



# LOANS IN THE LONG GAME: HOW STUDENT LOANS AFFECT STRESS



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# INTRODUCTION



# “Shout-Out” NCES-AIR Data Institute

2022 Cohort

*NCES-AIR Data Institute*

Institute Kick-off

*Jan 2022*

5-Week Online Course

*Jan – Feb 2022*

3-Month Research Project

*Mar – May 2022*

Group Presentations

*June 2022*

Weekly Research Group Meetings

Project Mentor

Dr. Allison C. Bell

Senior Director AIR

Tinsley Smith

Thank you – NCES & AIR Data Specialists and Experts!



# STATEMENT OF PROBLEM

- Student loans and debt, and policies that surround financial aid debt have been among the most debated topics in the past 20 years (especially during the pandemic), but so has mental health and stress. In this study we explore them both, by examining the extent to which financial aid debt has an effect on financial stress after graduation. And if so, who is affected the most?



# LITERATURE

- Federal direct loans account for more than \$1.6 trillion in student debt among 43 million Americans

(Federal Student Aid, 2021a)

- Student debt has been found to be negatively correlated with persistence to degree among college students

(Jones-White et al., 2014; Dowd & Coury, 2006; Herzog, 2018; Kim, 2007; Nora et al., 2006)



# LITERATURE

- Amounts of debt are inequitably distributed across populations

(AAUW, 2021; Baum & O'Malley, 2003; Carales et al., 2020; Institute for College Access and Success, 2016; Martin & Dyer, 2021)

- Student debt and financial well-being post-graduation

(Baum & O'Malley, 2003; Carales et al., 2020; Martin & Dyer, 2021)



# LITERATURE

- **Measuring financial well-being**

(Bleemer et al., 2021; Bozick & Estacion, 2014; Elliott & Lewis, 2015; Gicheva, 2016; Houle & Berger, 2015; Korankye & Guillemette, 2021; Mezza et al., 2020; Sommer, 2020; Walsemann et al., 2020; Zhang et al., 2020)

- **Measuring financial stress**

(Baker et al., 2017; Baum & Looney, 2020; Braga, 2016; Chen & DesJardins, 2010; Dwyer et al., 2013; Hanson, 2021; Kang & Torres, 2021; Rothstein & Rouse, 2011; Smith et al., 2013)



# RESEARCH QUESTIONS





# RESEARCH QUESTIONS

RQ1) To what extent does the amount of **debt at graduation** affect students' **financial stress**, measured by their ability to meet their fiscal obligations following graduation?



# RESEARCH QUESTIONS

RQ2) To what degree does this affect students from **racially/ethnically marginalized backgrounds?**



# RESEARCH QUESTIONS

RQ3) What are the postgraduate financial experiences of students who graduate from **Hispanic Serving Institutions, Primarily Black Institutions, or Historically Black Colleges and Universities?**



# METHOD



# DATASETS ANALYZED

## Baccalaureate and Beyond (B&B)

2016/2017

2008/2018



# DATA ANALYSIS

- Financial Stress – Self-reported by student after graduation
- Used PowerStats to obtain *descriptive statistics* and conduct *logistic regression*
- Logistic Regressions – predictive regression analysis used when the dependent variable is dichotomous



# DATA ANALYSIS

- Independent Variable– *UG debt at graduation*
- Dependent Variable – *Financial Stress*
  - defined as ability to meet financial obligations within the year preceding the interview



# VARIABLES

## Dependent Variable      Independent Variables

Ability to meet  
financial  
responsibilities of  
basic living  
expenses

2016-17  
B1STRESS

2008-18  
B2FSTRESS

Cumulative Federal Loans for  
undergraduate education

FEDCUM1 (16-17; 08-18)

## Control Variables

Race/ethnicity (with multiple)

RACE (16-17; 08-18)

Gender

GENDER (16-17; 08-18)

Institutional control of  
affiliation

CNTLAFFI (16-17; 08-18)

Minority Serving Institution  
indicator

MSISTAT (16-17)  
HBCU (08-18)  
OCRHSI (08-18)







# STATISTICAL RESULTS

# LR RESULTS

|   | Odds Ratio | SE     | Lower 95% CI | Upper 95% CI | t       | p-value | b      | b SE   |
|---|------------|--------|--------------|--------------|---------|---------|--------|--------|
| <b>Cumulative federal loan amount for undergrad</b> |            |        |              |              |         |         |        |        |
| Cumulative federal loan amount for undergrad        | 1.0000     | 0.0000 | 1.0000       | 1.0000       | 14.7168 | 0.0000  | 0.0000 | 0.0000 |
| <b>Gender</b>                                       |            |        |              |              |         |         |        |        |
| Female  | 1.4620     | 0.1026 | 1.2742       | 1.6776       | 5.4129  | 0.0000  | 0.3798 | 0.0702 |

Source: NCES Education Statistics, B&B 16-17 Survey



# LR RESULTS

| Odds Ratio | SE | Lower 95% CI | Upper 95% CI | t | p-value | b | b SE |
|------------|----|--------------|--------------|---|---------|---|------|
|------------|----|--------------|--------------|---|---------|---|------|

## Race/Ethnicity (Ref Group White)

|  |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
| Black or African American              | 2.1420 | 0.2243 | 1.7446 | 2.6299 | 7.2749 | 0.0000 | 0.7617 | 0.1047 |
| Hispanic or Latino                     | 1.9442 | 0.1784 | 1.6241 | 2.3274 | 7.2440 | 0.0000 | 0.6649 | 0.0918 |
| Asian                                  | 1.0559 | 0.1616 | 0.7823 | 1.4253 | 0.3555 | 0.7226 | 0.0544 | 0.1531 |
| American Indian or Alaska Native       | 2.0586 | 1.2073 | 0.6522 | 6.4979 | 1.2312 | 0.2197 | 0.7220 | 0.5865 |
| Native Hawaiian/other Pacific Islander | 1.8479 | 1.1054 | 0.5721 | 5.9684 | 1.0265 | 0.3059 | 0.6140 | 0.5982 |
| More than one race                     | 1.4298 | 0.1966 | 1.0920 | 1.8722 | 2.6002 | 0.0100 | 0.3576 | 0.1375 |

## Minority Serving Institution indicator

|   |        |        |        |        |         |          |         |        |
|---|--------|--------|--------|--------|---------|----------|---------|--------|
| HBCU  | 1.2008 | 0.3405 | 0.6888 | 2.0934 | 0.6453  | 0.5194 ? | 0.1830  | 0.2836 |
| Black/African American-serving, non-HSI   | 0.9949 | 0.1568 | 0.7306 | 1.3549 | -0.0325 | 0.9741   | -0.0051 | 0.1576 |
| Hispanic/Latino-serving   | 1.4489 | 0.1546 | 1.1755 | 1.7858 | 3.4760  | 0.0006   | 0.3708  | 0.1067 |
| Asian/Native Hawaiian/Pacific Islander-serving; American Indian/Alaska Native-serving; Other minority-serving | 1.0686 | 0.2248 | 0.7075 | 1.6141 | 0.3155  | 0.7527   | 0.0664  | 0.2104 |



Source: NCES Education Statistics, B&B 16-17 Survey



| LR RESULTS | Odds Ratio | SE | Lower 95% CI | Upper 95% CI | t | p-value | b | b SE |
|------------|------------|----|--------------|--------------|---|---------|---|------|
|------------|------------|----|--------------|--------------|---|---------|---|------|

Selectivity (All 4-year institutions, Ref Group Very Selective)

|  |        |        |        |        |         |        |         |        |
|--|--------|--------|--------|--------|---------|--------|---------|--------|
| Moderately selective                     | 1.2080 | 0.0967 | 1.0325 | 1.4132 | 2.3598  | 0.0192 | 0.1889  | 0.0801 |
| Minimally selective                      | 0.9329 | 0.1413 | 0.6933 | 1.2555 | -0.4582 | 0.6473 | -0.0694 | 0.1515 |
| Open admission; Not a 4-year institution | 1.3932 | 0.2331 | 1.0036 | 1.9340 | 1.9817  | 0.0489 | 0.3316  | 0.1673 |

Expected Family Contribution

|                              |        |        |        |        |         |        |        |        |
|------------------------------|--------|--------|--------|--------|---------|--------|--------|--------|
| Expected Family Contribution | 1.0000 | 0.0000 | 1.0000 | 1.0000 | -4.1752 | 0.0000 | 0.0000 | 0.0000 |
|------------------------------|--------|--------|--------|--------|---------|--------|--------|--------|



Source: NCES Education Statistics, B&B 16-17 Survey



# RESULTS – PLAIN LANGUAGE

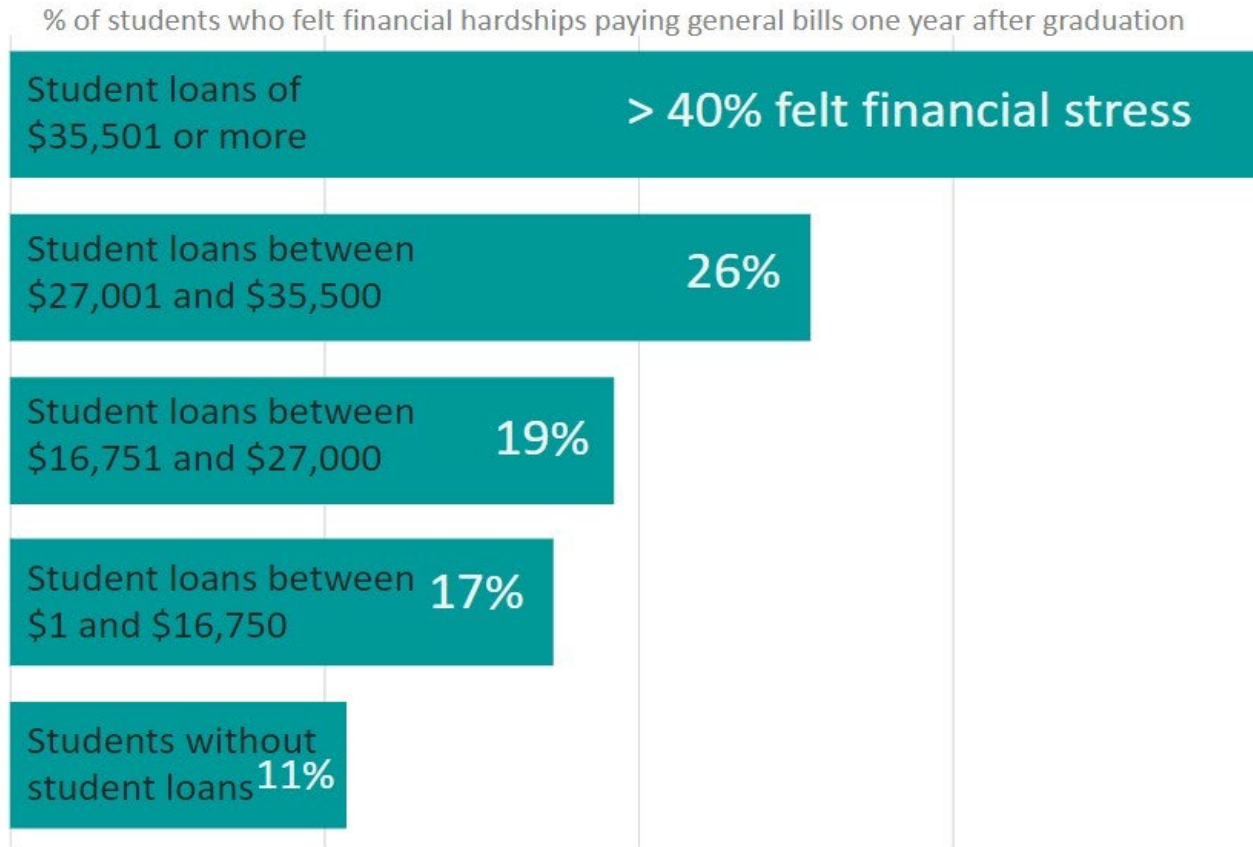


# RESULTS

*One* out of every *five* students feels financial stress in paying essential expenses one year after graduating college; however, the percentage of students who feel stress **varies** within demographic and institutional types.

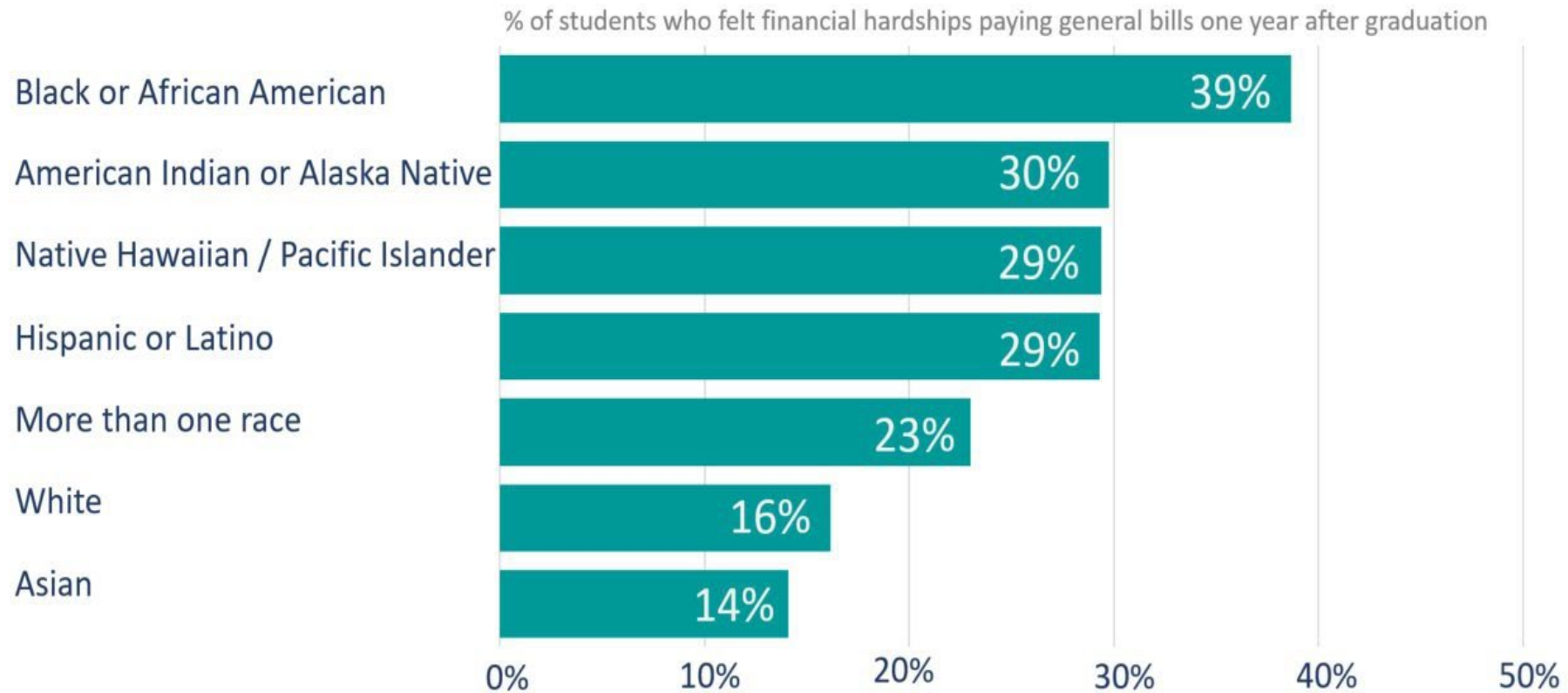
*Source: NCES Education Statistics, B&B 16-17 Survey*

# As student loan amounts **increase**, **greater percentages** of students report financial stress in paying their bills.



Source: NCES Education Statistics, B&B 16-17 Survey

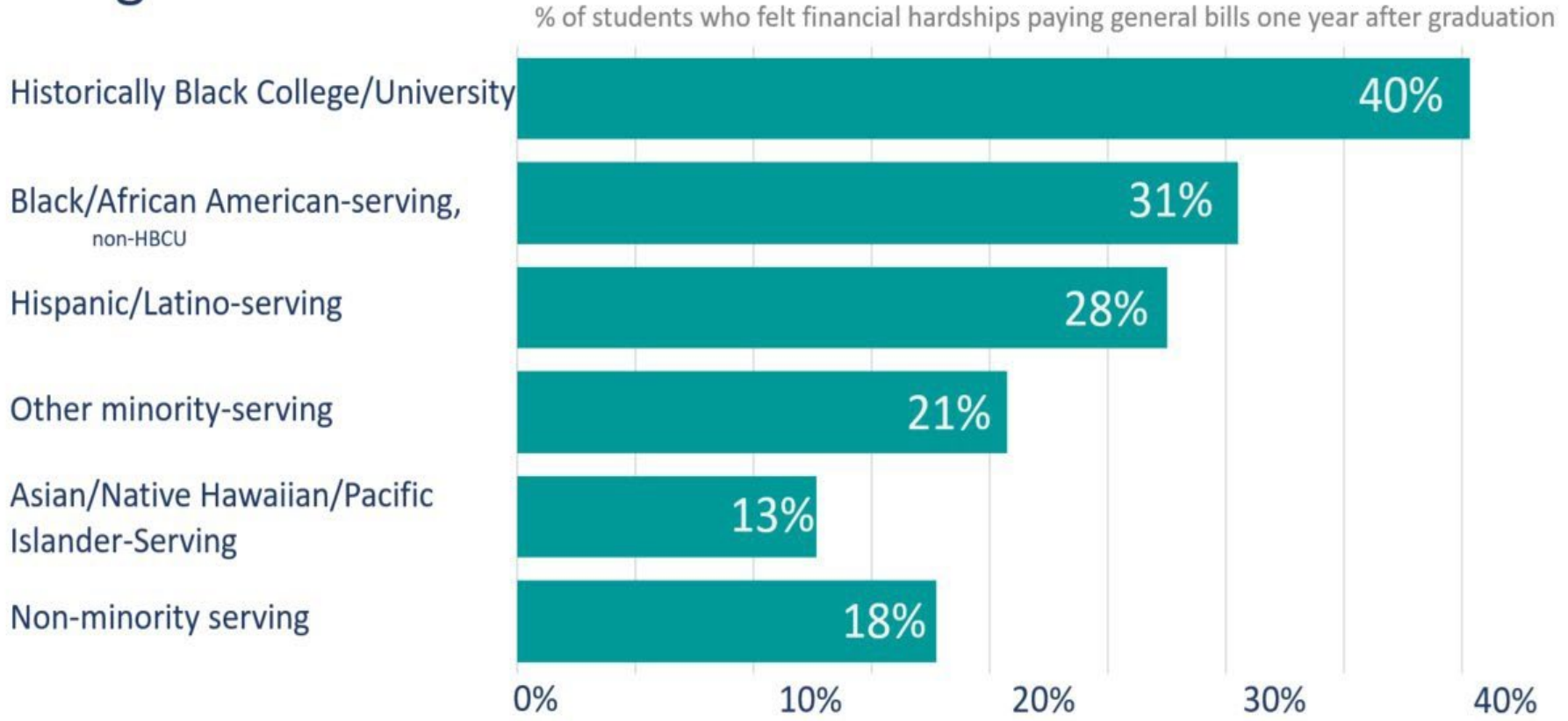
# African American students feel the most financial hardships in paying their bills one year after graduation.



Source: NCES Education Statistics, B&B 16-17 Survey

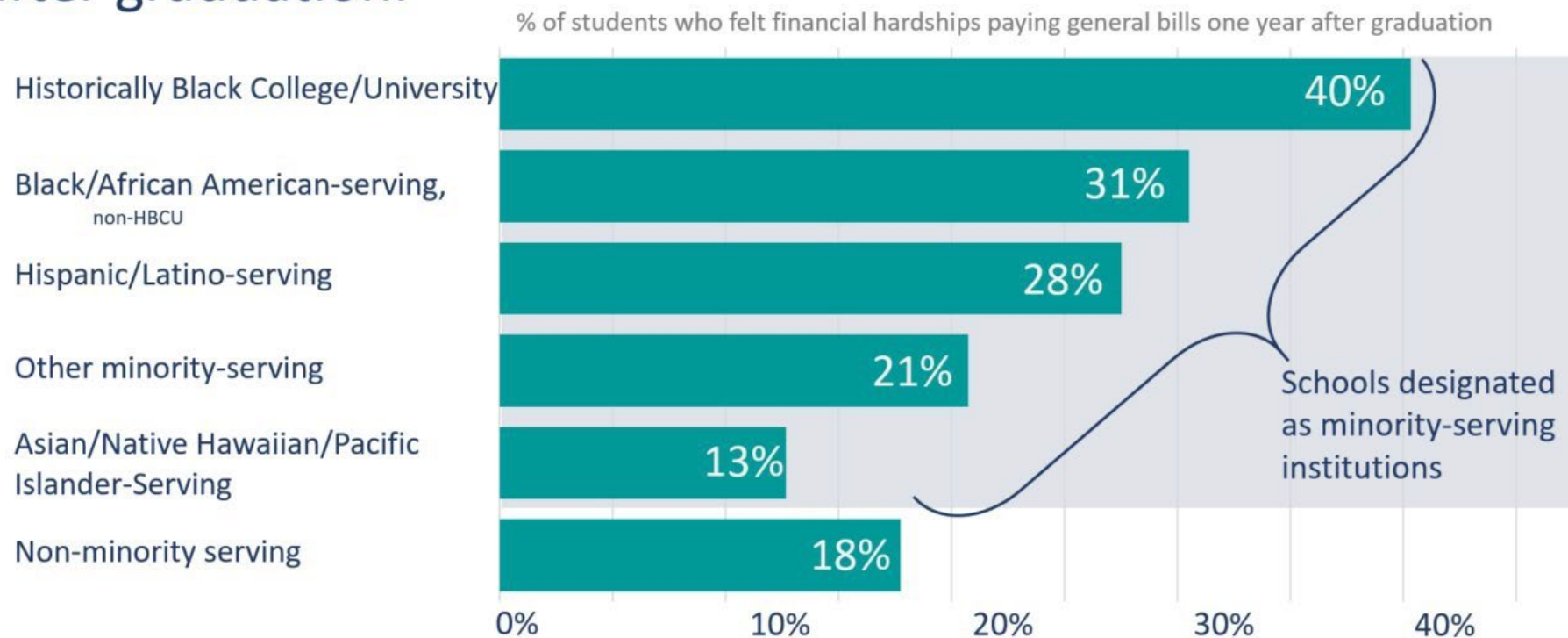


# Students attending a **minority-serving institution** feel the most financial hardships in paying their bills one year after graduation.



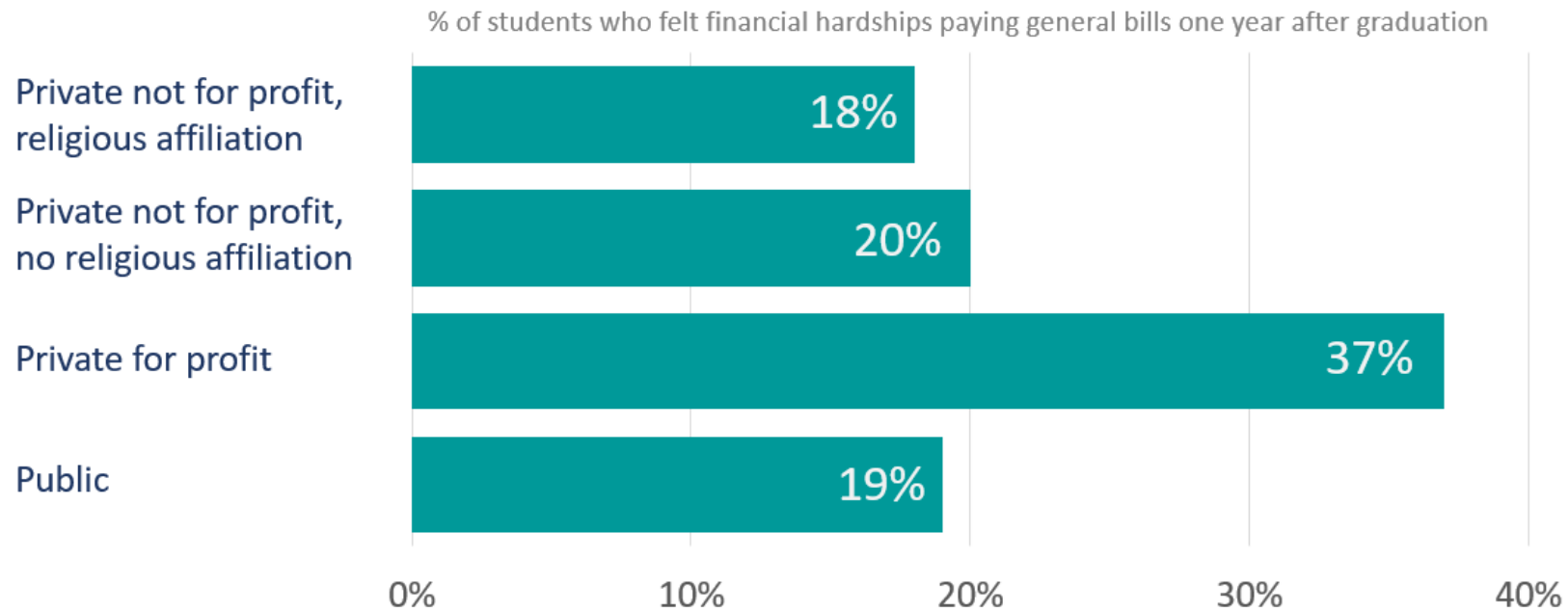
Source: NCES Education Statistics, B&B 16-17 Survey

# Students attending a **minority-serving institution** feel the most financial hardships in paying their bills one year after graduation.



Source: NCES Education Statistics, B&B 16-17 Survey

Students who graduate from **private for-profit schools** have a harder time paying general bills one year after graduation than students who attended other institutions.



Source: NCES Education Statistics, B&B 16-17 Survey



# CONCLUDING REMARKS



# CONCLUSION

- Graduates with high amounts of student loans may experience higher levels of financial stress.
- Black and Hispanic students experience a disproportionate share of financial stress
- Fewer students who attend not-for-profit private or public institutions experience financial stress than students at for-profit institutions



# CONCLUSION

- Students who attend HSI are more likely to experience financial stress
- Recommend additional research on policies, processes, and practices that reduce financial stress.
  - The role of *MSI*
  - High debt at *private institutions*
  - Programs that target *Black and Hispanic Students*
  - Programs that target *low income families*
  - Financial stress experienced by *women*

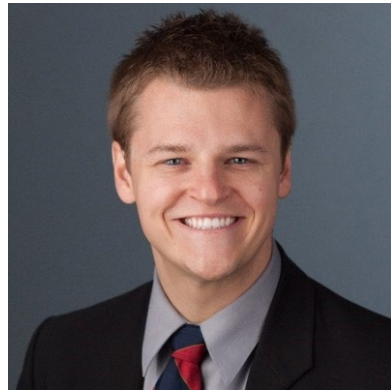


*This material is based upon work supported by the Association for Institutional Research and the National Center for Education Statistics.*

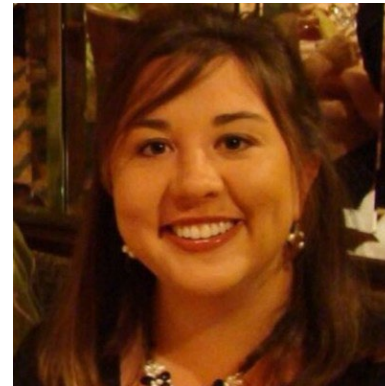
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