

**Name:** No High School Diploma

**Short Description:** Percentage of population aged 25 or older without a high school diploma or equivalent.

**Data Source:**

- **Name:** United States Census Bureau, American Community Survey (ACS)
- **Link to Source:** <https://www.census.gov/programs-surveys/acs/data.html>

**Year(s):** 2015-2019

**Source Geographic Level:** Zip Code Tabulation Area (ZTCA)

**Stratification:** Black populations

**Selection Rationale:** Research suggests a strong association between mental health and education; with a positive association between mental health disorders and lack of high school completion.<sup>1</sup> Additionally, seeking mental health care is less likely among people with lower levels of educational attainment.<sup>2</sup> The use of this measure helps capture the importance of education as a social determinant of health.

**Strengths and Limitations:**

- **Strengths:**
  - *[Importance]* Both a higher incidence of mental health disorders and lower likelihood of seeking and receiving needed mental health care is associated with not completing high school. Students who do not complete high school are also more likely to engage in substance use (including cigarette use, alcohol use, marijuana use, nonmedical use of prescription-type drugs, and use of any illicit drugs).<sup>3</sup> The research literature is split regarding whether academic difficulties lead to substance use, or substance use leads to academic difficulties; evidence shows that the association may be bidirectional.<sup>4</sup>

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<sup>1</sup> Esch, P., Bocquet, V., Pull, C., Couffignal, S., Lehnert, T., Graas, M., Fond-Harmant, L., & Ansseau, M. (2014). The downward spiral of mental disorders and educational attainment: a systematic review on early school leaving. *BMC Psychiatry*, 14, Article 237. <https://doi.org/10.1186/s12888-014-0237-4>

<sup>2</sup> Steele, L. S., Dewa, C. S., Lin, E., & Lee, K. L. (2007). Education level, income level and mental health services use in Canada: associations and policy implications. *Healthcare Policy*, 3(1), 96–106. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2645130/>

<sup>3</sup> Tice, P., Lipari, R. N., & Van Horn, S. L. (2013). *Substance Use Among 12th Grade Aged Youths, by Dropout Status*. PubMed; Substance Abuse and Mental Health Services Administration. <https://www.ncbi.nlm.nih.gov/books/NBK458749/>

<sup>4</sup> DuPont, R. L., Caldeira, K. M., DuPont, H. S., Vincent, K. B., Shea, C. L., & Arria, A. M. (2013). *America's Dropout Crisis: The Unrecognized Connection to Adolescent Substance Use*. Institute for Behavior and Health. <http://www.cls.umd.edu/docs/AmerDropoutCrisis.pdf>

- [Relevance and Usability] Data on the percentage of the population without a high school diploma are easily interpretable. Identification of areas with higher percentages of the population without a high school diploma may allow decision makers to effectively target policies and programs to improve high school graduation rates, with potential cascading impacts on improving mental health and other health outcomes.
- [Scientific Soundness] ACS data provide valid and reliable estimates. This measure is advantageous because it is both simple to calculate and simple to communicate.
- [Feasibility] This measure is readily available through the United States Census Bureau's ACS, an ongoing survey that provides data in the year immediately following the year in which they are collected.
- **Limitations:**
  - [Equity] This measure does not address the relative performance of schools in each ZIP code, only the level of educational attainment of adults who reside in that ZIP code, regardless of the quality of the school they attended. More granular information about school quality may be available at the local level.
  - [Scientific Soundness] This measure is self-reported and depends on the accuracy of the person surveyed.

## Calculation:

### Overall Population:

$$\text{No High School Diploma}_{\text{Overall}} = \frac{\text{individuals age 25 or older without a high school diploma or equivalent}}{\text{total number of individuals age 25 or older}} \times 100\%$$

ACS tables and variables used:

- Table B06009: Place of Birth by Educational Attainment in the United States:
  - B06009\_001: Estimate Total
  - B06009\_002: Estimate Total Less than high school graduate

### Black Populations:

$$\text{No High School Diploma}_{\text{Black}} = \frac{\text{Black individuals age 25 or older without a high school diploma or equivalent}}{\text{total number of Black individuals age 25 or older}} \times 100\%$$

ACS tables and variables used:

- Table C15002B: Sex by Educational Attainment for the Population 25 Years and Over (Black or African American Alone):
  - C15002B\_001: Estimate Total
  - C15002B\_003: Estimate Total Male Less than high school diploma
  - C15002B\_008: Estimate Total Female Less than high school diploma

