**Malnutrition, Obesity and Physical Inactivity Analysis and Surveillance**

CIS 5810

Management Information Systems

Project in Python

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**OBJECTIVE:**

Eighty percent of American adults do not meet the government's national physical activity recommendations for aerobic activity and muscle strengthening. Around 45 percent of adults are not sufficiently active to achieve health benefits [1]. The main objective of the project is to review and analyze the Malnutrition, Obesity and Physical Inactivity for a population on a specific dataset. The population’s behavior plays a pivotal role in analyzing what might be the cause for obesity, malnutrition and physical inactivity. This project also aims in identifying how the illness can be treated and controlled**.**

**DATASET SOURCE URL:**

<https://catalog.data.gov/dataset/nutrition-physical-activity-and-obesity-youth-risk-behavior-surveillance-system>

**DATASET FORMAT:** Comma Separated Values (CSV)

**PROJECT DESCRIPTION:**

This dataset includes data on adolescent's diet, physical activity, and weight status from Youth Risk Behavior Surveillance System. This data is used for DNPAO's Data, Trends, and Maps database, which provides national and state specific data on obesity, malnutrition and physical activity. According to the 2015 Youth Risk Behavior Surveillance System (YRBSS), 13.9 percent of high school students were obese, and an additional 16.0 percent were overweight. State obesity rates among high school students ranged from a low of 10.3 percent in Montana to a high of 18.9 percent in Mississippi, with a median of 13.3 percent.

The dataset contains the values from the year 2011 to 2015. It is classified into the stratification category of gender, race and grade. It also contains the geological information of the affected population. The topics covered in this dataset are in diverse behaviors such as fruits and vegetables behaviors, obesity behaviors and physical activity behaviors. Adopted by the World Health Assembly in 2004, the WHO Global Strategy on Diet, Physical Activity and Health calls for action at global, regional and local levels to improve diets and increase physical activity [2]. Obesity affects 37.9% of American youth over 20. The annual medical costs for obesity in the United States is $147 million annually (in 2008 dollars), according to the Centers for Disease Control and Prevention.

The groups with the highest rate of obesity are non-Hispanic blacks (48.1%), Hispanics (42.5%) and non-Hispanic whites (34.5%). In 2014, no state had an obesity rate below 20%. In Arkansas, Louisiana, Mississippi and West Virginia, 35% or more of the population is obese [3]. Child malnutrition is a long-standing and continuing public health problem in many regions of the world, despite global-level progress in the reduction of this problem during the past two decades [4]. With the help of python, we can now review the cause of youth risk factors by comparing the types of behaviors which causes obesity and malnutrition. We can also analyze if the specific behavior is related to a race or gender.

**QUESTIONS:**

1. What is the contribution of malnutrition behavior from 2001 to 2015 based on the location?
2. What are the major causes of physical inactivity in youth?
3. What are the values of obesity behavior by gender and grade of the youth?
4. How do the values of High Confidence Limit compare by Year End and Class?
5. Which Race/Ethnicity is majorly affected due to obesity?
6. What are the most common values of physical activity behaviors at the Year end?

**REFERENCE:**

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1. de Onis M, Blössner M, Borghi E, Morris R, Frongillo EA Int J Epidemiol. 2004 Dec; 33(6):1260-70, “Methodology for estimating regional and global trends of child malnutrition”

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