

Asthma Case Finding in Head Start Children

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BACKGROUND:

- Head Start children are at higher asthma risk
- Disparities in social determinants of health may contribute to this disparity
- It is essential to identify those children at risk for adverse outcomes to prevent the airway remodeling associated with uncontrolled asthma

PURPOSE:

This study aims to identify asthma prevalence and asthma risk among Head Start children.

METHODS:

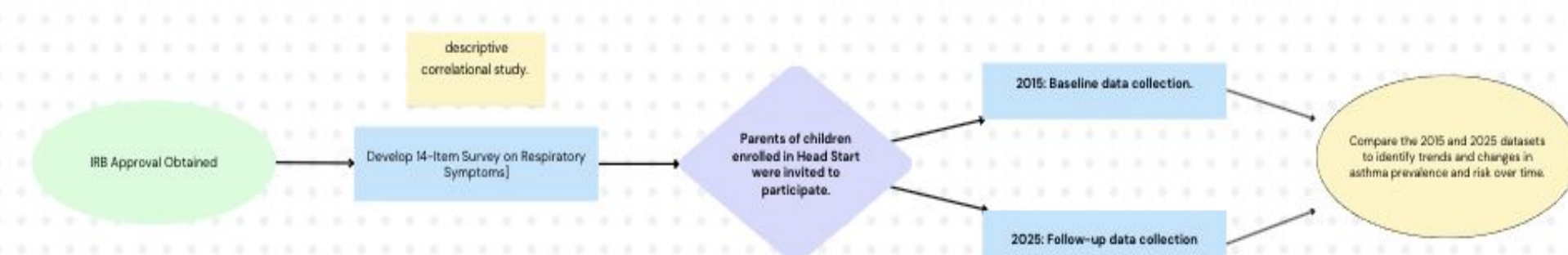
- Design: Cross Sectional Descriptive Correlational
- Convenience sample of parents of children enrolled in the 3- and 4-year-old classroom at Head Start
- A 14-item survey was developed to assess respiratory symptoms indicative of possible asthma (Cronbach's alpha .9) administered to parents
- Surveys were administered in two phases which allowed for comparative analysis of asthma prevalence and risk over time.

2015:N=133

2025:N=60

- Correlational analyses examined the relationships between reported respiratory symptoms and asthma risk. Descriptive statistics were used to estimate asthma prevalence.

Asthma Case Finding in Head Start Methods



The asthma prevalence of children in a local Head Start, aged 3 to 5, was 17% in 2015 (N=133) and 12% in 2025 (N=60), which is higher than the 9.6% for the state of New York for this age group.

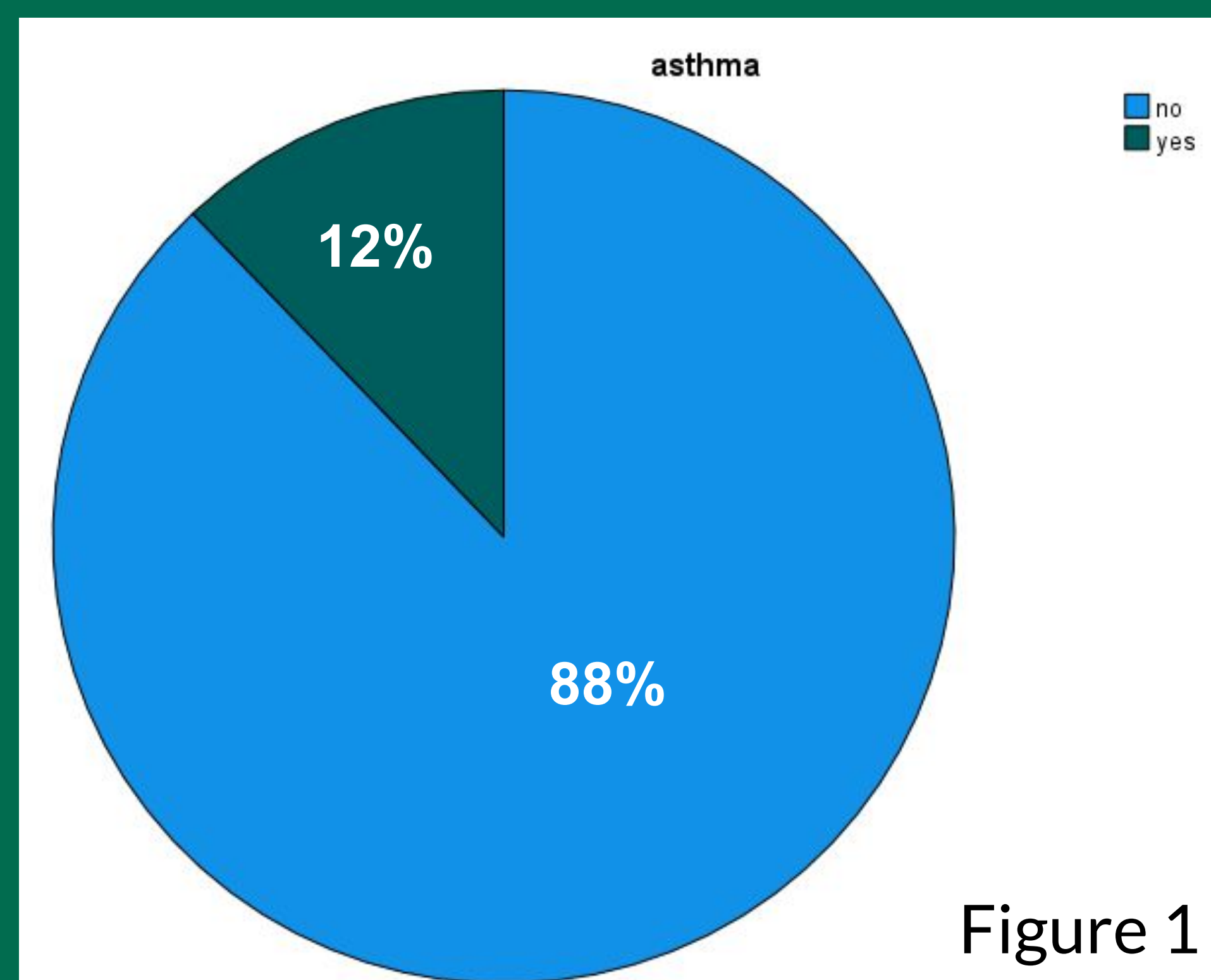


Figure 1

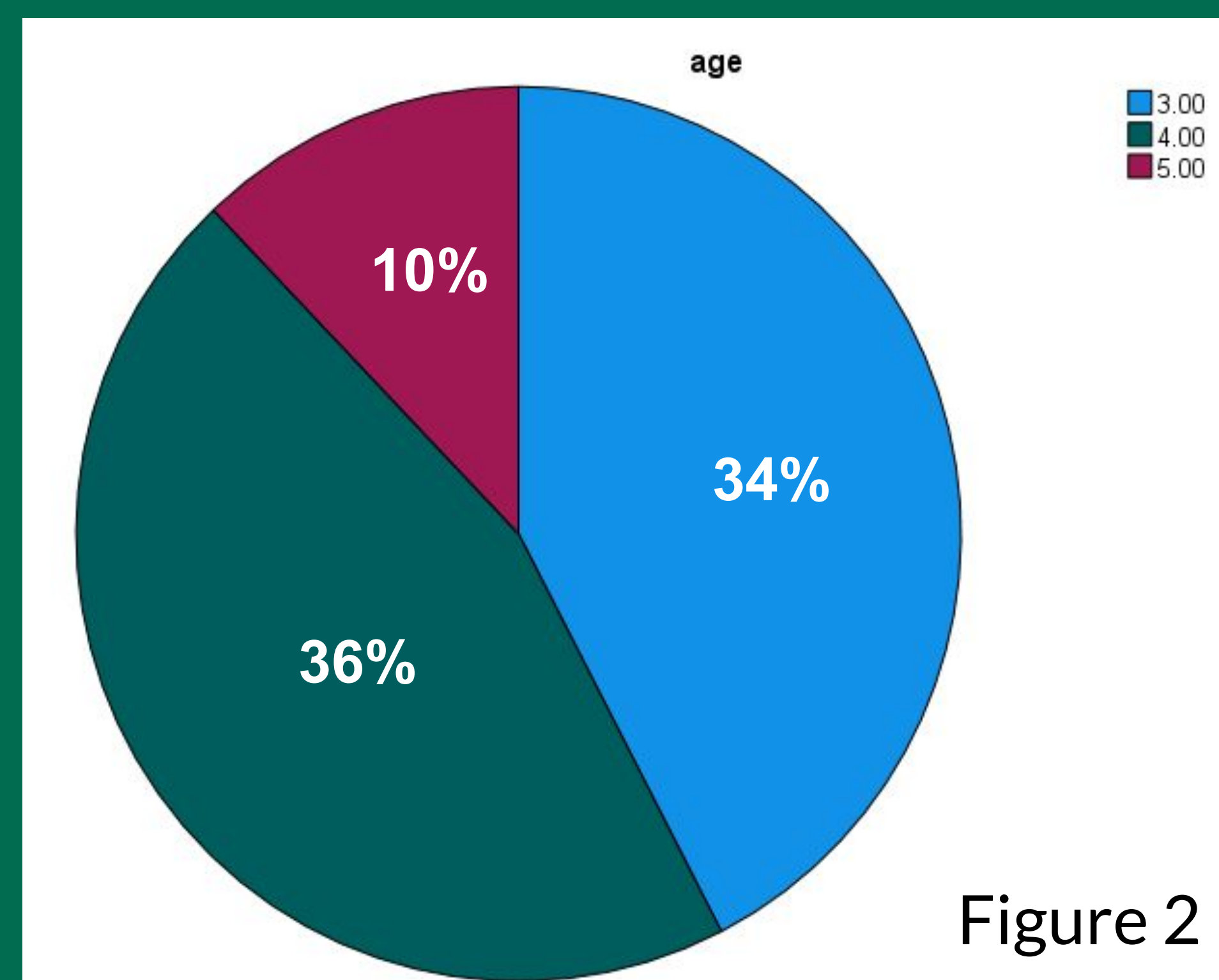


Figure 2

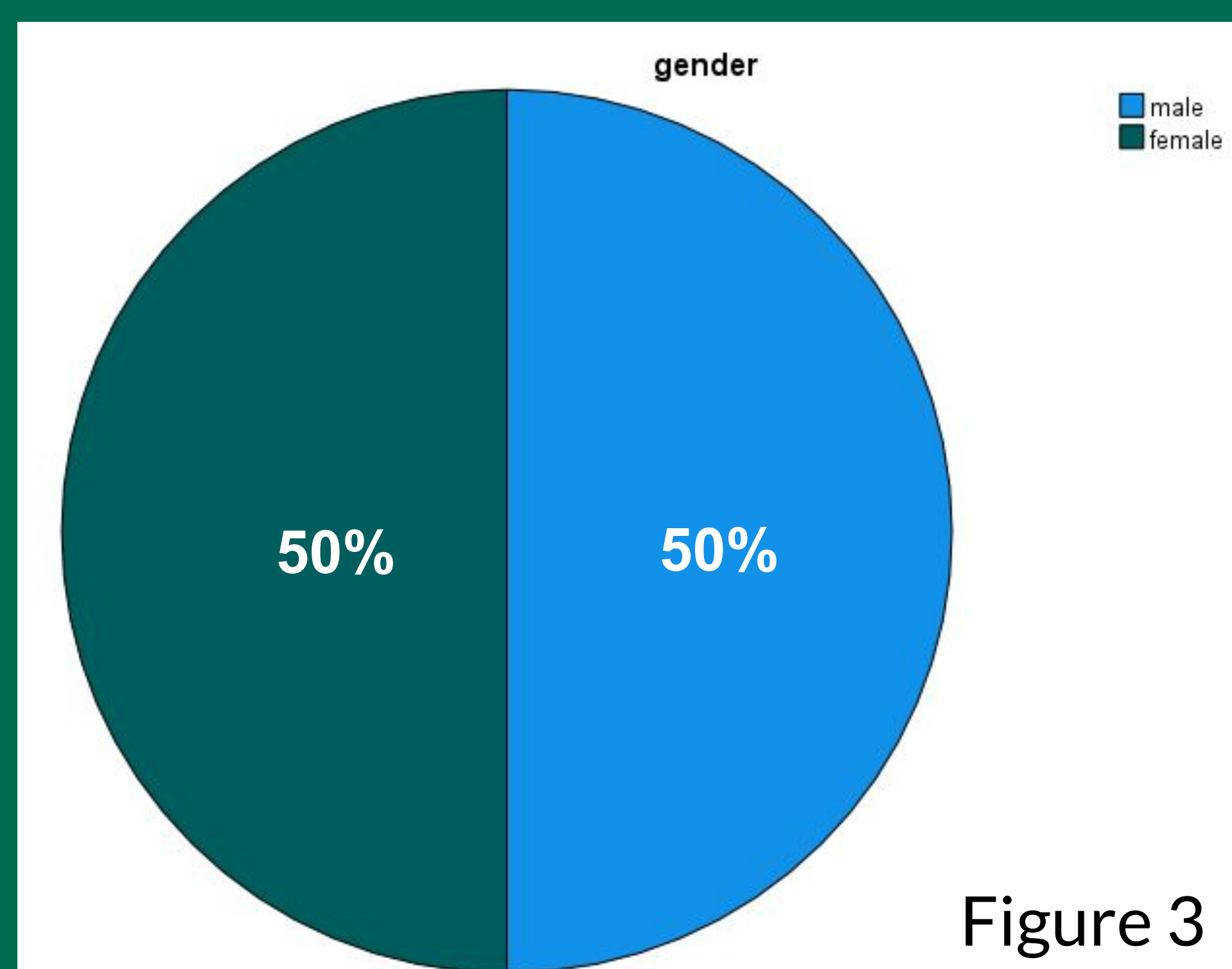


Figure 3

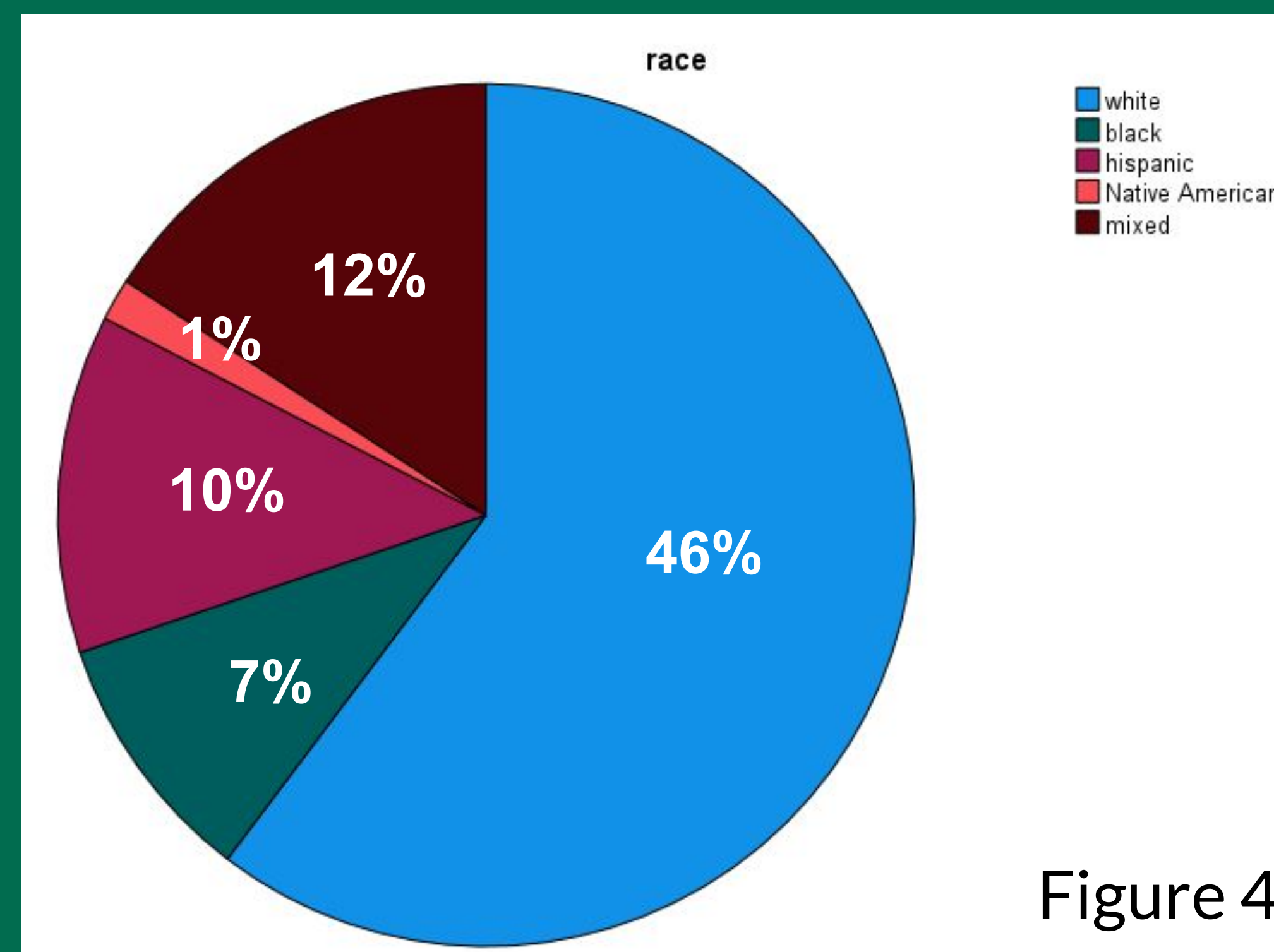


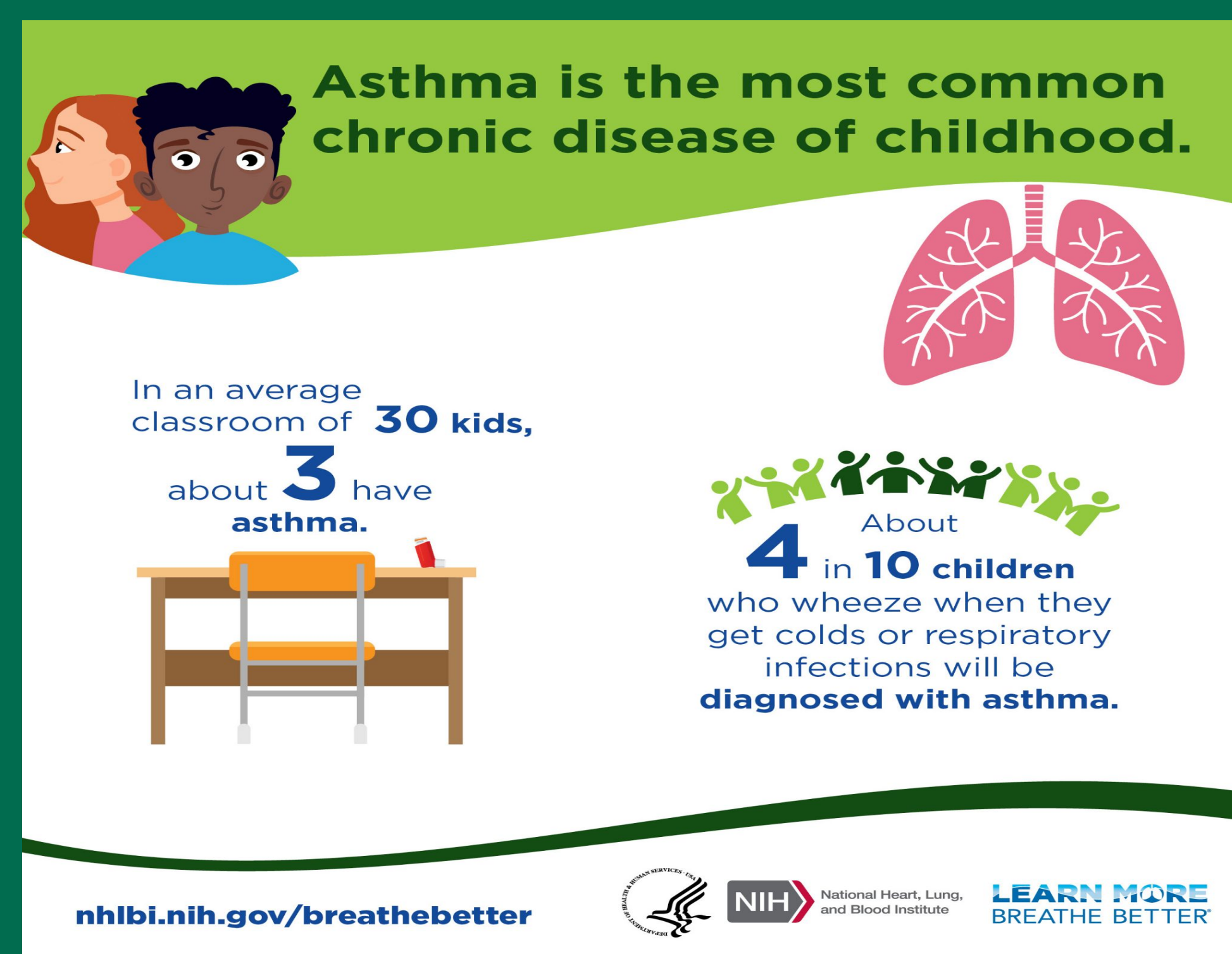
Figure 4

Figure 1: Percentage of local Head Start children with asthma is 12% in 2025.

Figure 2: Age distribution of the Head Start children in study.

Figure 3: Gender distribution of the Head Start children in study.

Figure 4: Race distribution of the Head Start children in study.



RESULTS:

- 54% of children with asthma had respiratory symptoms not associated with a cold ($p<.001$)
- 22% of children with asthma had a cough that lasted more than a week not associated with a cold ($p<.001$)
- 39% of children with asthma had difficulty sleeping due to respiratory symptoms not associated with a cold ($p<.001$)
- 40% of children with asthma had current respiratory symptoms ($p<.001$)
- 56% of children with asthma missed school for respiratory symptoms ($p<.001$)
- 71% of children with asthma had an ER visit for respiratory symptoms ($p<.001$)

DISCUSSION (NEXT STEPS):

- Implement parental education regarding asthma symptoms and effective asthma management to:
 - Limit asthma triggers in households
 - Resolve asthma attacks by understanding the usage of quick-relief and long-term control medications
- Early intervention through education and environmental remediation could prevent adverse asthma outcomes.
- Reduce triggers in homes and at Head Start

STUDY LIMITATIONS

- Convenience sample
- Self-report
- Recall

ASTHMA RISK QUESTIONNAIRE:



REFERENCES

1. Family Enrichment Network. (2023). Community assessment 2023-2024. www.familyenrichment.org/~familyen/resource_files/Community%20Assessment%202023.pdf.
2. Eakin, M. N., Zaeh, S., Eckmann, T., Ruvalcaba, E., Rand, C., Hillard, M. E., & Riekert, K. A. (2020). Effectiveness of a home- and school-based asthma educational program for head start children with asthma: A randomized clinical trial." JAMA Pediatrics, 174(12), 1191-1198. <https://doi.org/10.1001/jamapediatrics.2020.3375>
3. Jenkins, W. (2025, January 16). Where are children in head start exposed to environmental hazards? Urban Institute. Retrieved April 15, 2025 from www.urban.org/data-tools/where-are-children-head-start-exposed-environmental-hazards.