

Diversity Journal Club Discussion Notes 11/5/20

AIP TEAM UP Factor 4: personal belonging

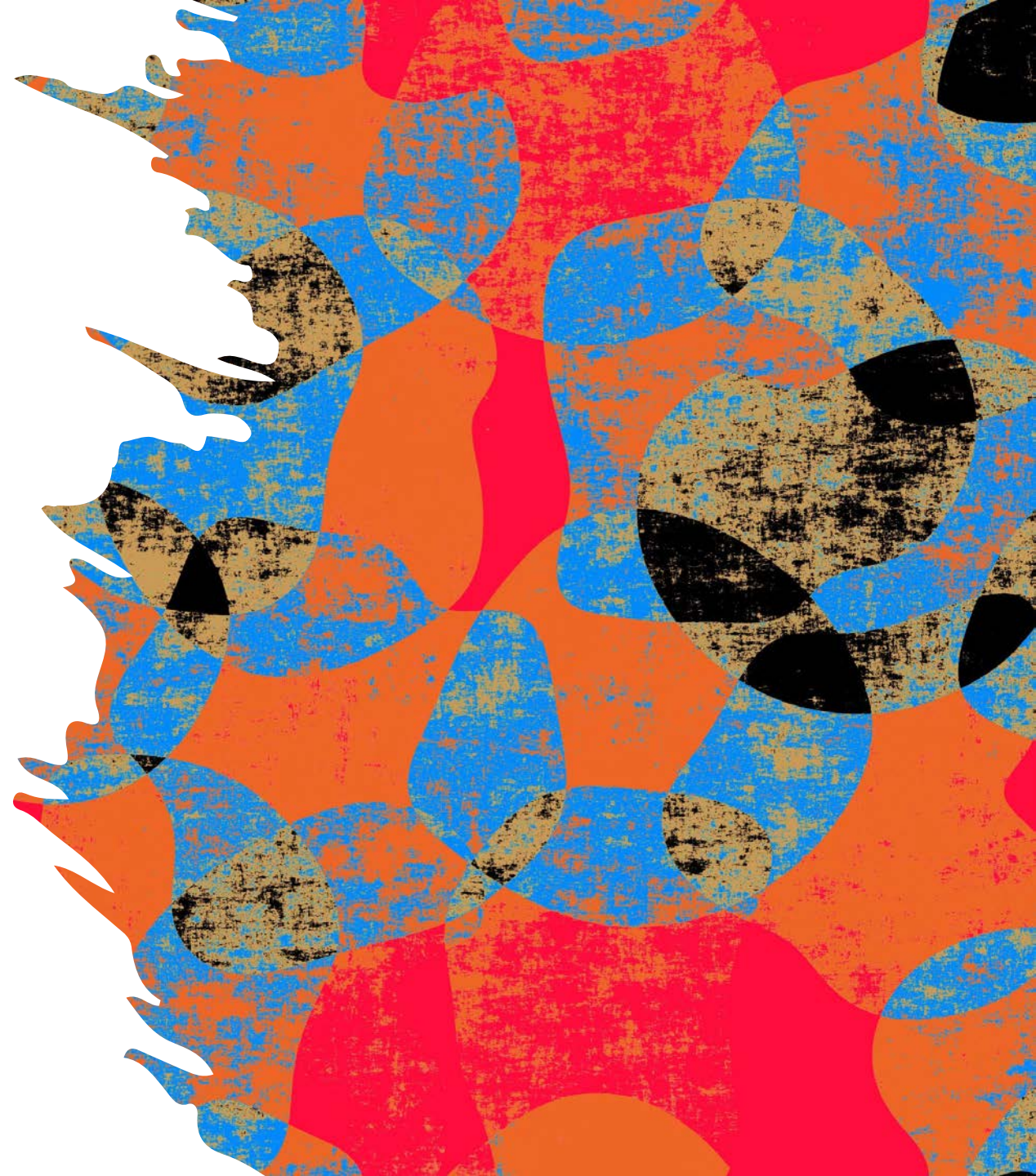
- Focused today on the financial issues and barriers
- Carlos asks for help with his AIP micro-grant! Contact Carlos if you would like to help out!
- Kevin asks what about for grad students here? How big was the decision to come to Arizona based on salary?
 - Jeremy said it was huge (Berkeley was expensive). Andrew says it was at least 50% the decision.
 - "If I had to send money home to my family I don't think I could afford to go here either"
- Benjamin Weiner says that this disparity has grown worse over the years. Part of the problem is that it's a very wide social problem. Many households are just one emergency away from being in a dangerous position.
- Carlos asks - are undergrads paid at Steward? Sam says yes through Space Grants (<https://spacegrant.arizona.edu>). Allie - are there any other avenues besides Space Grants to fund undergraduates? We should look into this more.
 - Other programs to look into: <https://grad.arizona.edu/uoc/>, <https://w3.physics.arizona.edu/node/26>
- **"An undergrad ideally shouldn't have to apply for anything on their own to get paid, that's just another bar they have to jump"**
- Sam - Can we erase the stigma that undergrads should just "feel grateful" to have a research opportunity. Many undergrads don't always know that they should be getting paid or they should be at least asking about getting paid.
- We should be paying our undergrads – no matter what.
 - GOOD POINT: Does anyone know if UA policy prohibits paying an undergrad if they're also getting course credit for the work?
 - *Allie says the real way fund undergrads is for PIs to ask for money when they're applying for grants in the first place. "You can absolutely fund an undergrad that way"
- Karen says it could be good to focus (also) on educating students about the high paying jobs that can be obtained with a bachelors in astronomy and physics.
 - Benjamin Weiner adds – "I'd like to add that there are more jobs for PhDs in academia than the 10-20% that become Tenure Track faculty. The pay isn't any better but it would be good to help people understand that being a prof is not the only job path in academic research."
- **We could go to Buell and ask about starting up a fund for emergency financial situations**

AIP TEAM-UP Report Personal Support

DIVERSITY JOURNAL CLUB

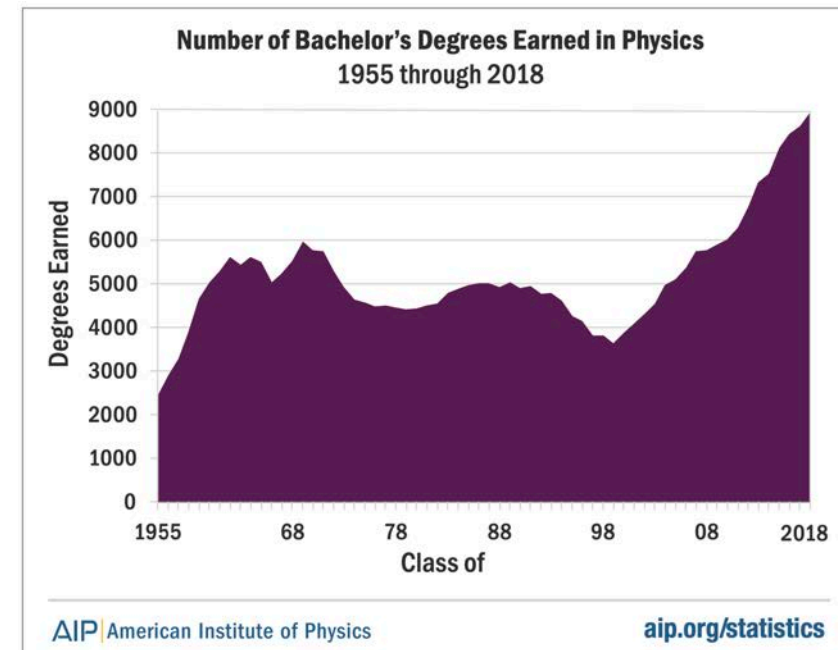
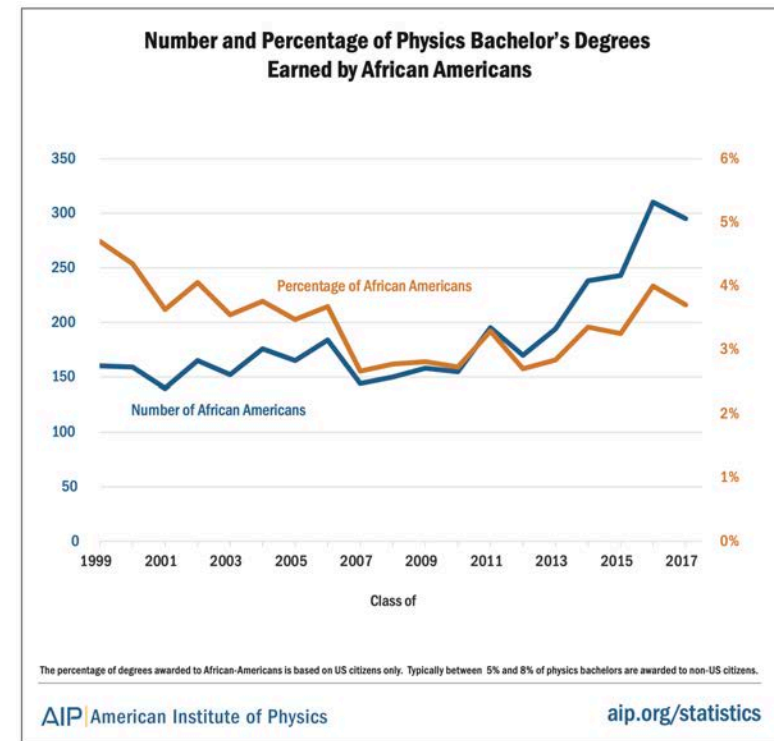
NOVEMBER 5, 2020

CARLOS VARGAS



TEAM-UP Report Recap

- TEAM-UP – National task force to elevate African American representation in physics & astronomy
 - Examined reasons behind persistent underrepresentation via awarded bachelor's degrees



FACTOR 1: BELONGING


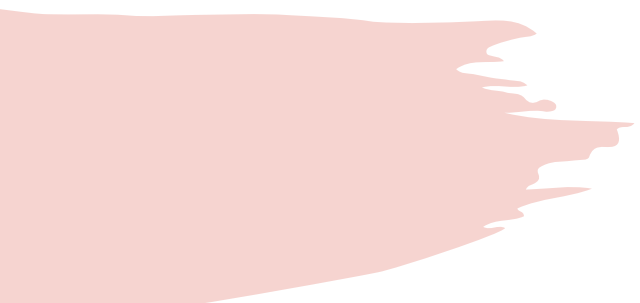
Fostering a sense of belonging is essential for African American student persistence and success.

FACTOR 2: PHYSICS IDENTITY

To persist, African American students must perceive themselves, and be perceived by others, as future physicists and astronomers.

FACTOR 3: ACADEMIC SUPPORT

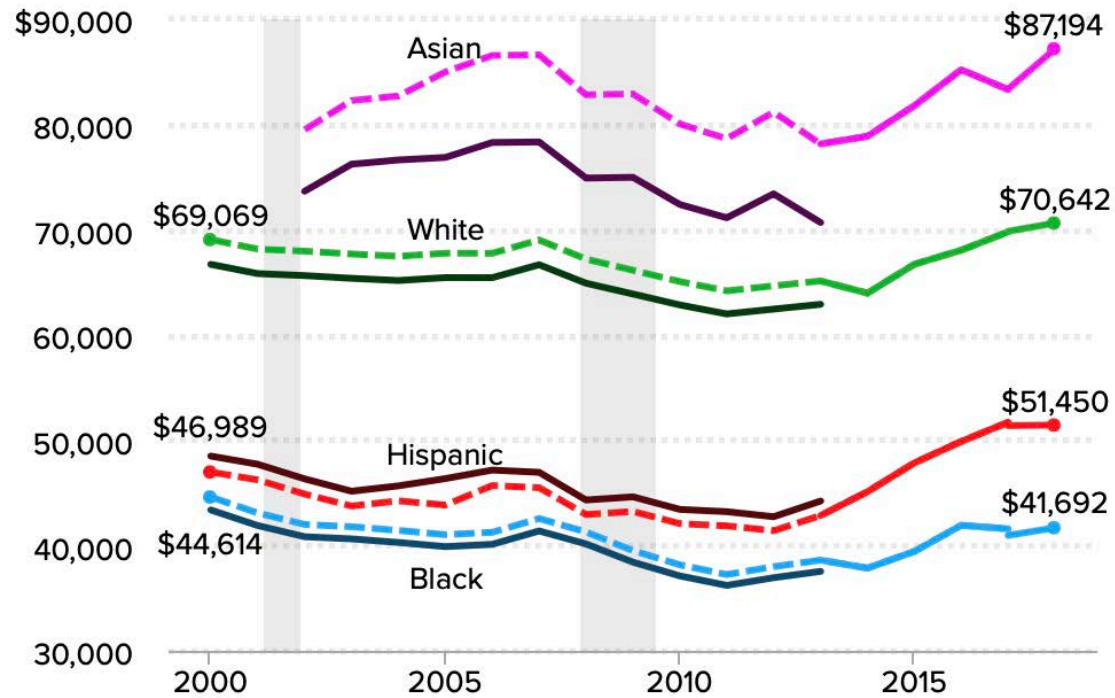
Effective teaching and a strengths-based approach to academic support are necessary for African American student retention and success.



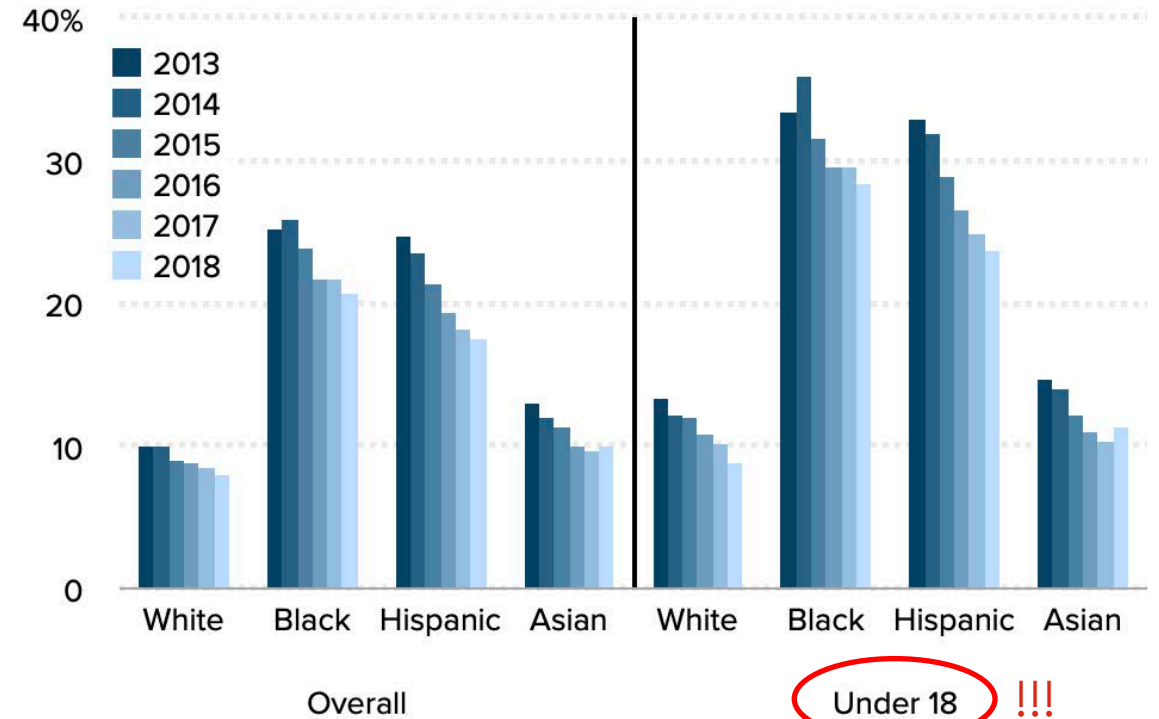
The persistent underrepresentation of African Americans in physics and astronomy is due to (1) the lack of a supportive environment for these students in many departments, and (2) the enormous financial challenges facing them and the programs that have consistently demonstrated the best practices in supporting their success.

U.S General Population

Real median household income by race and ethnicity, 2000–2018



Overall poverty rate and poverty rate of those under age 18, by race and ethnicity, 2013–2018



U.S. Wealth Inequality

In 2016, the median wealth of white families was \$171,000

The median wealth of Latino families was \$20,700

The median wealth of black families was \$17,600

Today's Focus:

FACTOR 4: PERSONAL SUPPORT

Many African American students need support to offset financial burdens and stress.

Empathize with a family battling scarcity...

Key Findings

- 4a. Financial stress is particularly high for many African American students given the documented enormous racial wealth disparities in the US. Colleges and universities improve student retention and graduation by providing emergency support.
- 4b. Working on or off campus in a paid internship or a job related to their major, such as paid research, enables students to earn needed income while supporting academic progress.

Finances were the barrier most frequently cited by African American students

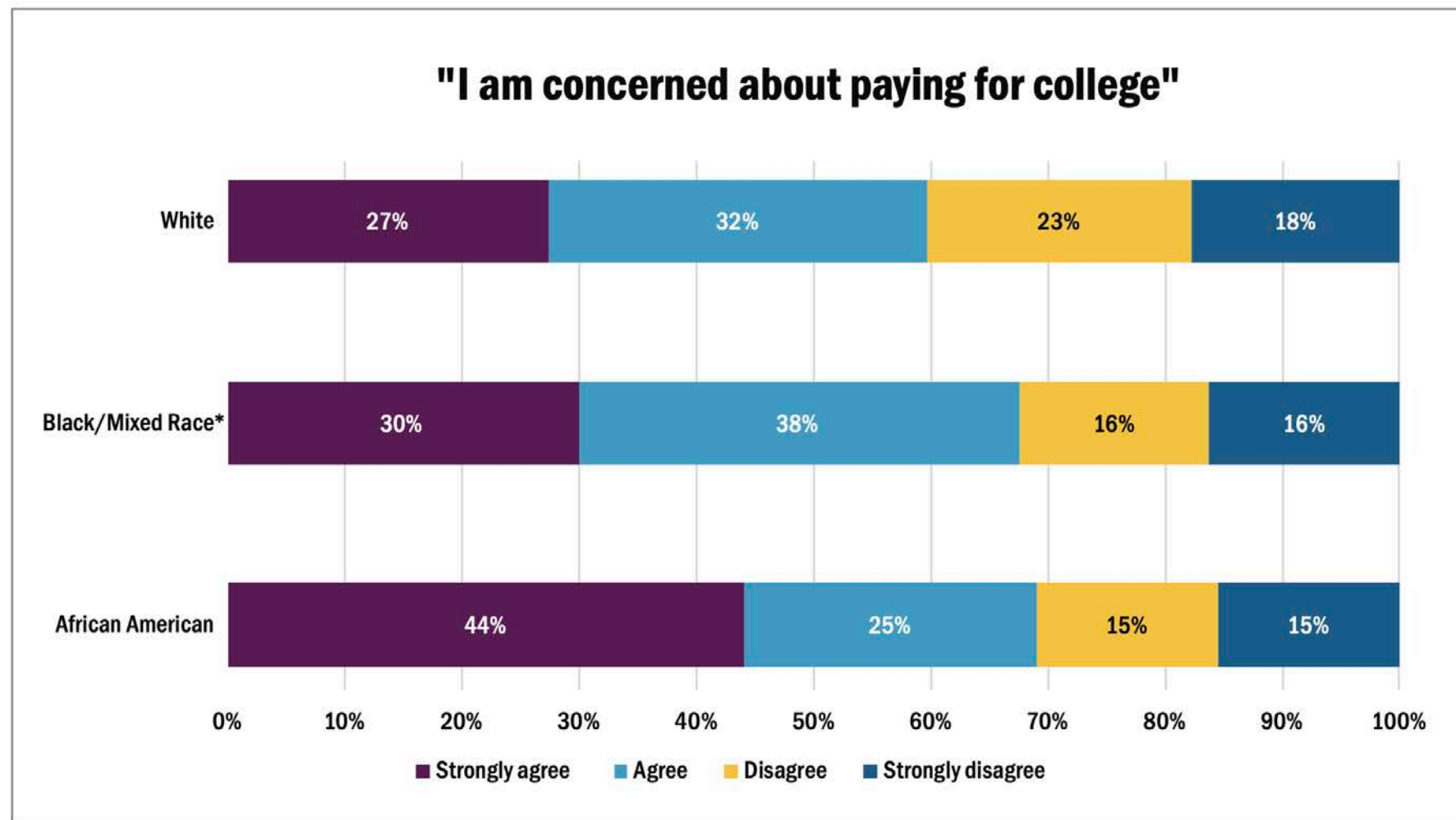


Figure 6

Source: Team-Up Student Survey

*Black/Mixed Race refers to students who selected Black or African American and at least one other race.

- Note: Decline in Historically Black Colleges and Universities (HBCUs) reduce the # of African American STEM students by ~150 per year.
 - The graphic above can only get worse...



Students in our site visits emphasized the importance of having aid in the form of stipends, not just tuition support.

“I am paying the cost of college on my own, so that is continuous financial stress. Working 20-plus hours a week, including overnights. Continuous and worsening mental health issues. Personal tragedies. Living at home in a nonideal situation. Lack of support from the college/department. Administrative issues with the college.”

Why Money Matters

- Stress and worry about money and debt impact all aspects of that student's life
 - Many students link this to a lack of sleep in the surveys
- African American students are CHOOSING engineering degrees over physics/astronomy
 - Due to greater financial reward*

*See Carlos' 2 cents later

Paid Research is Good, but Not Enough

- Federal Work Study Program provides pay to students for research hours
 - Increased graduation rates!
- But, financial aid and work study often do not meet student needs
- *Stipends do not effect on the number of hours students work to support themselves and their families*
 - Pay them!!!!
- Majority of African American students work 12+ hours per week
 - Many work 30+ hours outside of their academic work



Recommendations

- 4a. Departments should identify campus resources for emergency financial aid, conference travel, and other unmet needs and help students take advantage of them.
- 4b. Faculty should seek funding for undergraduate students to work in research groups or as Learning Assistants, and find other ways to help students advance academically while earning money.

What Faculty and Universities Can Do

- “Academic institutions have a responsibility for the care of their students”
- Faculty can reduce the stigma of financial strain by talking to their students about their own challenges when they were students
- Georgia State U informs advisors when their students are late making tuition or fee payments
 - AND they provide **emergency funding** opportunities to help support those students

Mental Health and financial/family stress

The following student comment illustrates the complex ways in which mental health challenges are exacerbated by financial and family stress:

“Having to work many hours to support my family. Both of my parents had [life threatening illnesses] around the same time. Then [one parent] passed away ..., [the other parent] survived ..., and the government mistakenly [mislabeled my status]. My mental health was at stake because I couldn’t remember any physics or math to do [my] research.”



Other Recommendations

- 4c. Faculty and staff should normalize seeking help by discussing stress and self-care with students and referring them to campus resources.
- 4d. Faculty should strive to understand that students do not leave behind their identity and experiences when entering the classroom and should recognize the unique promise of each student from a perspective of strengths rather than weaknesses.
- 4e. A consortium of physical sciences societies should be formed to raise a \$50M endowment from foundations and individuals to support minoritized students with unmet financial need in physics and astronomy and to support the implementation of this report's recommendations by departments. As an interim step, physics and astronomy societies should raise \$1.2M per year to relieve the debt burden of African American bachelor's degree students.

Carlos' Perspective

- The structure of academia 'weeds out' racial minorities
- Choose a major at age 18, first real (arguable) paycheck as a postdoc at age ~28-30
 - Students are told faculty jobs are only for the top 10%!
 - If you grew up poor, the choice to leave academia is extremely easy early on
- Grad student pay is an embarrassment
 - Average *entry-level* engineer salary is ~\$65k (sometimes \$80k+)
 - Grad school salaries need to compete with other STEM-degree field salaries
- Even faculty salaries are too low!
 - Median engineer salary \$91k in 2016 (don't need a PhD!)
 - Median university faculty salary \$80k in 2016 (both from Bureau of Labor Statistics)
 - Why traverse the grueling ladder of academia when you are more likely to make \$\$\$ as an engineer?

CSMA Micro-grants Program

- Awarded \$15k by the AIP Diversity Action Fund
- Will establish program to award small grants (~\$300) to pay for grad school application costs
 - GRE registration, application fees, transcript fees, etc.
- Will begin next Spring to be applied for Fall 2021 applications
- Will seek funding to make this more permanent
- If you're interested in being involved, let me know!