Childhood Experiences Influence Student Outcomes

Using the 2017 Youth Risk Behavior Survey to Highlight Connections Between Childhood Experiences and Outcomes Among Chicago Public High School Students

An extensive body of literature reveals that childhood experiences of all kinds shape our health and well-being. Adverse childhood experiences (ACEs) such as abuse, neglect, and household stress are associated with a broad range of physical, psychological and social problems across the lifespan, as described in the landmark 1998 ACE Study led by the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente.[1] The CDC now describes ACEs as potentially traumatic events occurring between birth and age 17,[2] recognizing that childhood adversity includes a broader range of individual experiences as well as diverse community, structural, and historical experiences—such as poverty, violence, racism, discrimination, and war—that were not captured in the ACE Study. Although traumatic experiences have a tremendous impact on health and well-being, individual, family, and community protective factors can prevent and mitigate the effects of adversity and support thriving. These include the presence of caring adult relationships, adequate food and housing, and safe neighborhoods.

Population-level ACEs are often measured using the 10-item questionnaire developed in the ACE Study. In Illinois, almost 60% of non-institutionalized adults[3] and 40% of children birth to 17[4] report at least one ACE, and adults and children of color, the poor, and publicly insured residents are disproportionately affected. To date, there are no publicly available datasets exploring the prevalence of childhood experiences or the connections between these experiences and health for Chicago high school students.

This brief builds on the basic science and epidemiologic research of the last two decades to measure population-level ACEs and protective factors among Chicago high school students using the Youth Risk Behavior Survey (YRBS), the largest public health surveillance system in the United States. In Chicago, the YRBS is administered to a random sample of Chicago Public Schools (CPS) high school students every two years.[5]

Because the CDC's core YRBS questionnaire did not contain questions about childhood adversity, the Illinois ACEs Response Collaborative (the Collaborative) advocated that CPS add two proxy questions in its 2017 survey: 1) experiencing violence inflicted by an adult and 2) witnessing domestic violence. Using these proxy questions and two existing protective factor questions already in YRBS (see below), the Collaborative 1) assessed the prevalence of ACEs and protective factors in CPS high school students and 2) highlighted the relationship between these experiences and health-compromising, self-soothing behaviors as well as health and academic outcomes among CPS students. This brief provides an overview of these findings with the goal of raising awareness about the impact of positive and adverse childhood experiences on health and well-being as well as using these data to increase commitment to preventing ACEs, mitigating their impact, and enhancing protective factors so all teens can thrive.[6]

The Illinois ACEs Response Collaborative

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Key Findings

An overview of key findings are presented here. Additional results will be available at www.hmprg.org/programs/illinois-aces-response-collaborative.

ACE questions added to the 2017 Chicago Youth Risk Behavior Survey (YRBS)

Have you ever been hit, beaten, kicked, or physically hurt in any way by an adult?
(Do not include being spanked for bad behavior.)

17.8%
responded YES

Have you ever seen or heard adults in your home slap, hit, kick, punch, or beat each other up?

19.8%
responded YES

Survey Demographics

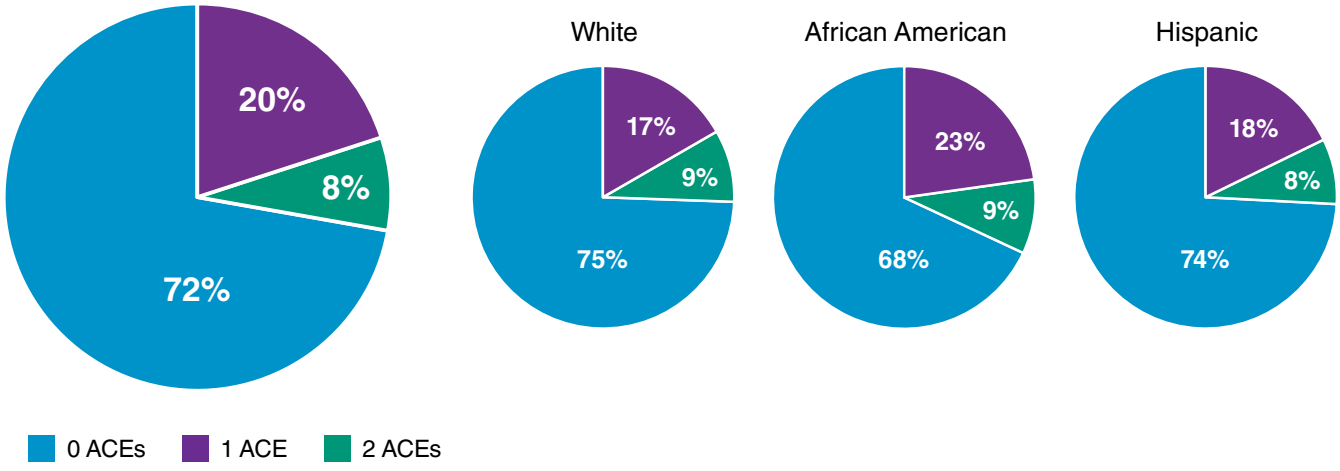
Chicago Youth Risk Behavior Survey 2017

N = 1,883
Weighted to match demographics of population N = 73,313

Overall Response Rate	**73%**
Female	**51.4%**
Male	**48.6%**
White	**11.4%**
Black	**33.8%**
Hispanic	**48.0%**
Other	**6.8%**
Heterosexual	**81.6%**
Gay or Lesbian	**4.1%**
Bisexual	**9.3%**
Not Sure	**5.1%**
Age 15 or younger	**33.2%**
Age 16 or 17	**48.7%**
Age 18 or older	**18.1%**

ACEs Reported

Percent of CPS Students who reported Adverse Childhood Experiences



Protective factors in the 2017 Chicago YRBS

Is there at least one teacher or other adult in your school that you can talk to if you have a problem?

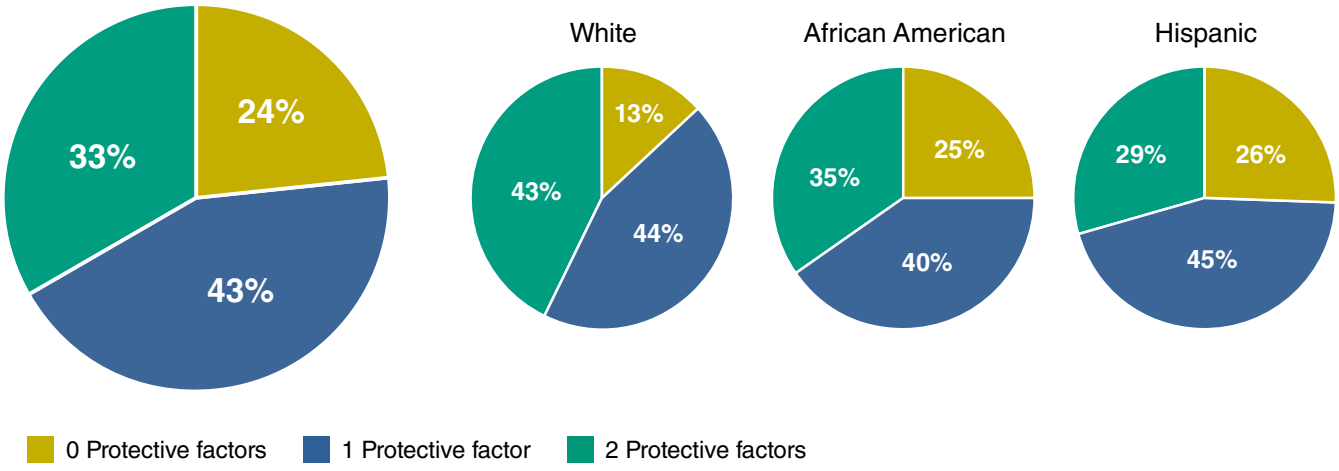
72%
responded YES

During the past 12 months, on how many sports teams did you play?
(Count any teams run by your school or community groups.)

49%
responded they played on at least one sports team

Protective factors

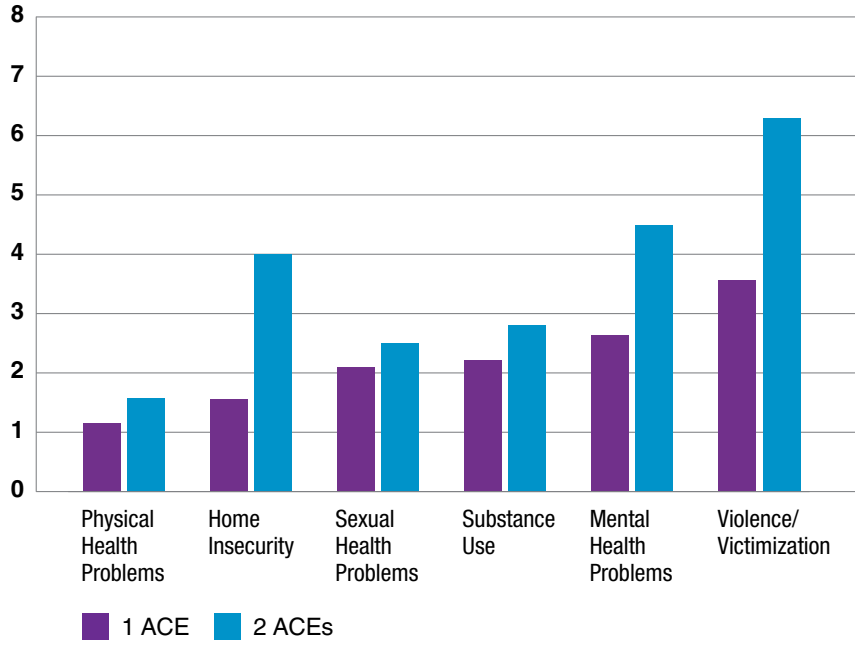
Percent of CPS Students who reported protective factors



Health Risk by ACE Score

Odds ratio compared to 0 ACEs*

**Logistic regression controlling for sex, race/ethnicity, grade, and sexual identity was done in order to obtain the dose response of 1 and 2 affirmative ACEs compared to 0 ACEs for each health risk category.*



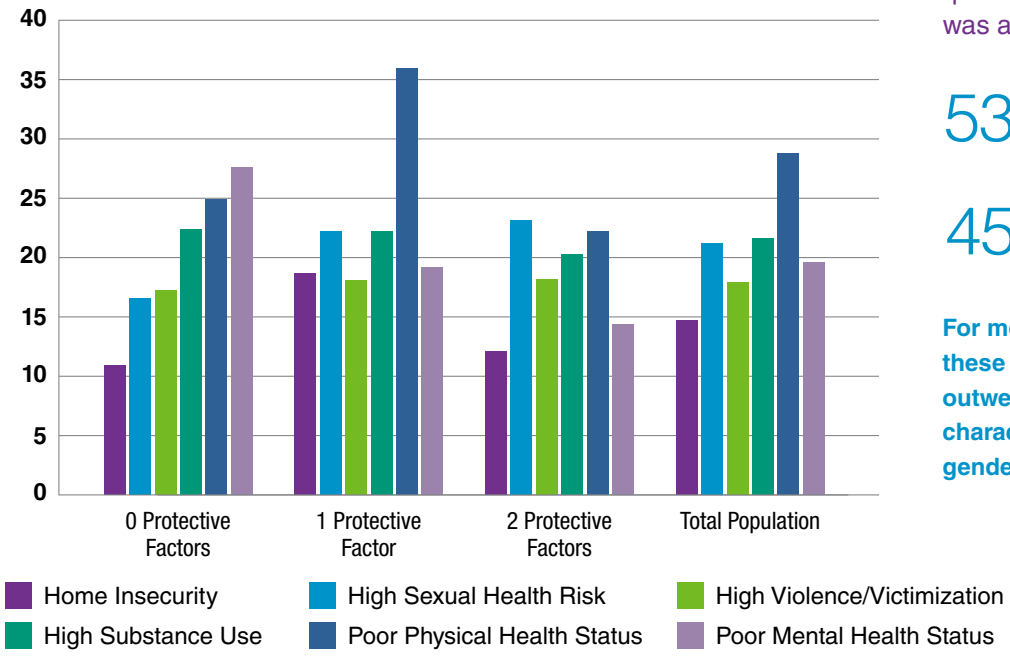
By the Numbers

Responding YES to both questions compared to NONE was associated with:

- **6.3×** increased risk of violence and victimization
- **4.5×** increased risk of mental health problems
- **4.0×** increased risk of home insecurity
- **2.8×** increased risk of substance use
- **2.5×** increase in high sexual health risk
- **1.6×** increased risk of physical health problems

Prevalence of Outcomes by Protective Factors

Percent of participants



By the Numbers

Responding YES to both questions compared to NONE was associated with:

- **53%** decreased risk of mental health problems
- **45%** decreased risk of physical health problems

For most domains, the impact of these protective factors does not outweigh the contributions of other characteristics like race/ethnicity, gender, and sexual minority status.

Having two ACEs compared to none*

10.5×
more likely to be forced to have sex

6.9× **more likely to be bullied for being lesbian, gay, or bisexual**

6.8× **more likely to be threatened or injured with a weapon at school**

5.0×
more likely to consider suicide

4.7×
more likely to have been kicked out, abandoned, or run away

4.6× **more likely to have experienced physical dating violence**

4.4× **more likely to not go to school because felt unsafe**

3.7× **more likely to be electronically bullied**

3.3× **more likely to feel sad or hopeless**

3.3×
more likely to become or get someone pregnant

3.3× **more likely to use IV drugs**

3.2×
more likely to currently smoke

3.1× **more likely to have four or more sexual partners**

3.0× **more likely to be bullied at school**

Having both protective factors compared to none in the setting of one or two ACEs:

53%
decreased likelihood of mental health problems, specifically suicidality

**Additional results will be available at www.hmprg.org/programs/illinois-aces-response-collaborative.*

Limitations

Although this project offers a sense of both the prevalence of ACE and protective factors as well as their impact on health and wellbeing among Chicago public high school students, it may be an underestimate for a number of reasons. Some limitations of our study include those related to the YRBS methodology: student self-report, exclusion of the youngest and oldest teens, and high school attendance selection bias (teens not in schools, potentially a more vulnerable population, were not included). Unrelated to the YRBS itself, the use of specific ACE and protective factor questions may or may not adequately represent the range of childhood experiences.

Conclusion

Results of this project align with other research linking childhood experiences to health and social outcomes for children, adolescents, and adults. These results indicate that:

- Both ACE and protective factors are common among Chicago high school students with noticeable differences by race, gender and sexual minority status.
- Students who report experiencing violence inflicted by an adult and/or witnessing domestic violence (ACEs) are more likely to report current health and social challenges as well as associated experiences, exposures and health-compromising behaviors that can negatively affect lifelong health.
- Although race remains an important mediator of outcomes, students who report access to both a relationship with a trusted adult at school and participation in team sports during the past year are significantly less likely to report mental health issues and may be less likely to report home insecurity, substance use, and physical health problems.

Along with data from other localities, this project demonstrates that YRBS provides a widely available local and national platform to study the impact of childhood experiences on adolescent health and well-being. These data compel us to act to prevent and mitigate childhood adversity while broadening and strengthening protective factors. Emerging evidence-informed strategies to that end include school-based or -linked basic needs support for students and families; respectful, culturally responsive parent mentoring and support; trauma-sensitive teacher/school professional development; school-located, whole school self-regulation skill-building and practice; and school discipline policy reform, all of which improve the health and well-being of adolescents, their families and school staff across the lifespan.[7,8]

End Notes

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6. Korpics, J., Altman, L., Feinglass, J., & Stillerman, A. (2021). Prevalence and Impact of Adverse Childhood Experiences on Chicago Public School Students in the Youth Risk Behavior Survey. *The Journal of School Health*, 10.1111/josh.13075. Advance online publication. https://doi.org/10.1111/josh.13075
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8. Illinois ACEs Response Collaborative. (2016). *Education Brief: ACEs for Educators and Stakeholders.* Health & Medicine Policy Research Group. https://hmprg.org/programs/illinois-aces-response-collaborative/policy-briefs-reports/

Acknowledgments

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Illinois ACEs Response Collaborative

Established in 2011, the Illinois ACEs Response Collaborative (the Collaborative) works to catalyze a cross-sector movement to prevent trauma and promote thriving across the lifespan and to place the impact of childhood experience at the forefront of the equity agenda in Illinois. The Collaborative envisions a thriving and equitable Illinois in which individuals, families, communities, and all systems and sectors work together to prevent trauma, heal, and flourish.

Learn more by visiting www.hmprg.org/programs/illinois-aces-response-collaborative.

Health & Medicine Policy Research Group

Health & Medicine is a Chicago based non-profit working to improve the health of all people in Illinois by promoting health equity. Founded in 1981 by Dr. Quentin Young, it was formed as an action-oriented policy center—nimble, independent, and focused on regional health issues. Health & Medicine's mission is to promote social justice and challenge inequities in health and health care. It conducts research, educates and collaborates with other groups to advocate policies and impact health systems to improve the health status of all people. Health & Medicine has successfully developed health policy recommendations and implementation strategies for different public and private entities, earning the trust of the legislature, advocates, the media, researchers and policymakers at all levels of government in Illinois to become the region's "honest broker" on healthcare policy matters.

Learn more at www.hmprg.org.

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