Healthy Eating Educational Resource for Asian American, Native Hawaiian, and Pacific Islander Populations: Brief Report on Survey Findings

MHP Salud and Association of Asian Pacific Community Health Organizations

Background

The Association of Asian Pacific Community Health Organizations (AAPCHO) and MHP Salud are two HRSA-funded National Training and Technical Assistance Partner (NTTAP) organizations that serve special and vulnerable populations within health centers. AAPCHO offers training and technical assistance (T/TA) related to disaggregated race/ethnicity, enabling services, and social determinants of health data collection, specifically for health centers serving Asian American (AA), Native Hawaiian (NH), and Pacific Islander (PI) communities. MHP Salud provides T/TA to health centers to develop, implement, and sustain Promotoras de Salud (Community Health Workers) programs through culturally-appropriate health education and community outreach development, specifically those organizations serving the migratory and seasonal agricultural worker (MSAW) populations. In recognition that both NTTAP organizations focus on culturally and linguistically appropriate services for special and vulnerable populations, AAPCHO and MHP Salud are collaborating to create culturally relevant material to promote healthy eating among the Filipino/a/x and Hmong communities, which are two AA subgroups that have a significant place in U.S. history, including the migrant farm worker movement.[1] [2] Moreover, in the context of diabetes amongst special and vulnerable populations, type 2 diabetes is a significant issue for both AA subgroups when one disaggregates data by race and ethnicity.

Diabetes

Diabetes is one of the most common chronic diseases in the United States.[3] As of 2018, 34.2 million Americans had diabetes.[4] Although ubiquitous, the data show there are racial/ethnic

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[1] Scharlin C, Villanueva LV. Philip Vera Cruz: A Personal History of Filipino Immigrants and the Farmworkers Movement. Seattle: University of Washington Press; 2000.

[2] Chia Thao, Nancy Burke, Sandie Ha, Andrea Joyce, Pesticide Knowledge, Attitudes, and Practices Among Small-Scale Hmong Farmers in the San Joaquin Valley of California, Journal of Integrated Pest Management, Volume 10, Issue 1, 2019, 32, https://doi.org/10.1093/jipm/pmz030

[3] Centers for Disease Control and Prevention. (2021, January 12). *About Chronic Diseases.* Centers for Disease Control and Prevention. https://www.cdc.gov/chronicdisease/about/index.htm.

[4] (2019). (rep.). *National Diabetes Statistics Report 2020*. Retrieved from https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf.

disparities in its prevalence. The Center for Disease Control and Prevention (CDC) data show that out of all racial/ethnic groups, Asians have one of the lowest rates of diabetes at 9.2%, only a 2.2% difference to the non-Hispanic white population at 7.5%.[5]

Disaggregated Data

However, the disaggregated data revealed hidden and complex disparities of the AA, NH, and PI populations. When NH and PI populations' numbers were separated from a 2018 dataset, their diabetes rates were significantly higher than the non-Hispanic white population at 15.2% and 7.9%, respectively.[6] Furthermore, when the NH and PI populations were further disaggregated, subgroups such as Samoans had an even higher rate of diabetes at 22.1%.[7] Disaggregating NH and PI populations from the AA, NH, and PI data show that NH and PI populations have a higher rate of diabetes than non-Hispanic white populations.

The Uniform Data System (UDS) data convey similar data. In 2019, NH and PI patients had a higher rate of uncontrolled diabetes (i.e., Hemoglobin A1c greater than 9%) than non-Hispanic white patients.[8] However, according to the UDS data, AAs had a lower rate of diabetes than NH, PI, and white patients.[9] Although this appeared to correlate to the CDC data, disaggregating AAs into ethnic subgroups display the nuances of diabetes disparities. Specifically, subgroups such as Filipinos/as/xs and South Asians have three times the higher rate of diabetes than non-Hispanic white populations.[10] Additional studies conclude that Hmong Americans, also have similarly high rates of diabetes even though they are often not included in the disaggregated data.[11] [12]

Explanations for AA, NH, and PI Racial/Ethnic Diabetes Disparities

Research postulates several reasons for diabetes disparities for AA, NH, and PI populations. First, the aggregated low diabetes rates may be attributable to low screening rates. Typically, the American Diabetes Association (ADA) considers a patient with body mass index (BMI) of equal to or greater than 25 kg/m^2 as at-risk for diabetes.[13] For AAs, however, the ADA has

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[5] (2019). (rep.). *National Diabetes Statistics Report 2020*. Retrieved from https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf.

[6] *Diabetes and Native Hawaiians/Pacific Islanders.* Office of Minority Health. (n.d.). https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=78.

[7] Ibid.

[8] *Uniform Data System, 2019.* Health Resources and Services Administration.

[9] Ibid.

[10] Wang, E. J., Wong, E. C., Dixit, A. A., Fortmann, S. P., & Palaniappan, L. P. (2011, August). *Type 2 diabetes: identifying high risk Asian American subgroups in a clinical population*. Diabetes research and clinical practice. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3156287/.

[11] Thao, K. L., Arndt, B., Tandias, A., & Hanrahan, L. (2015, October). *The Prevalence of Type 2 Diabetes Mellitus in a Wisconsin Hmong Patient Population.* WMJ : official publication of the State Medical Society of Wisconsin. https://pubmed.ncbi.nlm.nih.gov/26726339/.

[12] Cobb, T. (2010). Strategies for providing culturally competent health care for Hmong Americans. *Journal of Cultural Diversity*, 17, 79-83. For reference, Hmong people are an ethnic subgroup within Asia, thought to have originated in China and now residing in Laos, Burma, Thailand, and China. The Hmong Americans largely represent the Hmong people who immigrated to the U.S. with preferred refugee status during the early 1980s.

[13] American Diabetes Association. (2020, January 1). *2. Classification and Diagnosis of Diabetes: Standards of Medical Care in Diabetes-2020.* Diabetes Care. https://care.diabetesjournals.org/content/43/Supplement_1/S14.

acknowledged that the risk factor for diabetes is a BMI equal to or greater than 23 kg/m^2.[14] This BMI standard is not common knowledge, and there may be an additional 215,000 undiagnosed cases of AAs with diabetes.[15]

Second, social and behavioral risk factors may account for high rates of diabetes in AA, NH, and PI subgroups. Factors such as lack of access to health care, transportation, and cost of healthy food have shown to impact diabetes disparities in NH and PI communities.[16] These external factors may be exacerbated by immigration status. Migration status complicates non-communicable disease risk by affecting health access (e.g., language barriers, health literacy), pre-migration background (e.g., genetics, poverty), socioeconomic and legal status (e.g., income, education), and post-migration lifestyle (e.g., food intake, cultural norms).[17] AA, NH, and PI populations accounted for 37% of immigrant arrivals in 2018, and this percentage is projected to grow.[18] These multitude of factors related to social determinants of health impact diabetes disparities in AA, NH, and PI populations.

Selection of Filipino/a/x and Hmong Americans
Although it is challenging to quickly alleviate larger systemic factors, there are opportunities to create resources to increase knowledge and change behavioral patterns. By creating resources to increase health literacy and healthy eating, AAPCHO and MHP Salud hope to support Community Health Workers (CHWs) and other enabling services providers working with AA, NH, and PI patients.

AA, NH, and PI populations are extremely diverse, and represent over 50 ethnic communities and 100 languages.[19] Given limited resources, creating a healthy eating resource for all AA, NH, and PI populations would be less effective than targeting specific subgroups. Therefore, we decided to narrow down the AA, NH, and PI subgroups for the resources based on the following select criteria that align with AAPCHO and MHP Salud's priorities under our respective HRSA cooperative agreements:

(1) Need,
(2) Diabetes Rates, and
(3) Migratory and Seasonal Agricultural Worker (MSAW) status.

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[14] Araneta, M. R. G., Kanaya, A. M., Hsu, W. C., Chang, H. K., Grandinetti, A., Boyko, E. J., … Fujimoto, W. Y. (2015, May). *Optimum BMI Cut Points to Screen Asian Americans for Type 2 Diabetes.* Diabetes Care. https://care.diabetesjournals.org/content/38/5.

[15] *Screen at 23 Package*. Screen at 23. https://screenat23.org/wp-content/uploads/2015/10/Screenat23package-1.pdf.

[16] McElfish, P. A., Purvis, R. S., Esquivel, M. K., Sinclair, K. A., Townsend, C., Hawley, N. L., … Kaholokula, J. K. (2019, March 18). *Diabetes Disparities and Promising Interventions to Address Diabetes in Native Hawaiian and Pacific Islander Populations.* Current diabetes reports. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7171975/.

[17] Ibid.

[18] Budiman, A. (2020, August 20). *Key findings about U.S. immigrants*. Pew Research Center. https://www.pewresearch.org/fact-tank/2020/08/20/key-findings-about-u-s-immigrants/.

[19] *The Health Of Asian Americans, Native Hawaiians And Pacific Islanders Served At Health Centers 2018*. Association of Asian Pacific Community Health Organizations. https://aapcho.org/the-health-of-asian-americans-native-hawaiians-and-pacific-islanders-served-at-health-centers-2018/.

Although NH and PI populations have high rates of diabetes, we decided to not target this group since the Pacific Islander Diabetes Prevention Program at AAPCHO is already creating a healthy eating resource for this community. Therefore, this project focuses on AA MSAW subgroups that have high rates of diabetes to address both cultural appropriateness and need. The UDS data provides limited information about AAs and MSAWs, but the data could not be cross-tabulated.

California has one of the highest spatial concentrations of MSAWs.[20] The high density locations of MSAWs in California overlap with the San Joaquin Valley area, which has a high concentration of Hmong farmers.[21] In addition, California has the highest rates of Filipino/a/x Americans.[22] Based on the locations of Filipino/a/x/ and Hmong Americans, MSAWs, and research that show high rates of diabetes in these two populations, we have decided to focus the project for these two communities.

Survey Creation and Process

Overview of Survey

We gathered information through an electronic survey distributed nationally to individuals identifying within the Filipino/a/x and Hmong communities. The 19-item survey included multiple-choice items focused on food access and dietary preferences among these two communities. Survey items were translated and presented in Tagalog, Hmong, and English. Data collection spanned three weeks during April 2021, and analysis entailed running frequencies for each response.

Review and Translation

To ensure the survey is culturally and linguistically appropriate for Filipino/a/x and Hmong American patients, AAPCHO reached out to healthcare organizations who serve these populations to review and translate the survey. Mabuhay Health Center (MHC), a University of California, San Francisco (UCSF) student-run free community health clinic targeting underserved Filipino/a/x American residents, reviewed and translated the survey for the Filipino/a/x American community. Minnesota Community Care (MCC), a health system in Minnesota, reviewed and translated the survey for the Hmong American community.

Additionally, Hebni Nutrition Consultants, Inc. (Hebni), a community-based organization, worked with AAPCHO and MHP Salud to review survey questions and help frame the questions we asked, to ensure that we included a nutrition equity lens. Hebni is located in Orlando and provides culturally-informed nutrition education and intervention strategies to prevent diet-related diseases.[23]

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[20] *Miscellaneous agricultural workers, including animal breeders.* Data USA. (n.d.). https://datausa.io/profile/soc/miscellaneous-agricultural-workers-including-animal-breeders#demographics.

[21] Promnitz, D. A. (2020, June 22). *Southeast Asian farmers face total loss in Covid fallout. The Business Journal.* https://thebusinessjournal.com/southeast-asian-farmers-face-total-loss-in-covid-fallout/.

[22] Pew Research Center. (2017, September 8). *Filipinos: Data on Asian Americans.* Pew Research Center's Social & Demographic Trends Project. https://www.pewresearch.org/social-trends/fact-sheet/asian-americans-filipinos-in-the-u-s/.

[23] *About Us.* Hebni Nutrition Consultants, Inc. https://soulfoodpyramid.org/about/.

Review

Both health centers performed an in-depth review on the survey and met with AAPCHO over Zoom to provide feedback on the survey content. In addition, Hmong and Filipino/a/x staff members within AAPCHO as well as an interpreter from Sutter Health provided informal feedback on the survey. Most of the feedback provided was regarding missing or miscategorized food, as well as ensuring the food security question was accessible (e.g., clearly defining a "balanced meal.")

Translations

The in-house translation team for MHC and the interpretation team for MCC provided translations for the survey for their respective communities.

Dissemination

Our priority through this survey was to identify the dietary preferences of Filipino/a/x and Hmong communities to create a culturally responsive healthy eating resource. Although the final product for this survey is targeted for Filipino/a/x and Hmong Americans who are MSAWs, we decided to reach out to a variety of organizations for dissemination. AAPCHO reached out to over 40 health centers, health systems, research organizations, community-based organizations (CBOs), universities, and student groups that represent or are most likely to have significant reach to Filipino/a/x Americans or Hmong community members. To those that expressed interest in disseminating the survey, AAPCHO sent out the marketing materials and survey link to share until the survey closed. AAPCHO also used its own communication platforms (i.e., mass email and social media) to disseminate the survey.

The survey was marketed for three weeks, from April 7, 2021 through April 21, 2021. The Philippine Daily Inquirer, an English-language newspaper in the Philippines, reached out to AAPCHO to cover the survey. On April 12th, it published the survey background with a direct link to the survey for greater outreach to the Filipino/a/x community. However, we noticed there was a low response rate, particularly in the Hmong community, so we decided to extend the deadline for another two days until April 23rd and individually reached out to additional Hmong community organizations.

Survey Results and Analysis

Participants

A total of 118 individuals completed the survey, representing ten states/territories, with the majority located in California (57.6%), Guam (5.1%), and Michigan (2.5%). Participants predominantly identified as a woman (74.5%) and between ages of 25 and 34 years old (35.6%). Participants identified their racial/ethnic background as Filipino/a/x (62.4%), Hmong (23.7%), or multiracial (5.9%). A breakdown of demographic characteristics for participants can be seen in *Table 1*.

Table 1: Participant characteristics

Participant Characteristics

Age	*n*	*%*
18-24 years old	29	24.61%
25-34 years old	42	35.60%
35-44 years old	18	15.20%
45-54 years old	15	12.74%
55-64 years old	8	6.84%
65-74 years old	6	5.12%
75 years or older	0	0.00%
Gender	*n*	*%*
Woman	88	74.53%
Man	26	22.03%
Transgender woman	0	0.00%
Transgender man	1	0.82%
Non-Binary	2	1.7
Race/Ethnicity	*n*	*%*
Filipina/o/x, Filipina/o/x American	74	62.44%
Hmong, Hmong American	28	23.70%
Multiracial	7	5.92%
Other	3	0.03%

Overall Results

Participants reported dietary preferences across five food types, including fruit, vegetables, grains, dairy, and protein. Their responses can be seen throughout the results section. Responses are presented overall and broken down by participant language preferences (e.g., Hmong and Tagalog) to facilitate comparison.

The top reported fruit as preferred or eaten by participants were mangos (94.1%), bananas (89.8%), berries (89.8%), and oranges (86.4%). Outside of mangos, the reported preferences have noticeable similarities to the top fruit choices in the U.S., including apples, oranges, bananas, grapes, and strawberries.[24]

There were some distinguished differences in fruit preferences between Hmong and Filipino/a/x participants. The most striking differences were for plantains (Hmong: 11.8%v s. Filipino/a/x: 66.7%) and calamansi (Hmong: 29.4% vs. Filipino/a/x: 79.8%) preferences, as seen in *Table 2*.

Table 2: Fruit preferences among participants

What types of fruit do you eat/like?						
	Total		Hmong		Filipino/a/x	
	n	*%*	*N*	*%*	*n*	*%*

[24] *Apples and oranges are America's top fruit choices.* U.S. Department of Agriculture. https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=58322

Mango	111	94.07%	31	91.18%	80	95.24%
Banana	106	89.83%	28	82.35%	78	92.86%
Berries	106	89.83%	29	85.29%	77	91.67%
Orange	102	86.44%	32	94.12%	70	83.33%
Pineapple	101	85.59%	28	82.35%	73	86.90%
Apple	99	83.90%	28	82.35%	71	84.52%
Watermelon	99	83.90%	29	85.29%	70	83.33%
Cucumber	98	83.05%	30	88.24%	68	80.95%
Avocado	97	82.20%	28	82.35%	69	82.14%
Grapes	95	80.51%	31	91.18%	64	76.19%
Lemon/Lime	95	80.51%	26	76.47%	69	82.14%
Eggplant	91	77.12%	23	67.65%	68	80.95%
Peach	89	75.42%	30	88.24%	59	70.24%
Melon	88	74.58%	23	67.65%	65	77.38%
Coconut	81	68.64%	24	70.59%	57	67.86%
Calamansi	77	65.25%	10	29.41%	67	79.76%
Papaya	77	65.25%	22	64.71%	55	65.48%
Jackfruit	71	60.17%	19	55.88%	52	61.90%
Kiwifruit	71	60.17%	20	58.82%	51	60.71%
Cherry	70	59.32%	23	67.65%	47	55.95%
Guava	69	58.47%	22	64.71%	47	55.95%
Pear	69	58.47%	16	47.06%	53	63.10%
100% Natural Fruit Juice	65	55.08%	18	52.94%	47	55.95%
Plantains	60	50.85%	4	11.76%	56	66.67%
Persimmon	58	49.15%	18	52.94%	40	47.62%
Tamarind	57	48.31%	12	35.29%	45	53.57%
Plum	53	44.92%	15	44.12%	38	45.24%
Passion Fruit	48	40.68%	18	52.94%	30	35.71%
Grapefruit	43	36.44%	15	44.12%	28	33.33%
Fig	41	34.75%	12	35.29%	29	34.52%
Pomelo	38	32.20%	7	20.59%	31	36.90%
Mangosteen	35	29.66%	12	35.29%	23	27.38%
Banana Flowers	34	28.81%	13	38.24%	21	25.00%
Prickly Pear	13	11.02%	5	14.71%	8	9.52%
Mamey	11	9.32%	2	5.88%	9	10.71%

Participants reported that the overall top preferred vegetables include broccoli (92.4%), lettuce (92.4%), tomato (92.4%), and bok choy (90.7%), as seen in *Table 3*. Preferences among participants were noticeably different from the top vegetables in the U.S., including potatoes,

tomatoes, onion, and carrots.[25] This indicates possible variances in vegetable preferences between these two communities and the general U.S. population.

Table 3: Vegetable preferences among participants

What types of vegetables do you eat/like?						
	Total		Hmong		Filipino/a/x	
	n	*%*	*N*	*%*	*n*	*%*
Broccoli	109	92.37%	32	94.12%	77	91.67%
Lettuce	109	92.37%	32	94.12%	77	91.67%
Tomato	109	92.37%	29	85.29%	80	95.24%
Bok Choy	107	90.68%	33	97.06%	74	88.10%
Spinach	106	89.83%	27	79.41%	79	94.05%
Onions	105	88.98%	29	85.29%	76	90.48%
Beans	104	88.14%	27	79.41%	77	91.67%
Cabbage	104	88.14%	32	94.12%	72	85.71%
Corn	103	87.29%	30	88.24%	73	86.90%
Green Beans	103	87.29%	32	94.12%	71	84.52%
Mushrooms	103	87.29%	28	82.35%	75	89.29%
Carrot	102	86.44%	28	82.35%	74	88.10%
Potato	102	86.44%	26	76.47%	76	90.48%
Asparagus	94	79.66%	27	79.41%	67	79.76%
Pepper	94	79.66%	27	79.41%	67	79.76%
Cauliflower	89	75.42%	28	82.35%	61	72.62%
Edamame	89	75.42%	22	64.71%	67	79.76%
Sweet Potato	89	75.42%	23	67.65%	66	78.57%
Purple Yam	87	73.73%	21	61.76%	66	78.57%
Zucchini	85	72.03%	27	79.41%	58	69.05%
Bamboo Shoots	84	71.19%	31	91.18%	53	63.10%
Squash	81	68.64%	22	64.71%	59	70.24%
Taro	80	67.80%	23	67.65%	57	67.86%
Celery	79	66.95%	22	64.71%	57	67.86%
Brussel Sprouts	78	66.10%	20	58.82%	58	69.05%
Kale	75	63.56%	19	55.88%	56	66.67%
Peas	75	63.56%	20	58.82%	55	65.48%
Okra	70	59.32%	14	41.18%	56	66.67%
Pumpkin	69	58.47%	20	58.82%	49	58.33%
Bitter Melon/Gourd	66	55.93%	23	67.65%	43	51.19%

[25] *Potatoes and tomatoes are the most commonly consumed vegetables.* U.S. Department of Agriculture. https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=58340

Chayote	64	54.24%	12	35.29%	52	61.90%
Radishes	63	53.39%	16	47.06%	47	55.95%
Mustard Greens	59	50.00%	23	67.65%	36	42.86%
Artichoke	58	49.15%	13	38.24%	45	53.57%
Yuca Root	55	46.61%	10	29.41%	45	53.57%
Moringa Leaves	54	45.76%	4	11.76%	50	59.52%
Jicama	54	45.76%	11	32.35%	43	51.19%
Calabash/Bottle Gourd	42	35.59%	5	14.71%	37	44.05%
Beets	38	32.20%	11	32.35%	27	32.14%
100% Natural Vegetable Juice	37	31.36%	10	29.41%	27	32.14%

The top reported grains, bread, or cereals included rice (95.8%), noodles (92.4%), savory bread (88.1%), and sweet bread (80.5%). When comparing the Hmong and Filipino/a/x groups, there were noticeable higher preferences for oatmeal among Filipino/a/x participants (75.0% vs. 55.9%), as seen in *Table 4.*

Table 4: Grain preferences among participants

What types of grains, bread, or cereals do you eat/like?						
	Total		Hmong		Filipino/a/x	
	n	%	*n*	%	*n*	%
Rice	113	95.76%	34	100.00%	79	94.05%
Noodles	109	92.37%	32	94.12%	77	91.67%
Savory Bread	104	88.14%	28	82.35%	76	90.48%
Sweet Bread	95	80.51%	22	64.71%	73	86.90%
Pasta	95	80.51%	27	79.41%	68	80.95%
Tortilla	86	72.88%	25	73.53%	61	72.62%
Oatmeal	82	69.49%	19	55.88%	63	75.00%
Cereal	81	68.64%	23	67.65%	58	69.05%
Quinoa	55	46.61%	16	47.06%	39	46.43%

The top types of dairy or alternatives reported by participants included cheese (86.4%), butter (79.7%), non-dairy milk (73.7%), and yogurt (72.0%). When comparing Hmong and Filipino/a/x participants, the largest difference in reported dairy preferences were for yogurt (Hmong: 61.8% vs. Filipino/a/x: 76.2%), as seen in *Table 5.*

Table 5: Dairy preferences among participants

What type of dairy and/or dairy alternatives do you eat/like?						
	Total		Hmong		Filipino/a/x	
	n	%	*n*	%	*n*	%
Cheese	102	86.44%	25	73.53%	77	91.67%

Butter	94	79.66%	25	73.53%	69	82.14%
Non-Dairy Milk	87	73.73%	23	67.65%	64	76.19%
Yogurt	85	72.03%	21	61.76%	64	76.19%
Dairy Milk	78	66.10%	25	73.53%	53	63.10%
Cream	74	62.71%	21	61.76%	53	63.10%
Flavored Milk	46	38.98%	11	32.35%	35	41.67%
Buttermilk	28	23.73%	6	17.65%	22	26.19%

The top proteins as reported by participants included poultry (97.5%), eggs (97.5%), meat (92.4%), and tofu (86.4%), as seen in *Table 6*. There were not any notable differences in protein preferences among Hmong and Filipino/a/x participants.

Table 6: Protein preferences among participants

What type of protein do you eat/like?						
	Total		Hmong		Filipino/a/x	
	n	%	*n*	%	*n*	%
Poultry	115	97.46%	33	97.06%	82	97.62%
Eggs	115	97.46%	33	97.06%	82	97.62%
Meat	109	92.37%	33	97.06%	76	90.48%
Seafood	108	91.53%	32	94.12%	76	90.48%
Tofu	102	86.44%	32	94.12%	70	83.33%
Nuts	101	85.59%	29	85.29%	72	85.71%
Peanut butter	92	77.97%	25	73.53%	67	79.76%
Seeds	71	60.17%	26	76.47%	45	53.57%
Tempeh	15	12.71%	6	17.65%	9	10.71%

<u>*Food Insecurity*</u>

Beyond preferences, access to food was an additional metric assessed. Participants reported acquiring food from a variety of locations, including grocery stores (87.3%), restaurants (5.9%), and flea markets (1.7%). However, even with an extensive array of options for obtaining food, 18.6% of participants reported being unable to get food when needed, as seen in *Table 7*. Affording food was a considerable concern as 43.2% reported being unable to afford a balanced meal either sometimes, often, or always. These results are expected as one of the main reasons for the inability to access healthy food in the U.S. is a lack of finances.[26]

Table 7: Where do you obtain food?

In a typical week, where do you get the majority of your food?						
	Total		Hmong		Filipino/a/x	
	n	%	*n*	%	*n*	%

[26] *What Is Food Insecurity.* Feeding America. https://www.feedingamerica.org/hunger-in-america/food-insecurity.

Grocery store	103	87.29%	30	88.20%	73	86.91%
Flea market	3	2.54%	1	2.94%	2	2.41%
Drugstore or convenience store	0	0.00%	0	0.00%	0	0.00%
Restaurants	7	5.93%	1	2.94%	6	7.12%
Fast food chains	0	0.00%	0	0.00%	0	0.00%
Food pantries	1	0.85%	0	0.00%	1	1.24%
Family/friends	2	1.69%	0	0.00%	2	2.41%
Don't know	0	0.00%	0	0.00%	0	0.00%

Participants reported using various food assistance programs, including the Supplemental Nutrition Assistance Program (SNAP) (17.0%), local food pantries (17.0%), the National School Lunch Program (6.8%), and WIC (4.2%), as seen in *Table 8*. These programs provide individuals and families in need with access to food. However, 40.7% of participants reported being unable to access these programs. Various reasons were reported as to why individuals could not access assistance programs, with the top including not being eligible, not knowing about programs, and difficulty setting up an appointment for services.

Table 8: Reported use of food assistance programs

In the last 12 months, did you or your household access/use any food assistance programs to get any of the following services?						
	Total		Hmong		Filipino/a/x	
	n	%	*n*	%	*n*	%
None	79	66.95%	13	38.24%	66	78.57%
Food Stamps/SNAP	20	16.95%	13	38.24%	7	8.33%
Local food pantry	20	16.95%	11	32.35%	9	10.71%
National School Lunch Program	8	6.78%	6	17.65%	2	2.38%
WIC	5	4.24%	4	11.76%	1	1.19%

Limitations

There were several limitations to our findings and survey, such as:

- **Time constraints:** The survey only ran for 3 weeks, and translations took longer than initially anticipated.
- **COVID-19:** Impacted all other limitations, such as access to population and time constraints.
- **Community Input:** We did not have capacity for an advisory board for this survey, although we were able to connect with appropriate health organizations for translation and review.

However, our biggest limitations for this project were (1) identifying the key populations for the project and (2) disseminating the survey to the targeted populations efficiently and timely.

Key Population
Although AA, NH, and PI populations are one of the fastest growing racial/ethnic groups,[27] there are still limited data available for subgroups—especially those who are also underrepresented within the populations. As noted above, UDS data also does not cross-tabulate patients who are MSAWs and AA, NH, or PI. Therefore, it was difficult to identify the specific locations of these subgroups and which AA, NH, or PI subgroups comprised the highest populations of MSAWs. In addition, there is limited data available for diabetes disparities within AA subgroups. Despite the numerous research articles on disaggregated AA diabetes data, the research disaggregated the subgroups differently and results were inconsistent. Overall, Filipino/a/x Americans were frequently cited as having one of the highest rates of diabetes in the AA population. Most of these studies did not cite Hmong Americans, but there were multiple individual studies and advocacy resources discussing diabetes prevalence in the Hmong American communities.

Dissemination
MHP Salud performed a healthy eating survey for the Hispanic/Latinx community in April 2019 with a total of 184 respondents, the survey was disseminated to patients mostly in-person. In contrast, AAPCHO and MHP Salud's primary methods of dissemination for the Filipino/a/x and Hmong survey were online via email, social media marketing, and other online outreach with community-based and health organizations. Although we were able to connect with some organizations, it was difficult finding many organizations that were willing to disseminate the survey. Most of the organizations we emailed never responded. In addition, the COVID-19 pandemic limited in-person appointments and interactions overall.

Implications and Next Steps

The results and findings from this survey are a key part in determining next steps for this overall project to address nutritional disparities among AA, NH, and PI communities. Next year, AAPCHO and MHP Salud will work with Hebni Nutrition Consultants (Hebni) to create culturally-informed educational tool(s) that can be used by health centers and community-based organizations, nationally.

Looking ahead, AAPCHO and MHP Salud will also work closely with Hebni's team of registered dieticians to develop a series of educational tools, including a Healthy Eating Plate, given that there are little resources that exist for these communities on the topic. Lastly, AAPCHO and MHP Salud will explore options to include community input, such as an advisory board, to ensure that resources developed truly reflect the needs of these communities.

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[27] López, G., Ruiz, N. G., & Patten, E. (2017, September 8). *Key facts about Asian Americans. Pew Research Center.* https://www.pewresearch.org/fact-tank/2017/09/08/key-facts-about-asian-americans/.

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