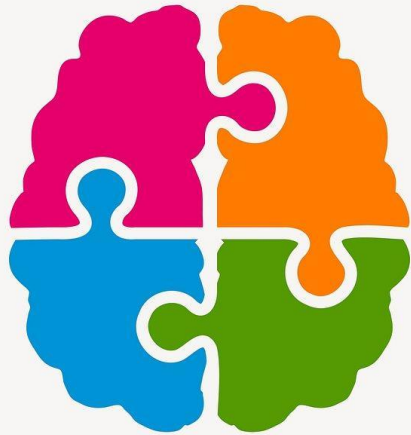


Brain Health Education for Medical Students: Strengths and Gaps

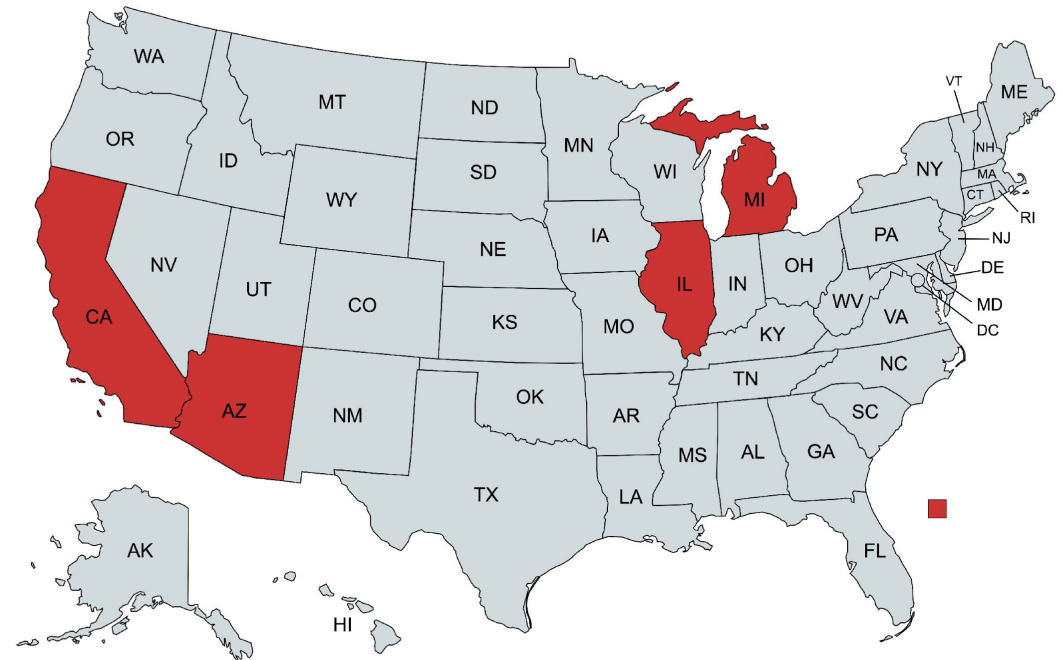


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Neurology Resident at Mayo Clinic - Arizona

Student Survey

- 90 medical students in the Midwest and southwestern United States were surveyed anonymously in 2020.
- Survey questions sought to assess:
 - 1)Methods of dementia education.
 - 2)Confidence in addressing concepts relating to brain health.
 - 3) Perceptions regarding the caregiving role.
 - 4) Barriers to cognitive screening.



Survey Design

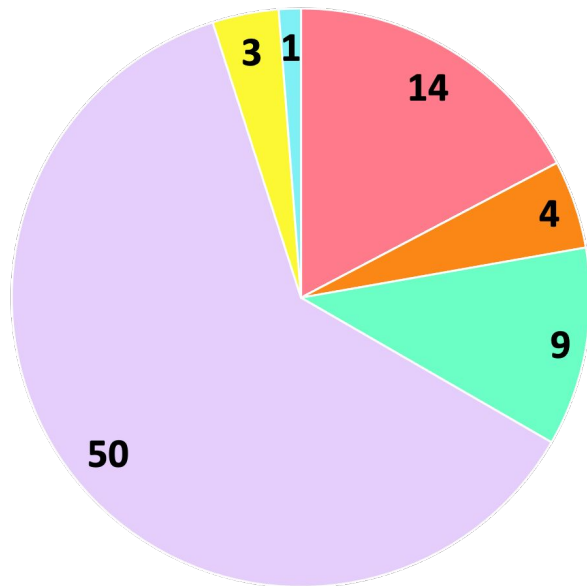
- Conducted by: National Council on Diversity, Equity, and Inclusion for the American Medical Women's Association (AMWA)
- Timeframe: July 2020 to December 2020
- IRB-approved (Beaumont Health served as the institution of record)
- Distribution: Shared through email listservs, social media groups (Facebook and Instagram), and AMWA newsletters. A snowballing technique was subsequently used to maximize the sample size.

Results

- A portion of these results were presented at the Alzheimer's Association International Conference Neuroscience Next (2020) and American Academy of Neurology Annual Scientific Meeting (2021).

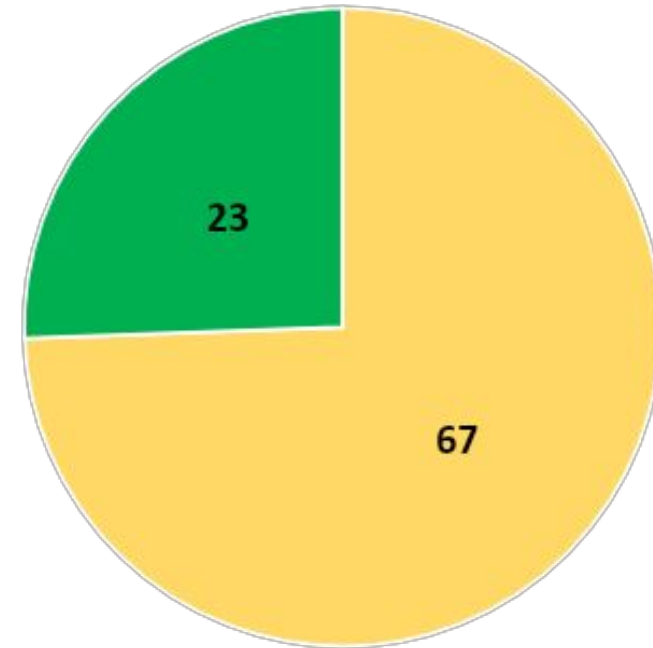
Cohort Demographics

Race/Ethnicity



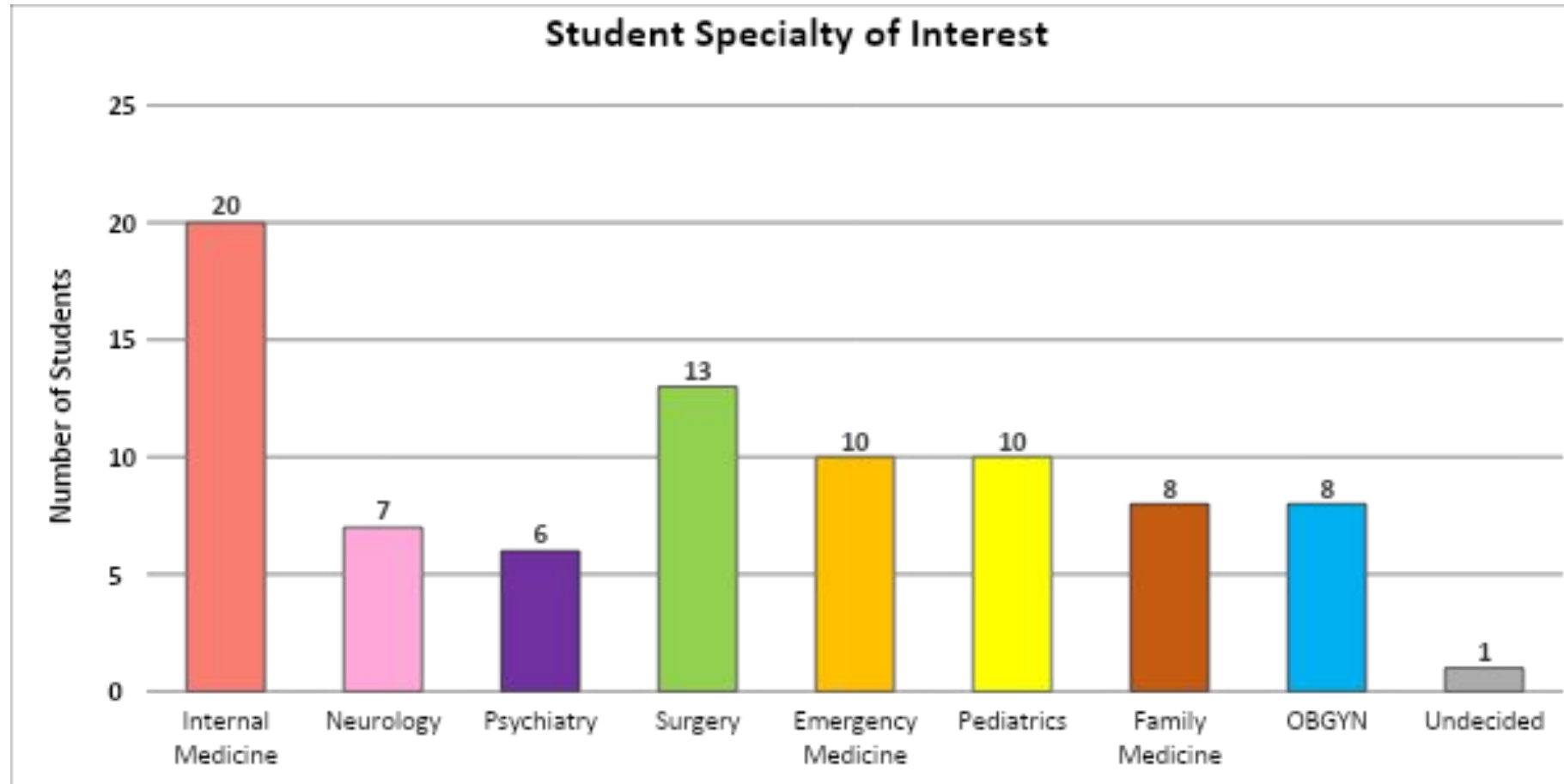
- Asian
- Hispanic/Latino
- Caucasian
- American Indian/Alaska Native
- African American
- Middle Eastern
- Mixed

Gender

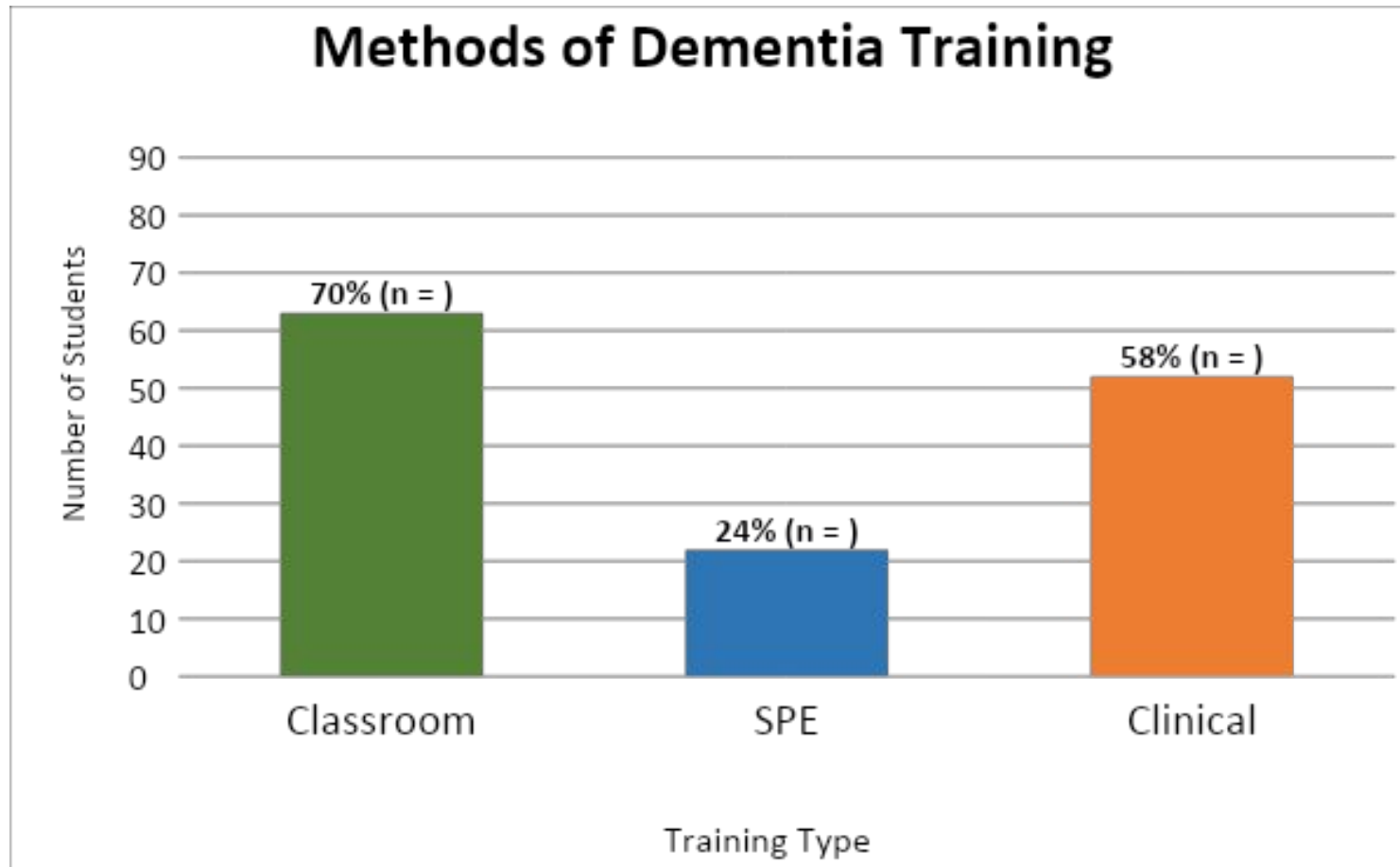


- Female
- Male

Medical Specialty of Interest



Reported Education Formats

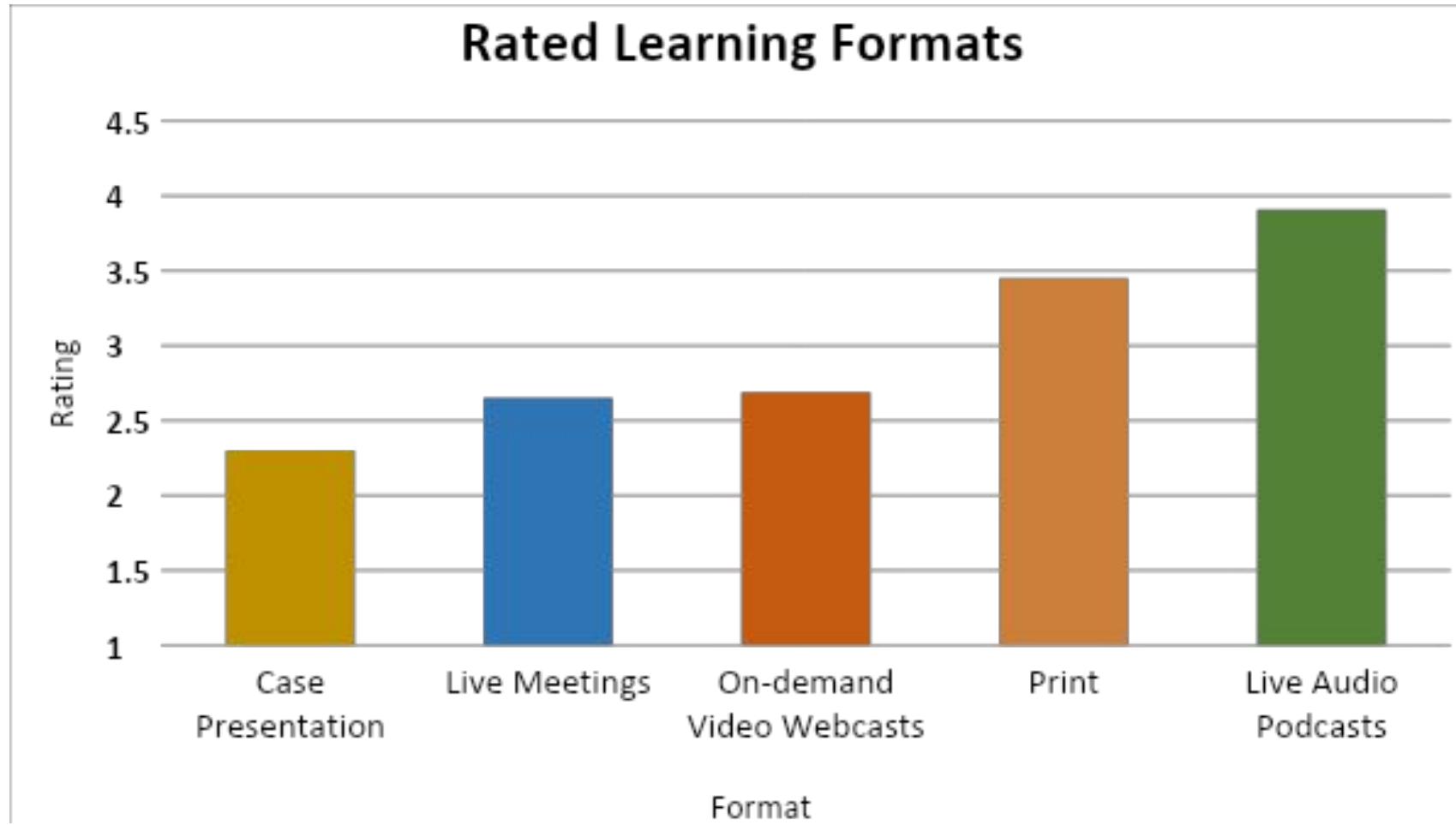


The majority of students received dementia training through classroom education (ie lectures) and clinical exposure. A minority also had completed standardized patient encounters (SPE).

Preferred Formats of Education

Least Preferred

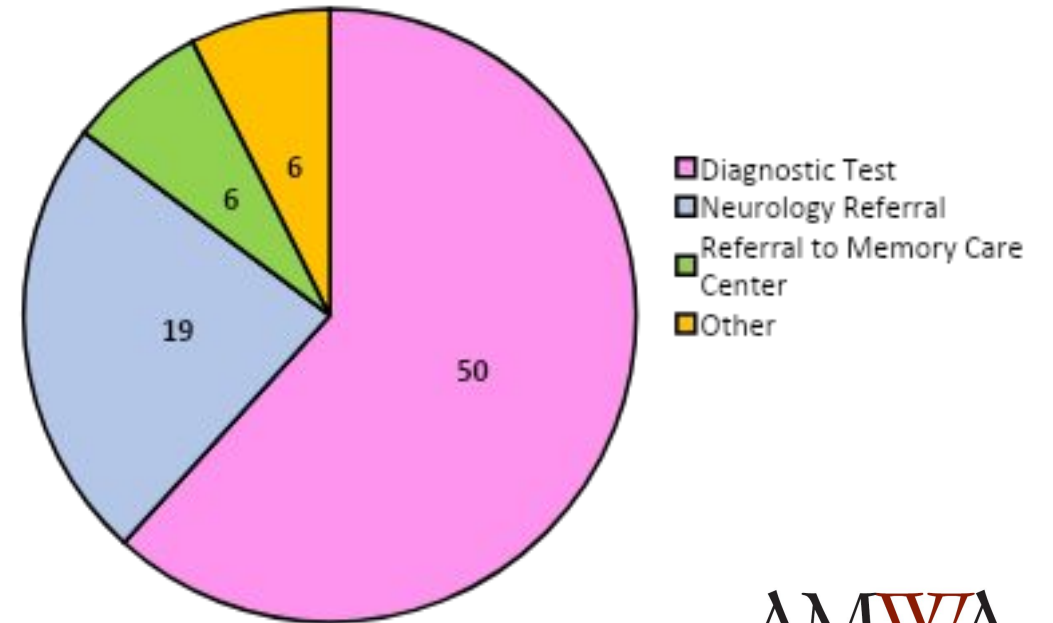
Most Preferred



Basic Knowledge & Management

- 80% of students knew to inquire about cardiac risk factors and recommend lifestyle changes.
- When encountering patients with cognitive concerns, 23.3% (n = 19) of the students said that their first step in management would be a neurology referral, whereas 7.8% (n = 6) would refer their patients to a memory care center.

If a patient shows signs of memory issues or complains about memory or cognitive issues, what would be your next step in management?



Student Confidence in Cognitive Counseling



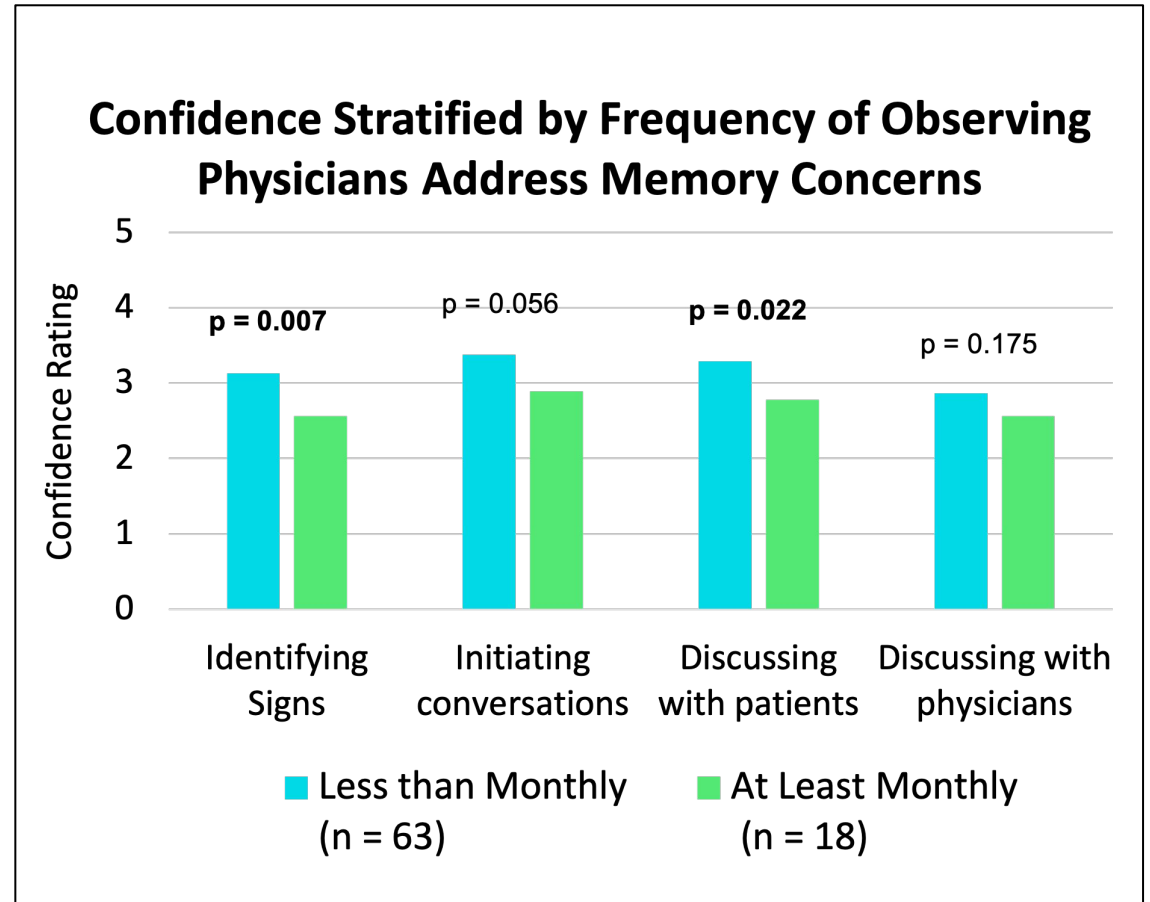
- Likert scale used to measure confidence.
- Medical students had less confidence in starting conversations about cognitive health with patients and family, although felt confident discussing these concerns with supervising physicians.

TASK	RATING
Identifying signs of memory problems.	3.00
Initiating conversations about cognitive health or possible dementia.	3.27
Discussing cognitive health concerns with patients and/or their family members.	3.17
Discussing cognitive health concerns with supervising resident or attending physician.	2.80

Clinical Exposure Increases Confidence



These results demonstrate that students who saw physicians address memory concerns with their patients at least once per month were more confident in identifying signs of cognitive decline ($p = 0.007$) and counseling patients on these cognitive concerns ($p = 0.022$).



Sex Differences in Confidence



- Likert scale used to measure confidence.
- Female medical students were less confident than their male counterparts in counseling patients on cognitive health.

TASK	MALE	FEMALE	p-Value
Identifying signs of memory problems.	2.87	3.06	0.345
Initiating conversations about cognitive health or possible dementia.	2.87	3.36	0.035
Discussing cognitive health concerns with patients and/or their family members.	2.78	3.28	0.018
Discussing cognitive health concerns with supervising resident or attending physician.	2.65	2.82	0.452

Potential of Standardized Patient Encounters



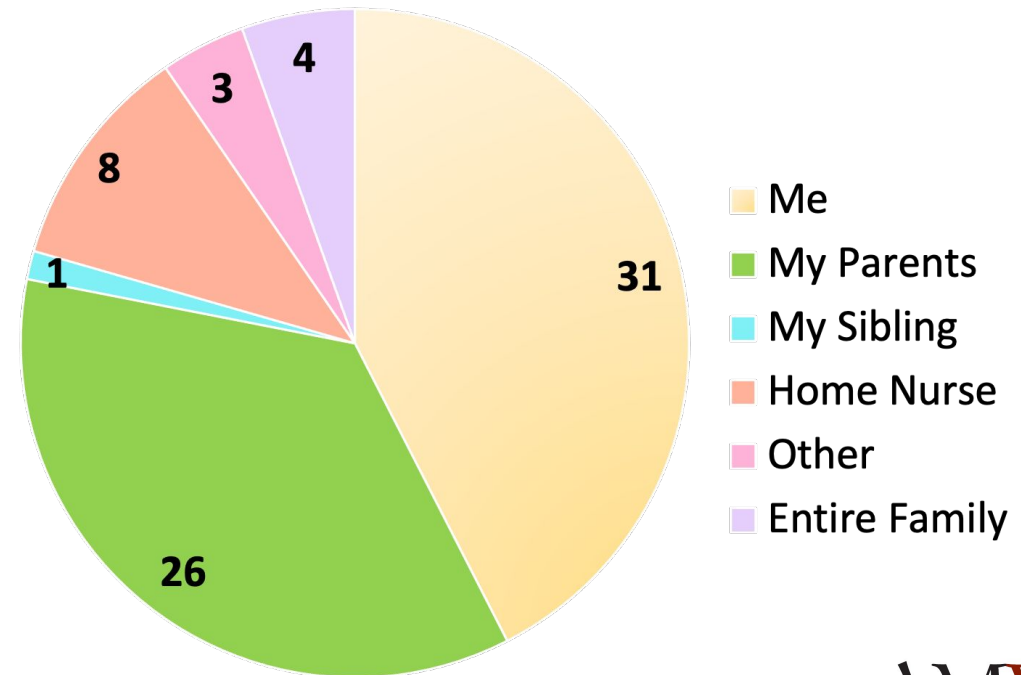
TASK	SPE	NO SPE	p-Value
Initiating conversations about cognitive health or possible dementia.	2.77	3.38	0.009

24% (n = 22) students received dementia education in the form of standardized patient encounters (SPE). These students were more confident in initiating conversations about brain health.

Perceptions of Caregiving

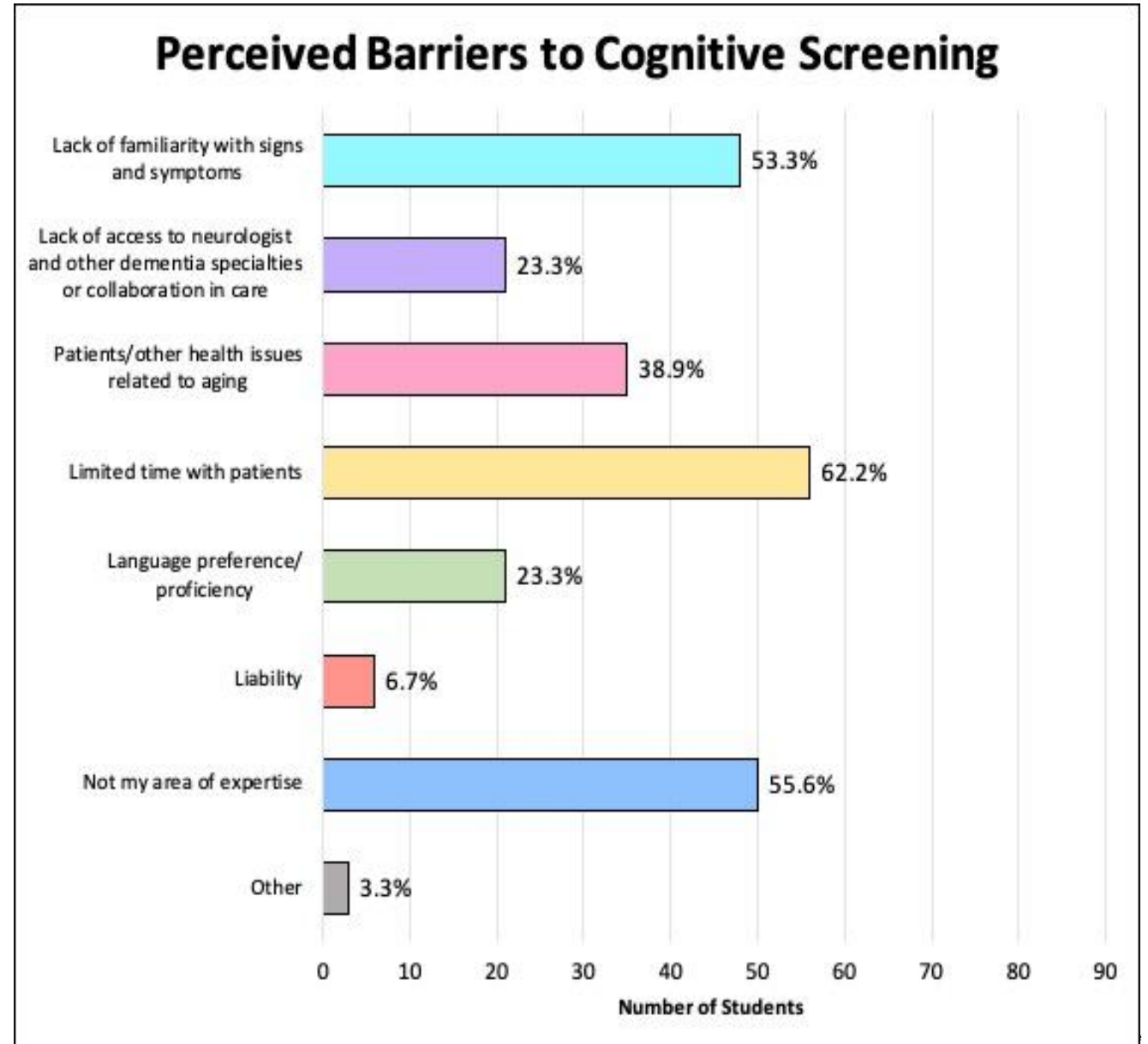
Half of the surveyed students (n = 45) indicated that they knew a dementia caregiver. These students (who knew a dementia caregiver) were less likely to report intent to serve as the primary caregiver for their own family member compared with those who did not know a caregiver (30.0% versus 59.5%, $p = 0.007$).

If a loved one developed dementia, who would be responsible in taking on the caregiver role?



Barriers

A variety of perceived barriers to screening for cognitive decline were reported. Limited time with patients, lack of familiarity with signs and symptoms of cognitive decline, and not falling within one's area of expertise were the most commonly reported barriers. Sex, year of study, frequency of exposure to physicians addressing memory concerns, and learning formats in dementia education had no impact on alleviating the perception of these barriers.



Conclusions

- The majority of medical students identify the link between vascular risk factors and cognitive decline.
- SPE's are not a common method of dementia education, although students who underwent SPE's reported greater confidence in initiating conversations regarding cognitive health.
- Female students were less confident in counseling patients regarding brain health when compared to male students.
- Limited time with patients was the most commonly reported perceived barrier to care. 55.6% of students also did not feel cognitive screening fell within their area of expertise.

