

Arc vs Silo Savory Snacks

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Introduction

- Evaluating nutrient intake is important for assessing the nutritional status of a population and determining how well dietary guidelines are being followed.
- High sodium consumption can increase blood pressure and raise the risk of heart disease and stroke.
- Our project examines the sodium content in products sold to students, analyzes whether sodium levels differ between items available at the Silo and the ARC, and evaluates how well these products align with established nutrition standards for students

Our Question & Objectives

- What proportion of pre-packaged savory snack foods offered at the ARC and Silo Markets contain ≥ 300 mg of sodium in one serving?
- To assess the percent of pre-packaged snacks available at the ARC and Silo markets that are above the Nourish Guidelines for sodium.
- To evaluate the compliance to Nourish guidelines for sodium requirements for pre-packaged snacks offered at the ARC compared to the Silo Market.
- To assess what pre-packaged snacks are within the Nourish Guidelines of sodium for the serving but, above the Nourish Guidelines for sodium for the whole snack container at the ARC and Silo Markets.

Objective

- To evaluate what brands of savory snack foods are in compliance with Nourish guidelines for sodium amounts per serving at the ARC and Silo markets.

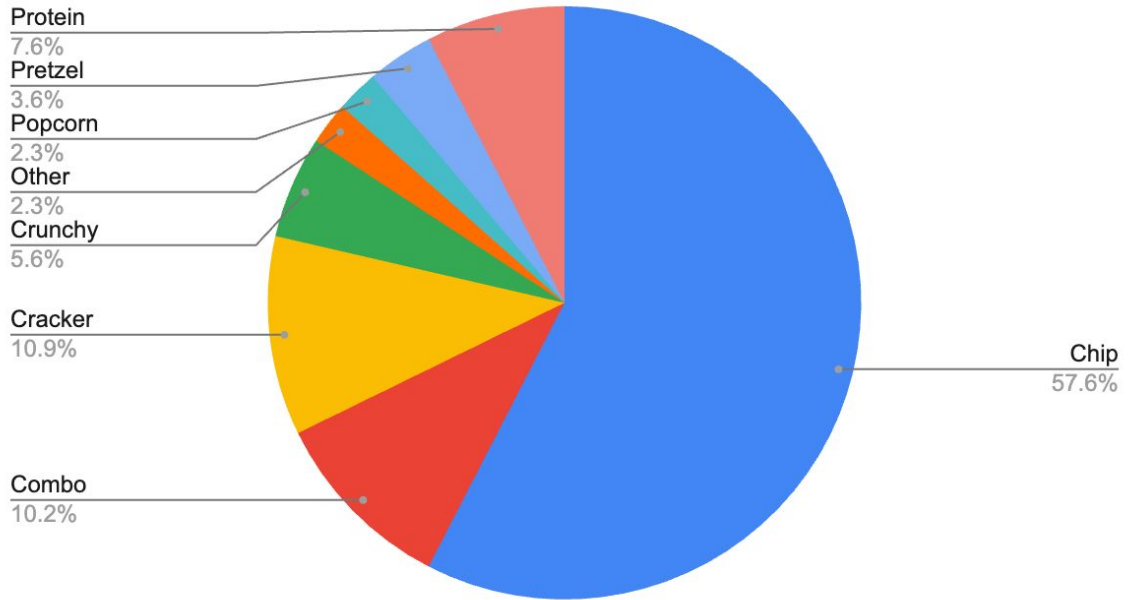
Methods:

- Photos of salty snacks were taken by each individual at the Silo and ARC from the left to the right side of the building, and down the center aisle. A total of 303 savory snack items for both locations
- Contingency labels were created to compare categorical variables of locations and snack types
- The nutritional facts for sodium per serving and per container were researched for each item, and sodium compliance was categorized as ≤ 300 mg/ serving and >300 mg/ serving
- Frequencies and percentages were calculated for each question (1,3,4) and bar graphs were created with the percentages, counts, and frequencies calculated using google sheets. Chi-square test of independence was performed comparing location sites

Results:

- Breakdown of types of savory snacks included in the study

The most populated snack found at all locations



Results:

- Percent of snacks that where over the threshold
 - Showing the snacks with the most sodium was the combination snacks.

Percent of snacks that went over the threshold of >300 mg Na

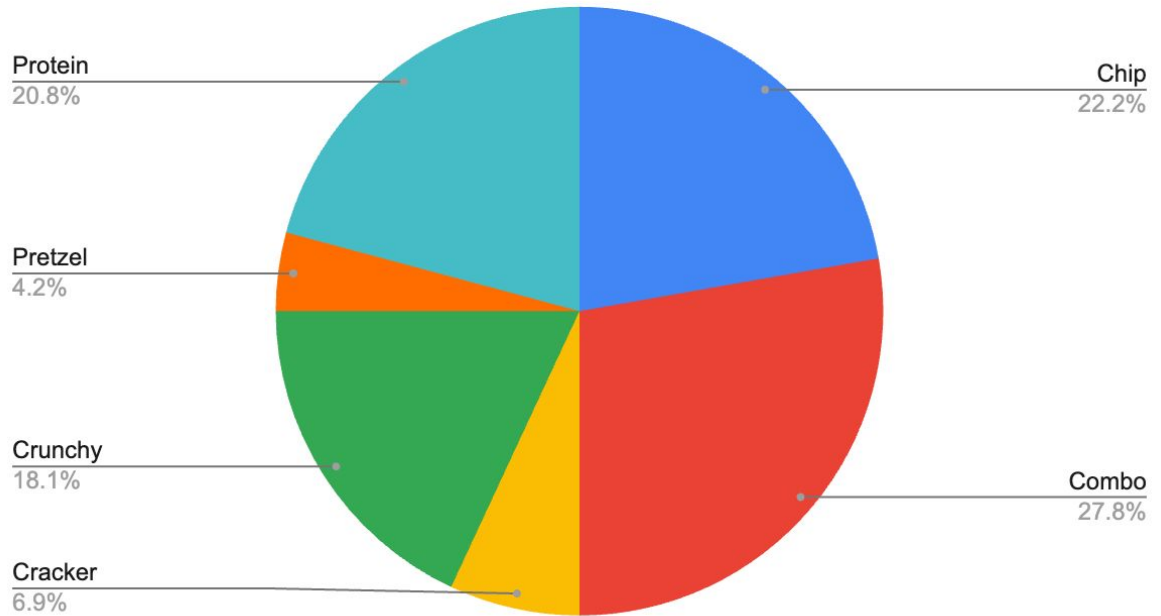


Figure 1:

- Assess the percent of pre-packaged snacks available at the ARC and Silo markets that are above the Nourish Guidelines for sodium
 - More than 25% over the guidelines

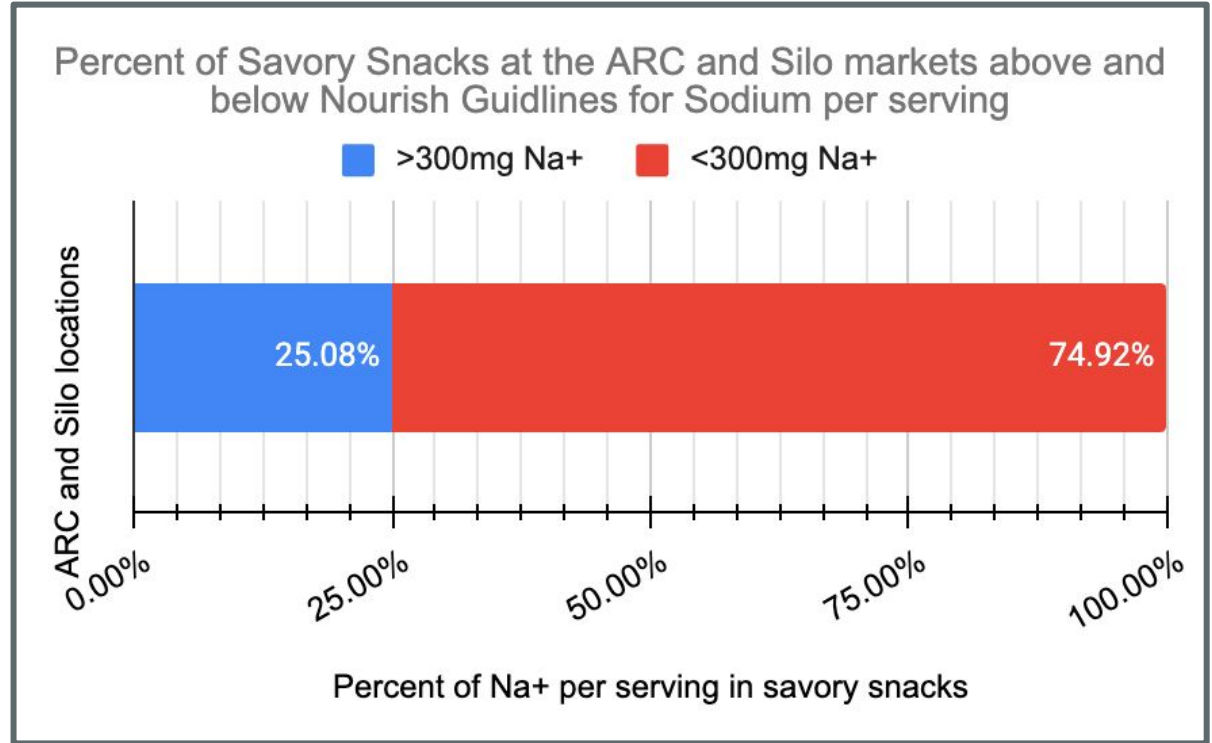


Figure 2:

- Evaluate the compliance to Nourish guidelines for sodium requirements for pre-packaged snacks offered at the ARC compared to the Silo Market
 - The chi-square test gave us a p-value of 0.1143
 - Meaning there is not enough statistical evidence to conclude that sodium compliance differs by location

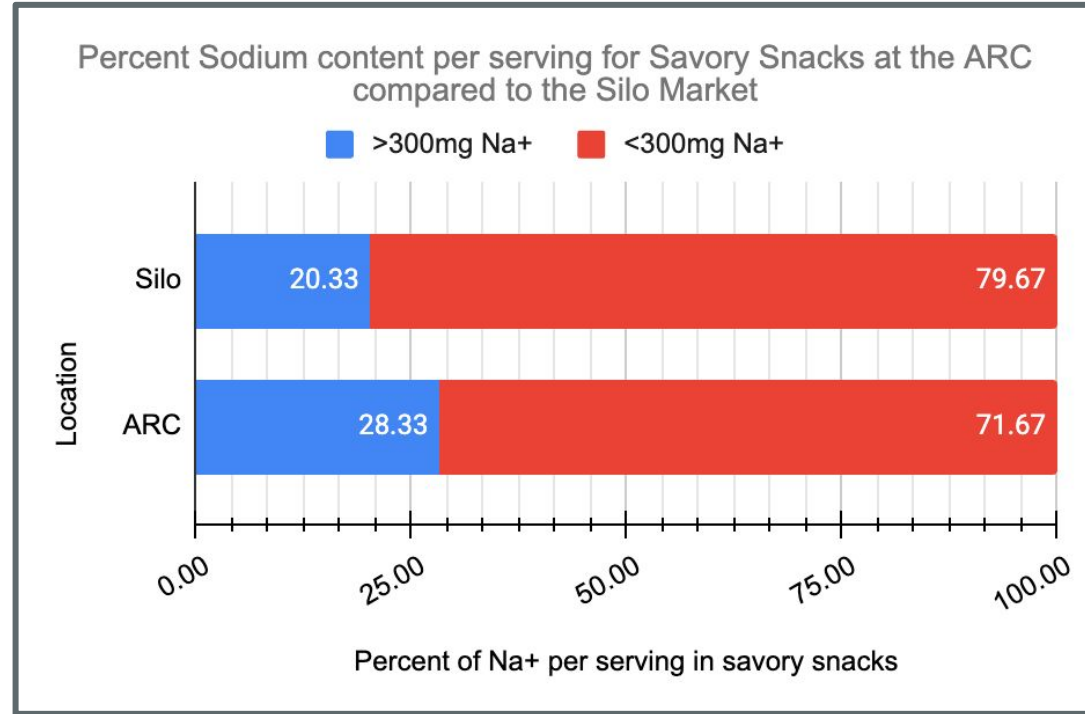


Figure 3:

- Assess what pre-packaged snacks are within the Nourish Guidelines of sodium for the serving but, above the Nourish Guidelines for sodium for the whole snack container at the ARC and Silo Markets
 - More snacks within guidelines per serving, but over 300 mg per container

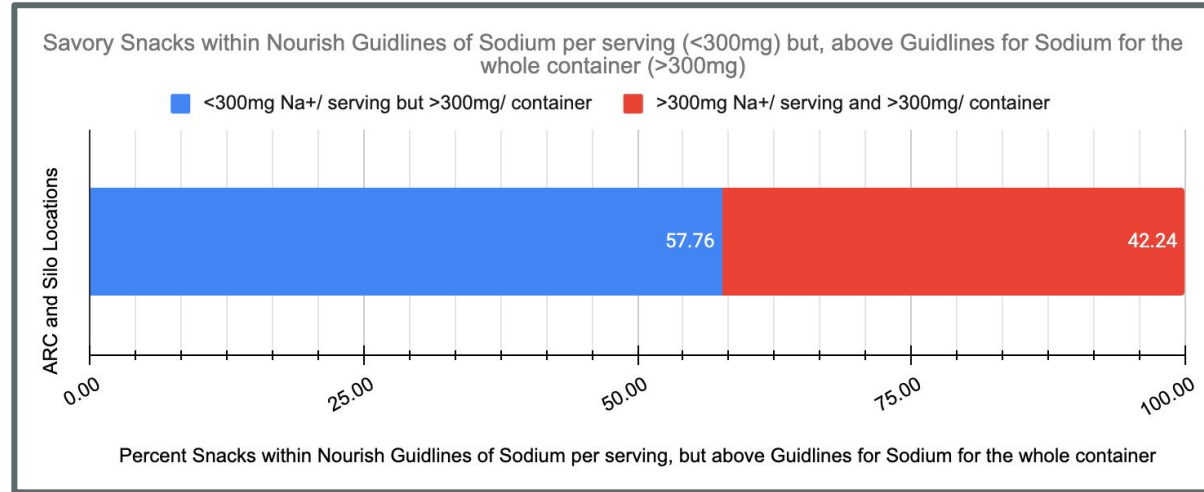
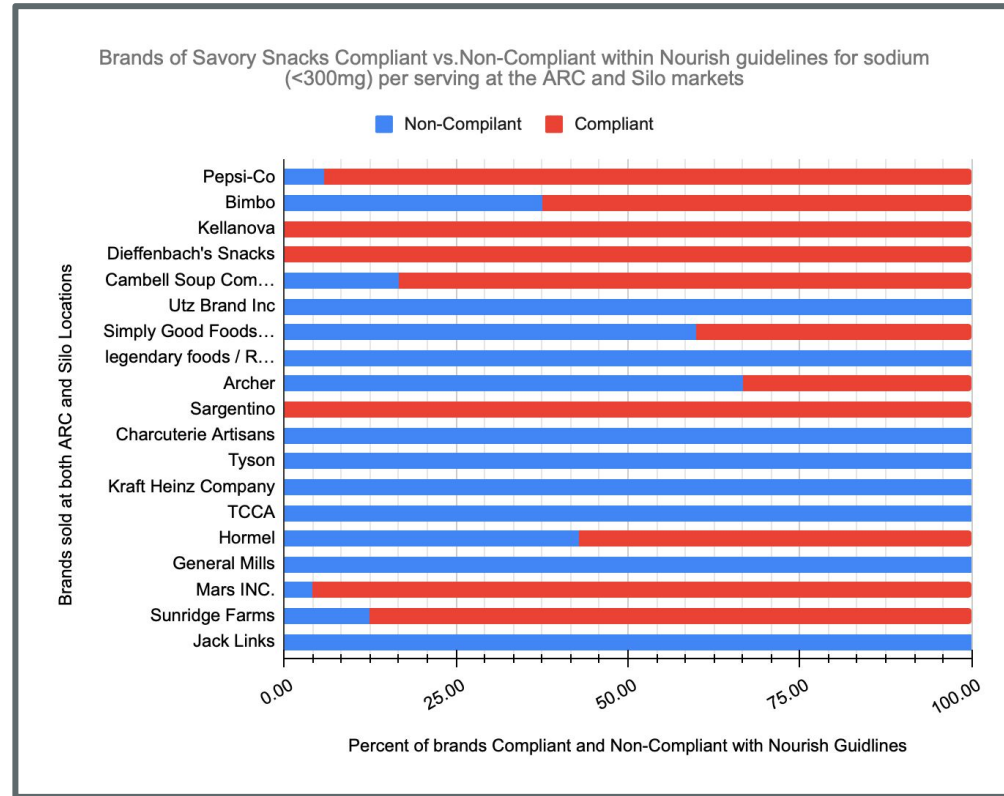


Figure 4:

- Evaluate what brands of savory snack foods are in compliance with Nourish guidelines for sodium amounts per serving at the ARC and Silo markets
 - Chi-square was not conducted because many brands had sparse counts
 - Brand compliance was summarized descriptively using counts and percentages
 - Noticeable brands non-compliant for >50%: Utz, Simply Good Foods, Legendary Foods, Archer, Charcuterie Artisans, Tyson, Kraft Heinz Co., TCCA, General Mills, and Jack Links



Conclusion

- Most snacks at both the Arc and Silo markets met the Nourish Guidelines on sodium for servings sizes, however, a substantial portion of snacks exceeded these guidelines when comparing the entire container. True sodium intake may exceed the guidelines if students consume more than a serving in the entire container.
- These findings signify the need for more nutritional quality assessment on food labels at UC Davis markets. If we offer more snacks that are compliant within a serving size and container size, students can consume sodium within the Nourish Guidelines.
- The brands that were most compliant with Nourish Guidelines consisted of: Kellanova, Dieffenbach's snacks, Sargentino, and Mars Inc.
- The brands that were the least compliant consisted of: Jack Links, General Mills, TCCA, Kraft Heinz Company, Tyson, Charcuterie Artisan, and Utz Brand Inc.

Stakeholder Pitch:

- To meet the Nourish Guideline standards, UC Davis Dining services should increase the amount of single serving snacks, specifically focusing on the ARC market
- UC Davis Dining services should also increase the amount of ready-to-eat foods sold to reduce sodium content from processing