

Culinary Medicine Outreach at Local High School



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BACKGROUND

Hoover High School

- Demographics
 - Ranked 1025th in CA
 - 98% total minority enrollment
 - 77.5% Hispanic, 11.6% Asian, 7.3% Black, 1.7% white, 1.7% 2 or more races, 0.1% NH/P [1]
 - About ⅓ of students come from homes where a language other than English is spoken. Many students and/or their family members are newcomers to the US as well as first generation college students. [2]
- Economics
 - 81% economically disadvantaged
 - 75% qualify for free lunch and 5% or reduced-price lunch. [2]
- Scholastics
 - 13% are proficient in science and 9% in math - based on test scores [1]
 - 20.5/100 - college-ready based on test scores [1]
 - 84% graduation rate - well below state median rate [1]

QI AIM & OBJECTIVES

How does food impact the health and well-being of high school students at an urban, economically disadvantaged, and racially diverse high school in San Diego?

- 1. Current Understanding of Food and Health:** Assess students' current knowledge and beliefs about how food affects their personal health and the health of their community.
- 2. Challenges to Dietary Change:** Identify specific barriers that prevent students from making meaningful dietary changes to improve their health and overall well-being.
- 3. Community and Individual Assets:** Explore the individual and community-level strengths that students can draw upon to support sustainable changes in their relationship with food.
- 4. Teaching Medical Residents:** To increase knowledge and confidence of counseling patients/students on protein intake and understand when protein intake should be adjusted due to a medical condition.

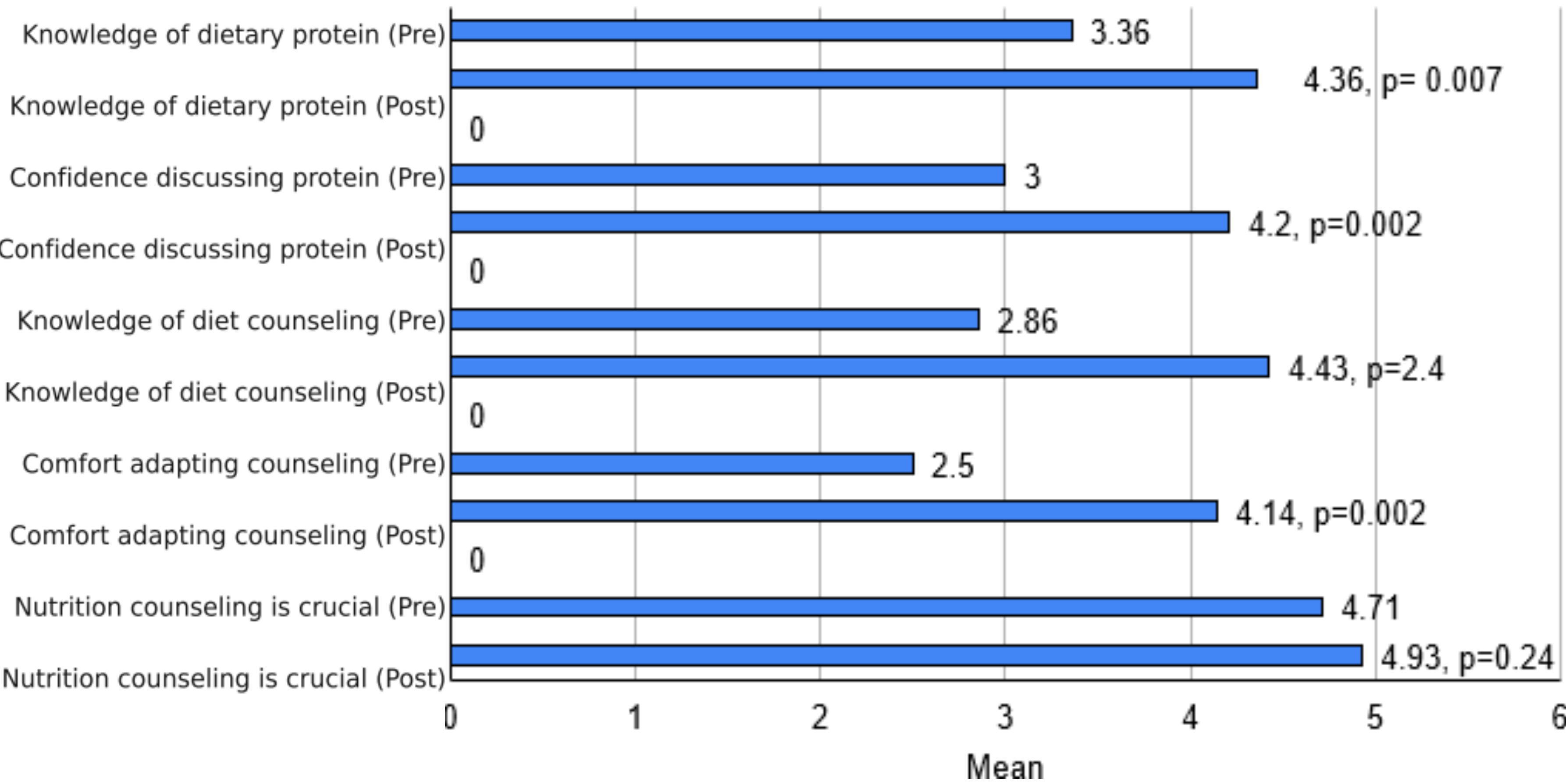
Needed Interventions:
Determine what types of interventions—at the individual, institutional, and systemic levels—are necessary to provide students not only with knowledge, but also with the confidence and tools to act on that information.

METHODS

- We developed a series of evidence-based, interactive nutrition presentations that were integrated into students' existing culinary medicine class and tailored to their interests.
- During the sessions, we explored the students' current understanding of food and health, their personal nutrition goals, the perceived barriers to achieving those goals, and what resources or interventions might help them overcome those barriers.
- Each presentation was paired with a hands-on activity, such as preparing healthy alternatives to sugar-sweetened beverages and making high-protein, plant-based smoothies. These interactive components were designed to empower students with practical skills they could apply in their daily lives.
- Although we were unable to administer formal pre- and post-intervention surveys with the high school students, we adapted one of our nutrition presentations for a separate audience of medical residents and faculty. We did a pre and post survey to quantify impact on understanding and confidence in nutrition counseling with respect to protein.

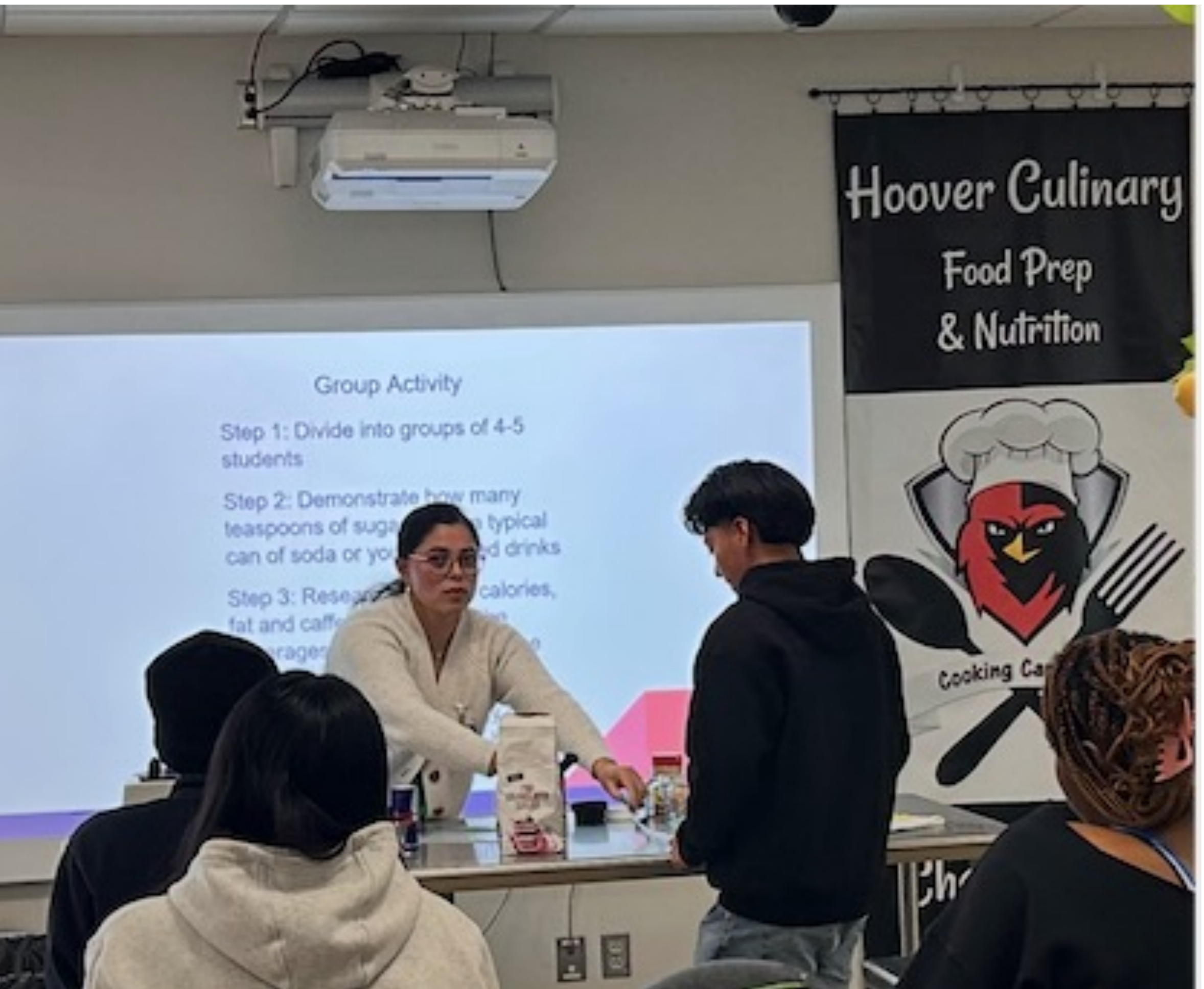
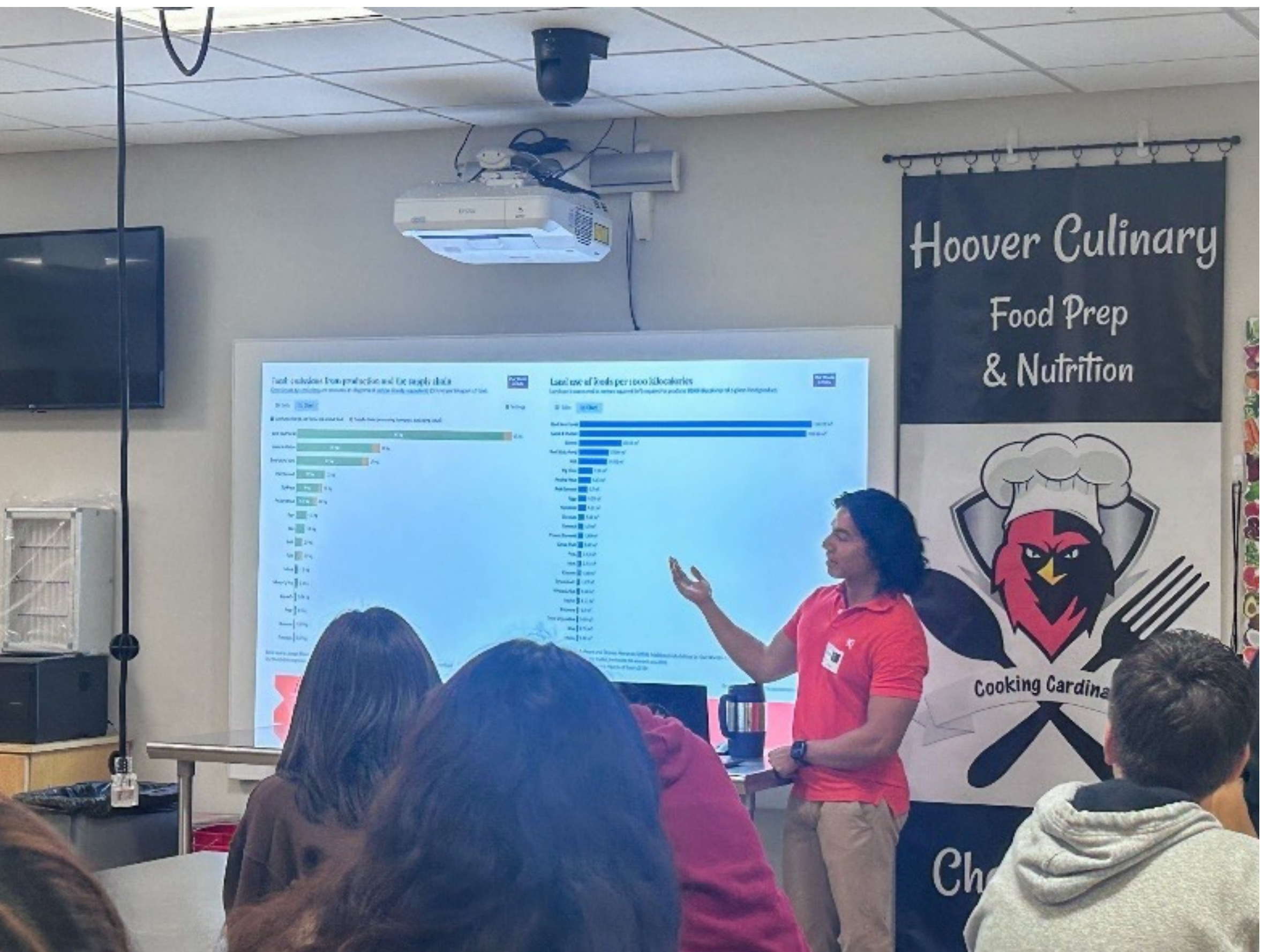
RESULTS

Change in Knowledge and Confidence in Protein-Related Nutrition Counseling



LIMITATIONS

- Small study size – both with the high school students at Hoover and the family medicine residents at Family Health Centers of San Diego
- Short study duration – only four classes over one semester of high school and one class during didactics
- Inability to obtain pre- and post-intervention data with the high school students
- Lack of standardized approach to teaching the classes at Hoover High School



DISCUSSION

- Students who participated in this 4-class culinary medicine series reported overall that the classes were valuable. They appreciated our presence, especially as physicians of color, and resonated with our approach to discussing health-related topics within the larger sociopolitical landscape in which we live.
- Students enjoyed engaging with the interactive components of each class and warmed up to us the more we established our presence there, suggesting consistency and rapport are key.
- A single, 1 hour presentation on recommended protein intake and the lifestyle medicine framework improved the family medicine residents' confidence discussing protein and comfort with counseling at Family Health Centers of San Diego.

CONCLUSIONS & FUTURE DIRECTIONS

- Overall, high school students enjoyed this addition to their culinary medicine curriculum and found the sessions valuable.
- Incorporating more intentional nutrition teaching into resident didactics may be an effective way to increase knowledge of and comfort with dietary counseling.
- Consistency is key to establishing rapport not just with patients but with high school students as well.
- More class time with the students and standardized teaching will be needed to quantify impact.
- Nutrition teaching with residents as well as high school students could be part of a larger residency-based lifestyle medicine track.
- More work is needed not just to further explore students' and residents' understandings of the different tenets of lifestyle medicine but also to move the discussion into the realm of what is actionable on every level, from the individual to global, to realize health equity and food and environmental justice for all.

REFERENCES

- [1] <https://www.usnews.com/education/best-high-schools/california/districts/san-diego-unified-school-district/hover-high-school-3201>
- [2] https://hoover.sandiegounified.org/general_info/about_us