From Access to Aspirations: Determining how Clinical Preparedness influences Confidence in Underrepresented Pre-Medical Students

Aran Zakeri, Aditya Khare, Roshni Sen, Raina Cheng, Wendy Lou, Arshiya Jafari
University of California, San Diego, La Jolla, California

Key Words: Underrepresented in Medicine (URiM), Medical School Admissions, Clinical Experience, Clinical Paid Employment, Medical School Matriculants, Pre-Medical Clinical Exposure, First-Generation College Students, Barriers to Medical School Admission, Pre-Med Student Preparedness, Medical School Application Readiness
URiM Representation in Medicine, Impact of Clinical Volunteering on URiM Students, Medical College Admissions Test (MCAT), Medical College Admission Requirements (MSAR), Association of American Medical Colleges (AAMC), University of California - San Diego (UCSD), Undergraduate MD/ PhD Society (UMPS)

ABSTRACT

Despite national efforts to diversify medical education, the physician workforce in the United States remains disproportionately White and economically privileged. Students underrepresented in medicine (URiM) continue to face entrenched structural barriers—including limited access to early clinical exposure, unclear pathways to medical preparation, and financial constraints—that restrict their participation in critical pre-medical experiences. This study investigates how such barriers affect URiM students' confidence in meeting clinical and community service expectations for medical school admission. Using data from "Happy Weekends," a student-led clinical training initiative within the Undergraduate MD/PhD Society (UMPS), we assess the preparedness and perceptions of pre-medical students engaged in the program. Quantitative analysis of confidence scores revealed no statistically significant change between pre- and post-intervention among URiM students, though upward trends were observed. Qualitative interviews highlighted significant frustration with the inaccessibility of clinical opportunities, a lack of mentorship, and the financial burdens associated with application preparation. At the same time, students emphasized that peer support and social connection through UMPS events helped mitigate feelings of isolation and fostered a sense of belonging. These findings suggest that while community-based interventions may not immediately alter self-assessed preparedness, they play a vital role in countering the exclusionary dynamics URiM students often face in the pre-medical pipeline.

INTRODUCTION

The lack of diversity in the U.S. physician workforce has long been a pressing issue. Despite ongoing national efforts to diversify medical education, underrepresentation of marginalized groups—particularly those categorized as underrepresented in medicine (URiM)—persists at nearly every stage of the medical pipeline. The Association of American Medical Colleges (AAMC) defines URiM as "racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population" (Association of American Medical Colleges, 2004) including, but not limited to, Black, Hispanic/Latino, and American Indian/Alaskan Native individuals. Existing literature on the benefits of increased representation in the healthcare scene consistently indicate increasing racial and cultural diversity among physicians improves care outcomes in underserved communities (how does representation do this), fosters greater trust in patient-provider relationships, and addresses systemic health inequities (what are some examples of these inequities) (Achenjang & Elam, 2016; Smedley et al., 2001).

However, current data reveal significant disparities addressing the diversity of physicians in the US healthcare physician. According to the AAMC's 2019 executive summary, 56.2% of practicing physicians in the U.S. are White (Association of American Medical Colleges, 2019). By contrast, as of 2024, only 13.6% of the U.S. population identifies as Black, 18.9% as Hispanic, and 1.3% as American Indian and Alaskan Native (AIAN).Yet, URiM students collectively represent only 13.6% of U.S. medical students (Association of American Medical Colleges, 2021; Lett et al., 2019). URiM students often face compounding obstacles long before the medical school application process begins. These include limited access to high-quality K–12 education, increased difficulties in gaining exposure to healthcare settings, lack of access to preparatory resources for standardized exams, and biases embedded in medical school admissions' criteria (Tello & Goode, 2023). Admissions criteria such as high GPAs, competitive MCAT scores, and robust extracurricular involvement often favor applicants who have the financial resources to invest in preparation and the social capital—such as family or mentors in healthcare—to access valuable clinical and community service opportunities (Kahn & Sneed, 2015; Perez et al., 2023; Nguyen et al., 2023).These structural issues result not only in unequal outcomes but also in lower self-efficacy among URiM students, especially in relation to essential admissions criteria like clinical exposure, which plays an increasingly prominent role in medical school evaluation.

While traditional academic metrics such as GPA and MCAT scores are consistently reported and emphasized by medical schools, clinical experience—particularly unpaid volunteering or paid clinical employment—is often less systematically presented across institutions. This lack of standardized reporting can make it difficult for pre-medical students to gauge its true weight in admissions decisions. However, available data from certain schools suggest that clinical experience is highly valued. For instance, the UC San Diego School of Medicine reported that 90% of its 2023 matriculating class had unpaid clinical experience, and 65% held clinical employment (Association of American Medical Colleges, 2025). Medical

school admissions increasingly appear to favor applicants with prior clinical experience, both paid and unpaid. Gaining such experience, however, often requires not just time and resources, but also insider knowledge about where and how to access these opportunities. This creates a disadvantage for students from underrepresented backgrounds, who may not have family members in healthcare or networks that can help them navigate these informal systems. Their lower participation is not a reflection of interest or ability, but rather a result of structural barriers related to access, opportunity, and mentorship.

Given this context, our study aims to explore how participation in structured clinical volunteering programs influences URiM students' confidence in their readiness for medical school. Specifically, we investigate how exposure to patient care and skill-building opportunities affects perceptions of preparedness and identify common barriers URiM students face when seeking clinical experience. This research was conducted through the Undergraduate MD/PhD Society (UMPS) at UC San Diego, a student-led nonprofit focused on empowering future physician-scientists.

To address these knowledge gaps, we analyzed data collected from Happy Weekends, which provides students with basic vitals instruction and weekly opportunities for hands-on health screenings in underserved local communities who face food and housing insecurity. By examining participation data and confidence metrics, this study contributes to a broader understanding of how early, targeted exposure initiatives may help URiM students overcome educational barriers in the pre-medical journey and increase their competitiveness in medical school admissions.

LITERATURE REVIEW: CURRENT TRENDS IN MEDICAL SCHOOL MATRICULATION AND CLINICAL EXPERIENCE BETWEEN 2020 and 2023

Understanding current trends in clinical experience expectations is essential to contextualizing the barriers URiM students face in medical school admissions. While academic performance metrics like GPA and MCAT scores are clearly defined, clinical engagement standards are often informal, yet highly influential. This literature review was necessary to clarify how clinical volunteering and employment have become de facto admissions expectations and to identify how these trends may disadvantage students without prior access to healthcare environments or networks.

Medical school admissions committees have long emphasized community and clinical engagement as essential elements of a competitive application. A review of Medical School Admission Requirements (MSAR) data across all California medical schools from 2020 to 2023 shows consistently high participation in community and clinical service, with a growing trend in paid clinical employment. Clinical community service—unpaid patient-facing volunteer work—remained nearly universal, with rates of 90% in 2020, 89% in 2021, and 88% in both 2022 and 2023 (Figure 1), with no significant variation across years ($p > 0.05$).

In contrast, clinical paid employment has shown a clear upward trend. Participation was 48% in 2020, dipped to 45% in 2021, then rose to 56% in 2022 and 64% in 2023 (Figure 2). Statistical analysis revealed a significant increase across these cycles ($p < 0.05$), suggesting that paid clinical experience is becoming more common and valued. However, many paid positions prioritize prior healthcare experience or connections in clinical settings, which URiM students are less likely to possess due to generational and systemic disparities in access to professional networks. These cumulative barriers mean that even as clinical employment becomes more valued by admissions committees, URiM students may be systematically excluded from these opportunities despite comparable levels of motivation and service participation.

METHODS

To understand how the experiences of URiM students in the UMPS' Happy Weekends program translated to improved confidence in their medical school preparation, the number of students within UMPS who qualified as URiM were quantified. To capture a broad range of contributing factors to limited educational access or lower quality of life, students were considered URiM based on three categories: 1) students identified as underrepresented according to the National Institutes of Health (NIH) (MARC Research Training Program, n.d.), 2) students who have first-generation college status, meaning neither parent attended college, and 3) students who have received Pell Grants, which are awarded based on financial need. By using this framework, we applied a more holistic understanding of what it means to be underrepresented in medicine and avoided solely relying on one characteristic such as race or socioeconomic status (Figure 3). Additionally, these indicators were selected based off the NIH's definition of 'underrepresented': individuals as those from ethnic minorities, people with disabilities, and those from disadvantaged backgrounds such as people experiencing homelessness, living under foster care, low-income people, and first-generation college students.

Participants and Procedure

To assess the percentage of UMPS members with URiM status, demographic data was collected from 100 unique undergraduate students from a series of different membership and event log-in forms from within the UMPS organization. The data was processed to remove any duplicates. Within these forms, students provided self-reported demographic information, including ethnicity, gender, academic year, major, first-generation college status, and Pell Grant recipient status. These variables were used to assess URiM representation within our organization.

Following our assessment of UMPS' URiM student population, we assessed 54 undergraduate students who participated in Happy Weekends clinical or weekend training sessions to determine how participating in the Happy Weekends initiative could improve confidence in medical school aspirations for URiM students. Eligibility criteria included participation in at least 1 Happy Weekends session and completion of a follow up survey. Data collection took place during the Spring 2023 academic term at the University of California, San

Diego. Participants completed an online survey capturing demographic information, confidence levels in medical school applications, and prior clinical experience. They rated their confidence in applying to medical school on a 5-point Likert scale, ranging from 1 (not confident at all) to 5 (very confident). Confidence levels were assessed before and after participation in the clinical training sessions to determine changes associated with the intervention.

Finally, to gain qualitative insights on the challenges faced by underrepresented pre-medical students, we conducted semi-structured interviews with 9 participants actively engaged in the UMPS program. What was the exact URiM makeup of this group. If most were non-URiM, this data is ultimately unimportant to your research topic on how URiM students could benefit from targeted clinical experience opportunities. The interviewees were selected through a voluntary participation process, with each interview lasted approximately 15 to 30 minutes and followed a structured yet flexible format that allowed participants to elaborate on their experiences. The interviews covered topics such as academic preparedness, access to clinical experience, financial concerns, mentorship, and the emotional toll of the medical school application process. Interviews were conducted virtually and transcribed for thematic analysis. Data was then categorized into recurring themes, highlighting common barriers, motivations, and support mechanisms identified by participants.

RESULTS

To better understand the demographics and experiences of students participating in the Happy Weekends program, we collected a range of self-reported data through voluntary surveys. Variables included gender, ethnicity, underrepresented status, first-generation status, financial aid eligibility, disability status, academic year, and field of study. For the purpose of this analysis, the terms “underrepresented in medicine” (URiM) and “underrepresented” are used interchangeably, aligning with the NIH definition used throughout this study.

Among all Happy Weekends participants, 60% self-identified as underrepresented (Table 1, Figure 4). Additionally, 54% of respondents reported receiving Pell Grants, a federal indicator of low-income status (Table 2, Figure 5). First-generation college students comprised 26% of the participant pool (Table 3, Figure 6).

Ethnic diversity among participants was varied. 39% identified as Hispanic/Latino, the largest single ethnic subgroup (Table 4A, Figure 7A). Disaggregated data across ethnic subgroups is presented in Tables 4B–4G and Figures 7B–7G. A total of eight participants identified as students with disabilities (Table 5, Figure 8).

Participants represented a range of academic disciplines. While 61.1% were pursuing degrees in the natural sciences, others came from the physical sciences, engineering, and social sciences (Table 6, Figure 9). The survey captured responses from 388 UC San Diego students

across 14 academic majors, with Human Biology being the most common major at 27.1% (Tables 7–8, Figure 10).

Happy Weekends Attendee Analysis

Happy Weekends attendees included 38.3% first-year students, 29.2% second-year students, 20.0% fourth-year students, and 12.5% third-year students (Figure 11). Clinical and community service confidence levels were analyzed by URiM and first-generation status. URiM students reported an average clinical confidence score of 1.8/5 and a community service confidence score of 2.5/5. In comparison, non-URiM students reported scores of 2.6/5 and 2.9/5, respectively (Figure 12). First-generation students also reported lower confidence scores compared to their non-first-generation peers. Clinical confidence scores were lower than the 2.9/5 reported by non-first-gen students, and community service confidence was lower than the 3.1/5 reported by their peers (Figure 13).

Interview Findings

Interview responses provided qualitative insight into students' experiences. Participants identified barriers related to clinical and community service access, structured mentorship availability, and financial resources. Some participants described feeling behind compared to peers. Interviewees also discussed emotional and psychological challenges, including imposter syndrome, feelings of unpreparedness, and burnout. Despite these experiences, many reported personal motivation to pursue medicine and cited hands-on clinical exposure and peer support through UMPS as beneficial. Several participants also noted increased awareness of career pathways as a result of their participation in Happy Weekends.

Respondents offered suggestions for future improvements to pre-medical programming, including more structured mentorship, accessible clinical and research training, resume-building workshops, interview preparation, and clearer guidance on application expectations from medical school admissions committee (Table 9)

DISCUSSION

This study assessed whether clinical preparedness improves confidence among underrepresented pre-medical students (URiM), using the Happy Weekends program as a case environment. We found that **URiM students reported significantly lower clinical confidence (1.8/5)** compared to their non-URiM peers (2.6/5), and lower community service confidence (2.5/5 vs. 2.9/5). These results are not merely psychological—they reflect structural inequalities in early exposure, mentorship, and opportunity. Research shows that URiM students frequently encounter barriers such as limited healthcare access, lack of role models, and unfamiliarity with

the medical application process, which can all suppress early confidence (Tello & Goode, 2023; Lett et al., 2019).

We also observed that **first-generation students mirrored these disparities**, with clinical confidence falling below the 2.9/5 reported by non-first-gen students, and community service confidence below the 3.1/5 average. This suggests that familial exposure to medicine—such as knowing how to access clinical roles or navigate competitive pre-med pathways—can shape how students perceive their own readiness, even in the absence of differences in academic ability or motivation.

Interestingly, while our **post-intervention data did not show statistically significant changes in URiM students' confidence**, several upward trends were noted. The absence of significance may be due to the small sample size (n=54), short follow-up window, or the subtle, long-term nature of confidence development. However, the **qualitative data tells a complementary story**: students frequently reported that after the intervention, they felt more connected to their peers, less alone in their journey, and more aware of what clinical preparation entailed. These shifts, while not immediately quantifiable, represent meaningful psychosocial improvements that align with existing research on pre-med attrition.

Programs like Happy Weekends seem particularly effective because they intervene **early**. Our data shows that **38.3% of participants were first-year students**, and **29.2% were second-year students**, with third-years comprising the smallest group at 12.5%. Early engagement is critical for URiM students who often miss initial windows to build clinical credentials due to lack of awareness or access. Introducing these experiences early allows students to build skills gradually while boosting self-efficacy.

Qualitative interviews illuminated additional barriers to confidence, including financial constraints, confusion around clinical entry points, and imposter syndrome. Students described feeling "behind" and doubting their preparedness compared to peers. These sentiments echo broader national studies showing that URiM students frequently experience psychological stressors and increased risk of burnout (Achenjang & Elam, 2016; Eames et al., 2024). Notably, Eames and colleagues found that even URiM medical students—after gaining admission—face disproportionate levels of stress and academic underperformance during clerkships, partly due to gaps in early exposure and institutional support. By contrast, pre-med initiatives that cultivate early clinical confidence may act as protective factors against this long-term vulnerability.

Although statistical gains in confidence were modest, the Happy Weekends program succeeded in building social capital and clinical literacy among participants. Students reported that hands-on exposure—such as learning vitals or working with patients—helped translate vague career aspirations into tangible pathways. They also recommended expanding the program to include longitudinal mentorship, structured guidance on application preparation, and paid roles.

There are limitations to our analysis. Demographic questions were voluntary, resulting in varying response rates. The ethnicity question yielded 100 responses, while 439 respondents indicated year in college. Multiple identities were often selected, increasing category counts. Furthermore, students with initial anxiety about clinical hours may have been more likely to participate in Happy Weekends, potentially skewing baseline confidence lower than that of the general pre-med population.

Going forward, UMPS aims to scale the Happy Weekends model. With over **60% of participants identifying as URiM**, we recommend the following: (1) match URiM students with healthcare mentors; (2) expand access to free or paid clinical experiences.In conclusion, our data affirms that **URiM students consistently begin their clinical journeys at a confidence deficit**, but early, supportive clinical exposure can help bridge this gap. Community-based programs that offer low-barrier, peer-supported entry into clinical spaces hold promise—not only for increasing self-perception, but also for closing long-term disparities in medical training outcomes.

DECLARATIONS

The authors declare that there are no conflicts of interest related to this study. This research was supported by the Undergraduate MD/PhD Society (UMPS) 501(c)(3) at the University of California, San Diego. No external funding was received for this study. No ethical approval was required for this study as it did not involve human clinical trials or interventions that mandate institutional review board (IRB) approval. Informed consent was obtained from all participants prior to their involvement in the Happy Weekends program. The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request. The authors' contributions were as follows: Aran Zakeri guided the overall research process, wrote the introduction, abstract, and conclusion, and is currently writing the edits and reviews; Roshni Sen wrote the literature review and checked word choice and editing; Wendy Lou wrote the results, checked for word choice and editing, and conducted interviews; Raina Cheng processed data and assisted in writing the literature review; Aditya Khare helped process data, conducted interviews, and wrote the results. We would like to acknowledge the students who participated in the Happy Weekends program and the UMPS organization for their continued support of pre-medical students. Special thanks to the mentors and volunteers who made this research possible. The authors declare that this manuscript has not been published or submitted for publication elsewhere, and all sources are appropriately cited in the manuscript.

References

1. Achenjang, J. N., & Elam, C. L. (2016). Recruitment of underrepresented minorities in medical school through a student-led initiative. *Journal of the National Medical Association, 108*(3), 147–151. https://doi.org/10.1016/j.jnma.2016.05.003

2. Association of American Medical Colleges. (2004). *Underrepresented in medicine definition*. https://www.aamc.org/initiatives/urm

3. Association of American Medical Colleges. (2018, October). *An updated look at the economic diversity of U.S. medical students* (Analysis in Brief, Vol. 18, No. 5). https://www.aamc.org/media/9591/download

4. Association of American Medical Colleges. (2019). *Diversity in medicine: Facts and figures 2019*. https://www.aamc.org/media/38266/download?attachment

5. Association of American Medical Colleges. (2021). *2021 state physician workforce data report*. https://store.aamc.org/downloadable/download/sample/sample_id/506/

6. Association of American Medical Colleges. (2025). *Medical school admission requirements (MSAR)*. https://students-residents.aamc.org/medical-school-admission-requirements/medical-school-admission-requirements-msar-applicants

7. Eames, D., Thomas, S., Norman, K., Simanton, E., & Weisman, A. (2024). Sociodemographic disadvantage in the burden of stress and academic performance in medical school: Implications for diversity in medicine. *BMC Medical Education, 24*(348). https://doi.org/10.1186/s12909-024-05263-y

8. Kahn, M. J., & Sneed, E. J. (2015). Promoting the affordability of medical education to groups underrepresented in the profession: The other side of the equation. *AMA Journal of Ethics, 17*(2), 176–180. https://doi.org/10.1001/virtualmentor.2015.17.02.oped1-1502

9. Lett, E., Murdock, H. M., Orji, W. U., Aysola, J., & Sebro, R. (2019). Trends in racial/ethnic representation among US medical students. *JAMA Network Open, 2*(9), e1910490. https://doi.org/10.1001/jamanetworkopen.2019.10490

10. MARC Research Training Program. (n.d.). *Underrepresented definition*. https://marcu.ucr.edu/underrepresented

11. Nguyen, M., Desai, M. M., Fancher, T. L., Chaudhry, S. I., Mason, H. R. C., & Boatright, D. (2023). Temporal trends in childhood household income among applicants and

matriculants to medical school and the likelihood of acceptance by income, 2014–2019. *JAMA, 329*(21), 1882–1884. https://doi.org/10.1001/jama.2023.5654

12. Perez, M. A., Williams, C., Henderson, K., & McGregor, R. (2023). Association of applicant demographic factors with medical school acceptance. *BMC Medical Education, 23*(1), 960. https://doi.org/10.1186/s12909-023-04897-8

13. Smedley, B. D., Stith, A. Y., Colburn, L., & Evans, C. H. (Eds.). (2001). *The right thing to do, the smart thing to do: Enhancing diversity in the health professions: Summary of the symposium on diversity in health professions in honor of Herbert W. Nickens, M.D.* National Academies Press. https://www.ncbi.nlm.nih.gov/books/NBK223632/

14. Tello, C., & Goode, C. A. (2023). Factors and barriers that influence the matriculation of underrepresented students in medicine. *Frontiers in Psychology, 14*, 1141045. https://doi.org/10.3389/fpsyg.2023.1141045

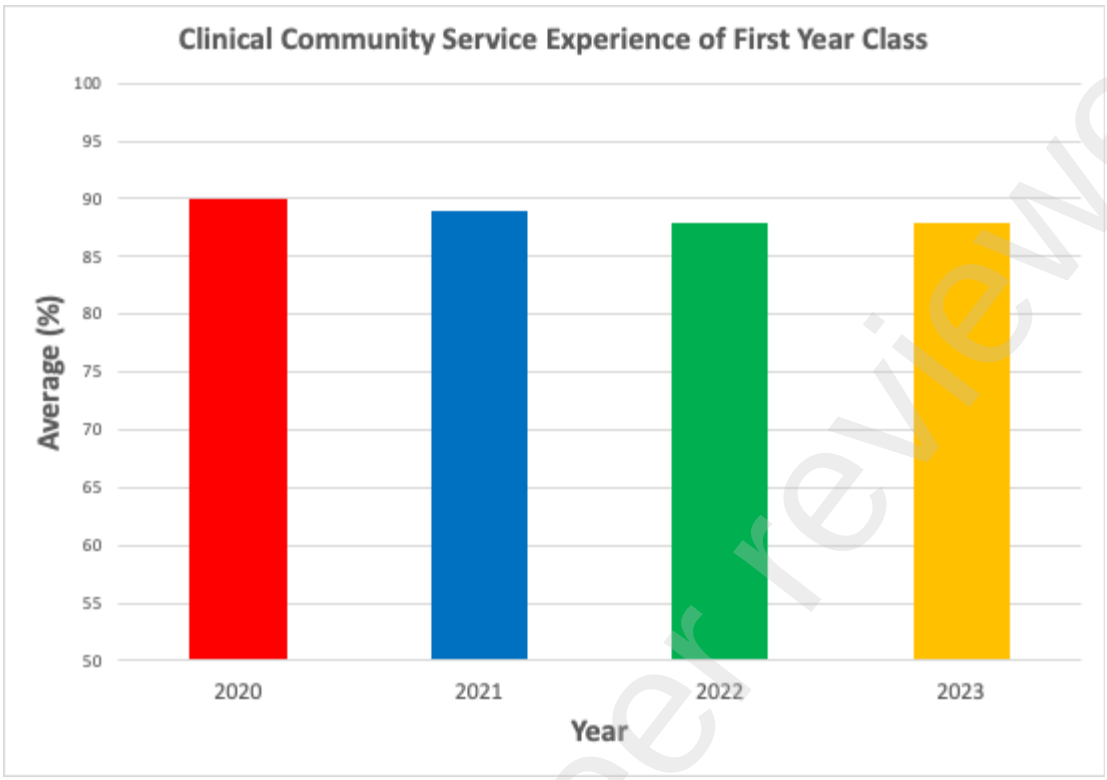

Figure 1 : Bar Graph of average % of Clinical Community Service of First Year Medical School Matriculants, 2020-2023

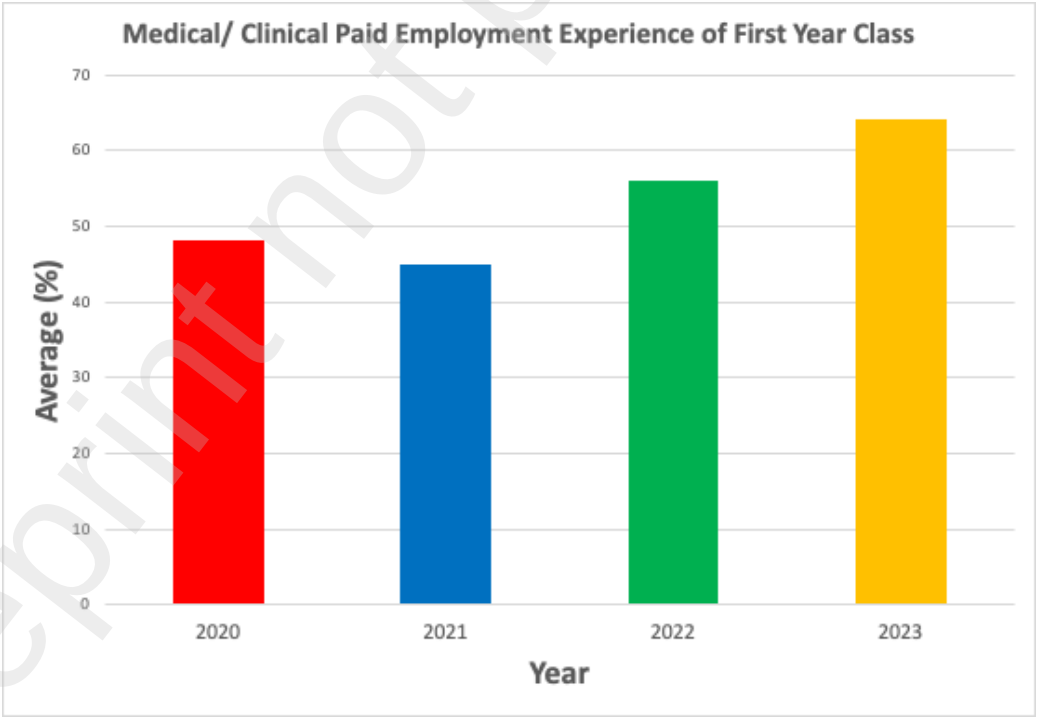

Figure 2: Bar Graph of average % of Clinical Paid Employment of First Year Medical School Matriculants, 2020-2023

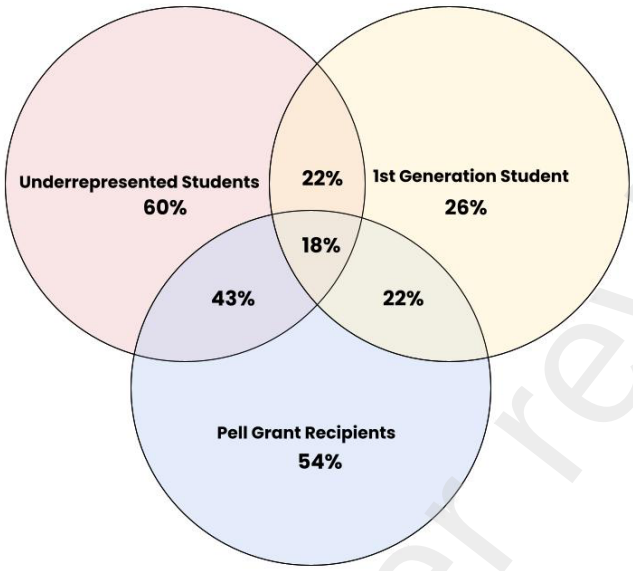

Figure 3: The percentage of Happy Weekends members with underrepresented status, first-generation status, and receiving Pell Grants (n=100).

Underrepresented Status (UDR)		
UDR	**Number**	**% of members**
Yes	60	60.00%
No	40	40.00%
n = 100		

Table 1: Breakdown of Happy Weekends members who self-identified as underrepresented status (n=100)

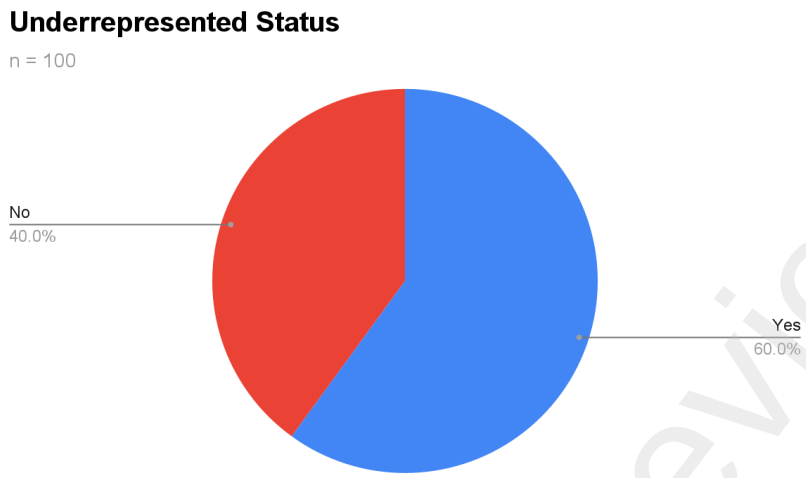

Figure 4: Pie chart for Happy Weekends who self-identified underrepresented status. (n=100)

Pell Grant Recipients		
Pell Grant	**Number**	**% of members**
Yes	54	54.00%
No	46	46.00%
n = 100		

Table 2: Data Breakdown of Pell Grant recipients. (n=100)

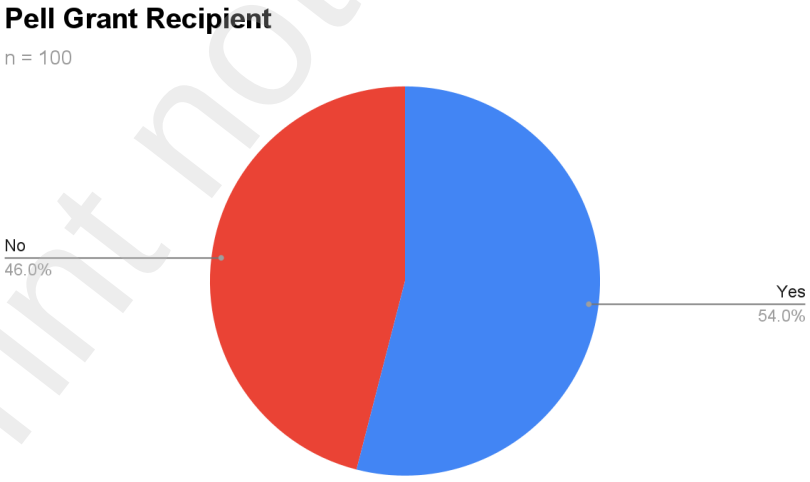

Figure 5: Pie chart of Pell Grant recipients (n=100).

First Generation Students		
1st gen. status	Number	# of members
Yes	26	26.00%
No	74	74.00%
n = 100		

Table 3: Breakdown data for respondents self-identified as first generation students. (n=100)

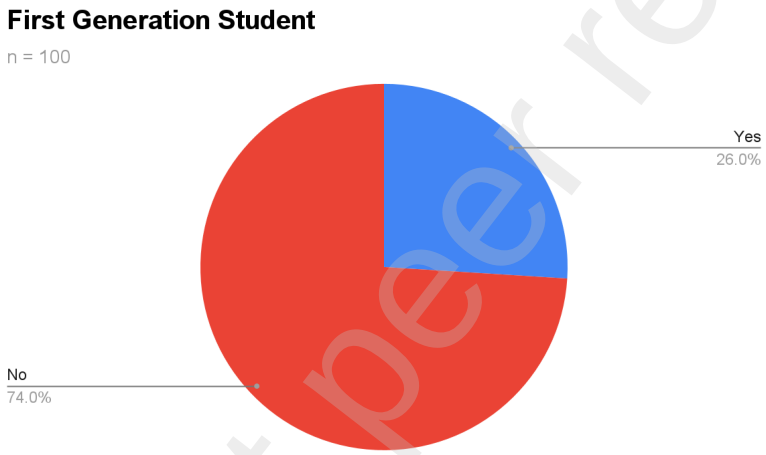

Figure 6: Pie chart for respondents self-identified as first generation students. (n=100)

Ethnicity		
Ethnicity	Number	% of members
Asian	50	50.00%
Black/African American	2	2.00%
Caucasian	3	3.00%
Hispanic/Latino	39	39.00%
Indigenous	2	2.00%
Middle Eastern	4	4.00%
n = 100		

Table 4A: Breakdown data for respondents' self-identified ethnicity. (n=100)

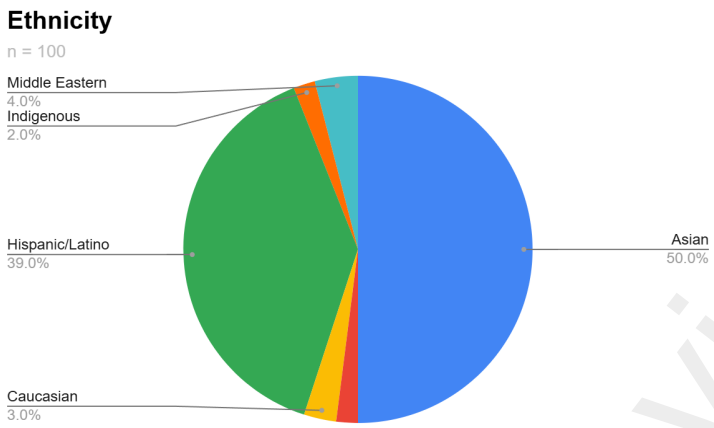

Figure 7A: Pie chart for respondents' self-identified ethnicity. (n=100)

Asian		
Status	**Number**	**% of members**
Underrepresented Student	18	36.00%
Pell Grant Recipients	19	38.00%
First Generation Students	8	16.00%
Disability	3	6.00%
n = 50		

Table 4B: Breakdown data for respondents who self-identified as Asian. (n=50)

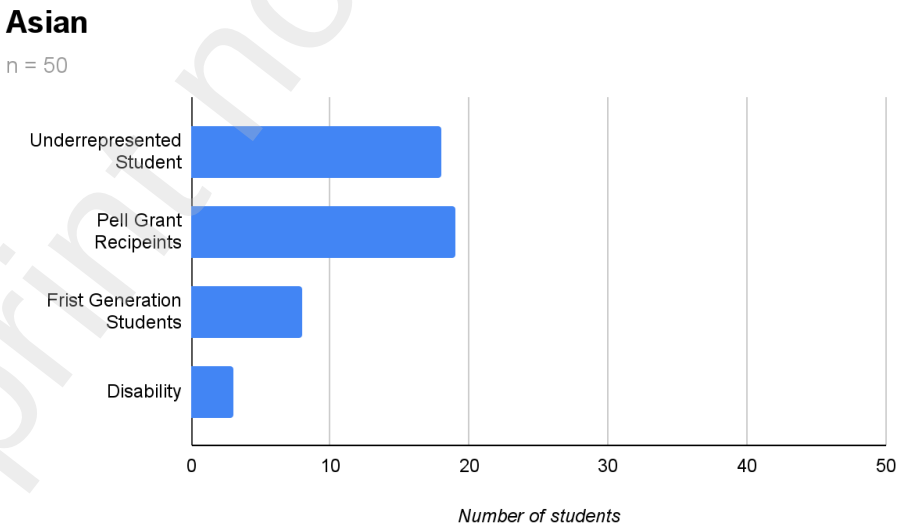

Figure 7B: Bar Graph for respondents who self-identified as Asian. (n=50)

Hispanic/Latino		
Status	**Number**	**% of members**
Underrepresented Student	33	84.62%
Pell Grant Recipients	31	79.49%
First Generation Students	15	38.46%
Disability	4	10.26%
n = 39		

Table 4C: Breakdown data for respondents who self-identified as Hispanic/Latino(n=39).

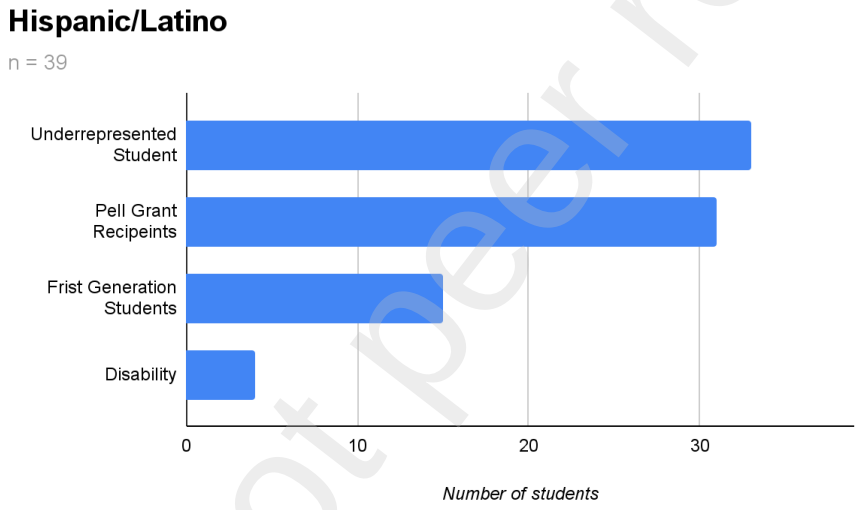

Figure 7C: Bar Graph for respondents who self-identified as Hispanic/Latino. (n=39)

Black/African American		
Status	**Number**	**% of members**
Underrepresented Student	2	100.00%
Pell Grant Recipients	0	0.00%
First Generation Students	1	50.00%
Disability	1	50.00%
n = 2		

Table 4D: Breakdown Data for students who are African American. (n=2)

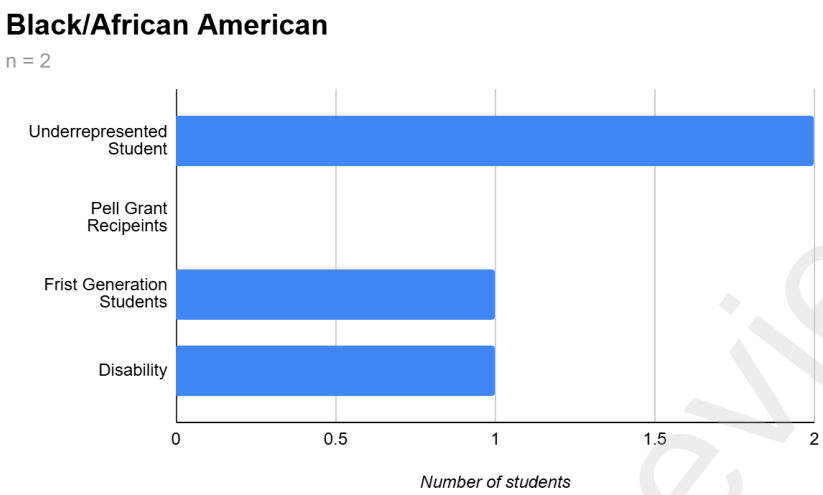

Figure 7D: Bar graph for students who are African American. (n=2)

Caucasian		
Status	**Number**	**% of members**
Underrepresented Student	1	33.33%
Pell Grant Recipients	0	0.00%
First Generation Students	0	0.00%
Disability	0	0.00%
n = 3		

Table 4E: Data Breakdown of respondents who self-identified as Caucasian. (n=3)

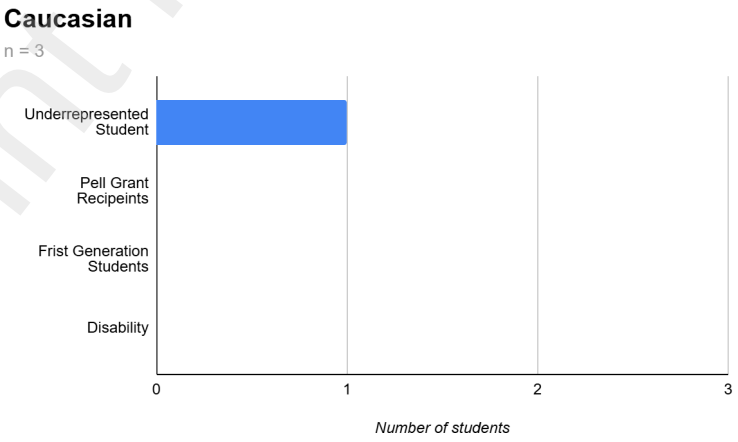

Figure 7E: Bar graph of respondents who self-identified as Caucasian. (n=3)

Indigenous		
Status	**Number**	**% of members**
Underrepresented Student	2	100.00%
Pell Grant Recipients	1	50.00%
First Generation Students	1	50.00%
Disability	0	0.00%
n = 2		

Table 4F: Data Breakdown of respondents who self-identified as Indigenous. (n=2)

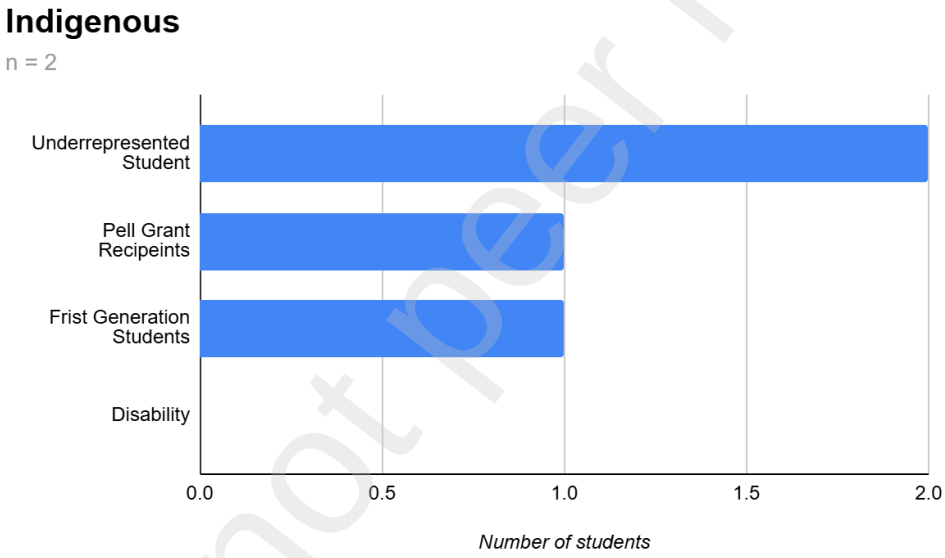

Figure 7F: Bar graph of respondents who self-identified as Indigenous. (n=2)

Middle Eastern		
Status	**Number**	**% of members**
Underrepresented Student	4	100.00%
Pell Grant Recipients	3	75.00%
First Generation Students	1	25.00%
Disability	0	0.00%
n = 4		

Table 4G: Breakdown of respondents who self-identified as Middle Eastern. (n=4)

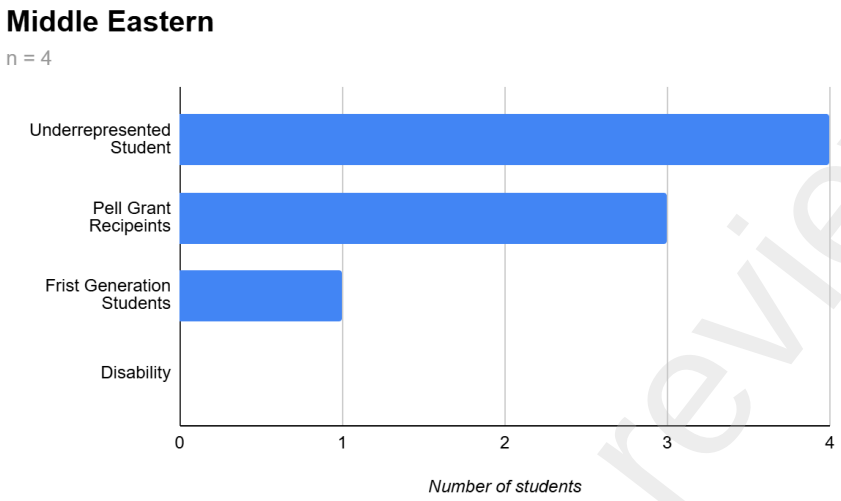

Figure 7G: Bar graph of respondents who self-identified as Middle Eastern. (n=4)

Students with disability		
Disability	**Number**	**% of members**
Yes	8	8.00%
No	92	92.00%
n = 100		

Table 5: Breakdown Data for students with disabilities. (n=8)

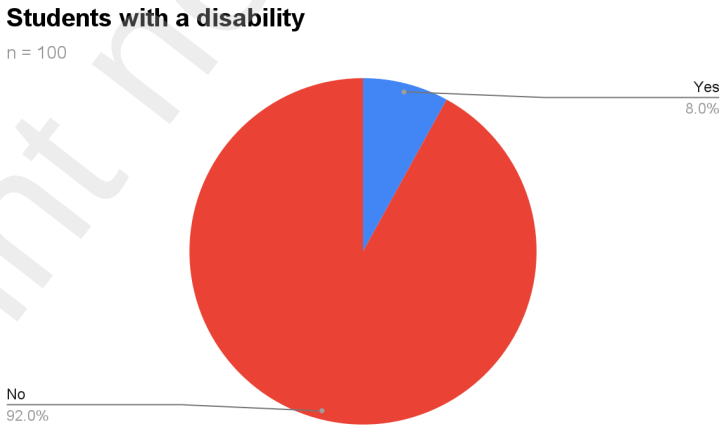

Figure 8: Pie Chart for students with disabilities (n=8).

Academic Year		
Year	**Number**	**% of members**
1st Years	249	56.72%
2nd Years	70	15.95%
3rd Years	80	18.22%
4th Years	38	8.66%
Graduates	2	0.46%
n = 439		

Table 6: Data breakdown of respondents' academic year. (n=439)

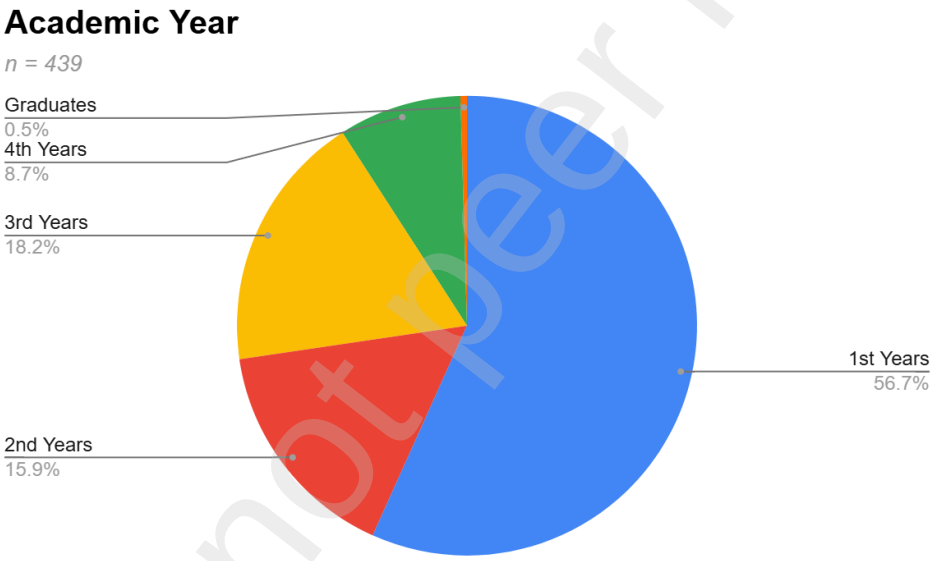

Figure 10: Pie chart of respondents' academic year. (n=439)

Academic Department		
Department	**Number**	**% of members**
Physics	1	0.26%
Physical Sciences	39	10.05%
Natural Sciences	237	61.08%
Social Science	92	23.71%
Engineering	18	4.64%
Undecided	1	0.26%
n = 388		

Table 7: Data breakdown of respondents' academic major. (n=388)

Academic Major		
Major	**Number**	**% of members**
Astronomy and Astrophysics	1	0.26%
Biochemistry	30	7.73%
Bioengineering	6	1.55%
Bioinformatics	8	2.06%
Biological Anthropology	5	1.29%
Chemical Engineering	4	1.03%
Chemistry	4	1.03%
Clinical Psychology	20	5.15%
Cognitive Science	3	0.77%
Cognitive Science - Neurobiology	29	7.47%
Gender Studies	1	0.26%
General Biology	40	10.31%
Global Health	11	2.84%
Human Biology	105	27.06%
Human Developmental Science	4	1.03%
International Relations	1	0.26%
Marine Biology	1	0.26%
Molecular & Cell Biology	39	10.05%
Neurobiology	52	13.40%
Pharmacological Chemistry	5	1.29%
Public Health	18	4.64%
Undecided	1	0.26%
n = 388		

Table 8: Pie chart of respondents' academic major. (n=388)

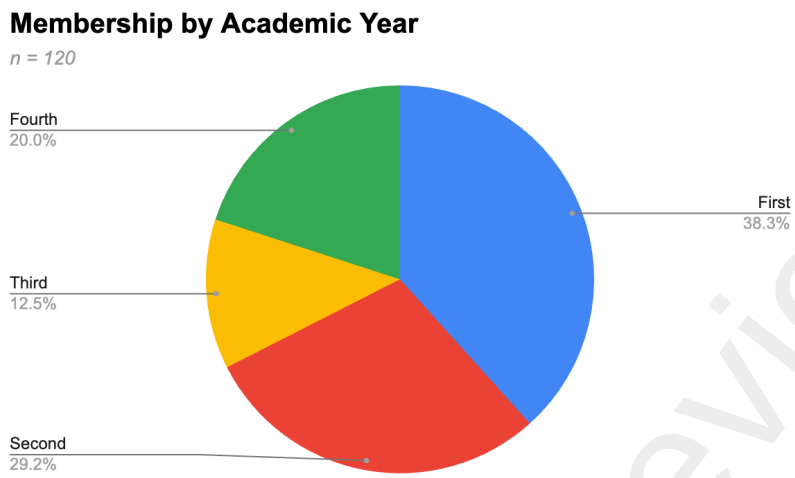

Figure 11: Pie chart of Happy Weekends attendees by academic year. (n=120)

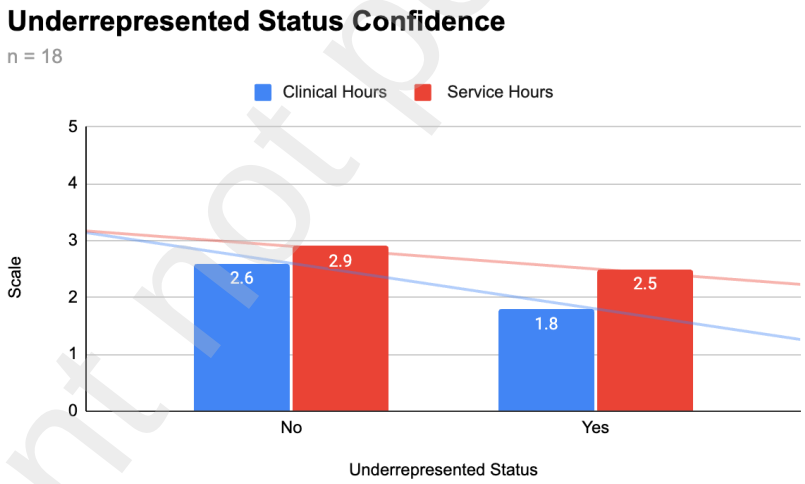

Figure 12: Bar graph comparing the confidence levels of underrepresented and non-underrepresented students in obtaining adequate clinical and community service hours (n=18).

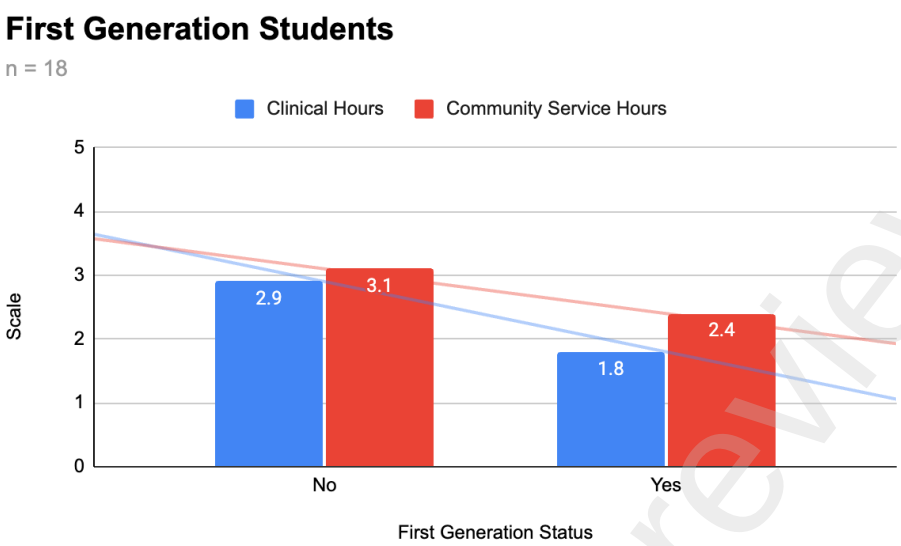

Figure 13: Bar graph comparing the confidence levels of first-generation college students and non-first generation college students in obtaining adequate clinical and service hours (n=18).

Interview Data

Category	Subcategory	Insights	#
Participant Demographics & Background	First-Generation Status	Many participants indicated challenges due to being first-generation students, highlighting the lack of guidance and mentorship.	5
	Ethnic Background & Representation	Several interviewees referenced their underrepresented backgrounds, influencing both their motivations and barriers to entering medical school.	6
	Financial Status & Barriers	Financial struggles were a common theme, with concerns about tuition costs, clinical training fees, and the ability to participate in unpaid experiences.	4
	Disability & Health Concerns	Some students faced health conditions that affected their educational and professional trajectory.	2
Motivations for Pursuing Medicine	Family Influence & Personal Health Experiences	Many participants cited personal or familial health issues as key motivators.	3
	Community Engagement & Desire to Serve	Some interviewees, especially those from underrepresented communities, expressed a strong commitment to serving populations similar to their own.	4
	Interest in Science & Medical Field	Passion for biology, human anatomy, and direct patient interactions were common factors.	5
Barriers to Medical School Admission	Lack of Clinical & Community Service Hours	Many expressed uncertainty and frustration about obtaining sufficient clinical and community service experience, often due to lack of opportunities or knowledge of how to access them.	6
	Limited Mentorship Access	A recurring theme was the lack of structured mentorship, particularly for first-generation and underrepresented students.	5
	Financial Constraints	The high costs associated with application fees, MCAT prep, and clinical certification programs were major concerns.	4
	Competitive Environment & Self-Doubt	Several students felt "behind" compared to peers and struggled with confidence in their applications.	3
Impact of UMPS/Happy Weekends	Clinical Exposure & Hands-on Training	Participants who attended UMPS events reported gaining hands-on experience in vitals training and patient interaction, boosting their motivation.	5

	Networking & Peer Support	Engaging with other pre-med students helped mitigate feelings of isolation and competition.	4
	Resource Awareness & Career Guidance	Some students learned about medical assistant (MA) and certified nursing assistant (CNA) opportunities through UMPS but needed more structured guidance.	3
Suggested Interventions & Supports	Mentorship Programs	Many participants expressed a need for long-term mentorship rather than surface-level interactions.	5
	Accessible Clinical & Research Training	Suggestions included partnerships with clinics to provide structured, financially accessible training.	4
	Application & Resume Support	Several students requested workshops on application preparation, including personal statement reviews and interview practice.	3
	Clearer Pathways for Clinical Hours & Certifications	Participants wanted clearer pathways outlined for clinical hours, certifications, and volunteer opportunities.	3
Emotional & Psychological Impact	Imposter Syndrome	Many students, especially those from underrepresented backgrounds, felt that they were not as prepared or as competitive as their peers.	4
	Burnout & Stress	Balancing coursework, financial struggles, and application requirements contributed to high levels of stress.	4
	Resilience & Motivation	Despite challenges, students remained motivated, citing their personal experiences and community responsibilities as driving forces.	5

Table 9: Interview Data