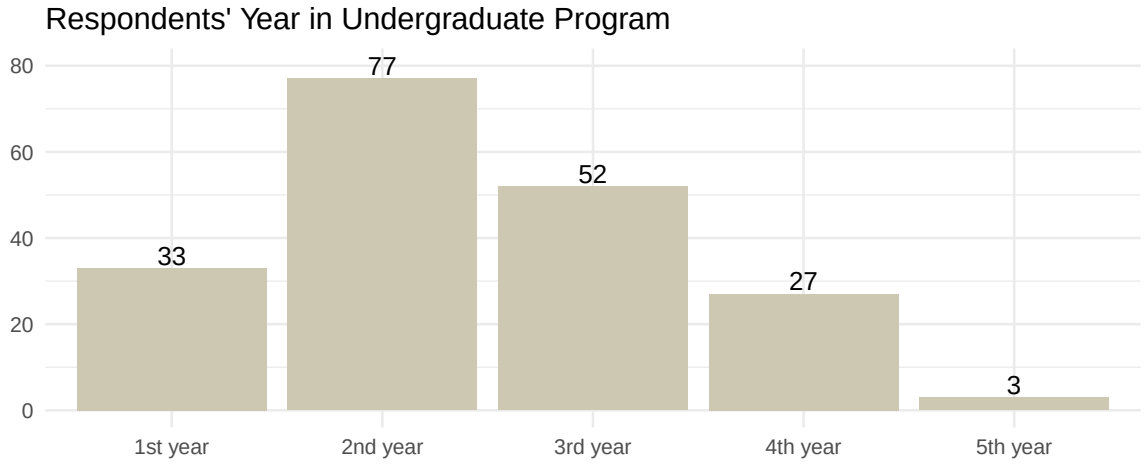
Caleb Skinner

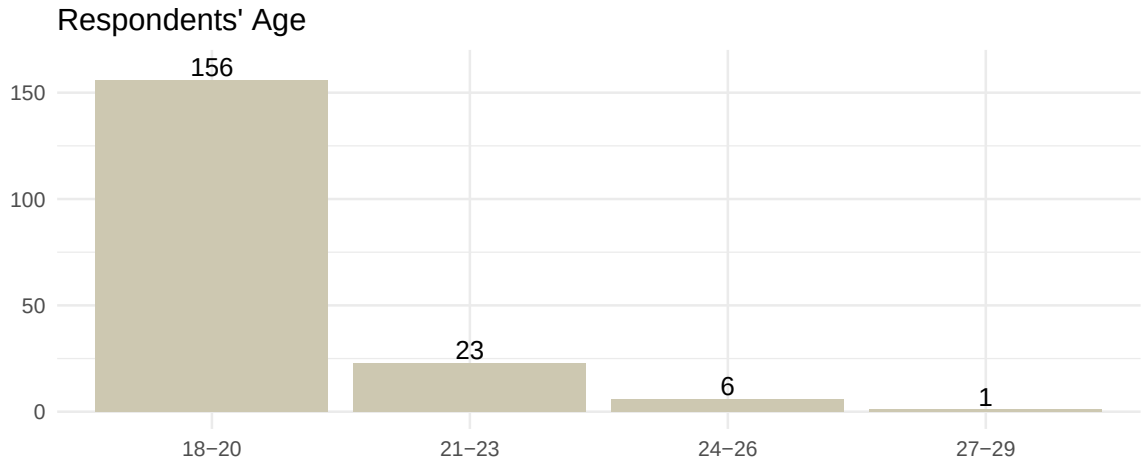
Global Health Survey Questions 1-5

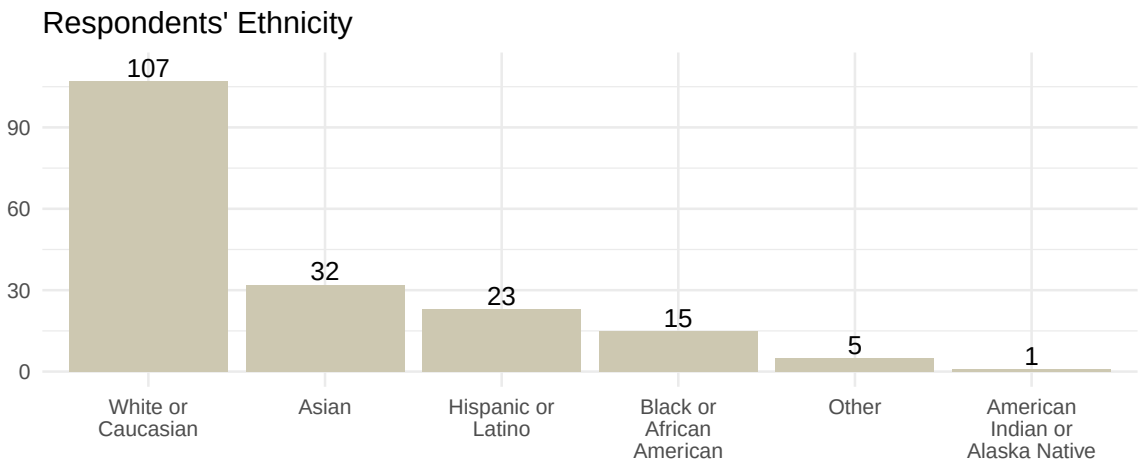
Questions:

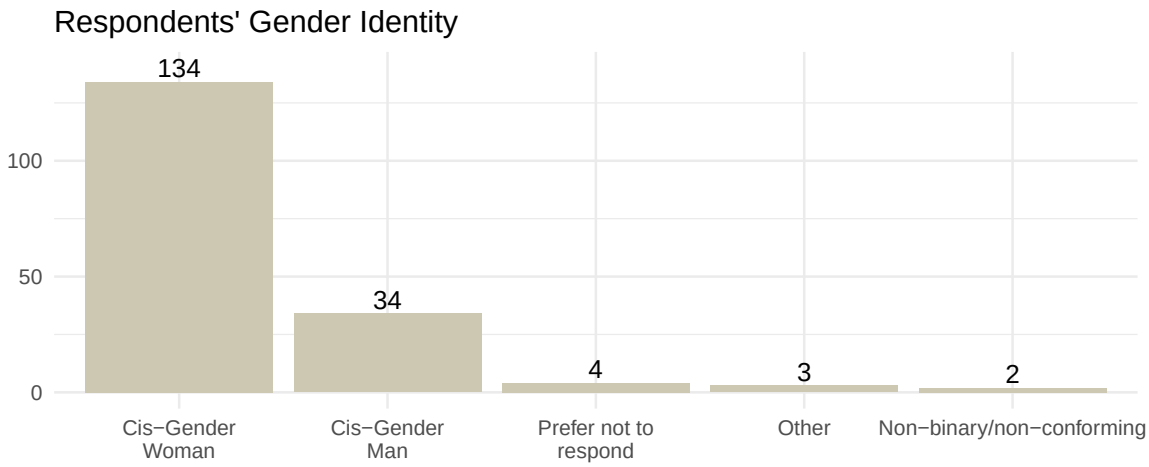
1. Describe the dataset: what do the respondents look like?

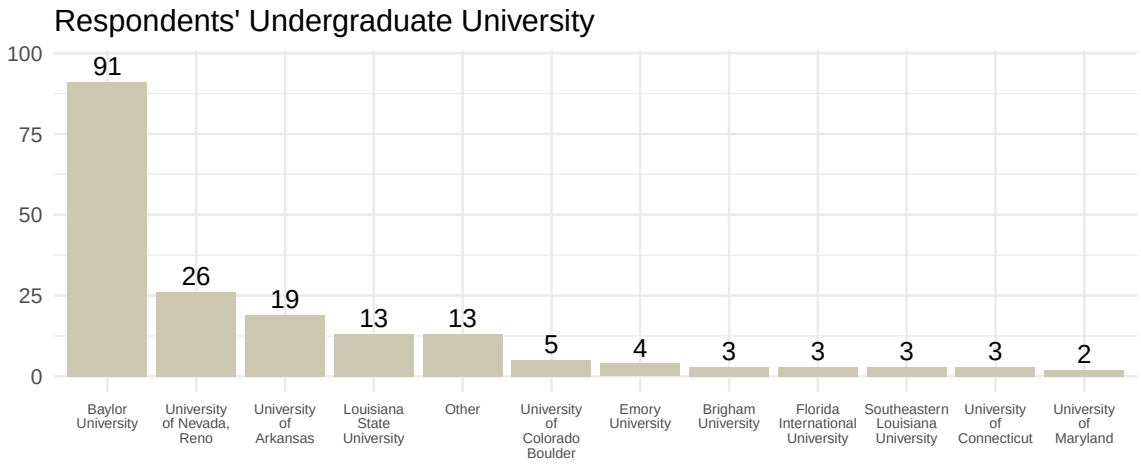
The following visualizations are meant to give a general understanding of the respondent pool.

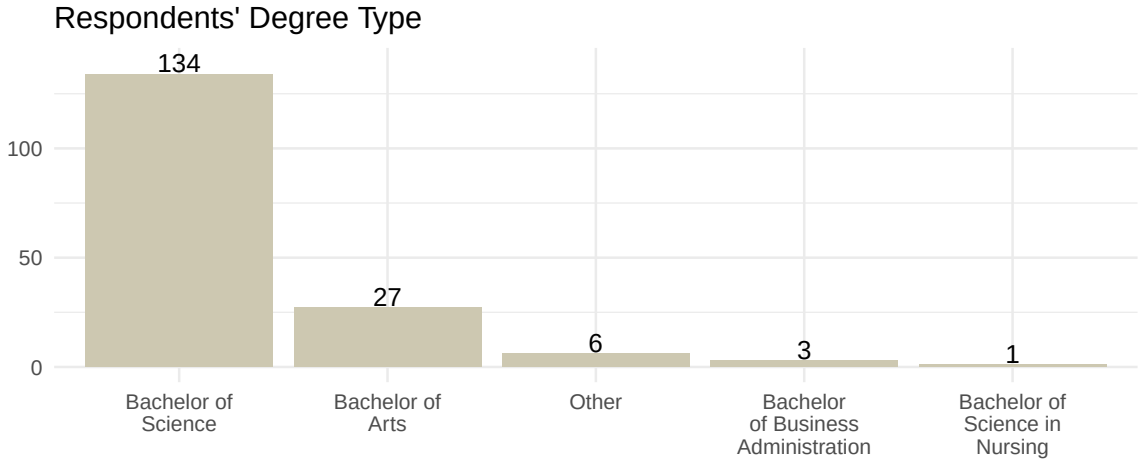


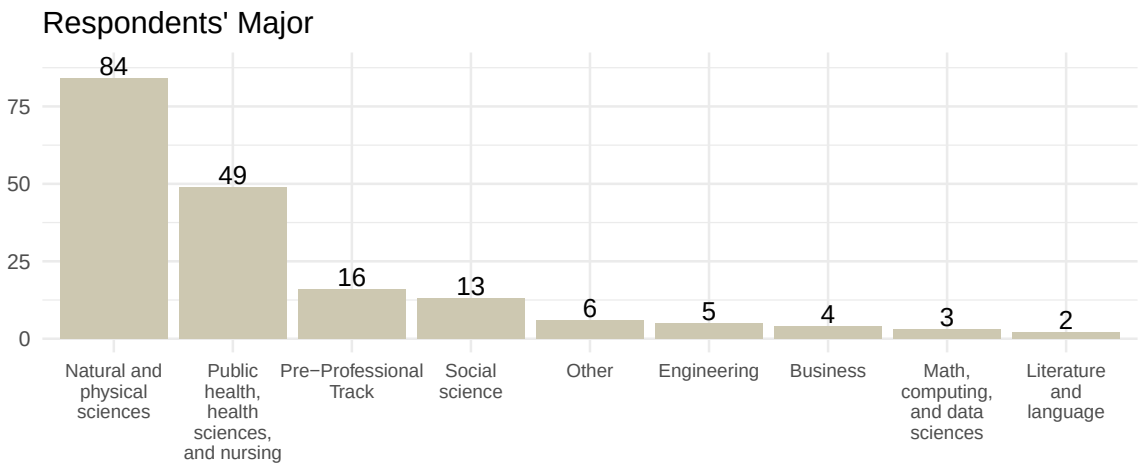


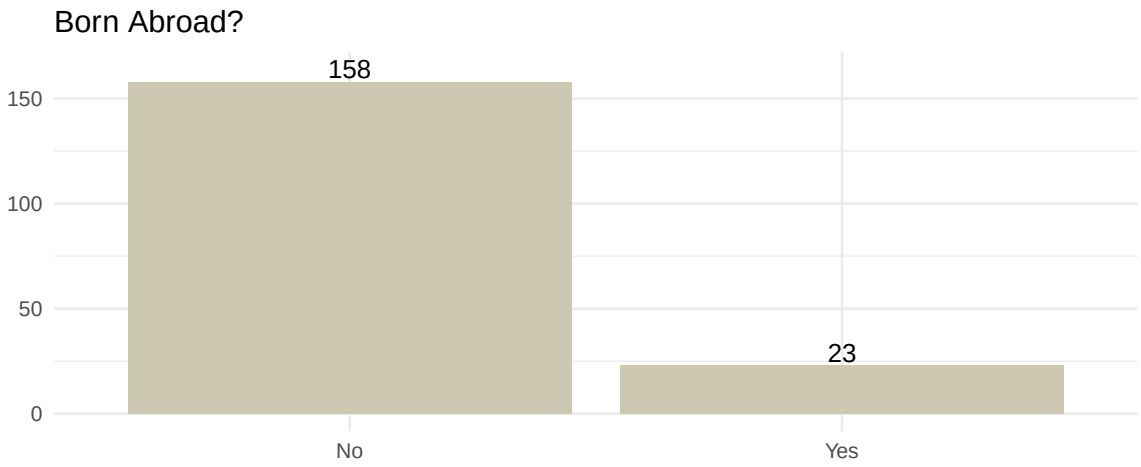

Respondents' Ethnicity
107
32
23
15
5
1
90
60
30
0
White or Caucasian
Asian
Hispanic or Latino
Black or African American
Other
American Indian or Alaska Native

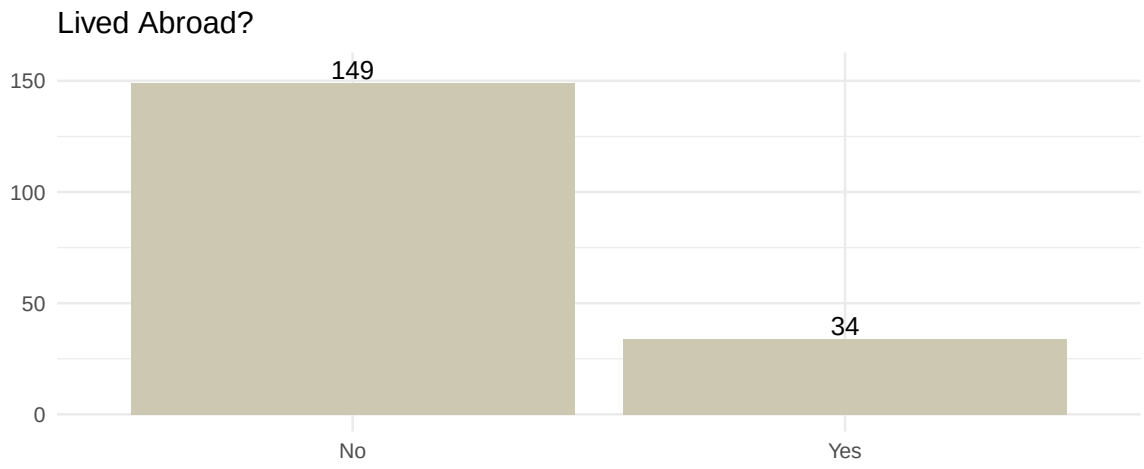

Respondents' Gender Identity
134
34
4
3
2
100
50
0
Cis−Gender Woman
Cis−Gender Man
Prefer not to respond
Other
Non−binary/non−conforming

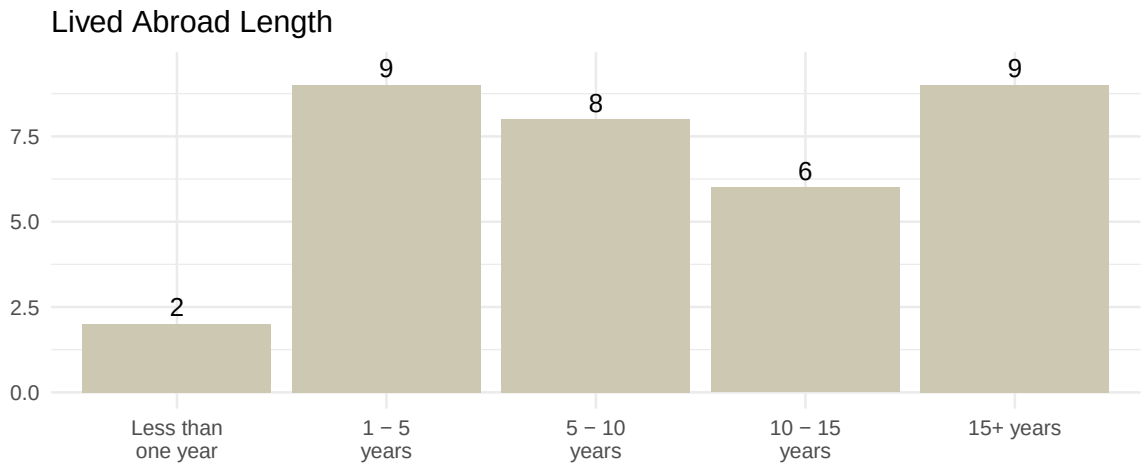

Respondents' Undergraduate University
100
75
50
25
0
91
26
19
13
13
5
4
3
3
3
3
2
Baylor University
University of Nevada, Reno
University of Arkansas
Louisiana State University
Other
University of Colorado Boulder
Emory University
Brigham University
Florida International University
Southeastern Louisiana University
University of Connecticut
University of Maryland


Respondents' Degree Type
100
50
0
134
27
6
3
1
Bachelor of Science
Bachelor of Arts
Other
Bachelor of Business Administration
Bachelor of Science in Nursing


Respondents' Major
84
49
16
13
6
5
4
3
2
75
50
25
0
Natural and physical sciences
Public health, health sciences, and nursing
Pre−Professional Track
Social science
Other
Engineering
Business
Math, computing, and data sciences
Literature and language

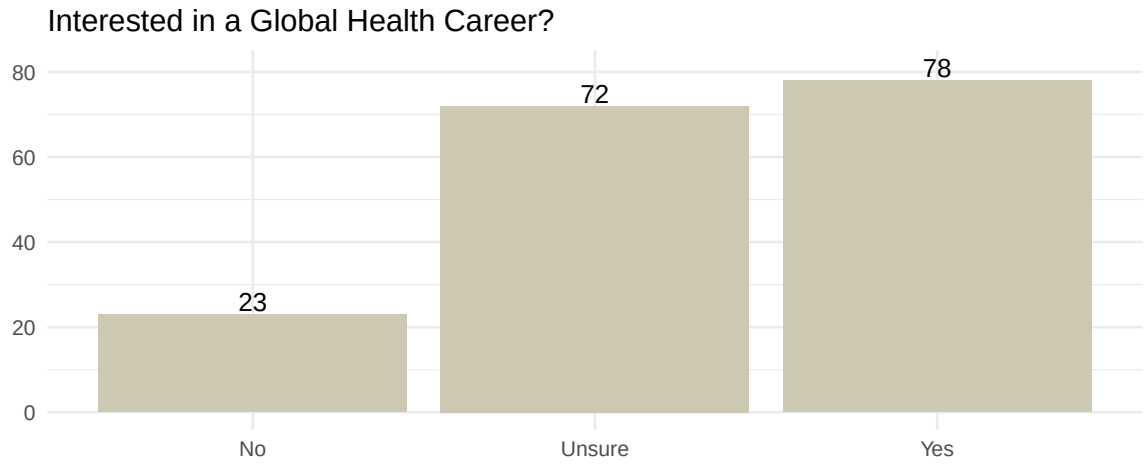

Born Abroad?
158
23
150
100
50
0
No
Yes


Lived Abroad?
150
100
50
0
149
34
No
Yes

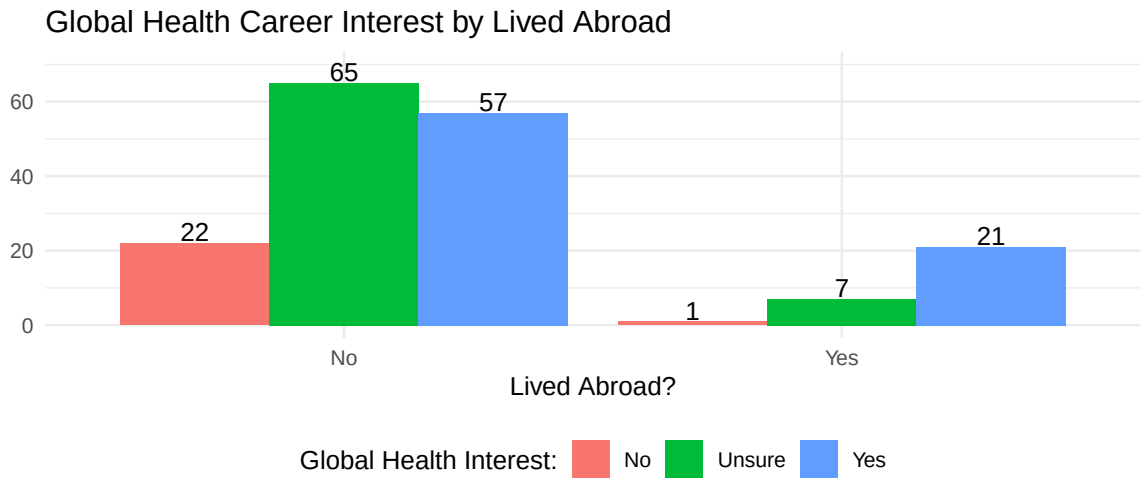

Lived Abroad Length
7.5
5.0
2.5
0.0
2
9
8
6
9
Less than one year
1 − 5 years
5 − 10 years
10 − 15 years
15+ years

2. How do pre-medical students perceive a career in global health?

A. Overall Responses to pursuing a career in Global Health.



B. Pursuing a career in Global Health grouped by those who have lived abroad.

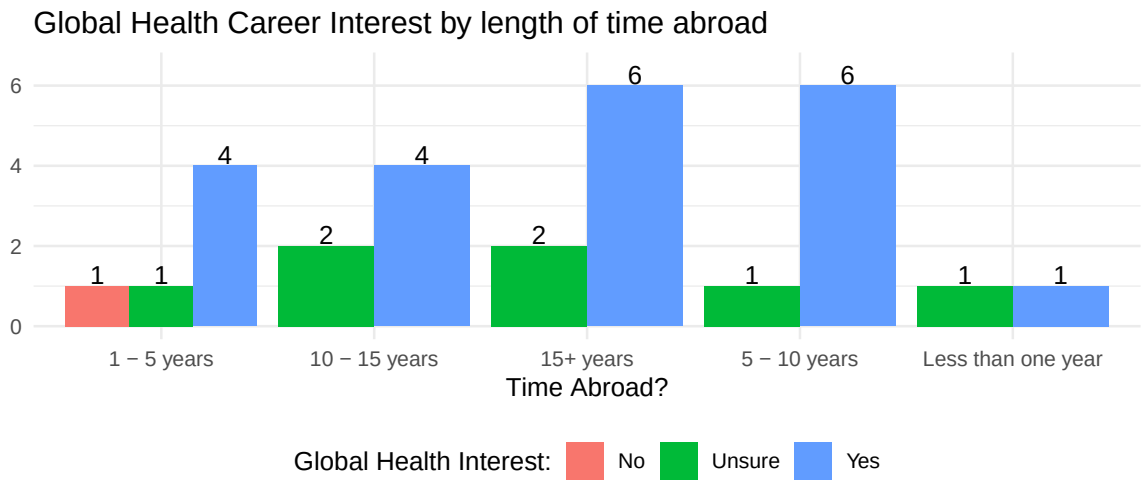


The following is a t-test measuring the difference in interest in a Global Health Career in those who have lived outside the US and those who have not. For this t-test I counted "unsure" responses as 1/2 a "yes" and 1/2 a "no". The results are significant. Those who have lived outside the US demonstrate a higher interest in a Global Health Career than those who have not lived outside the US.

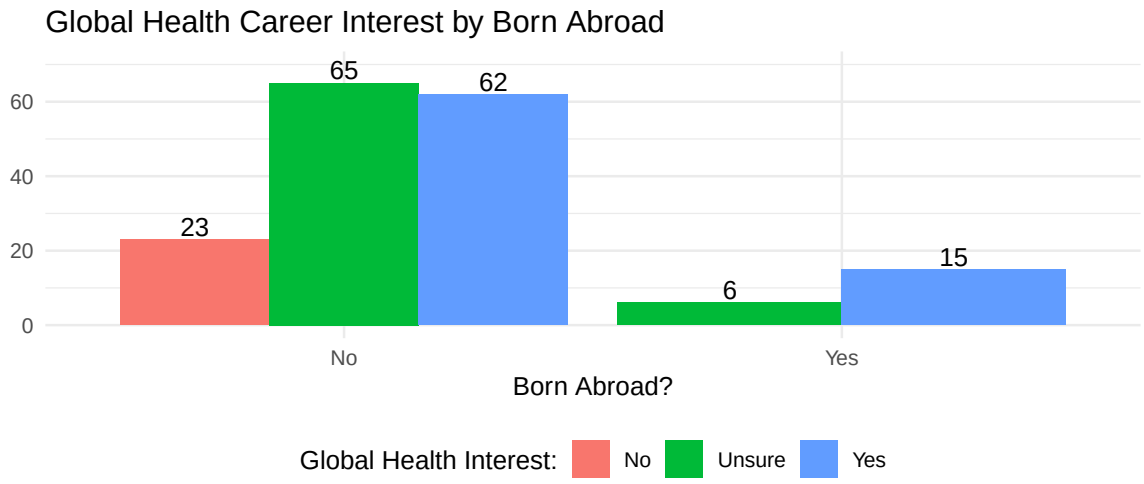
```
#
#   Welch Two Sample t-test
#
# data:  df14ttest %>% filter(Q12 == "No") %>% select(Q14) and df14ttest %>% filter(Q12 == "
# t = -3.8394, df = 49.077, p-value = 0.0003537
# alternative hypothesis: true difference in means is not equal to 0
# 95 percent confidence interval:
#  -0.3401720 -0.1064276
# sample estimates:
# mean of x mean of y
# 0.6215278 0.8448276
```

The following is also a t-test measuring the difference in interest in a Global Health Career in those who have lived outside the US and those who have not. For this t-test I removed "unsure" responses from the data. Once again, the results are significant. Those who have lived outside the US demonstrate a higher interest in a Global Health Career than those who have not lived outside the US.

```
#
#   Welch Two Sample t-test
#
# data:  df14ttest %>% filter(Q12 == "No", Q14 != 0.5) %>% select(Q14) and df14ttest %>% filt
# t = -3.4202, df = 74.733, p-value = 0.001017
# alternative hypothesis: true difference in means is not equal to 0
# 95 percent confidence interval:
#  -0.36876272 -0.09729022
# sample estimates:
# mean of x mean of y
# 0.7215190 0.9545455
```


Global Health Career Interest by length of time abroad
6
4
2
0
1
1
4
2
4
2
6
1
6
1
1
1 − 5 years
10 − 15 years
15+ years
5 − 10 years
Less than one year
Time Abroad?
Global Health Interest:
No
Unsure
Yes

C. Pursuing a career in Global Health grouped by those who were born abroad.



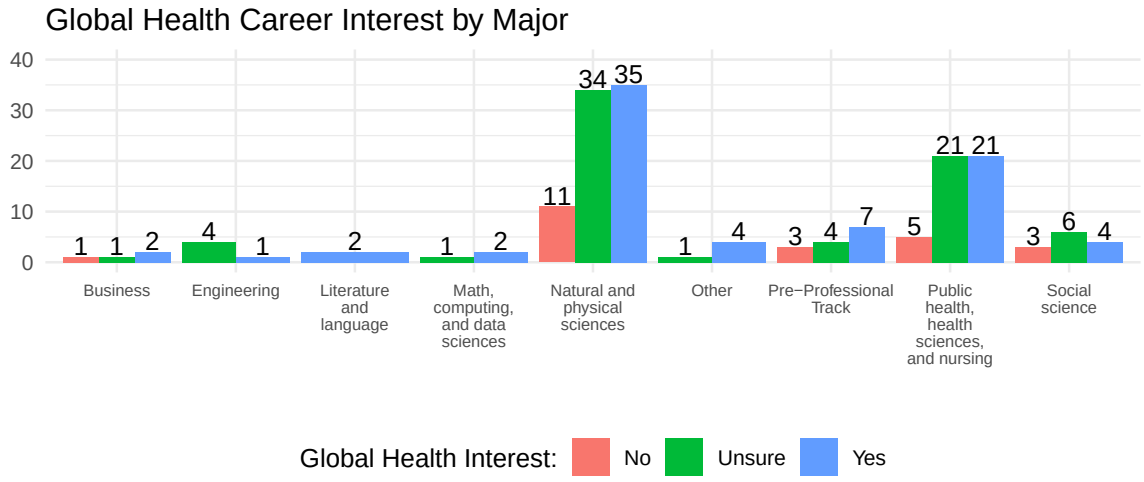
The following is a t-test measuring the difference in interest in a Global Health Career in those who were born outside the US and those who were not. For this t-test I counted "unsure" responses as 1/2 a "yes" and 1/2 a "no". The results are significant. Those who were born outside the US demonstrate a higher interest in a Global Health Career than those who were not born outside the US.

```
#
#   Welch Two Sample t-test
#
# data:  df14ttest %>% filter(Q10 == "No") %>% select(Q14) and df14ttest %>% filter(Q10 == "
# t = -3.9021, df = 34.782, p-value = 0.000417
# alternative hypothesis: true difference in means is not equal to 0
# 95 percent confidence interval:
#  -0.3453416 -0.1089442
# sample estimates:
# mean of x mean of y
# 0.6300000 0.8571429
```

The following is a t-test measuring the difference in interest in a Global Health Career in those who were born outside the US and those who were not. For this t-test I removed "unsure" responses. The results are significant. Those who were born outside the US demonstrate a higher interest in a Global Health Career than those who were not born outside the US.

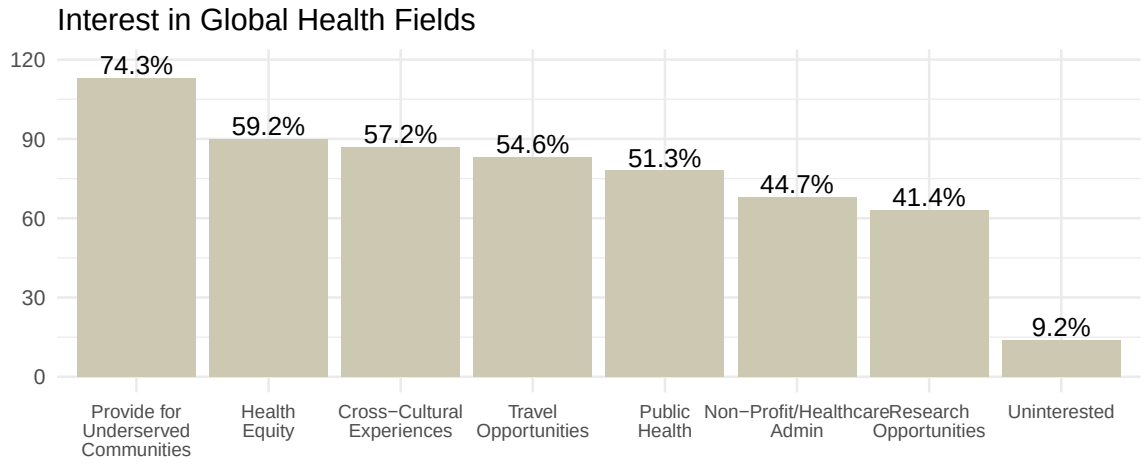
```
#
#   Welch Two Sample t-test
#
# data:  df14ttest %>% filter(Q10 == "No", Q14 != 0.5) %>% select(Q14) and df14ttest %>% filt
# t = -5.5822, df = 84, p-value = 2.848e-07
# alternative hypothesis: true difference in means is not equal to 0
# 95 percent confidence interval:
#  -0.3669824 -0.1741941
# sample estimates:
# mean of x mean of y
# 0.7294118 1.0000000
```

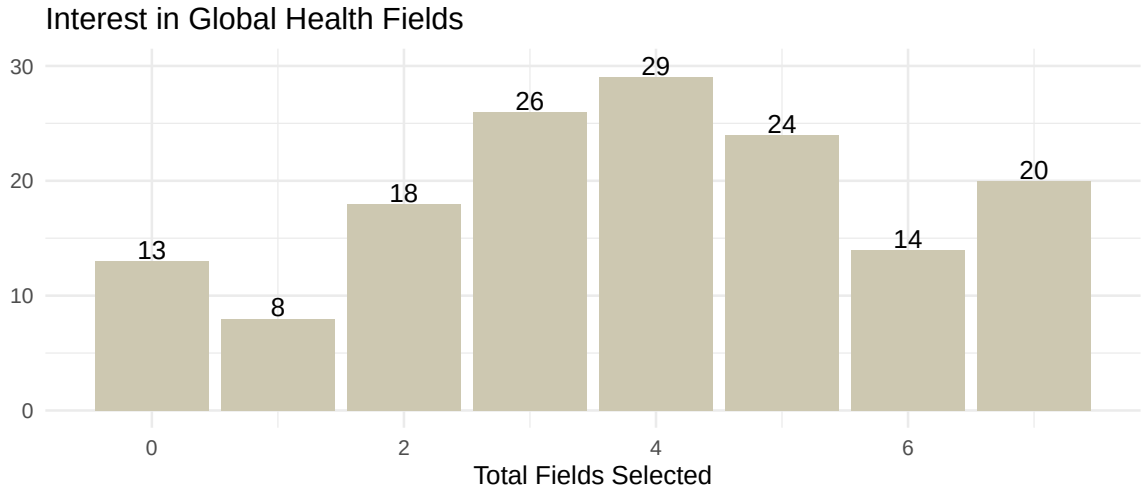
D. Pursuing a career in Global Health grouped by major.



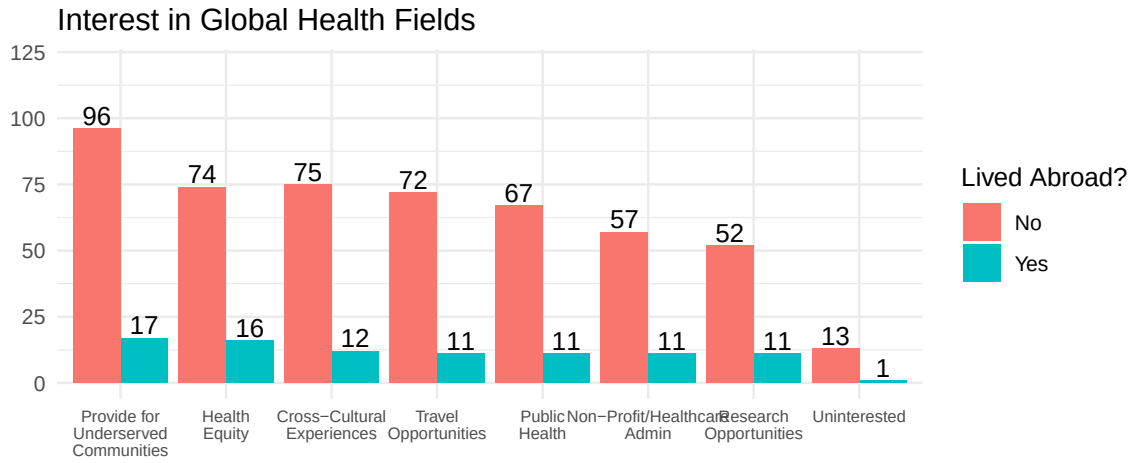
3. Which aspects of the global health field interest you when considering your medical career?

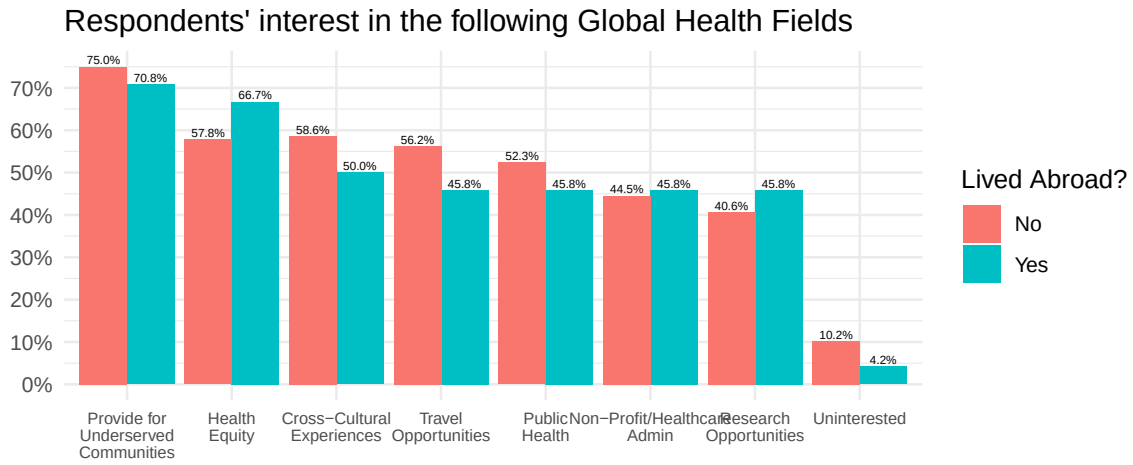
A. Total Results of Aspects of Global Health Field Considered





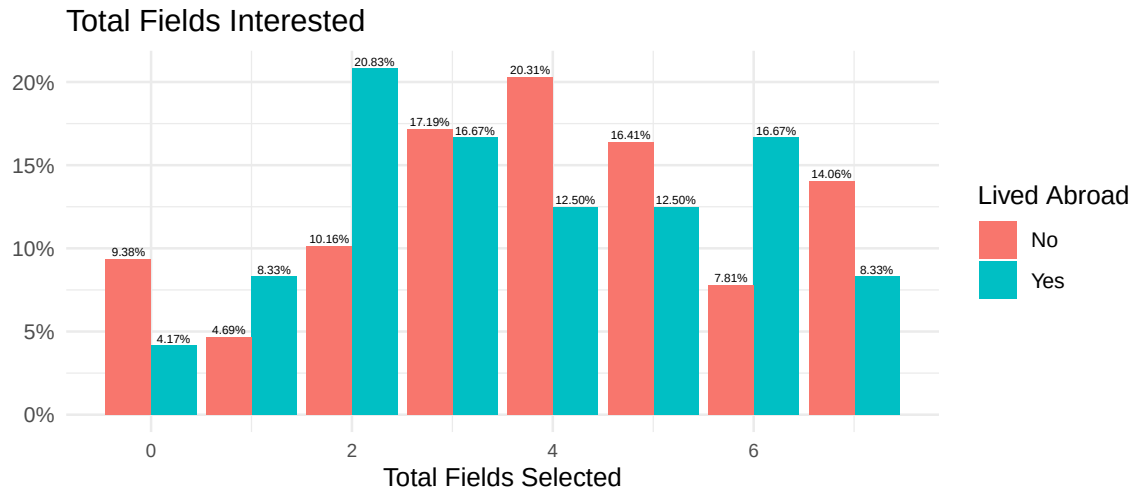
B. Results by Lived Outside the US





Below is a Chi Squared Test. This tests to see if the two distributions of interest in the global health fields are distinct from one another. The test cannot confirm that there is a distinction. In other words, the difference in interest of the various global health fields of those who lived abroad and those who did not live abroad is not significant.

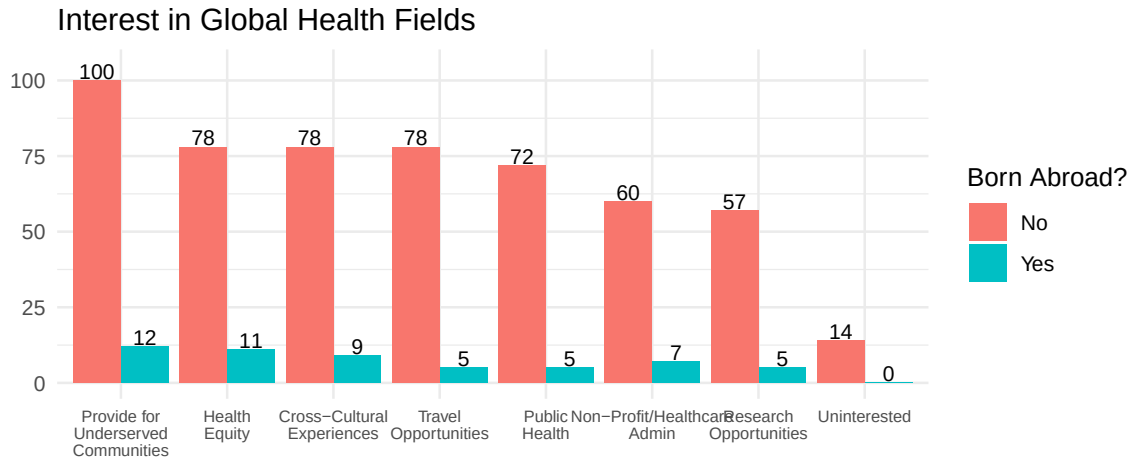
```
#
#   Pearson's Chi-squared test
#
# data:  df15gLiveChi$Yes and df15gLiveChi$No
# X-squared = 32, df = 28, p-value = 0.2745
```

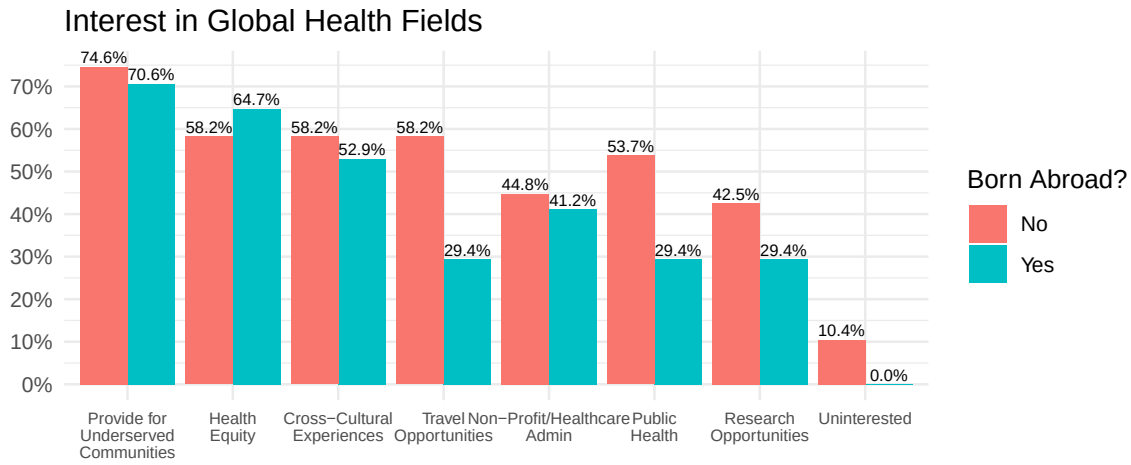


Below is a second Chi Squared Test. This tests to see if the two distributions are distinct from one another. The test cannot confirm that there is a distinction. In other words, the difference between the number of fields selected between those who lived abroad and did not live abroad is insignificant.

```
#
#   Pearson's Chi-squared test
#
# data:  df15gLiveChiTotals$Yes and df15gLiveChiTotals$No
# X-squared = 32, df = 28, p-value = 0.2745
```

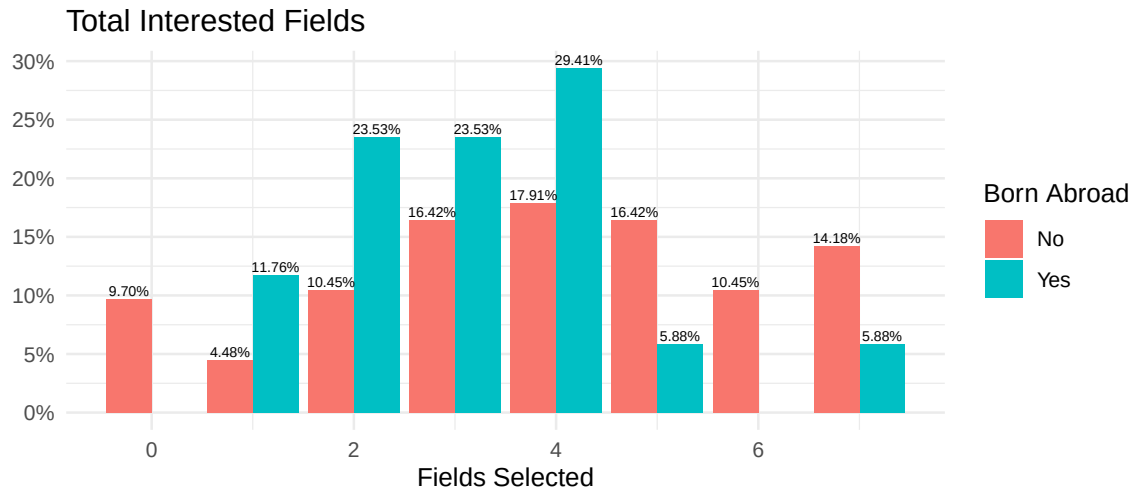
C. Results by born outside the US





Below is a Chi Squared Test. This tests to see if the two distributions of fields are distinct from one another. The test cannot confirm that there is a distinction. In other words, the difference in interest of the various global health fields of those who were born abroad and those who were not born abroad is not significant.

```
#
#   Pearson's Chi-squared test
#
# data:  df15gBornChi$Yes and df15gBornChi$No
# X-squared = 27.556, df = 25, p-value = 0.3287
```

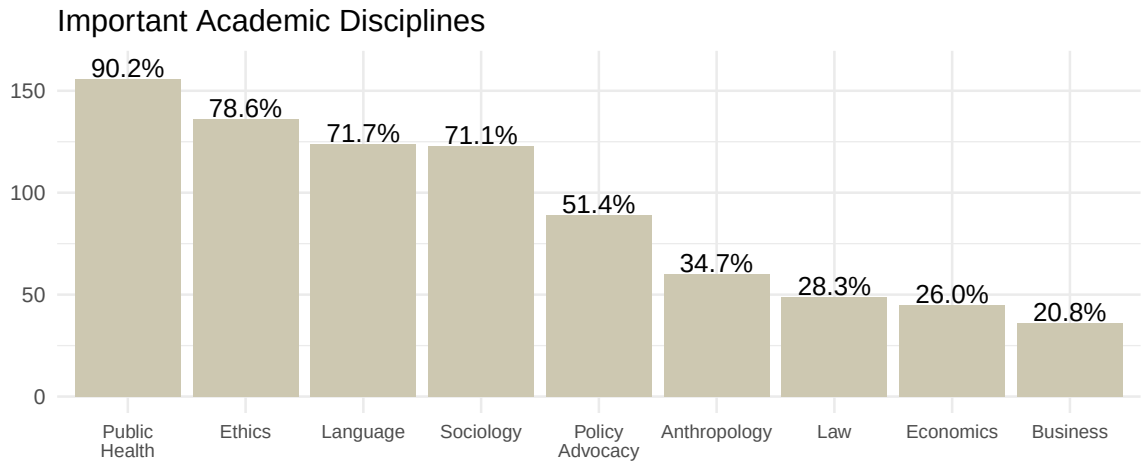


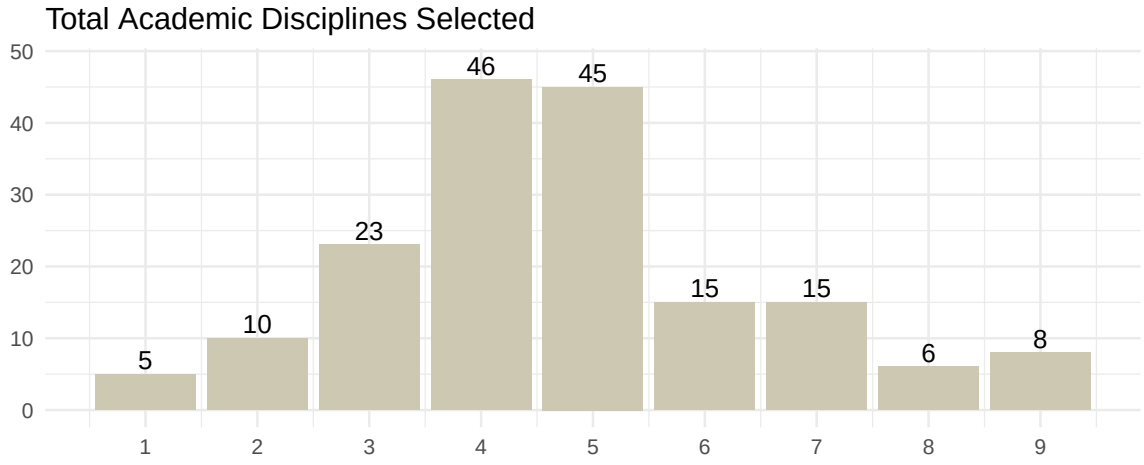
Below is a Chi Squared Test. This tests to see if the two distributions of the number of fields selected are distinct from one another. The test cannot confirm that there is a distinction. In other words, the difference in the total number of fields interested in by those who were born abroad and those who were not born abroad is not significant.

```
#
#   Pearson's Chi-squared test
#
# data:  df15gBornChiTotals$Yes and df15gBornChiTotals$No
# X-squared = 18, df = 15, p-value = 0.2627
```

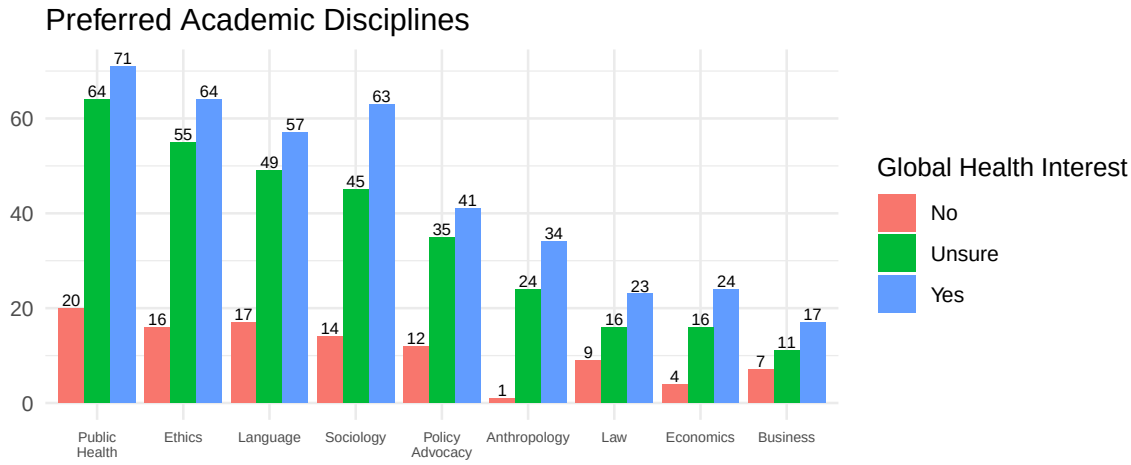
4. In your opinion, in addition to clinical training, physicians who work within global health (domestic or international) should have educational training in which THREE academic disciplines?

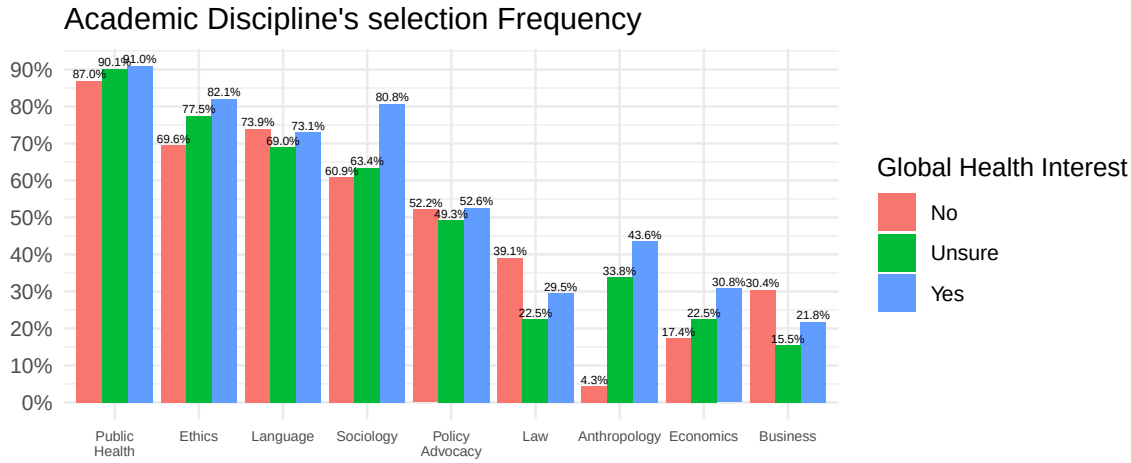
A. Overall Results of educational training





B. Relationship of preferred educational training with stated interest in Global Health

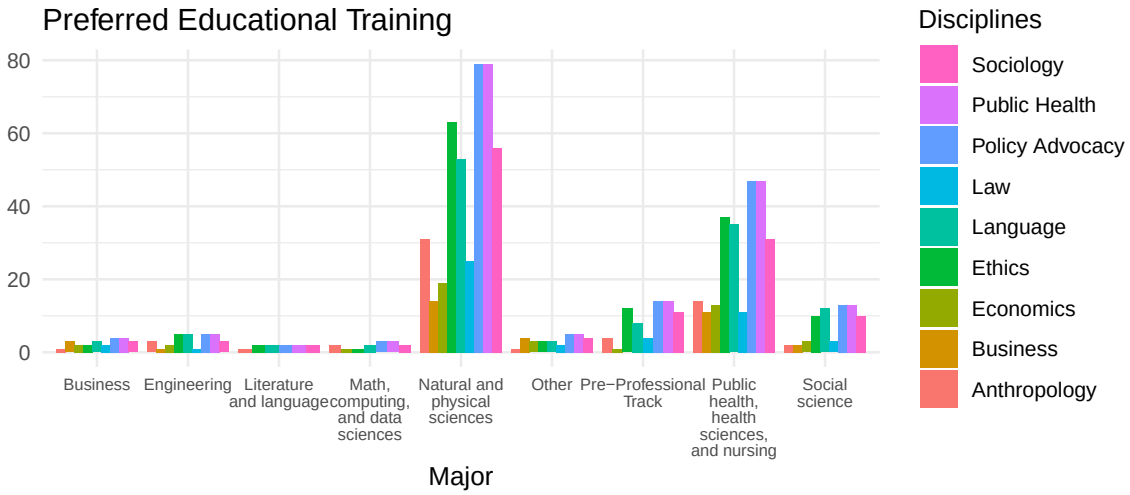


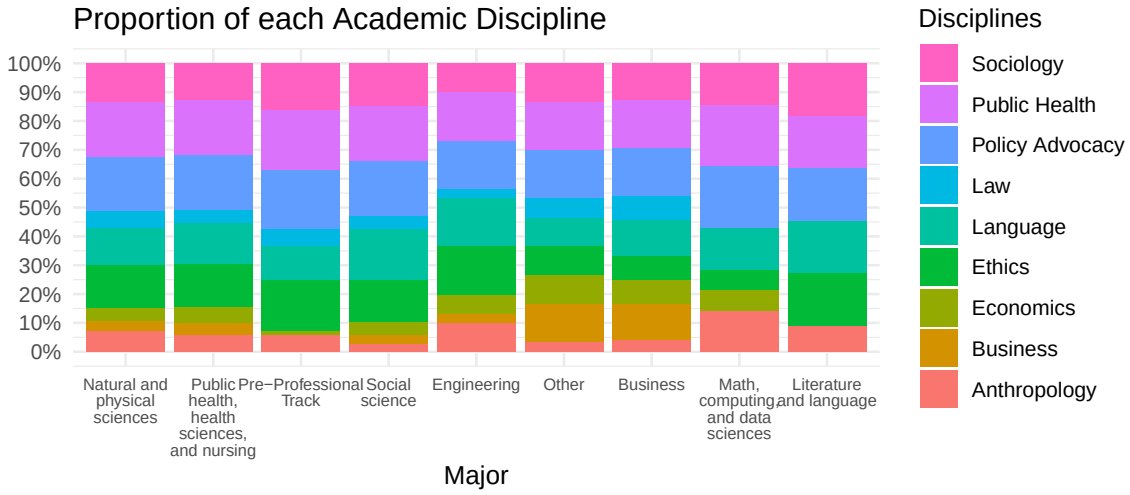


Below is a Chi Squared Test. This tests to see if the distribution of the preference of academic disciplines preferred for global health is distinct when separated by respondent's stated interest in Global Health. The test cannot confirm that there is a distinction. In other words, the difference in preference of the academic disciplines of those who are interested in global health and who are not interested in global health is not statistically significant.

```
#
#   Pearson's Chi-squared test
#
# data:  df16gIntChi$Yes and df16gIntChi$No
# X-squared = 72, df = 64, p-value = 0.2303
```

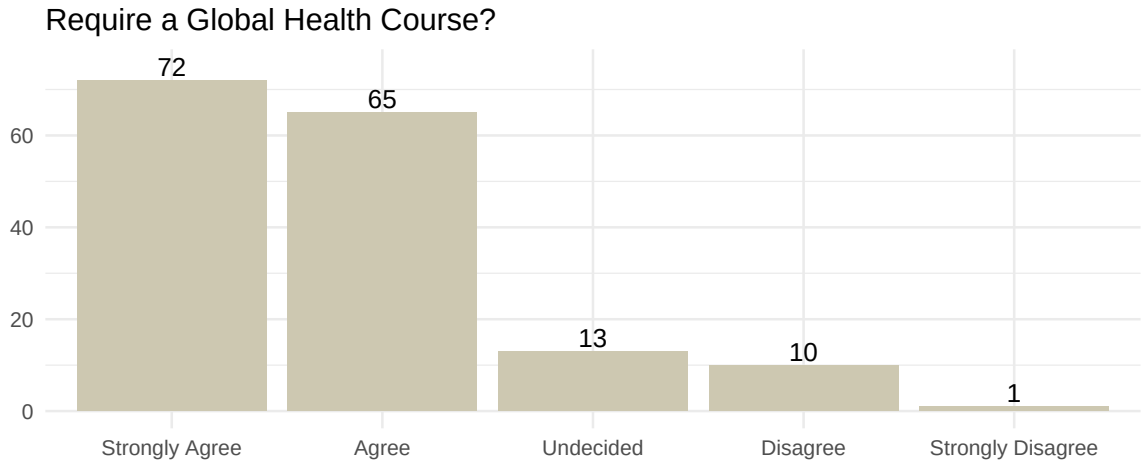
C. Correlation of preferred educational training with major



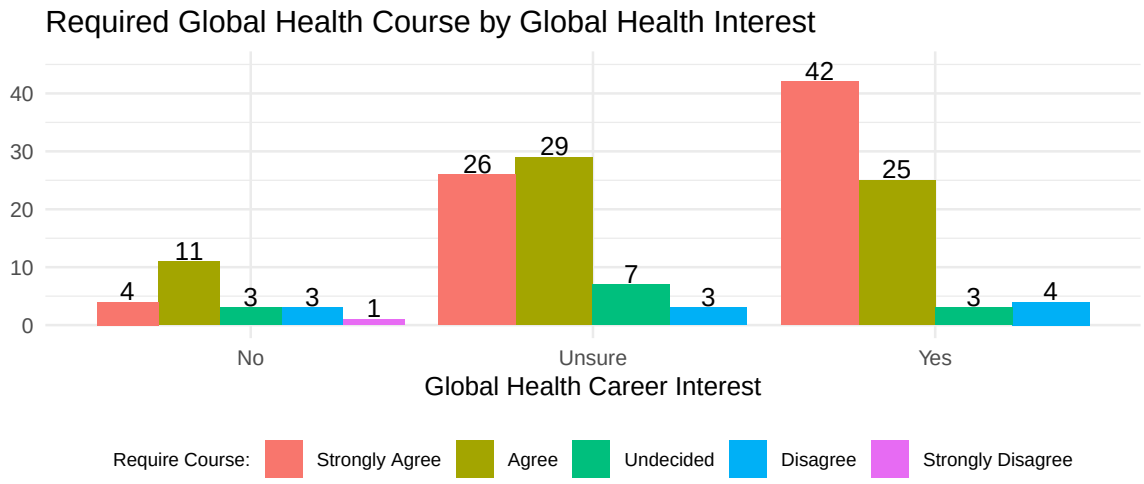


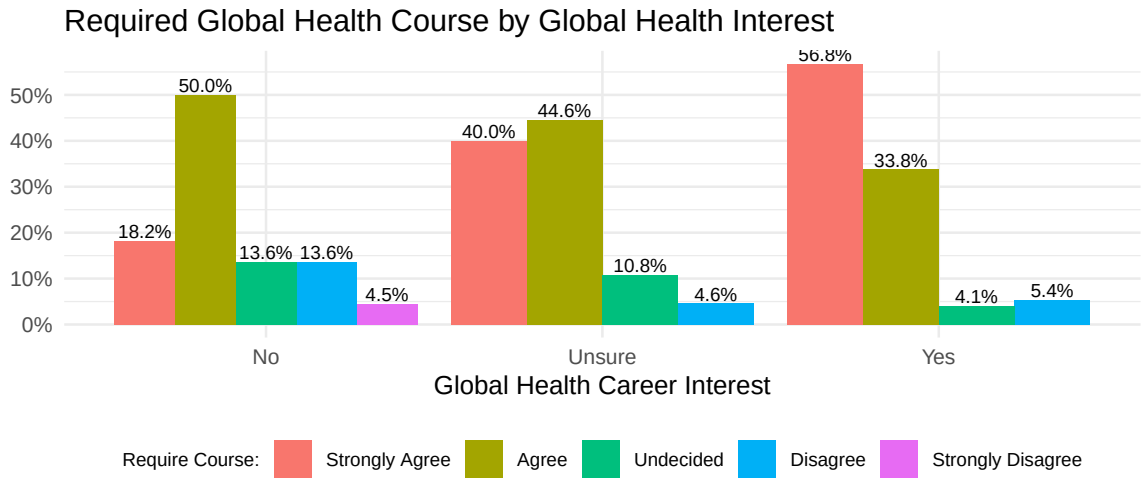
5. Should all pre-medical students take at least one global health-focused class before entering medical school?

A. Overall Results of Global Health Class Requirement

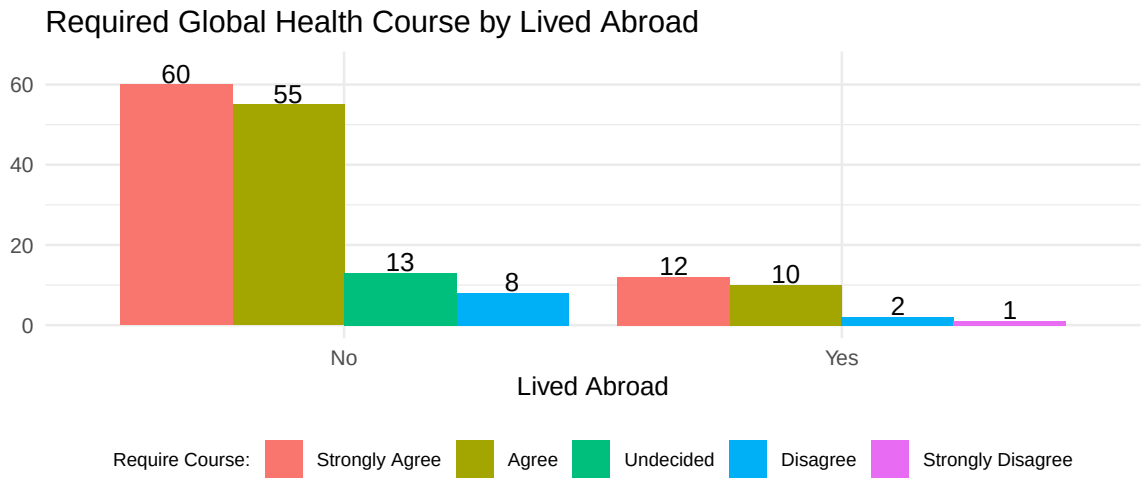


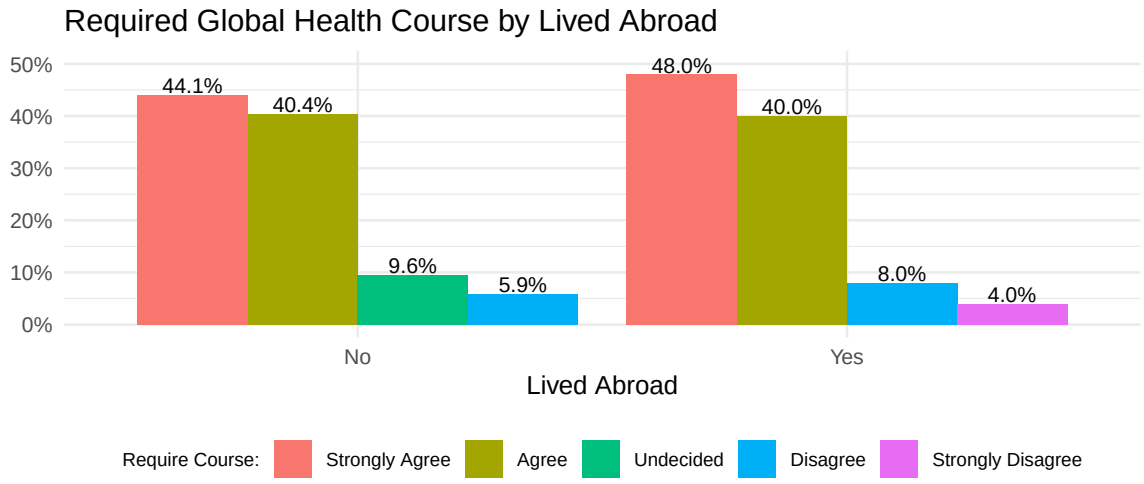
B. Global Health Class Requirement by Global Health Career Interest





C. Global Health Class Requirement by Living Abroad





D. Global Health Class Requirement by Major