Bridging Data Gaps in Educational Equity: An Intersectional Analysis Leveraging NPSAS

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MISSION

NCES is the nation's premier statistical agency for **collecting, analyzing, and reporting statistics** at all levels of education in a manner that

A. is **objective, secular, neutral, and nonideological** and is **free of partisan political influence and racial, cultural, gender, or regional bias**

B. is **relevant and useful** to practitioners, researchers, policymakers, and the public

Acknowledgments

- Sample Survey Division: Longitudinal Survey Branch, NCES
- Annual Reports and Information, NCES
- Partner and respondent

Limitations of Current Population Survey in Supporting Intersectional Analysis

- Family Income Gaps
  - Parental income for dependent students
  - Low-income and students of color more likely to be independent
- Intersectionality
  - Interaction between various factors, race, gender and income and an outcome.
  - Bias in parental income limits CPS utility to report on outcome by income.

Chingos M.M., Dynarski, S. (2015, March 12). *How Can We Track Trends in Educational Attainment by Parental Income? Hint: Not with the Current Population Survey*. Brown Center on Education Policy, Brookings Institution. https://www.brookings.edu/articles/how-can-we-track-trends-in-educational-attainment-by-parental-income-hint-not-with-the-current-population-survey/

Understanding NPSAS and Its Role in Educational Research

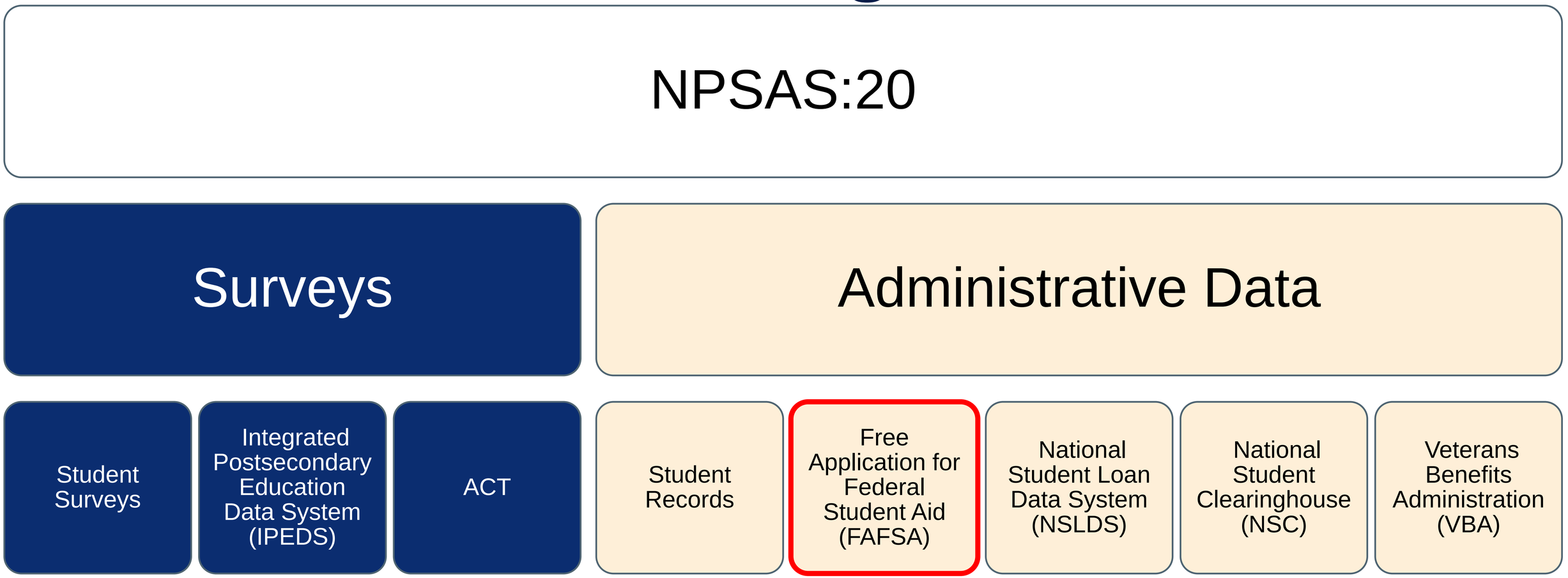
Timeliness

- Conducted every 3–4 years since 1987
- NPSAS:20 National estimates are based a sample of 80,800 undergraduates and 19,700 graduate students enrolled at about 2,200 institutions during the 2019–20 academic year
- Survey questions on the early impact of COVID-19 on students included

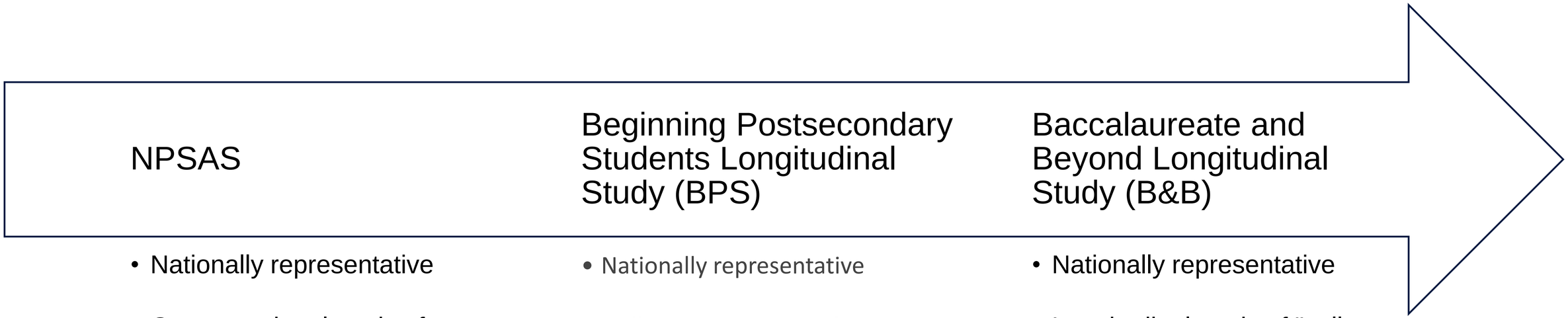
Relevance

- Nationally representative study that measures how students and their families pay for postsecondary education in a given academic year
- Legislatively mandated data collection designed to describe the federal government's investment in financing students' postsecondary education
- National estimates for undergraduate and graduate students enrolled at institutions of all controls and levels

Precision through Data Linkage: NPSAS and Administrative Data Integration



The Condition of Postsecondary Education



NPSAS

- Nationally representative
- Cross-sectional study of **undergraduate and graduate students** enrolled in postsecondary education.

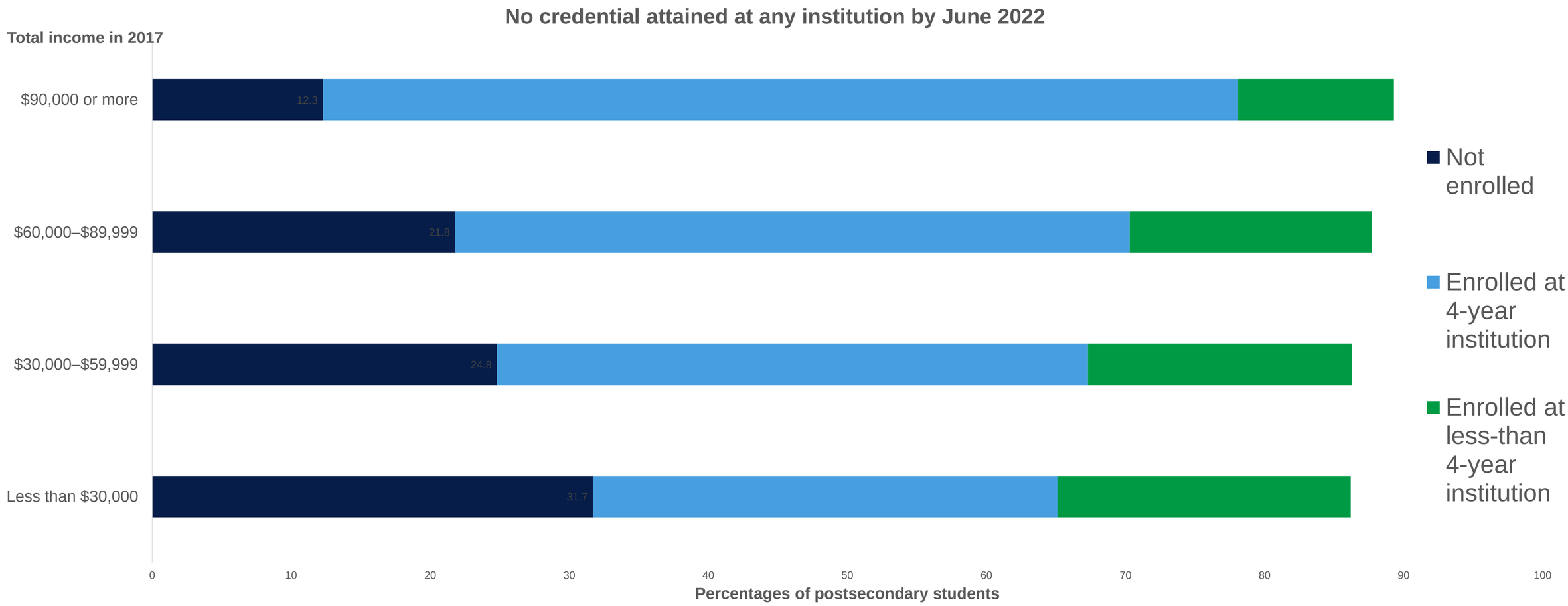
Beginning Postsecondary Students Longitudinal Study (BPS)

- Nationally representative
- Follows **postsecondary students**' educational paths for 6 years
- Students are surveyed beginning in their 1st year of postsecondary education and followed up at the end of their **3rd and 6th years** after entry into postsecondary education

Baccalaureate and Beyond Longitudinal Study (B&B)

- Nationally representative
- Longitudinal study of "college completers" (**students who completed the requirements for a bachelor's degree in a given academic year).**
- Surveys grauates **1, 4, and 10 years** after completing their bachelor's degree.

Family Income and Persistence



https://nces.ed.gov/programs/digest/d23/tables/dt23_503.40.asp

Source: Beginning Postsecondary Students Longitudinal Study (BPS:20/22)

Total Income: Indicates total income for calendar year 2017 for independent students (including spouse) or parents of dependent students. The 2017 calendar year income was used in federal need analysis to determine financial aid eligibility for the 2019–20 academic year. Total income is primarily composed of data from the FAFSA and refers to "total income" used to calculate an expected family contribution for federal financial aid. This generally includes the filer's adjusted gross income, plus untaxed income, minus certain deductions like education tax credits, combat pay, child support, etc.

Leveraging Linked Data for Decision Making

- Evidence Based Act of 2018
  - High-quality data to improve the effectiveness of federal programs to evidence policy making
  - Evaluate data quality and support data sharing & linkage.
  - NPSAS/BPS data reveal disparities in outcome by parental income
  - Data can inform financial Aid and wraparound services.

Using Linked Data to Support Access & Attainment

- NPSAS, B&B and BPS is a timely and relevant source for family income filling voids
- Blending and linking student surveys with administrative data facilitates intersectional analysis
- Need for increased data sharing

NCES Ability to Support Intersectional Analysis

Table 503.40. Percentage of 16- to 64-year-old undergraduate students who were employed, by attendance status, hours worked per week, and selected characteristics: 2010, 2015, and 2022

[Standard errors appear in parentheses]

Year and selected characteristic	Full-time undergraduates: Percent of all full-time undergraduates		Full-time undergraduates: Percent employed: Total employed[1]		Full-time undergraduates: Percent employed: Hours worked per week[2]: Less than 10[1]		Full-time undergraduates: Percent employed: Hours worked per week[2]: 10 to 19		Full-time undergraduates: Percent employed: Hours worked per week[2]: 20 to 34		Full-time undergraduates: Percent employed: Hours worked per week[2]: 35 or more	
1	2		3		4		5		6		7	
2010												
Total	**100.0**	**(†)**	**41.1**	**(0.90)**	**4.9**	**(0.32)**	**9.9**	**(0.44)**	**16.4**	**(0.65)**	**9.9**	**(0.49)**
Sex												
Male	45.2	(0.77)	39.6	(1.24)	4.1	(0.46)	9.1	(0.66)	16.6	(0.93)	9.8	(0.69)
Female	54.8	(0.77)	42.4	(1.17)	5.5	(0.47)	10.6	(0.64)	16.3	(0.85)	10.1	(0.69)
Race/ethnicity												
American Indian/Alaska Native	0.8	(0.17)	23.0 !	(7.60)	‡	(‡)	‡	(‡)	‡	(‡)	15.4 !	(7.37)
Asian	6.6	(0.34)	31.1	(2.91)	3.9	(1.10)	8.8	(1.63)	12.4	(1.94)	5.9 !	(1.83)
Black	14.9	(0.65)	36.6	(2.44)	3.4	(0.90)	6.9	(1.19)	13.6	(1.59)	12.7	(1.52)
Hispanic	13.5	(0.51)	39.0	(2.16)	2.5	(0.70)	6.5	(1.09)	18.4	(1.81)	11.6	(1.47)
Pacific Islander	0.4 !	(0.12)	‡	(‡)	‡	(‡)	‡	(‡)	‡	(‡)	‡	(‡)
White	62.2	(0.79)	44.1	(1.15)	5.8	(0.44)	11.6	(0.62)	17.2	(0.90)	9.4	(0.58)
Two or more races	1.6	(0.22)	39.6	(6.95)	8.5 !	(3.64)	10.2 !	(3.85)	15.6 !	(4.78)	‡	(‡)
Age												
16 to 24	79.0	(0.66)	39.9	(1.05)	5.2	(0.38)	11.2	(0.55)	17.5	(0.81)	6.1	(0.47)
25 to 29	8.7	(0.45)	47.0	(2.66)	2.8	(0.78)	8.6	(1.65)	13.8	(1.78)	21.8	(2.09)
30 to 39	7.6	(0.39)	45.4	(3.16)	3.9 !	(1.18)	3.1 !	(0.93)	12.8	(1.91)	25.7	(2.64)

Year and selected characteristic	Part-time undergraduates: Percent of all part-time undergraduates		Part-time undergraduates: Percent employed: Total employed[1]		Part-time undergraduates: Percent employed: Hours worked per week[2]: Less than 10[1]		Part-time undergraduates: Percent employed: Hours worked per week[2]: 10 to 19		Part-time undergraduates: Percent employed: Hours worked per week[2]: 20 to 34		Part-time undergraduates: Percent employed: Hours worked per week[2]: 35 or more	
1	8		9		10		11		12		13	
2010												
Total	**100.0**	**(†)**	**74.5**	**(1.40)**	**4.2**	**(0.54)**	**5.3**	**(0.63)**	**22.1**	**(1.19)**	**42.9**	**(1.53)**
Sex												
Male	42.8	(1.27)	77.0	(1.90)	4.1	(0.84)	4.3	(0.79)	21.6	(1.74)	47.0	(2.36)
Female	57.2	(1.27)	72.7	(1.80)	4.3	(0.75)	6.1	(0.87)	22.5	(1.71)	39.8	(1.90)
Race/ethnicity												
American Indian/Alaska Native	0.7 !	(0.20)	‡	(‡)	‡	(‡)	‡	(‡)	‡	(‡)	‡	(‡)
Asian	3.0	(0.50)	69.0	(8.23)	‡	(‡)	‡	(‡)	25.7	(6.46)	35.4	(7.45)
Black	16.3	(1.17)	75.7	(2.91)	4.7 !	(1.42)	3.5 !	(1.55)	21.9	(3.19)	45.6	(3.46)
Hispanic	21.0	(1.23)	73.0	(3.02)	3.2 !	(1.08)	4.5	(1.22)	25.3	(3.12)	40.0	(3.35)
Pacific Islander	‡	(‡)	‡	(‡)	‡	(‡)	‡	(‡)	‡	(‡)	‡	(‡)
White	57.4	(1.52)	75.7	(1.70)	4.6	(0.75)	5.8	(0.86)	21.0	(1.59)	44.3	(1.97)
Two or more races	1.6	(0.41)	65.9	(9.24)	‡	(‡)	‡	(‡)	23.6 !	(9.38)	26.7 !	(10.90)
Age												
16 to 24	42.2	(1.24)	72.0	(2.16)	4.1	(0.88)	8.9	(1.22)	29.4	(2.09)	29.6	(2.23)
25 to 29	19.7	(1.05)	79.2	(2.51)	4.3	(1.28)	3.1 !	(1.12)	20.0	(2.49)	51.7	(3.39)
30 to 39	20.0	(1.05)	76.0	(2.82)	3.4 !	(1.08)	2.5 !	(0.95)	15.6	(2.16)	54.4	(3.10)

https://nces.ed.gov/programs/digest/d23/tables/dt23_503.40.asp

- Digest of Education Statistics produces over 400 tabulations
- Unintentional outcome of this work was an improved understanding how we could better support intersectional analysis
- Important to support users across data acumen spectrum

Future Research Opportunities

- Intersectionality of race, parental income and gender with COVID-19
- Persistence and student experiences
- Long-term outcomes

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https://nces.ed.gov/surveys/annualreports/contact