

Multivariate Analysis – Individual Final Project

Kireeti Mantrala – sm2594

About the Data :

This dataset is sourced from the Global Health Observatory (GHO) data repository, which is managed by the World Health Organization (WHO). It covers a wide range of health-related indicators and factors for every country in the world. The dataset spans the years 2000 to 2015 and includes data for a total of 193 countries. The dataset talks about the Life expectancy and the various factors affecting life expectancy like demographic variables, income composition, mortality rates, immunization, human development index, social and economic factors.

Data Dictionary:

Variable	Description	Datatype
Country	Country Name	Object
Year	Year	Object
Status	Developed or Developing	Object
Life Expectancy	Life expectancy in age	Object
Adult Mortality	Probability of dying between 15 and 60 years per 1000 population	Object
infant deaths	Number of infant deaths per 1000 population	Object
Alcohol	recorded per capita consumption (in litres)	Object
percentage expenditure	Expenditure on health as per GDP(%)	Object
Hepatitis B	Immunization coverage among 1 year old's(%)	Object
Measles	Number of reported cases per 1000 population	Object
BMI	Average BMI of entire population	Object
under-five deaths	Number of under five deaths per 1000 population	Object
Polio	Immunization coverage among one year old's(%)	Object
Total Expenditure	Government expenditure of health as a percentage of total govt. expenditure (%)	Object
Diphtheria	Immunization coverage among one year old (%)	Object
HIV/AIDS	Deaths per 1000 population	Object
GDP	per capita (USD)	Object
Population	population of the country	Object
thinness 10-19 years	Thinness among children from age 10-19(%)	Object
thinness 5-9 years	Thinness among children from age 5-9(%)	Object
Income composition of resources	Index ranging from 0-1	Object
Schooling	Number of years of schooling	Object

Questions:

1. Does immunization affect life expectancy rate, How?
2. Does life expectancy has any correlation with eating habits, lifestyle, exercise, smoking or drinking alcohol?

Solutions:

Answer 1:

Immunization factors here are, Polio, BMI and HIV/AIDS. We can say that, if people take the polio vaccine, it is likely that the incidence of polio will decrease, leading to a decrease in the number of deaths caused by polio. This, in turn, can increase the overall life expectancy rate of the population. Lower the BMI of a person, lower will be the life expectancy. If a person has a lower BMI, they are less likely to develop these diseases and may have a higher life expectancy rate. Similarly, the Life Expectancy rate will increase if HIV/AIDS vaccine is also taken.

Answer 2:

Across countries, high life expectancy is associated with high income per capita and the given factors too. We know, life expectancy may have positive or negative effects. On the other hand, lower mortality may lead to an increase in population size. According to our analysis here, we can say that life expectancy has positive correlation, and we can say that people who have healthy eating habits and avoid smoking and excessive alcohol consumption tend to have a longer life expectancy, then there is a positive correlation between these factors and life expectancy.