Presentation Title: Add it to the Grocery List!

Research Focus: Factors influencing consumer decision-making regarding prepared meals

School: United States Naval Academy

Researchers: Zachary Bell and Jen Sun (DC210056)

Abstract:

Often, obtaining fresh fruits and vegetables as well as the chance to prepare the ingredients places a strain on people with low income or disabilities. This effect has been exacerbated by COVID restrictions that prevent people from grocery shopping regularly due to health concerns. Packaged meals alleviate some of these concerns, delivering a consumer a set nutritional level, convenience in preparation, and a shorter cooking time. However, the variety of options can make it overwhelming for consumers to choose the best options for their lifestyles. We created a tool that helps consumers filter through the database and generate a "grocery list" based on their selected preferences.

Our aim is to turn the dataset into a cohesive tool to guide decision-making regarding purchasing prepared meals. The dataset provided by the U.S. Department of Agriculture contained information related to packaged meals. This information included an ingredients list, manufacturer name, food category, serving size, and household serving. Using the FoodData Central identification (fdc id) number assigned to each food, we linked our dataset to nutrient information provided in the USDA's Branded Food Product Database (BFPD). Our project also seeks to provide an overview of the database, made more comprehensive using the supplementary BFPD datasets.

Throughout this effort, we evaluated the nutritional considerations for different demographics including adolescents, pregnant women, and the elderly. Program users can select certain criteria for their suggestions based on their individual needs. We also provided an option for users to sort their data according to ingredient preference. Finally, we organized the data using a health index according to the Food and Drug Administration's (FDA) definition of a healthy food: a food that is greater than equal to 10% Daily Value of potassium as well as low in polyunsaturated fats. This provides an indicator to quickly evaluate the various options.

(300 words)