

Impact of Health Insurance Literacy on Timely Access to Healthcare for College Students

Alex Zuehlke | Faculty Mentor Dr. Wu Zeng
Georgetown University



GEORGETOWN UNIVERSITY
Center for Research & Fellowships



Introduction

- **Health insurance literacy (HIL)** was defined in 2012 as “the degree to which individuals have the knowledge, ability, and confidence to find and evaluate information about health plans, select the best plan for their own (or their family’s) financial and health circumstances, and use the plan once enrolled.” [1]
- Healthcare in the United States is a mixed system, meaning that both government funded coverage schemes—like Medicare and Medicaid—and private insurance plans—like employer sponsored plans or individual plans through health insurance marketplaces—are responsible for health financing.[2]
- Due to the complexities of the health insurance system, previous research has shown that over 50% of American adults are found to have low or inadequate HIL.[3]
- College students are particularly vulnerable to low health insurance literacy rates. [4,5]
- **The research objective is to (1) examine the status of students' health insurance knowledge and (2) examine the relationship between students' knowledge of health insurance and their ability to access healthcare in a timely manner.**

Methodology

- A cross-sectional survey was conducted at Georgetown University with 190 participants. The research subject was undergraduate students at Georgetown University. The survey was approved by the university Institutional Review Board. The sample size was 190 participants.
- The survey utilized online voluntary participation and was conducted anonymously.
- The survey measured: 1. Demographic information; 2. Health insurance literacy via the Kaiser Family Foundation health insurance literacy quiz [6], 3. Healthcare seeking behavior based on the Health Insurance Literacy Measure (HILM).[7]
- Responses were coded to receive two different scores: a health insurance literacy score based on correct answers on the Kaiser Family Foundation HIL quiz and a health insurance confidence score. The health insurance confidence score was derived from likert style questions in the care seeking behavior section of the survey that asked participants to rate their ability to use health insurance and access care.
- Both the health insurance literacy score and health insurance confidence score were measured on a 10 point scale.
- Health insurance literacy scores were compared using ANOVA to compare the difference in mean HIL scores across groups.

Table A

DEMOGRAPHICS	n%	Mean HIL Quiz Score	Mean HIL Conf. Score
Total	100.00	6.58	6.88
Gender			
Male	18.42	7.14	7.01
Female	78.95	6.49	6.86
Nonbinary	2.11	5.75	6.90
Prefer Not to Say	0.53	4.00	4.80
School			
School of Business	4.74	6.11	7.33
College of Arts and Science	40.00	6.16	6.61
School of Health	32.10	7.22	7.14
School of Nursing	1.05	3.00	5.00
School of Foreign Service	22.11	6.69	6.97
Race			
Asian or Pacific Islander	32.11%	6.36	6.92
Black or African American	2.63%	7.60	7.68
Native American or Alaskan Native	0.00%	N/A	N/A
Hispanic or Latino	4.21%	5.75	6.60
White or Caucasian	52.63%	6.88	6.95
Other	4.21%	6.00	6.75
Prefer Not to Say	4.21%	6.88	5.60
Age			
Under 18	3.70	7.43	7.43
18	15.34	6.31	7.05
19	25.93	6.57	7.04
20	28.57	6.31	6.72
21	21.69	6.85	6.66
22	3.70	7.71	7.20
23+	1.06	8.50	8.00
Family Income			
Less than \$25,000	4.74	5.78	5.91
\$25,000-\$50,000	7.89	5.93	6.16
\$50,000-\$100,000	15.26	7.55	7.08
\$100,000-\$200,000	23.68	6.71	6.96
More than \$200,000	45.79	6.44	7.03
Prefer Not to Say	2.63	5.60	6.24
Highest Family Education			
Less than High School	1.05	8.00	7.80
High School	5.79	5.82	6.14
Associate's Degree	4.21	6.38	6.85
Undergraduate Degree	16.32	6.77	6.77
Master's Degree	43.16	6.77	6.90
Doctorate or Higher	29.47	6.34	7.02

Results

- Out of 190 participants, 78.95% identified as female, 18.42% identified as male, and 2.11% identified as nonbinary. The largest undergraduate school represented in the sample was the College of Arts and Sciences at 40.00%, followed by the School of Health at 32.10%. The full demographic breakdown of the sample is listed in Table A.
- **The overall mean health insurance literacy score was 6.58 out of 10 with a standard deviation of 2.26.** Overall, questions about health insurance premiums and provider networks had the highest percentage of correct answers and questions about calculating costs and health insurance formularies had the lowest percentage of correct answers.
- Table A displays the breakdown of average HIL scores and health insurance confidence scores by demographic group.
- Table D compares the percentage of Georgetown students who answered each question of the Kaiser Family Foundation Health Insurance Quiz correctly to the percentage of adults in the 2014 KFF study of a 1,292 American adults who answered correctly.[6] **Georgetown students had a higher percentage of correct answers on almost all questions with the exception of the question on the definition of “health insurance formulary.”**
- A one-way ANOVA was conducted to compare each demographic group to the HIL quiz scores. **The one way ANOVA for undergraduate schools (MSB, SFS, SOH, SON, CAS) revealed that there was a statistically significant difference in mean quiz scores between at least two groups ($F(4,185) = [3.45], p = 0.0090$). There was no statistically significant difference between mean quiz scores for any other demographic category.**
- Unsurprisingly, participants who said that their knowledge of health insurance makes it easier to access healthcare in a timely manner had higher literacy scores on average ($n\%=13.66\%, \bar{X}=7.64$) than those who said that their knowledge of health insurance makes it harder to access timely healthcare ($n\%=20.22\%, \bar{X}=6.7$). However, the majority of respondents ($n\%=66.12$) said that their knowledge of health insurance had no impact on their ability to access healthcare in a timely manner (Table B).
- A one-way ANOVA was conducted to compare the effect of whether or not someone believes their HIL impacts access to healthcare on quiz scores (Table B). **This revealed that there was not a statistically significant difference in mean quiz score between those who said their HIL impacted access to healthcare and those who did not ($p=0.075$).**
- When participants were asked whether or not they have experienced issues with accessing healthcare in a timely manner, 33.16% of participants said they have experienced issues, 54.74% of participants said they have not experienced issues, and 12.11% of participants didn't respond.
- Table B suggests that some 33.88% of students perceive their HIL to affect their ability to access healthcare, however **Table C shows that both students that said they have had timely access issues in the past and those who said that they have not had access issues in the past had the same mean health insurance literacy score ($\bar{X}=6.84$).**

Table C

Healthcare Access Issues and Score	n%	Mean Quiz Score
Had difficulty accessing timely healthcare	33.16	6.84
Has not had difficulty accessing timely healthcare	54.74	6.84
Didn't Answer	12.11	4.95

Table D

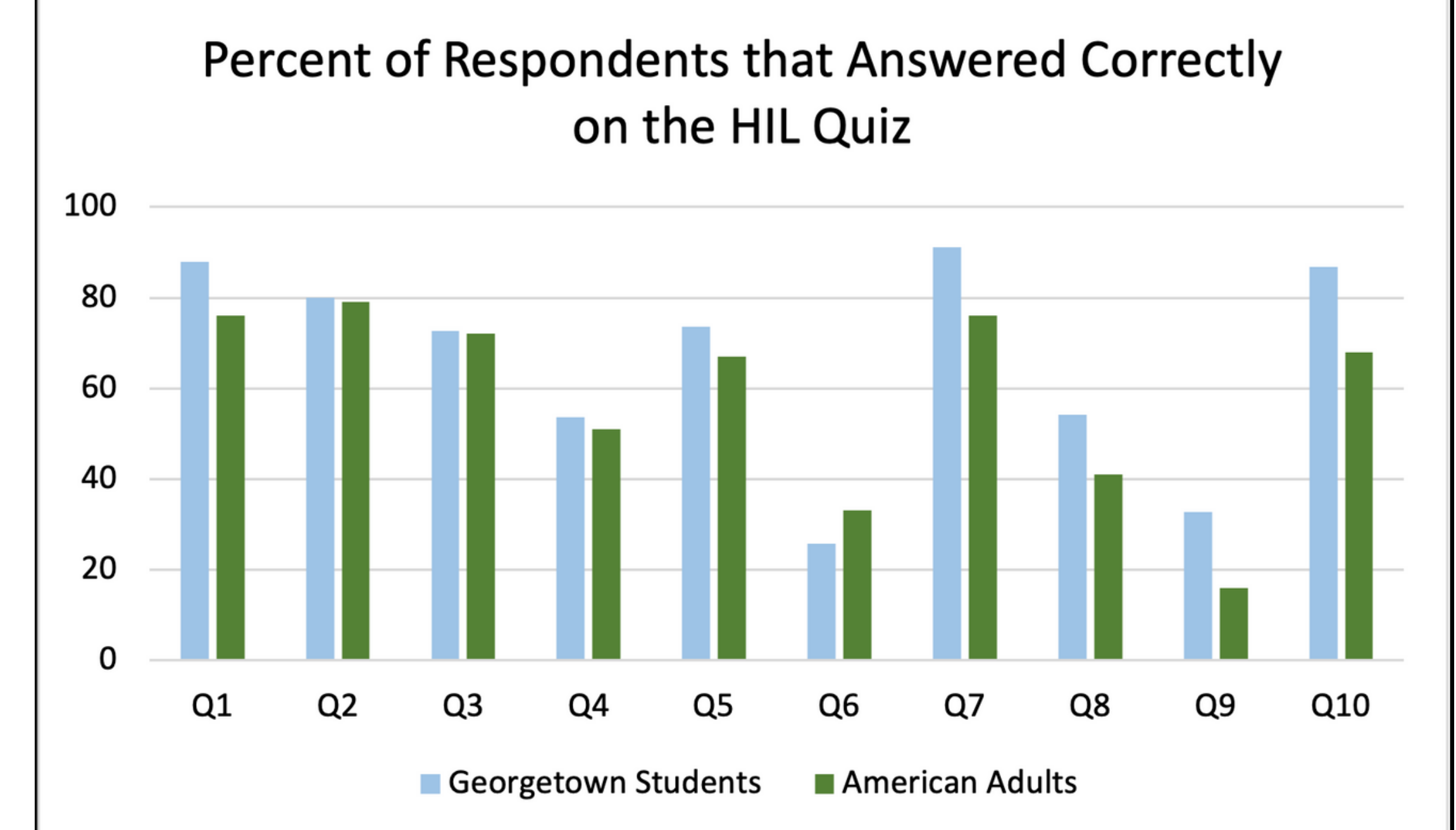


Table B

HIL and Access to Healthcare	n%	Mean Quiz Score	Mean Conf. Score
"My HIL makes it EASIER to access healthcare"	13.66	7.64	7.74
"My HIL makes it HARDER to access healthcare"	20.22	6.7	6.21
"My HIL does not affect my ability to access care"	66.12	6.36	6.96

Conclusion

- The survey found statistically significant differences in mean scores between students from different Georgetown undergraduate schools with students from the School of Health scoring highest on average.
- Georgetown students were also found to have higher health insurance literacy rates than the nationally representative sample of American adults conducted by the Kaiser Family Foundation.
- Both students that have and have not had healthcare access issues in the past had similar health insurance quiz scores. **This suggests that other factors such as the level of parental support in healthcare decisions and cost of healthcare procedures may have a larger impact on students' ability to receive timely healthcare than their health insurance literacy.**
- Further research has the opportunity to further examine HIL rates and socioeconomic determinants by comparing HIL rates of young adults at different universities or those not enrolled in university. Furthermore, future studies could examine HIL rates of young adults compared to the level of parental support received when making healthcare decisions.

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