**W.H.O LIFE EXPECTANCY ANALYSIS BY ESTHER REGINALD YEBOAH**

This study will focus on factors like immunization, mortality, economic, social and other health related factors and their impact on life expectancy. Since the observations in this dataset are based on different countries, it will be easier for a country to determine the predicting factor which is contributing to lower value of life expectancy. This will help in suggesting to a country which

area should be given importance in order to efficiently improve the life expectancy of its population.

**VARIABLES’ DICTIONARY**

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| **Column names** | **Meaning** |
| *Country* | Country |
| *Year* | Year |
| *Status* | Developed or Developing status |
| *Life expectancy* | Life Expectancy in age |
| *Adult Mortality* | Adult Mortality Rates of both sexes (probability of dying between 15 and 60 years per 1000 population) |
| *infant deaths* | Number of Infant Deaths per 1000 population |
| *Alcohol* | Alcohol, recorded per capita (15+) consumption (in litres of pure alcohol) |
| *percentage expenditure* | Expenditure on health as a percentage of Gross Domestic Product per capita (%) |
| *Hepatitis B* | Hepatitis B (HepB) immunization coverage among 1-year-olds (%) |
| *Measles* | Measles - number of reported cases per 1000 population |
| *BMI* | Average Body Mass Index of entire population |
| *under-five deaths* | Number of under-five deaths per 1000 population |
| *Polio* | Polio (Pol3) immunization coverage among 1-year-olds (%) |
| *Total expenditure* | General government expenditure on health as a percentage of total government expenditure (%) |
| *Diphtheria* | Diphtheria tetanus toxoid and pertussis (DTP3) immunization coverage among 1-year-olds (%) |
| *HIV/AIDS* | Deaths per 1 000 live births HIV/AIDS (0-4 years) |
| *GDP* | Gross Domestic Product per capita (in USD) |
| *Population* | Population of the country |
| *thinness 1-19 years* | Prevalence of thinness among children and adolescents for Age 10 to 19 (% ) |
| *thinness 5-9 years* | Prevalence of thinness among children for Age 5 to 9(%) |
| *Income composition of resources* | Human Development Index in terms of income composition of resources (index ranging from 0 to 1) |
| *Schooling* | Number of years of Schooling(years) |

Starting with the **economy factor**, our findings show that country with higher GDP has a higher life expectancy and most of these countries happen to be **developed** countries.

The average life expectancy for all our 39 billion population, 193 countries is age 69.2 years and the lowest ever recorded at 36.3 years in Haiti.

﻿Average of Life expectancy for Developing (7.85% increase) and Developed (5.09% increase) both trended up between 2000 and 2015.

Human Development Index in terms of income composition of resources may be given a great attention when considering life expectancy this implies that the more people make, the better they tend to their health and in other words, more money, better health.

In terms of population, countries with lower and higher population tend to have lower life expectancy than countries within the average population.

Considering the **social factor,** there only two indicators available in our dataset, they are; schooling which can tell the literacy of the population and Alcohol which can tell a bit about the countries’ societal engagements. Average age of Schooling for Developed countries is 15.49 years and higher than developing countries 11.19 years. Our findings show that the higher the number of years of schooling, the high the life expectancy age. On the other hand, there was no clear relationship between the intake of alcohol and life expectancy as they are evenly distributed.

Does **Immunization** have effect on life expectancy? yes, it does. There is a positive increase in the life expectancy age in countries with higher immunization coverage and this applies to the three immunizations present in our dataset, Hepatitis B, Polio and Diphtheria.

The results we got in the **mortality** factor indeed confirms the increase in life expectancy over the stated period (2000-2015). Although, other factors unknown in our data could have contributed to the decrease in infant death, under-five death and adult mortality, however, countries should work towards preventing untimely deaths to enjoy more life expectancy years.

In spotlight, our finding shows that developing countries are really lagging behind the prevention of under-five deaths. It is sad to behold the disparity in the averages. At least 50 out of 1000 children die in the developing countries and less than or 2 out of 1000 die in the developed countries.

Finally, for the **health factor**, there is a higher adult mortality rate among people with high BMI. However, there is no enough evidence to show that countries with people with higher BMI have lower life expectancy, except for few. On the other hand, they seem to have a higher life expectancy. This may be as a result of the average BMI for developed countries being 52 and for developing countries, around 35. Also, BMI may not be an effective measure for a good health.

To close this chapter, it is good to note that developed countries percentage expenditure on health is on the high side which indicates that they probably prioritized strengthening their health system which may be the result of their longevity. Developing countries can take a cue to achieve same result.

Thank you.

**Limitations**

Our data is lacking an essential variable; continents. It would have helped us generate a fair look at these countries in their continents.