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Capstone Project: Life Expectancy Analysis

Title: Exploring Factors Affecting Life Expectancy: Insights from Power BI Report and Dashboard

**Introduction:**

Life expectancy is a critical indicator of a nation's healthcare and well-being. This report aims to explore the factors affecting life expectancy using a Power BI report and dashboard. The analysis focuses on identifying the most significant predictors of life expectancy and providing insights for countries to improve their healthcare and living conditions.

**Problems:**

1. What are the key factors affecting life expectancy?

2. How do immunization rates, mortality rates, economic factors, and social factors impact life expectancy?

3. Which countries have the highest and lowest life expectancy rates?

4. What are the trends in Diphtheria and Polio vaccination coverage?

**Insights and Analysis:**

*Key Factors Affecting Life Expectancy:*

1. Immunization rates (Diphtheria and Polio)
2. Mortality rates (infant, adult, and under-5)
3. Economic factors (GDP per capita and economic growth rate)
4. Social factors (population density)

**Country Comparison:**

1. Top 10 countries with highest life expectancy (healthiest Nations): Japan, Sweden, Iceland, Switzerland, France, Italy, Spain, Australia, Norway and Canada
2. Bottom 10 countries with lowest life expectancy: Liberia, Malawi, Marshall Island, Tuvalu, Eritrea, Burundi, Palau, Somalia, Dominica and Nauru

**Vaccination Trends:**

1. Diphtheria vaccination coverage has increased globally, with a few exceptions in the year 2015.
2. Polio vaccination coverage varies widely across countries, with some showing significant improvement

**Mortality Rates:**

1. under-5 mortality rates have decreased globally, but disparities persist across countries.
2. Adult and Infant mortality rates show similar patterns, with some countries experiencing higher rates
3. Developing countries have a much higher death rate than developed countries.

**Economic and Social Factors:**

- GDP per capita and economic growth rate are positively correlated with life expectancy

- Human Development Index and population density also show significant relationships with life expectancy

**Conclusion:**

This analysis highlights the complex relationships between various factors and life expectancy. Countries with high immunization rates, low mortality rates, strong economic conditions, and favorable social factors tend to have higher life expectancy rates. These insights can inform healthcare policies and initiatives to improve life expectancy globally.