

# World Happiness Report 2019 Analysis

## Introduction:

This report presents an analysis of the World Happiness Report dataset for the year 2019. The dataset contains happiness scores and several contributing factors for various countries around the world, sourced from the World Happiness Report. The primary purpose of this analysis is to explore and identify the key factors that contribute to the happiness levels of countries based on the provided data.

## Descriptive Statistics Summary:

The dataset includes happiness scores and several key factors for 156 countries. The average happiness score across all countries in the dataset is around 5.41, with scores ranging from a minimum of 2.85 to a maximum of 7.77. The contributing factors like GDP per capita, Social support, and Healthy life expectancy show considerable variation, reflecting differences in economic prosperity, social safety nets, and health outcomes. Freedom to make life choices, Generosity, and Perceptions of corruption also vary, indicating differences in personal freedoms, charitable behaviors, and perceived levels of corruption.

## Top Countries by Contributing Factors:

Based on the analysis of the top 10 countries for each contributing factor:

- Countries with high **GDP per capita** tend to be developed nations with strong economies.
- Countries with high **Social support** scores indicate robust social networks and support systems for their populations.
- Countries with high **Healthy life expectancy** scores generally have better healthcare systems and overall public health.
- Countries with high scores in **Freedom to make life choices** suggest that citizens in these nations feel a greater sense of autonomy and control over their lives.
- Countries with high **Generosity** scores indicate a greater tendency towards charitable behavior and helping others.
- Countries with low **Perceptions of corruption** scores suggest a higher level of trust in government and institutions.

## Overall Happiest Countries:

The bar plot of the top 10 countries with the highest happiness scores reveals that Nordic countries like Finland, Denmark, Norway, and Iceland are consistently at the top,

along with other developed nations like the Netherlands, Switzerland, Sweden, New Zealand, Canada, and Austria. These countries generally perform well across multiple contributing factors.

### Correlation Analysis Insights:

The heatmap illustrates the correlations between the different factors and the happiness score. The happiness score shows strong positive correlations with **GDP per capita**, **Social support**, and **Healthy life expectancy**. This suggests that economic prosperity, strong social networks, and good health outcomes are significantly associated with higher happiness levels. **Freedom to make life choices** also shows a positive correlation, indicating that feeling in control of one's life is linked to happiness. **Generosity** shows a weaker positive correlation, while **Perceptions of corruption** shows a negative correlation, meaning that higher perceived corruption is associated with lower happiness.

### Factor-Score Relationship Insights:

The scatter plots provide a visual representation of the relationship between individual factors and the happiness score:

- **GDP per capita vs. Score:** The scatter plot shows a clear positive trend, indicating that countries with higher GDP per capita tend to have higher happiness scores.
- **Social support vs. Score:** There is a strong positive relationship between social support and happiness score, suggesting that robust social networks are crucial for well-being.
- **Healthy life expectancy vs. Score:** The scatter plot shows a positive correlation, indicating that longer and healthier lives are associated with greater happiness.
- **Generosity vs. Score:** The scatter plot shows a weak positive relationship, suggesting that while generosity might contribute to happiness, its impact is not as strong as other factors.
- **Perceptions of corruption vs. Score:** The scatter plot, though not explicitly generated for this pair in the analysis, would likely show a negative trend based on the correlation heatmap, indicating that higher perceived corruption is associated with lower happiness scores.

### Geographical Distribution of Happiness:

The choropleth map provides a geographical visualization of happiness scores across the world. It clearly shows that countries in North America, Europe, and Oceania tend to have higher happiness scores compared to many countries in Africa and Asia. This

aligns with the findings from the contributing factors, as countries in these happier regions often have higher GDP per capita, better social support, and longer healthy life expectancies.

## **Conclusion:**

In conclusion, the analysis of the 2019 World Happiness Report dataset reveals that economic factors (GDP per capita), social support, and healthy life expectancy are the most strongly correlated factors with national happiness scores. Freedom to make life choices also plays a significant role. While generosity has a weaker association, lower perceptions of corruption are linked to higher happiness. Geographically, North America, Europe, and Oceania generally report higher happiness levels. These findings underscore the multifaceted nature of happiness and the importance of a combination of economic, social, health, and governance factors in contributing to the overall well-being of a nation's population.

This report provides a summary of the key insights from the provided dataset and analysis. Further research could involve exploring trends over time, analyzing other potential factors, or conducting deeper dives into specific regions or countries.

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