



# Adverse Childhood Experiences: Health

2021 IU Southeast Sociology Research Lab

Adverse Childhood Experiences (ACEs) are traumatic events experienced from birth through age 17. Research shows that these experiences disrupt neurodevelopment, causing social, emotional, and cognitive impairments that affect behaviors, including health behaviors.<sup>1</sup> These impacts lead to negative outcomes in health, mental health, education, and social success and well being, ultimately resulting in early death.

Jefferson County is home to relatively high rates of smoking, obesity, physical inactivity, poor physical health days, and diabetes.

The Jefferson County community-wide ACEs survey documents the prevalence of ACEs and draws important connections between experiences of childhood trauma and health outcomes.

## Key Findings

Based on a weighted sample:

- The estimated average ACE score for Jefferson County adults is 2.4.
- 30.4% of Jefferson County adults have an ACE score of 4 or higher.
- Roughly 9.7% of Jefferson County adults have an ACE score of 7 or higher.
- More than a third of Jefferson County adults report that before age 18 they experienced one

or more of the following: separation or divorce of parents, emotional abuse, or living with someone who suffered from substance use disorder (an alcoholic or drug user).

- 32.2% of Jefferson County adults have no ACEs.

## Health Behaviors and Outcomes

Those with higher ACE scores experience progressively higher rates of disease and dysfunction in their adult lives. Those with zero reported ACEs have significantly better outcomes than those with four or more ACEs across a range of indicators of adult well-being and predictors of early death.<sup>3</sup>

- Toxic stress is one mechanism by which childhood trauma affects adult health outcomes.
- The body experiences chronic stressors and remains in a fight or flight mode of vigilance that causes the release of hormones and chemicals that affect neurodevelopment and long-term health outcomes.<sup>12</sup>
- Chronic stress causes changes to neurobiology that impact early brain development,<sup>13</sup> the immune system,<sup>14</sup> and the endocrine system.<sup>15</sup>
- Stressful or traumatic experiences often lead to

Figure 12: Percent Indicating they Smoke or Have Ever Regularly Smoked Cigarettes by ACE score category (Sample N=642 | Weighted N=24,474, p<.001)

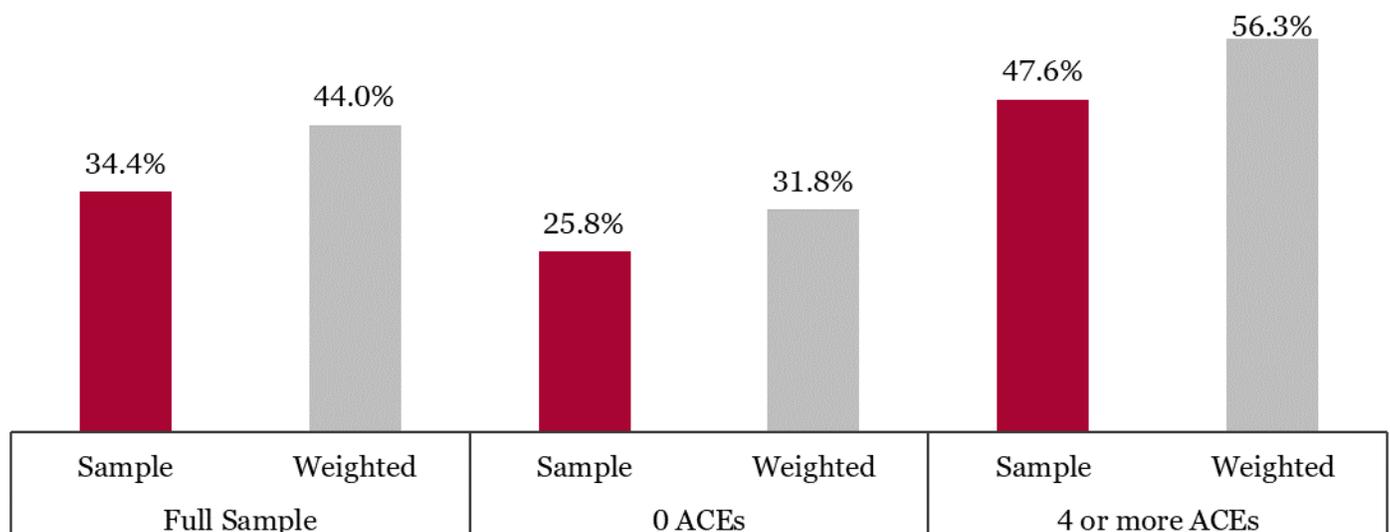
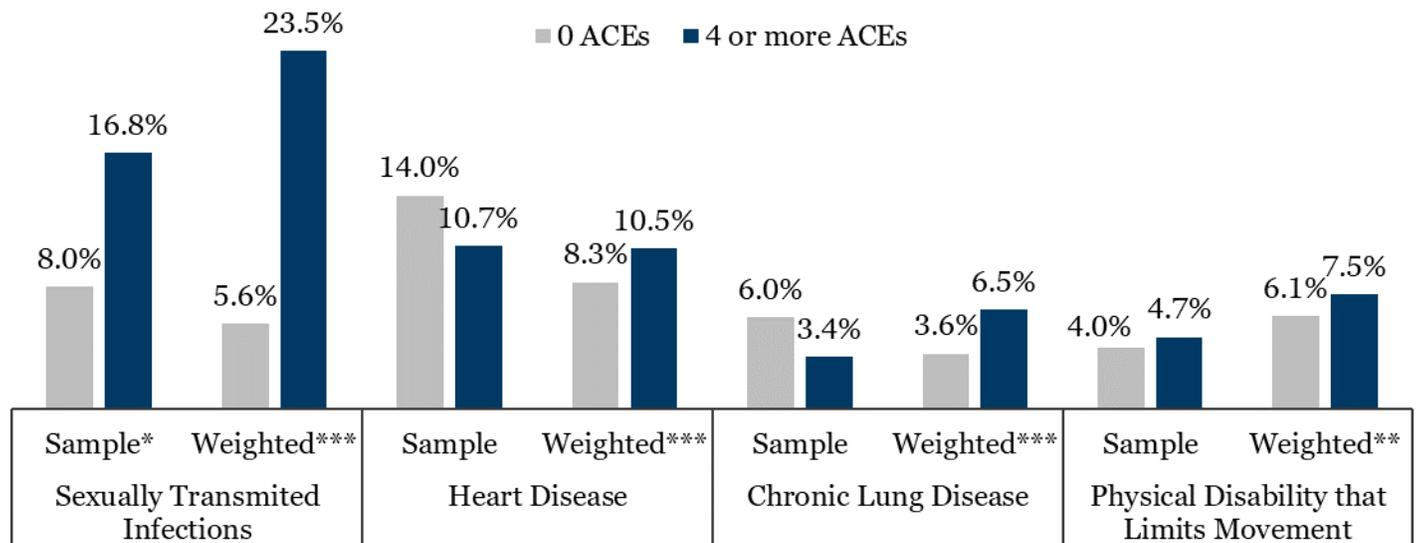


Figure 13: Prevalence of Health Issues for those with Zero ACEs and those with Four or More ACEs in Jefferson County, IN (Sample N=438 | Weighted N=25,567)



Statistically significant differences in prevalence between those with zero ACE and those with four or more ACE are indicated with asterisks. \*p<.05, \*\*p<.01, \*\*\*p<.001. Contrary to findings in the literature, associations with liver disease and obesity were not found to be statistically significant in the Jefferson County sample, with or without weighting.

social, emotional, and cognitive deficiencies that increase risk for unhealthy behaviors and chronic disease.<sup>16</sup>

- Toxic stress can cause issues with immune and metabolic systems that fight illness, leading to a lifetime of susceptibility to illness.<sup>17</sup>
- Toxic stress causes early onset of disease, disability, and premature death.<sup>18</sup>
- ACE exposure increases risk of obesity.<sup>19</sup>
- Higher ACE scores are associated with increased risk of smoking, heart disease, chronic lung disease, and poor self-rated health.
- Those with 4 or more ACEs are more likely to report high numbers of sexual partners and incidence of sexually transmitted disease (2-4 fold increase in risks).<sup>20</sup>
- Researchers find a 1.4-1.6 fold increase in physical inactivity and severe obesity among those with 4 or more ACEs compared to those with none.<sup>21</sup>
- Higher ACE scores are associated with diseases such as ischemic heart disease, cancer, chronic lung disease, skeletal fractures, and liver disease.<sup>22</sup> Research links ACEs to systemic arterial stiffness among adolescents.<sup>23</sup>

## Jefferson County

Jefferson County residents report an average 4.2 poor physical health days per month compared to 4.0 for the state and 3.4 among U.S. top performers. The county has relatively high rates of smoking (24%), obesity (33%), and physical inactivity (25%). In Jefferson County,

- Those with four or more ACEs are significantly more likely than those with zero ACEs to smoke or to have smoked regularly at some point in their life (Figure 1).
- A higher ACE score is significantly associated with higher rates of sexually transmitted infections, heart disease, chronic lung disease, and physical disability that limits movement (Figure 2).
- Obesity rates were not significantly different between those with zero and those with four or more ACEs.

Findings from Jefferson County largely confirm the existing research on the association between ACEs and adult health outcomes. With a higher average ACE score than the nation, it is not surprising that Jefferson County also sees higher rates of chronic disease.

\*Endnote numbers match the full report available at [www.resilientjeffersoncounty.org](http://www.resilientjeffersoncounty.org). Full citations also available on the website.