PROJECT 1 - VISUALISATIONS

Team members: Atharva Sapre and Mitanshi Vyas

1. **Global distribution of Suicide rate**

Link: https://public.flourish.studio/visualisation/15447927/

Explanation:
The projection map provides a high-level visualization of global suicide rates, offering insights into regions with varying prevalence. By selecting suicide rates as our variable, we aim to focus on a critical public health concern. The map helps reveal geographical patterns and disparities, serving as a starting point for more in-depth analysis and targeted interventions.

The varying suicide rates globally, such as those in Lithuania and Russia with high rates exceeding 30 annual deaths per 100,000 people, while countries like Brazil and Colombia exhibit lower rates under 10 annual deaths per 100,000, highlight the complex factors influencing suicide trends. These disparities stem from differences in mental health, treatment, personal and financial stress, means restriction, awareness, and other variables, emphasizing the need for tailored interventions.

Additional information: To focus our analysis on countries with substantial and consistent data, we applied a filter to include countries with data available for at least 20 years between 1985 and 2015. This reduced the number of countries in our dataset from 77 to a subset of countries that could provide more robust and meaningful insights. The filtering process was essential to ensure the reliability of our analysis. By selecting countries with more extended data records, we aimed to eliminate potential data gaps or inconsistencies and focus on a more comprehensive examination of suicide rates over a substantial time frame. This helped in providing a more accurate representation of the global suicide landscape, considering the significant data gaps in Asia and Africa and the scarcity of data in intermediate years.

2. **Suicide rate by age and by country**

Link: https://public.flourish.studio/visualisation/15447988/

Explanation: The stacked bar plot provides a comprehensive visual representation of the average suicide rates in different age categories for each country. This visualization is instrumental in understanding how suicide rates vary across age groups within specific countries, allowing us to identify trends and potential risk factors. We chose this representation as it enables us to showcase the age-specific suicide rates for each country, providing valuable insights into variations across demographics and regions. The utilization of averaged data for both male and female populations in this analysis ensures a more balanced and representative assessment of suicide rates.

It's worth noting that this visualization clearly reveals higher suicide rates among individuals aged over 55 years old. In contrast, suicide rates in the 5-14 age category are noticeably lower in most countries.

3. **Suicide rate over the years**

Link: https://public.flourish.studio/visualisation/15453545/

Explanation: The line plot depicting suicide rates over the years for selected countries provides a critical insight into the temporal trends in suicide, helping us track changes in these countries. This visualization is instrumental in identifying patterns, both in terms of declining and increasing suicide rates, offering a basis for further investigation into the factors influencing these trends. We chose to include countries with high suicide rates and relevant countries like the United States to showcase diverse experiences and outcomes. The data analysis guided our selection of variables, emphasizing the need to highlight nations with distinct trends in suicide rates, which can be attributed to various social, cultural, and economic factors.

The observed declining suicide rates in several countries such as Italy, Russian Federation, Lithuania, Argentina, France, Japan, Finland, Hungary, & Belarus can be attributed to a combination of factors, such as increased awareness of mental health issues, improved access to mental health treatment, and legislative measures that restrict lethal means for suicide. Conversely, in countries where suicide rates are on the rise, various factors like economic instability, social isolation, or inadequate mental health support systems may contribute to this concerning trend.

4. **Running Bar Chart: Suicide Numbers by Country (1985-2015)**

Link: https://public.flourish.studio/visualisation/15454119/

Looking at how different countries took the top spot in suicide cases over 30 years helps us understand what makes these numbers change. Our EDA process showed that countries often moved up and down the list, and that's why we're investigating these specific time periods. Focusing on the years when suicide numbers were the highest in various countries is crucial for our research. It helps us figure out why these numbers shot up during those times. Our data analysis told us that there were clear spikes in suicide cases during these years, which is why we're looking into them.

This running bar chart reveals several notable points in the history of suicide rates. Russia consistently had the highest suicide rates from 1986 to 2015, while Japan, Ukraine, Germany, and Brazil experienced significant shifts in their rankings over the years. Poland and France also entered the top-ranking countries for suicide cases during specific periods. This information highlights the need to investigate what contributed to these changes and the factors underlying the overall trends in suicide rates during this time frame