

## Research Question

- This study aims to further understand to what extent the COVID-19 pandemic impacted the journey of pre-health students from low-socioeconomic communities and underrepresented minorities in medicine (URiM).

## Background

- The COVID-19 pandemic has contributed to the existing challenges faced by pre-health students from socioeconomically disadvantaged backgrounds.
- Generally, the pandemic disrupted numerous aspects of the pre-health journey including access to clinical exposure, readiness to apply and enter professional healthcare programs, and preparing and completing entry exams like the MCAT.
- The pandemic also impacted other socioeconomic and health factors that added more stress to an already challenging pre-health path. This includes mental well-being, disruptive home environment<sup>1</sup>, and financial difficulties.
- A transition to remote learning was also a significant change with potential negative impact for most pre-health students. A study done in 2010 showed that approximately 40% to 80% of online students' dropout of their classes<sup>2</sup>. Contributing factors included isolation from peers and educators, mastering new learning material, and negative impact on quality of instruction.<sup>2</sup> Virtual learning may also make it more difficult for students to set boundaries between home and school life.

The Bronx Community Health Leaders (BxCHL) is a longitudinal pre-health pathway program for socioeconomically disadvantaged students located within a Federally Qualified Health Center (FQHC) in the Bronx. BxCHL aims to provide mentorship, professional development, and exposure to healthcare career environments. Our program also transitioned to a virtual forum during the pandemic.

## Methods

- A one-time survey questionnaire (using Qualtrics tool) was administered to BxCHL students. Their responses were analyzed using statistical tools such as SPSS.
- Cross-tabulations and chi-square tests were performed.
- Qualitative data was also analyzed, and bar graphs were created.

## Results

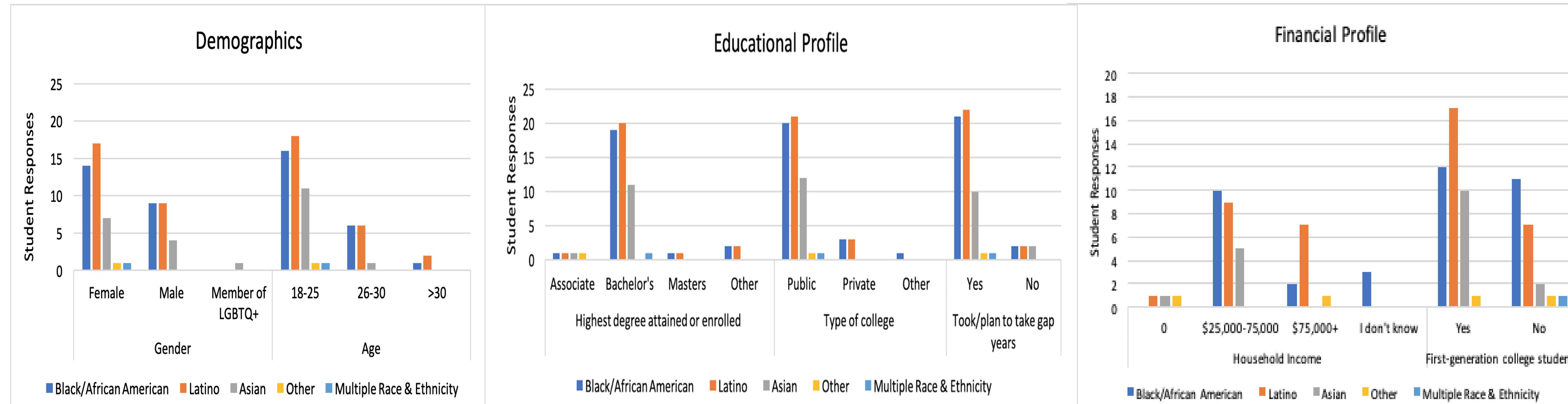


Figure 1 Demographic profile of BxCHL students.

Figure 2 Educational profile of BxCHL students.

Figure 3 Financial profile of BxCHL students.

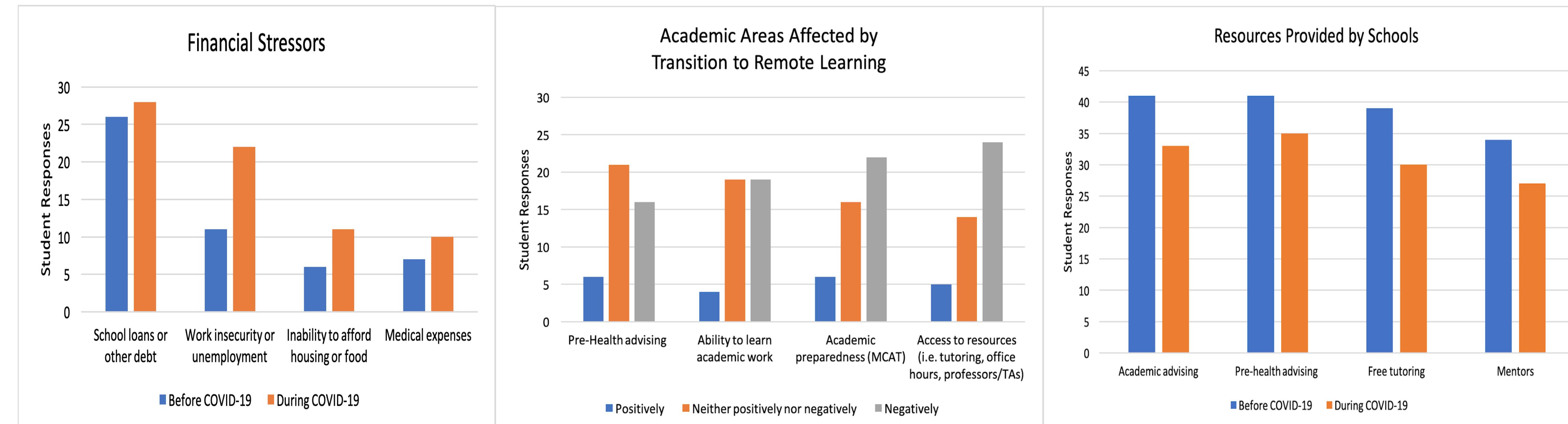


Figure 4 Financial stressors reported by our students before and during the COVID-19 pandemic.

Figure 5 Academic areas affected by transition to remote learning for our student population.

Figure 6 Resources provided by schools before and during the COVID-19 pandemic.

During the peak of the COVID-19 pandemic (March-May), were you _____?	Black/African American (N=23)	Latino (N=26)	Other (N=14)	Total (N=63)
Extra Irritable	10 (31%)	15 (47%)	7 (22%)	<b>32 (51%)</b>
Fatigued more than or less than usual	11 (30%)	15 (41%)	11 (30%)	<b>37 (59%)</b>
Sleeping more than usual	12 (28%)	19 (44%)	12 (28%)	<b>43 (68%)</b>
Eating more frequently	8 (24%)	16 (47%)	10 (29%)	<b>34 (54%)</b>
Enjoying hobbies less often	10 (42%)	7 (29%)	7 (29%)	<b>24 (38%)</b>
Exercising less	13 (32%)	16 (39%)	12 (29%)	<b>41 (65%)</b>
Trouble focusing	9 (24%)	19 (50%)	10 (26%)	<b>38 (60%)</b>

Table 1 Impact of the COVID-19 pandemic on the mental health/wellness of our students

Has COVID-19 impacted the following experiences?	Black/African American (N=23)	Latino (N=26)	Other (N=14)	Total (N=63)
Shadowing	19 (37%)	20 (39%)	12 (24%)	<b>51 (81%)</b>
Internships/volunteering/jobs (clinical)	21 (40%)	20 (38%)	11 (21%)	<b>52 (82%)</b>
Internships/volunteering/jobs (non-clinical)	18 (40%)	17 (38%)	10 (22%)	<b>45 (71%)</b>
Poster presentations	14 (34%)	17 (41%)	10 (24%)	<b>41 (65%)</b>
Publications	13 (36%)	14 (39%)	9 (25%)	<b>36 (57%)</b>
Conferences	17 (38%)	18 (40%)	10 (22%)	<b>45 (71%)</b>

Table 2 Impact of the COVID-19 pandemic on our students' extracurricular and pre-health related experiences.

## Discussion

- Recent literature highlights the disproportionate impacts of the COVID-19 pandemic on populations from disadvantaged backgrounds. The demographic profile of the students in our study is primarily from minority backgrounds: 37% identifying as Black/African American, 41% as Latino or Hispanic, and 19% as Asian.
- As approximately 66% of the students identified as first-generation college students, this study illustrates the barriers they may face in comparison to students who were not first generation. The data shows that the students experienced an increase in financial stressors in the areas of student loans or other debt, work insecurity or unemployment, food or housing insecurity, and medical expenses.
- Considering the transition to remote learning, the data suggests a greater number of students were negatively impacted in areas of academic preparedness and access to academic resources. It was also found that there was a decrease in academic resources provided by schools in the areas of academic / pre-health advising, free tutoring, and access to mentors.
- During the peak of the pandemic in March-May of 2020, it was found that the overall mental health and wellness of the students were impacted. Students of Black/African American and Latino backgrounds reported experiencing extra irritability and exercising less than students from other backgrounds.
- The pandemic also made an impact on pre-health extracurricular experiences. The data shows that Black/African American and Latino students experienced a greater impact compared to students from other backgrounds in the areas of physician shadowing, clinical/non-clinical internships, and scholarly research experiences.

## Conclusion & Future Direction

- The study data supports that students from low socioeconomic and underrepresented minorities in medicine backgrounds have been negatively impacted by the COVID-19 pandemic in the areas of financial stressors, academic preparedness/resources, pre-health extracurricular experiences, mental health, and wellbeing.
- Future directions include studying and developing interventions to alleviate barriers from the pandemic for students pursuing health professions.

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## References

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