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## INTRODUCTION

"Pusong Nanay" is inspired by my personal experience managing my mother's nutritional health after being diagnosed with kidney cancer and cardiovascular comorbidities in my Filipino family. In Tagalog, "Nanay" means mother, and "puso" means heart. I named this online Filipino heart health nutrition curriculum in her honor. When my mom's cancer required significant dietary changes, including replacing rice with quinoa, she struggled with the unfamiliar diet. Food had always been a source of happiness for her, and not being able to enjoy her favorite dishes deepened her sense of despair. Unable to afford a culturally tailored nutritionist, I researched and collaborated with Filipino nutritionists and nutrition advocates, local farmers, culinary medicine physicians to create kidney and heart-friendly Filipino recipes that she could enjoy. Leveraging my culinary medicine curriculum from medical school, I developed heart-healthy alternatives to traditional Filipino dishes. Learning that cardiovascular disease is the leading cause of mortality among Filipino Americans and lack of culturally appropriate Filipino nutrition cooking classes, I expanded this work aiming to create an accessible, culturally tailored heart health nutrition curriculum for the wider Filipinx community. With a team of fellow medical and public health students from Filipino American Medical Society and Pilipino United Students Organization, we developed infographics showcasing heart-healthy alternatives to beloved Filipino dishes, combining research, authenticity, and education to promote healthier lifestyle choices.

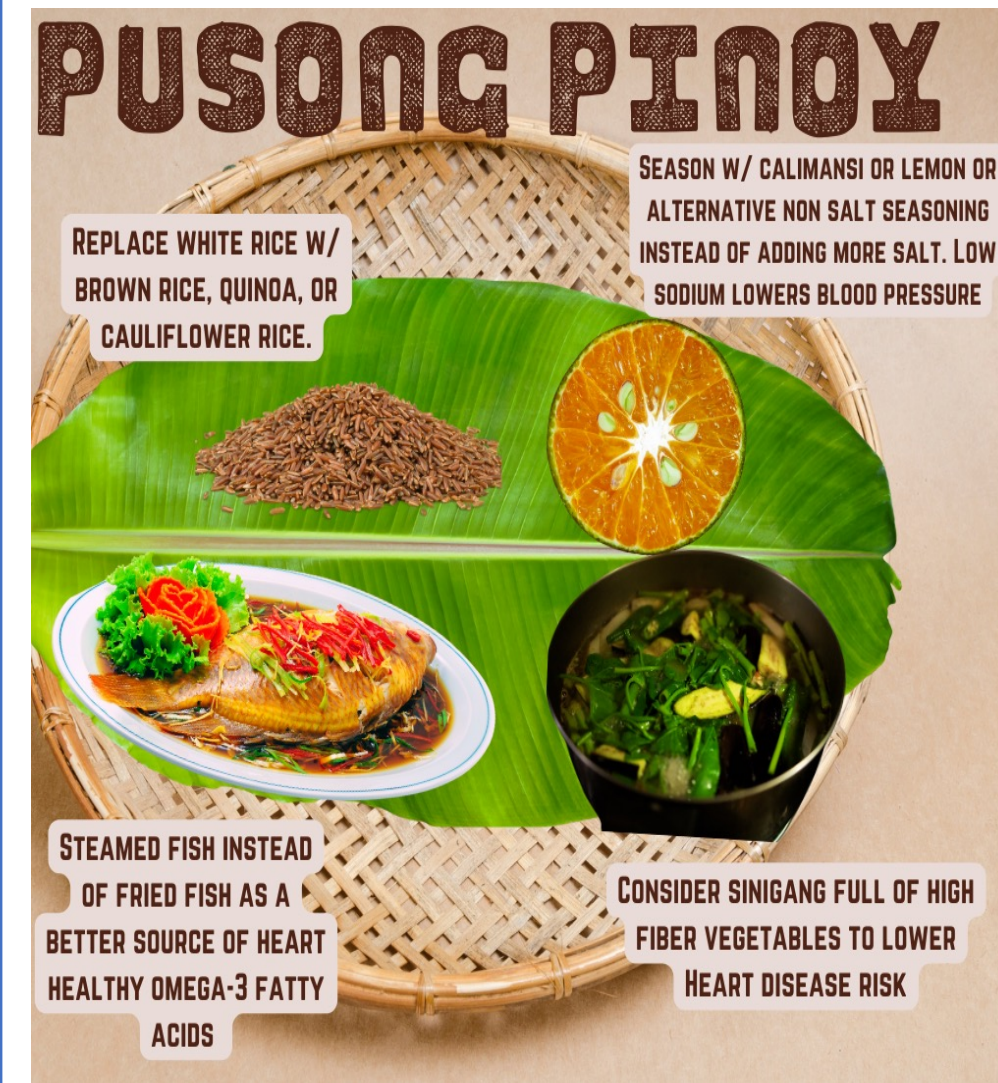
## OBJECTIVES

Will culturally appropriate online cooking classes and videos improve confidence in healthier lifestyle based practices, heart healthy cooking, and heart-health nutrition knowledge in FilipinX community members?

Address Heart Health disparities in FilipinX communities living in the United States of America as cardiovascular diseases are the leading cause of morbidity and mortality in FilipinX communities.

- **Goal 1:** Teach Filipino cardiovascular friendly cooking classes on an online platform using adapted Filipino recipes that retain their nostalgic flavors and educate Filipino community members on the heart-health benefits of the alternative ingredients.
  - Empower FilipinX communities to continue eating the food they love and grow up with in a more heart-healthy way to create a sustainable dietary approach.
  - Rather than focusing on the Western diet, educate FilipinX communities ways of tailoring their diet with the fruits and vegetables they are most familiar with.
- **Goal 2:** Determine if this pilot study can achieve feasibility, acceptability, and positive change as a grounds to scale up the study into a follow up randomized control trial study comparing measured blood pressure outcomes of control vs intervention group.

## FUNDING & COLLABORATION



## METHODS & MATERIALS

### FILIPINO MODIFICATIONS

- ADOBO**
  - Low sodium soy sauce or liquid aminos to reduce sodium and lower fat
  - Substitute chicken breast or tofu to lower cholesterol
- KARE-KARE**
  - Homemade peanut butter by grinding peanuts at home for less additives and sugar
  - Double the vegetables and use lean meats
- SINIGANG**
  - High fiber vegetables
  - Use lemon instead of pink salt
  - Add turmeric + ginger for anti-inflammatory
  - If using prepackaged sauce use half the packet and flavor rest w/ calamansi/lemon
- BULALO**
  - Make portion size
  - Substitute beef stock to lower saturated fat, cook meat to broth then strain out, rinse clinging fat on sides of pot
- CHICHARRON**
  - Homemade if available use air fryer
  - Try oyster mushroom chicharron
  - Try seasoned chicharron

- Before cooking demo, educated class on cardiovascular nutrition and heart health alternative ingredients such as:
  - Low sodium soy sauce vs Regular sodium soy sauce vs Coconut aminos vs Liquid aminos
  - Table salt vs Himalayan pink salt vs Morton's kosher salt
  - Good vs Bad Cholesterol
- Culinary skill demonstrations such as basic knife skills for chopping cauliflower into "rice like consistency" to encourage confidence in heart healthy cooking.

## Low sodium vs Regular sodium soy sauce



Nutrition Facts	
For a Serving Size of 1 Tbsp (15g)	
Calories 10	Calories from Fat 0 (0%)
% Daily Value*	
Total Fat 0g	0%
Sodium 920mg	39%
Carbohydrates 1g	-
Net carbs 1g	-
Sugar 0g	-
Fiber 0g	0%
Protein 2g	-
Vitamins and minerals	
Vitamin A 0mg	0%
Vitamin C 0mg	0%
Calcium 0mg	0%
Iron 0mg	0%
Fatty acids	-
Amino acids	

Daily dietary sodium guidelines, in milligrams	
American Heart Association	Less than 1,500
World Health Organization	Less than 2,000
U.S. Food and Drug Administration	Less than 2,300
U.S. average daily sodium intake	3,400

### HEART HEALTHY TOFU ADOBO

serves 2-3

**Ingredients**

- 1 block of extra firm tofu, frozen overnight then thawed for a few hrs
- 3-4 tablespoons cornstarch
- 4 cloves of garlic, peeled, crushed, and minced
- 1 inch of ginger, peeled, minced
- Olive oil

**Braising Liquid:**

- 2 tablespoons of low sodium soy sauce or liquid coconut aminos
- 3 tablespoons vinegar
- 1/2 cup water
- 1/4 tablespoon cornstarch
- 2 pieces of bay leaves
- 1 teaspoon whole peppercorn
- Pinch of salt

**Method**

1. Wrap tofu in towel and place heavy object on top to press out excess water from tofu for 10mins
2. Heat large skillet over medium heat
3. Add enough oil to lightly coat base of pan (~2-3tbsp)
4. Sauté onion until translucent
5. Add garlic and cook until slightly golden
6. Cook minced ginger for 3mins
7. Cut tofu into one-inch squares or triangles
8. Using a separate medium mixing bowl, coat tofu w/ cornstarch
9. Add tofu and fry until golden on all sides (~2-3mins on each side)
10. In a small bowl, mix all braising liquid ingredients: soy sauce, vinegar, water, cornstarch, bay leaves, pepper, and salt
11. Lower heat and pour liquid from small bowl into large skillet, and mix well.
12. Cook until sauce gets thicker.
13. Adjust seasoning to taste. If needs more salt, add calamansi/lemon.

### WHY?

Tofu: fiber, protein, and isoflavones contribute to heart health benefits

Garlic: cardioprotective effect

Ginger: lowers blood pressure, improves cholesterol, anti-platelet effect

Liquid aminos: low sodium alternative, amino acids, no chemical preservatives like soy sauce, natural glutamate may reduce hunger by stimulating umami flavor sensation

Coconut aminos: significantly less salt than liquid aminos or low sodium soy sauce, slightly sweeter taste

Low sodium soy sauce: reduced sodium intake lowers blood pressure but caution use since sodium still increased

Bay Leaves: ruin strengthens capillary walls of heart, caffeic acid lowers bad cholesterol

Olive Oil: 2020 study found more than half a tablespoon a day may lower risk of coronary heart disease

Avocado oil: monounsaturated fats, anti-inflammatory, antioxidant, heart health benefit

Himalayan Pink Salt: more minerals (calcium, potassium, magnesium, iron) than regular salt, however still limit sodium intake, limit in chronic kidney disease

Diamond Kosher Salt: 50% less sodium

Whole Peppercorn: piperine may reduce risk of heart disease and lower bad cholesterol levels and reduce inflammation

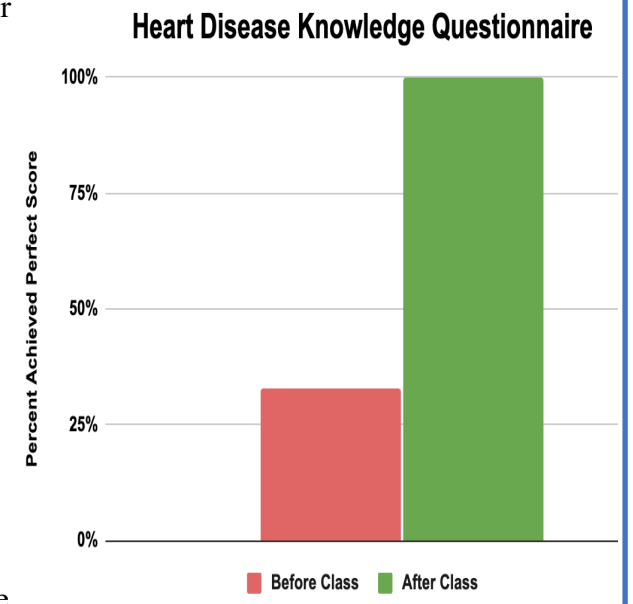
Calamansi: rich in pectin, soluble fiber that lowers bad cholesterol (LDL)

Maraming Salamat!

- Developed Heart Healthy Filipino recipes using Health Meets Food curriculum.
- Course materials include:
  - Ingredient list, equipment list, pre-work, heart healthy recipe, heart health explanations for alternative ingredients
- Platform: Zoom & accessible online cooking videos
- Participants encouraged to have mic and camera on to promote a collaborative atmosphere of an "open kitchen."
- After cooking demo, short presentation to recap and emphasize the use of alternative ingredients to improve cardiovascular health.

## RESULTS

- Demographics predominantly age 25-34yo and 55-70yo, associates degree or higher, and Asian or Hispanic ethnicity
  - All participants answered presence of both individual and family heart disease risk factors
- Predominant answer of sometimes routinely ate fruit and vegetables, sometimes low salt diet, and never or rarely ask for low salt items when eating or visiting others
- Participants reported positive feedback for more heart health Filipino cooking classes, ease of recipes to recreate at home, willingness to explore heart healthy options, and collective wisdom that enriched the culinary teaching experience.



## CONCLUSIONS

- Online cooking classes facilitate knowledge and cultural exchange by allowing participants to explore local and seasonal variations, introduce new ingredients, and offer creative substitutions for dietary restrictions and regional unavailability. These exchanges enhance cultural appreciation and understanding as participants bring forward ingredients steeped in their cultural heritage.
- The interactive nature of these classes enhances engagement, with real-time discussions offering immediate problem-solving and tips on ingredient selection, preparation, and storage.
- Challenges include technology issues, accessibility for elderly communities, and scheduling commitments. Although participation numbers were lower, engaged attendees benefited from personalized feedback. The target audience was elderly FilipinX members with cardiovascular disease, but younger professionals were the primary attendees.
- Solutions involve creating recorded content to increase participation and motivation by providing scheduling flexibility, pacing options, inclusive features like subtitles and translations, and a comfortable learning environment that reduces pressure and allows learners to absorb the material at their own pace.

## FUTURE DIRECTIONS

- Further research on effects of pilot study cooking demos on blood pressure, cholesterol, ASCVD risk score.
- Cooking classes in collaboration with Filipino organizations (churches, non-profit health clinics, community centers) to target appropriate age population and increase engagement.
- Collaborate with medical school teaching kitchens to promote culturally appropriate patient conversations about the role of diet in disease.
- Heart Healthy Filipino cooking demos at farmers markets to improve community engagement and participants.

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