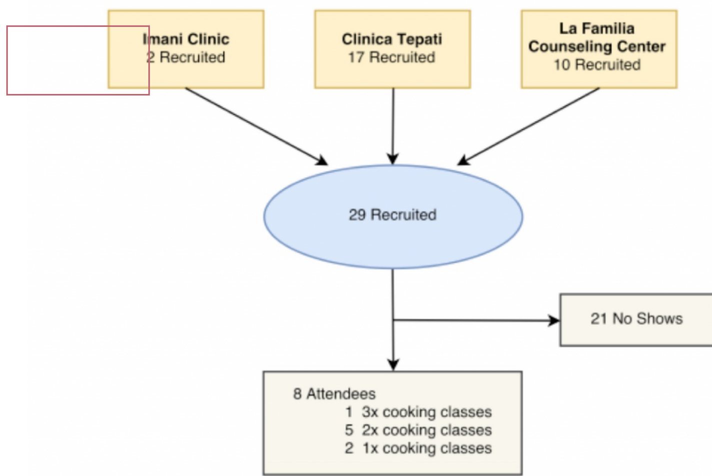

Figure 2. Twenty-nine patients were recruited. One patient attended three cooking classes, five patients attended two cooking classes, and two patients attended one cooking class.

Questions Scale 0- not confident to 10- extremely confident	Pre-Session 1 Mean	95% CI	PostSession 1 Mean	95% CI	P Value	PostSession 2 Mean	95% CI	P Value
How would you rate your confidence in cooking cost effective foods?	5.6 ± 2.1	[3.8, 7.4]	8.3 ± 1.5	[7.0, 9.5]	0.02	9.4 ± 0.7	[8.8, 10]	0.001
How would you rate your confidence in accessing ingredients or materials for cooking?	6.0 ± 2.2	[4.2, 7.8]	9.1 ± 1.0	[8.3, 10]	0.003	9.4 ± 0.7	[8.8, 10]	0.005
How would you rate your confidence in cooking dishes that you culturally identify with?	4.5 ± 2.8	[2.2, 6.8]	7 ± 3.2	[4.4, 9.6]	0.01	8.25 ± 2.4	[6.2, 10.3]	0.001
How would you rate your confidence in cooking dishes in a timely manner?	5.5 ± 2.3	[3.6, 7.4]	8.4 ± 2.1	[6.6, 10.1]	0.02	9 ± 2.1	[7.3, 10.7]	0.005

Table 1: Changes in cooking confidence before and after two cooking sessions.

After one cooking session, participants' confidence in cooking cost effective foods increased from 5.6±2.1 (95% CI: 3.8, 7.4) to 8.3 ± 1.5 (95% CI: 7.0, 9.5), p=0.02. A second cooking cost effective foods to 9.4 ± 0.7 (95% CI: 8.8, 10), p=.001 (Table 1). The HB medical students and physician assistant students surveyed at the end of the project exhibited an increase in confidence in nutrition counseling, understanding social determinants to healthy eating, and consideration in being involved with the local community as a future health care provider. Patient compliance with the daily calendar was poor, and we do not report this data.

Discussion

Historically, it has been assumed that cooking skills are assets that are passed down from parents or guardians (Lavelle et al., 2019). Yet, due to commercialization and simplification of the cooking process by industry, cooking has been reduced significantly in the United States, with many products described as canned, precooked, prewashed, preserved, microwaveable, and so on (Pollan, 2013). Through this reductivist attitude to cooking, cooking skills have been lost and many detrimental health consequences have been associated with families solely relying on fast food or microwaved foods (Pereira et al., 2018). Therefore, our program strives to teach patients of the local Latino community essential cooking skills—from the purchase and selection of ingredients to preparing a healthy meal for a family. Cooking sessions with culturally competent didactics and recipes increased participants' confidence in cooking, ability to cook affordable healthy dishes, and ability to access ingredients for healthy cooking. Although our study is limited by the sample size, there is an increase from baseline cooking session increased the confidence in measurements with one cooking class. After the second session, a subsequent increase was also seen in the confidence to access ingredients or materials, cook dishes that one culturally identifies with, and cook dishes in a timely manner (Table 1). These results are consistent with past research, and may suggest that successful cooking classes with nutrition education programs could be created by a team of medical students, physician assistant students, and chefs (Reicks, Trofholz, Stang, & Laska, 2014). The main limitation of this work was the low participant size, due to employment or accessibility. Maintenance of improved confidence post- cooking class intervention was not assessed. Because we informally observed that partnering with community

centers and establishing good rapport with participants improved enrollment and retention, future directions include partnering with more community centers to increase participant turnout and expanding our program to include other demographics. One notable bias may arise from free ingredients were given to the participants; because price was a reported obstacle to healthier eating, the free vegetables and spices could have helped our patients increase their confidence in cooking healthier. If free healthy ingredients alone can encourage patients to eat healthier, La Familia Counseling Center and Student Run Free Clinics could consider providing patients with fresh ingredients (for example, after a nutrition consultation). Culinary medicine is an evidence-based field that integrates food and cooking with medicine to improve patients ' conditions and restore well-being. This has become a topic of interest due to the effects of highly processed foods, rising cost of health care, enthusiasm for food sustainability, among other reasons (La Puma, 2016). The HB program exposed future healthcare students to the importance of food and its effects on individual and community health and well-being. In addition, we observed that creating a community program via interdisciplinary teamwork between medical and physician assistant students is feasible and enhances medical education and service to underserved communities. From participants' feedback, we believe that students can greatly benefit from starting community programs to have hands-on experience in networking and collaborating with other organizations, as well as develop leadership and research skills.

Although nutrition education and cooking classes have helped participants attain healthier lifestyles, the effects of increasing obesity rates are still challenging problems. Unlike LA Sprouts, one program focused on low-income Latino communities that offers a solution at reducing obesity rates by incorporating a 12-week gardening course with their nutrition and cooking intervention, resulted in fewer participants with metabolic syndrome and lower waist circumference and BMI (Gatto et al., 2017). We do not report any difference, most likely due to our program only being two months and participants only consecutively attended at most three consecutive cooking classes. Nevertheless, our program offered increased cooking and food preparation confidence in our patient population.

Conclusion

Culinary medicine is important as it has the potential to positively change patients to eat healthier. The HB project successfully increased confidence in different aspects of meal preparation in Latino patients from Sacramento County. The dietary changes that were taught may help improve many parts of their health, from cardiovascular to metabolic diseases. The feasibility and success of this program may also help other medical and physician assistant students to form interdisciplinary teams and initiate community programs. This may not only help the local communities that they serve but also encourage and better equip future healthcare providers with experience working with community organizations, research, and leadership.

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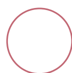

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