

DSC 423 Final Group Project

The dataset we have selected is “**Food Consumption Pattern**” which analyzes the daily calorie intake of an individual in Illinois state. This dataset focuses on different parameters like age, weight, gender, dietary preferences, etc. that impacts individuals’ overall health and well-being. The objective of studying and interpreting this dataset is to identify trends and patterns that will determine the lifestyle and detrimental eating habits. This analysis is an essential first step in addressing healthy eating habits, the prevention of illness like obesity and malnutrition, and the development of personalized dietary recommendations based on the specific requirements and tastes of every individual and food consumption pattern. Through highlighting the findings between lifestyle choices and daily calorie intake, a person can have a nutritional food habit which are specific to their age, gender, weight, food preference, eating disorder.

The dependent variable (response variable) is daily calorie intake.

The list of independent variables is:

- a. Age: Age of the individual (Range – 18-60 in years).
- b. Gender: Gender of the individual (Male/Female).
- c. Weight (in kilograms)
- d. Dietary Preference: Dietary preference of the individual (Vegetarian/Non-vegetarian/Vegan).
- e. Exercise Frequency: Frequency of exercise per week (Low/Medium/High).
- f. Eating disorder habits: People having eating disorder habits (binge eating/ restrictive eating/no)
- g. Location: People residing in various cities in Illinois state.

The sample size is **2000** samples.

Reason for selecting above mentioned independent variables-

The above factors play a significant role in a person’s day-to-day life as it influences the eating habits and well-being of a person. On further research, it has been found that these factors help in understanding various dietary behaviors including the dependent variable i.e., daily calorie intake.

With the help of this dataset, we are trying to address the following questions-

1. How does weight depend upon the calorie intake based upon gender?
2. Is there a significant difference in daily calorie intake between different age groups?
3. Considering potential variations in the personalized food choices, how does gender affect daily calorie intake?
4. Are there interaction effects between certain independent variables (e.g. dietary preference, exercise frequency, location) on daily caloric intake?
5. By analyzing eating disorder habits such as binge-eating or restrictive eating patterns what predictions can be drawn regarding daily calorie intake?
6. What can we interpret about all the independent variables having an influence on the daily calorie intake and individuals’ food preferences?