

MindCORE Undergraduate Summer Fellowship 2021 STUDENT PRE- & POST-SURVEY RESULTS

Respondents: Pre-survey n=17, Post-survey n=10 (see demographics on pg.5)

Pre-survey collected 6/7/21, Post-survey collected 8/13/21 – 8/17/21

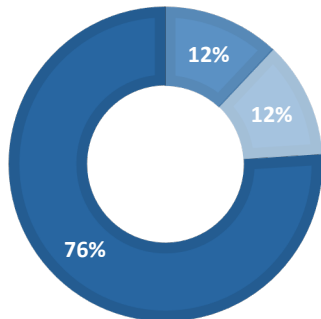
Survey link: https://upenn.co1.qualtrics.com/jfe/form/SV_cSxjPSTQtK4pmnA

Key Takeaways:

- 30% of students plan to pursue a PhD or Master degree who had not planned to previously
- The vast majority of students reported increased skills, understanding of the field, and personal growth
- Overall, students were very satisfied with the program, their mentors, and most program components, except for the meal plan
- White students reported higher gains & that the program exceeded their expectations more than Asian or Black or African American students (*n* too small for robust analysis)

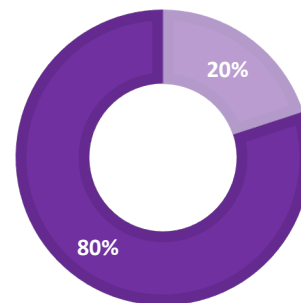
PRE-SURVEY: POST-GRADUATION PLANS

- Work in scientific field/no grad school
- Masters or professional degree
- PhD and/or MD



POST-SURVEY: POST-GRADUATION PLANS

- Masters or professional degree
- PhD and/or MD



30% of respondents now plan to pursue a Doctoral or Master's degree, reporting they previously had no plans/had not considered a higher degree

60% maintained their original plans to pursue a Doctoral or professional degree

Improved understanding of “a career scientist”

- When asked how easy it was for them to visualize “a career scientist,” participants pre-program responded “I think I know what they are talking about, but I am not confident” while participants post-program responded “I have a good idea of what they are talking about,” on average.

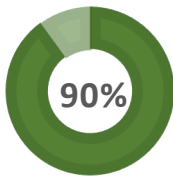
Improved self-report of computer skills

- When asked to rate their confidence in their skill level compared to the average student, participants pre-program responded “I’m about average” in computer skills while post-program participants reported “I’m above average but not in the top 10%,” on average.
- Respondents maintained the following self-reported skill levels from pre- to post-program:
 - Math skill: “I’m about average”
 - Writing skill: “I’m above average but not in the top 10%”
 - Public speaking skill: “I’m about average”
 - Social skill: “I’m about average”

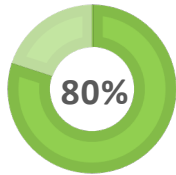
On average students reported **at least moderate gains in every single area** of impact on a scale from “No gain or very small gain,” “Small Gain,” “Moderate Gain,” “Large Gain,” to “Very Large gain”

% Respondents reporting “Large” or “Very Large” Gains in the following areas:

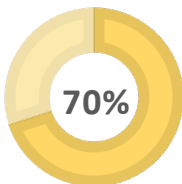
(Note: the remaining % reported “Moderate” gains across most areas)



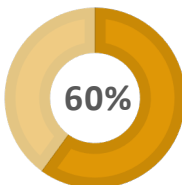
“Learning to work independently”
“Understanding how knowledge is constructed”



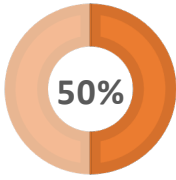
“Tolerance for obstacles faced in the research process”
“Understanding of the research process in your field”
“Understanding of how scientists work on real problems”
“Understanding that scientific assertions require supporting evidence”



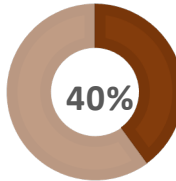
“Clarification of a career path”
“Skill in the interpretation of results”
“Readiness for more demanding research”
“Ability to integrate theory and practice”
“Understanding science”
“Ability to read and understand primary literature”
“Skill in how to give an effective oral presentation”
“Understanding of how scientists think”



“Becoming part of a learning community”
“Self-confidence”
“Ability to analyze data and other information”



“Learning laboratory techniques”



“Learning ethical conduct in your field”

“Skill in science writing”

“Confidence in my potential to be a teacher of science”

Racial Differences

On average, BIPOC students reported lesser gains in areas of impact (see section above) while white students reported the program exceeded their expectations more than BIPOC students.

On average, white students reported “Very Large Gain” across areas, Asian students reported “Large Gain” across areas, and Black and/or African-American students reported between “Moderate Gain” & “Large Gain” across areas. Sample size was too small to determine statistical significance.

On average, white students reported, “The experience was much better than I expected,” Asian students reported, “The experience was a little better than I expected,” and Black or African American students reported, “The experience met my expectations.”

Program Feedback

Participants were **very satisfied** with the overall experience and felt it **met or exceeded expectations**

- 80% felt **very satisfied** with their overall experience (no one felt dissatisfied)
- 50% said the experience was **better** than their original expectations (no one said it was worse than their expectations)

Good mentor quality

- 60% felt their supervisor was an outstanding teacher & mentor
- 90% felt their supervisor was at least above average as a mentor & teacher

Program Components:

- 100% felt **moderately or very positive** about the social activities
- 80% felt **moderately or very positive** (40% very positively) about the discussion on research ethics, no one felt negatively
- 80% felt **moderately or very positive** about on-campus housing, no one felt negatively
- 80% felt **moderately or very positive** about their final presentation, no one felt negatively
- 70% felt **moderately or very positive** about the application process, no one felt negatively
- 60% felt **moderately or very positive** about the seminar on public safety, no one felt negatively
- 66% felt **moderately or very negative** about the meal plan, no one felt positively

COMMENTS

“I wish that I had been able to see the application as a whole when I was filling it out. I could not move and see what was after the essay, until I had filled out the essay part. It wasn't terrible but it was a little frustrating”

“Thank you for all of your work in providing such an enriching environment for me and my peers as we go along our journey finding ourselves as scientists in our fields!”

“I really enjoyed this summer and learned loads, so thanks a lot to MindCORE! My one comment of feedback would be that the first week of orientation was really a lot of hours on zoom when I was eager to just start working in my lab, but also maybe the talks would have been more engaging in person.”

Survey Respondent Demographics

PRE-SURVEY (n=17)	
Research Experience	
Previous Experience	47%
None	53%
Gender	
Female	82%
Male	12%
Non-binary/Third gender	6%
Sexual Orientation	
LGBTQ+	29%
Straight/Heterosexual	59%
Prefer not to say	12%
Race	
White	24%
Black or African American	47%
Middle Eastern (Arab)	6%
North African	6%
Asian	18%
Ethnicity	
Non-Hispanic	94%
Hispanic	6%
FGLI status	
First-gen & low-income	24%
Low-income	29%
First-generation	12%
Neither	35%
Undergraduate Year	
Rising Sophomore	29%
Rising Junior	41%
Rising Senior	29%

POST-SURVEY (n=10)	
Research Experience	
Previous Experience	60%
None	40%
Gender	
Female	80%
Male	20%
Non-binary/Third gender	0%
Sexual Orientation	
LGBTQ+	20%
Straight/Heterosexual	70%
Prefer not to say	10%
Race	
White	30%
Black or African American	40%
Asian	30%
Ethnicity	
Non-Hispanic	90%
Hispanic	10%
FGLI status	
First-gen & low-income	20%
Low-income	30%
First-generation	10%
Neither	40%
Undergraduate Year	
Rising Sophomore	30%
Rising Junior	40%
Rising Senior	30%