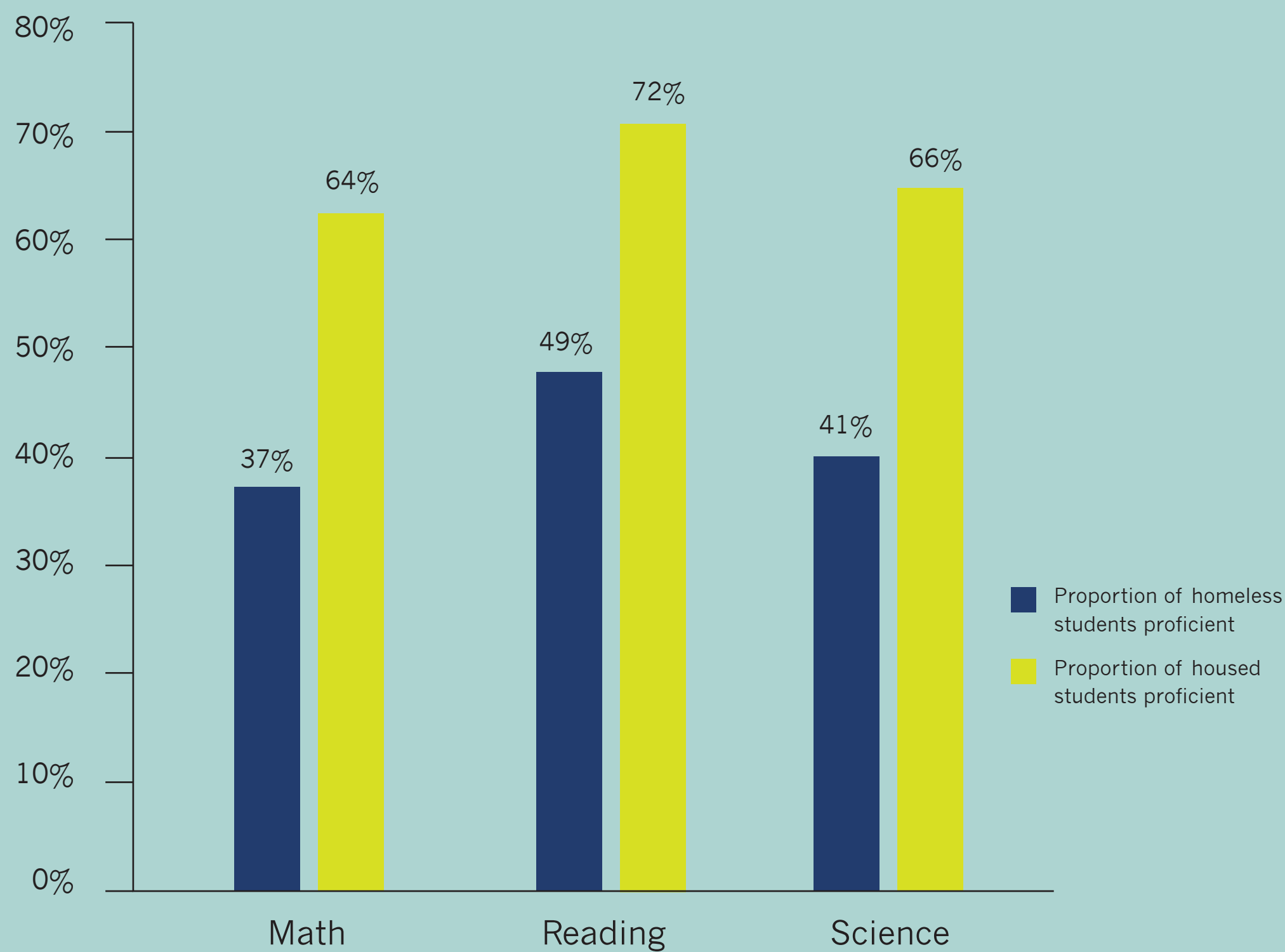
The number of schoolchildren who are homeless in the United States. This is an 8% increase since the last report.<sup>11</sup>

## ACADEMIC CONSEQUENCES



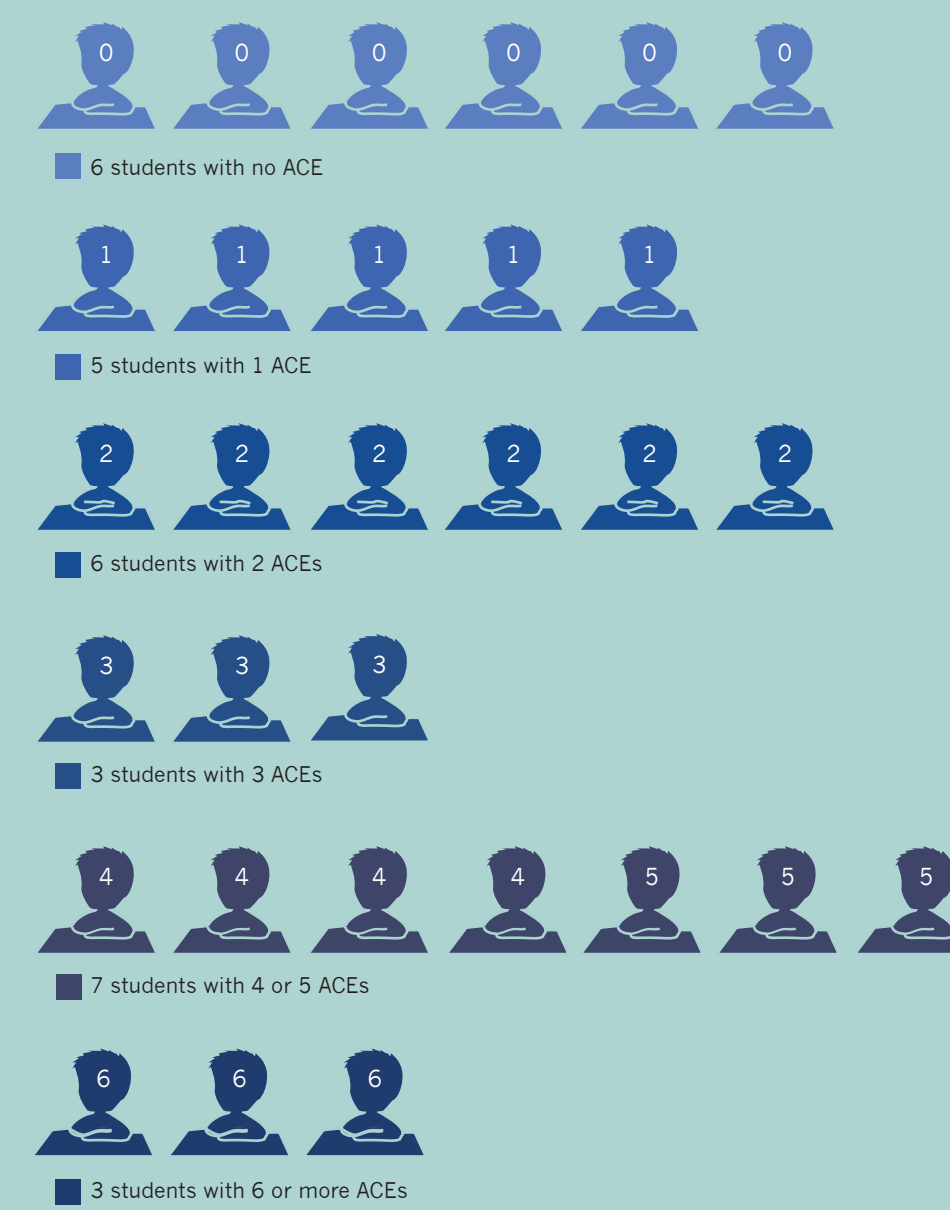
On average, children who are homeless change schools multiple times a year. Each time a student moves, 4-6 months of learning progress is lost, which widens the learning gap.<sup>12</sup>

THE LEARNING GAP<sup>12</sup>



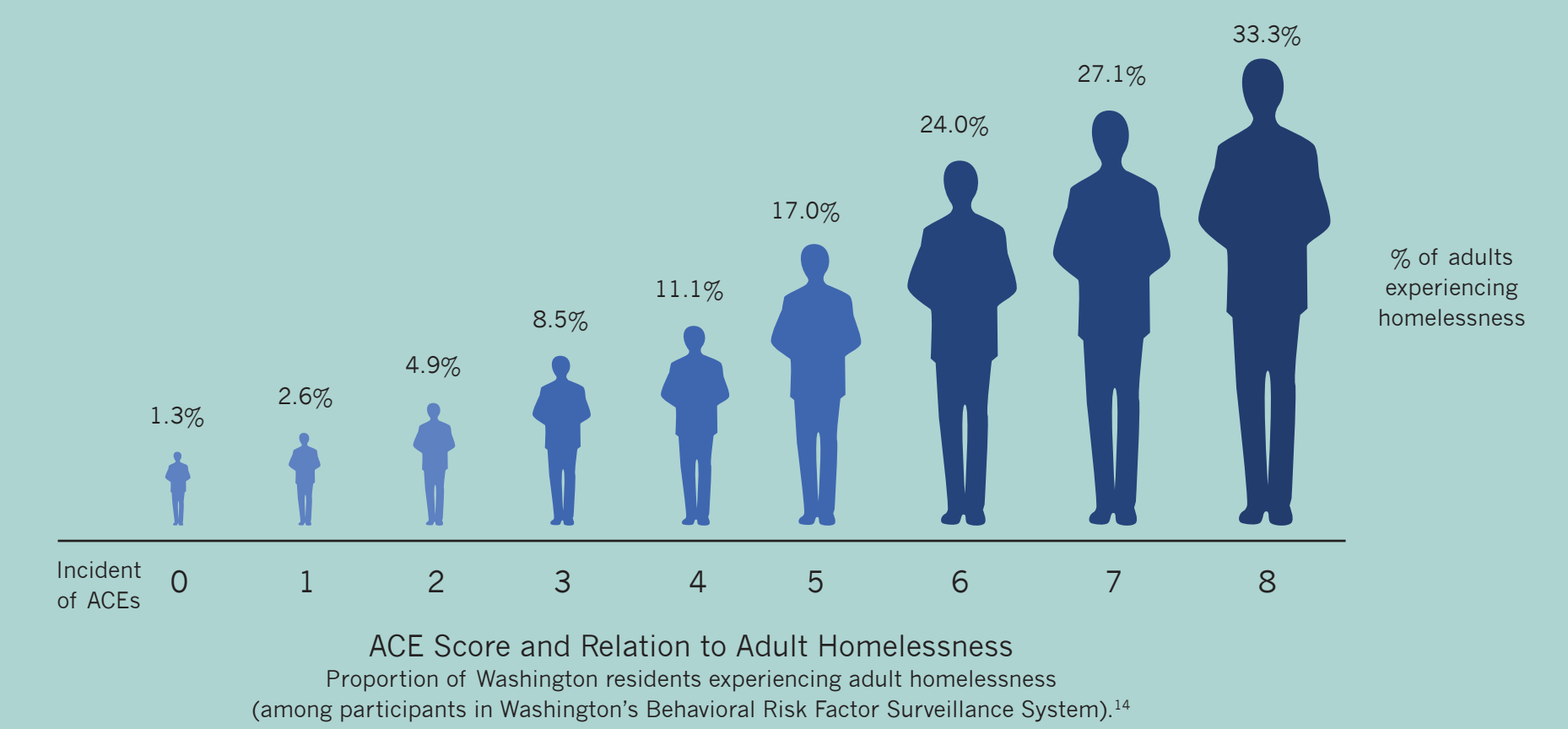
## ADVERSE CHILDHOOD EXPERIENCES IN THE CLASSROOM<sup>13</sup>

Children coping with significant adversity will have a harder time learning. Out of a 30-child high school classroom, only 11 students will have experienced one or zero ACEs.



## MORE ADVERSE CHILDHOOD EXPERIENCES INCREASE RISK FOR ADULT HOMELESSNESS

As ACE scores increase (e.g., the level of adversity someone experiences in childhood), so does adult homelessness.



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1. University of Washington. <http://bit.ly/1yb4C9n>  
 2. Nature. <http://bit.ly/1zJmSUr>  
 3. APAPsycNet. <http://bit.ly/1pISNV7>  
 4. Harvard Center on the Developing Child. <http://bit.ly/11lu0Fp>  
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9. National Center on Family Homelessness. <http://bit.ly/1eVvmlc>  
 10. First Focus. (2014). <http://bit.ly/1vLdyY>  
 11. Think Progress. <http://bit.ly/1vCyVUP>  
 12. Columbia Legal Services. <http://bit.ly/1pITvif>  
 13. ACEs Too High. <http://bit.ly/1rPCMB1>  
 14. Infographic adapted from Factors Associated with Adult Homelessness in Washington State: A Secondary Analysis of Behavioral Risk Factor Surveillance System Data (Final Report). <http://bit.ly/1CzkAgr>