Global Suicide Trends (1985–2016) — A Health Data Analysis in R

1. Introduction

This project analyses global suicide data from 1985 to 2016 to uncover trends and insights related to mental health, gender, age, and economic factors. The goal is to understand how suicide rates have changed over time and what patterns exist across different populations.

2. Data Overview

Dataset: Suicide Rates Overview 1985–2016 (Kaggle)

Variables: country, year, gender, age_group, no_of_suicides, population, HDI.for.year, gdp_per_capita, etc.

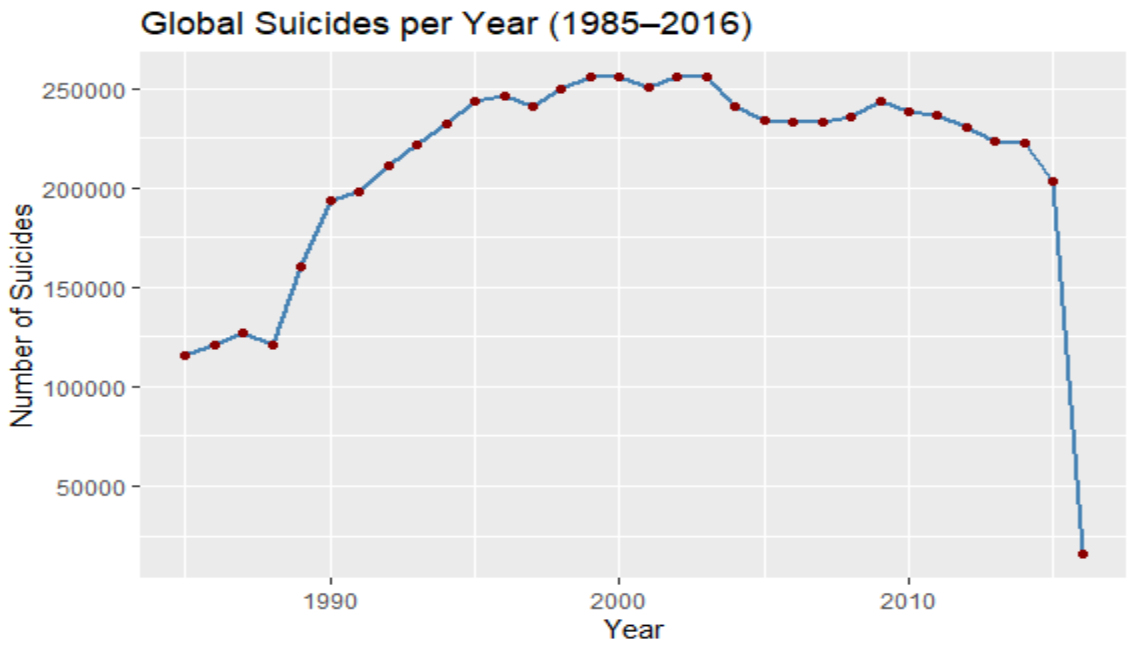
Tools: *R programming, dplyr, ggplot2*

3. Data Cleaning

Columns were renamed for clarity (e.g., suicides_no → no_of_suicides).

4. Exploratory Data Analysis & Visualizations

4.1 Suicides per Year



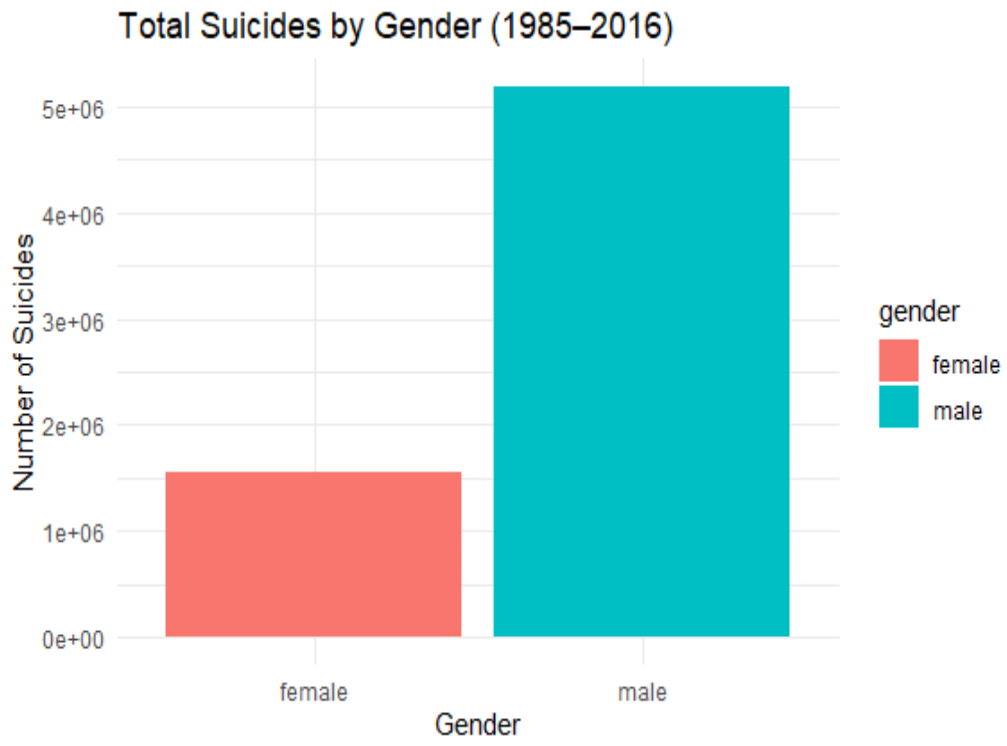
Description: This line chart shows the total number of suicides recorded globally each year from 1985 to 2016

Insight :

⭐ Moderate downward trend observed in later years, suggesting improved awareness and mental health initiatives.

4.2 Suicides by Gender

Chart:



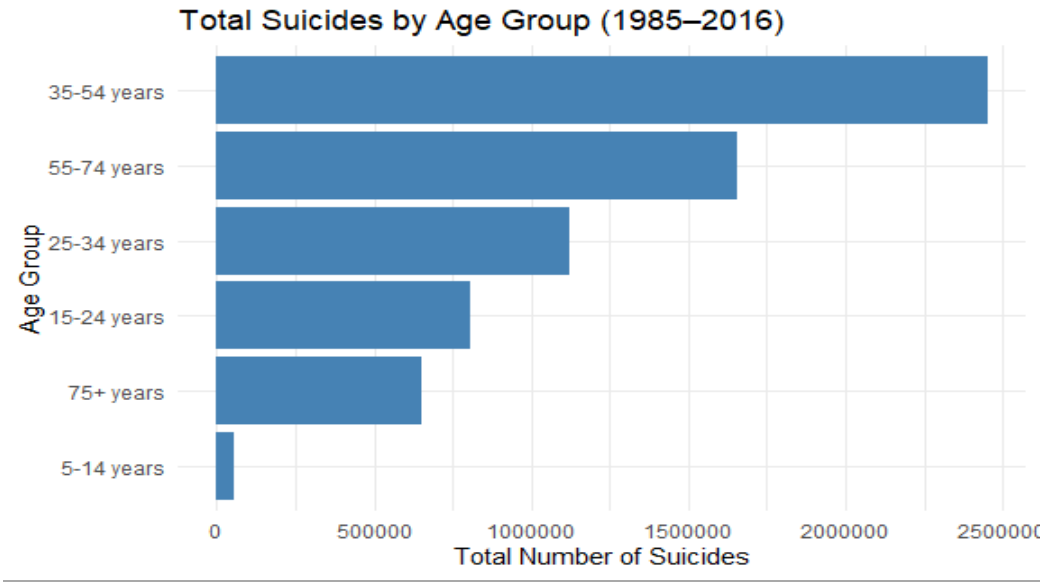
Description:

This bar chart compares the number of suicides between males and females.

Insight:

⭐ Males have consistently higher suicide numbers, often 3–4× more than females, indicating gender disparities in mental health and coping behaviours.

4.3 Suicides by Age Group



Description:

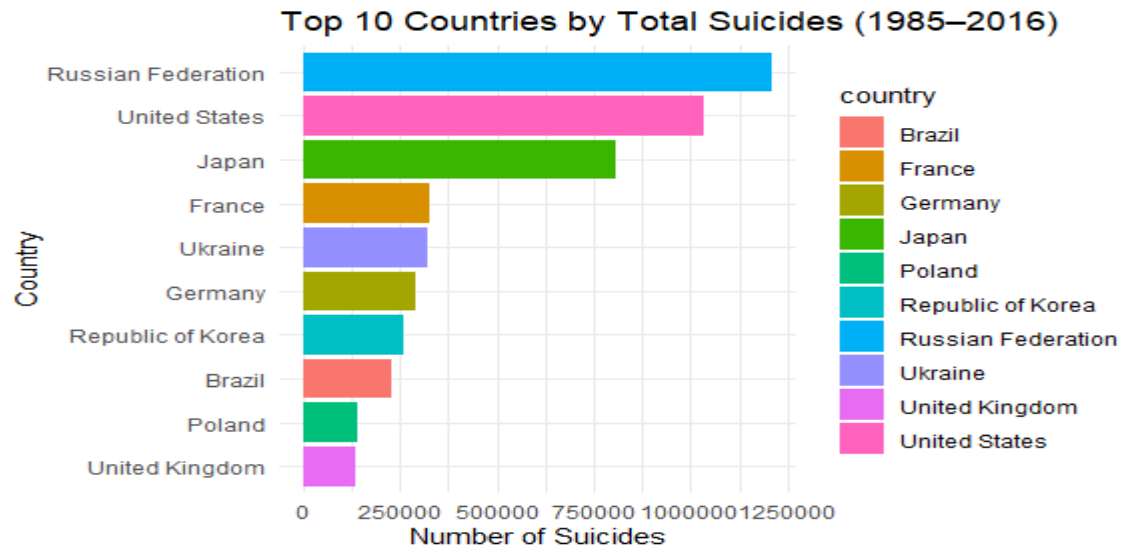
This plot shows the distribution of suicides across different age groups.

Insight:

⭐⭐ Higher suicide rates are observed in middle-aged groups (35–54), possibly due to work stress, social pressure, and mid-life crises.

4.4 Top 10 countries by total suicides

Chart:

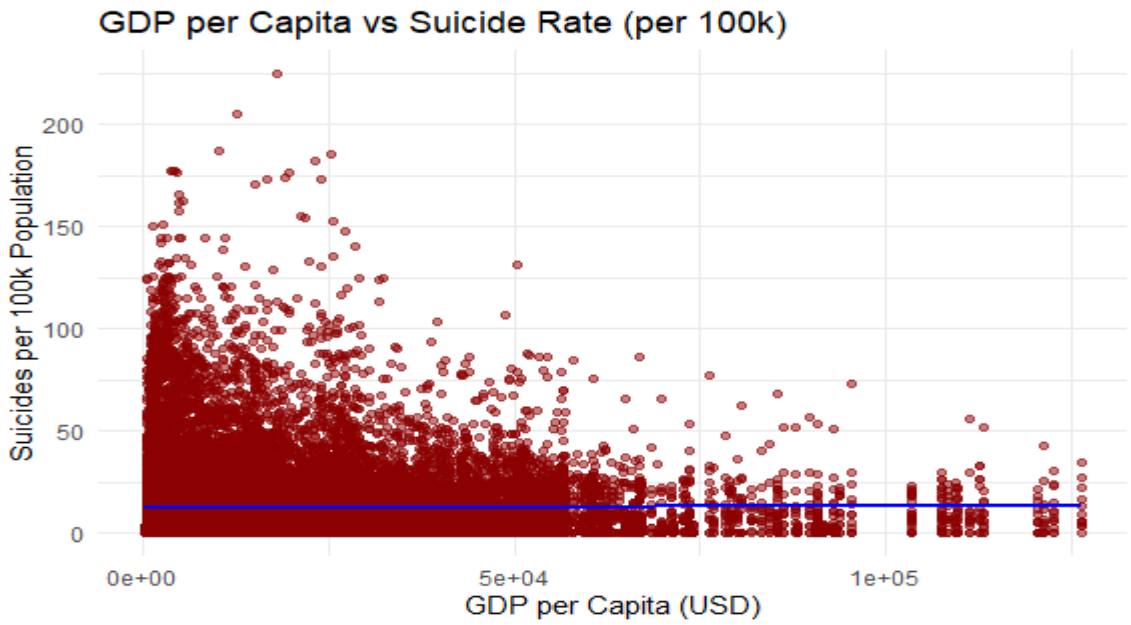


Description:
This horizontal bar chart displays the ten countries with the highest total number of suicides recorded between 1985 and 2016. The data aggregates all years to show long-term patterns in suicide counts across nations. Each bar represents the cumulative number of suicides per country, allowing for an easy comparison of overall impact.

Insight:
⭐ The chart reveals that the Russian Federation and the United States recorded the highest total suicide counts during the 31-year period, followed by Japan, France, and Ukraine.
⭐ These trends suggest that suicide is not limited to developing nations — it is a global issue affecting both high-income and middle-income countries.
⭐ Cultural, social, and economic factors may contribute differently in each country, but the consistently high numbers in developed regions indicate that mental health challenges cut across economic boundaries.

4.5 Relationship Between GDP per Capita and Suicide Rates

Chart:



Description: This scatter plot explores the relationship between a country's GDP per capita and its suicide rate.

Insight:
⭐ There is no strong correlation — both high- and low-income countries show varied

suicide rates, suggesting that mental health challenges are not solely driven by economic status.

5.Conclusion

- Suicide rates differ by gender and age, with men and middle-aged groups most affected.
- Wealth does not determine suicide levels — both rich and poor countries face the issue.
- A slow global decline after 2000 suggests growing mental-health awareness and prevention.
- The Russian Federation and the United States recorded the highest overall suicide counts.
- Mental health remains a worldwide concern that needs continuous attention and support.