Mental Health Trends and Their Impact on Suicide Rates: A Global Perspective

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Introduction

Mental health is a critical aspect of overall well-being, influencing not only individual lives but also societal health and productivity. Understanding the trends and prevalence of various mental health disorders can provide valuable insights for policymakers, healthcare providers, and communities. This analysis leverages a dataset that encompasses mental health statistics across different countries and years, focusing on disorders such as depression, anxiety, schizophrenia, and more. By employing various visualization techniques in Tableau, we aim to uncover patterns, disparities, and correlations that can inform effective mental health strategies.

Dataset Overview

The dataset, contains comprehensive statistics on mental health disorders and related factors across various countries and years. It includes data from 1990 to 2017 for multiple entities (countries), providing insights into the prevalence of different mental health disorders, suicide rates, and demographic information.
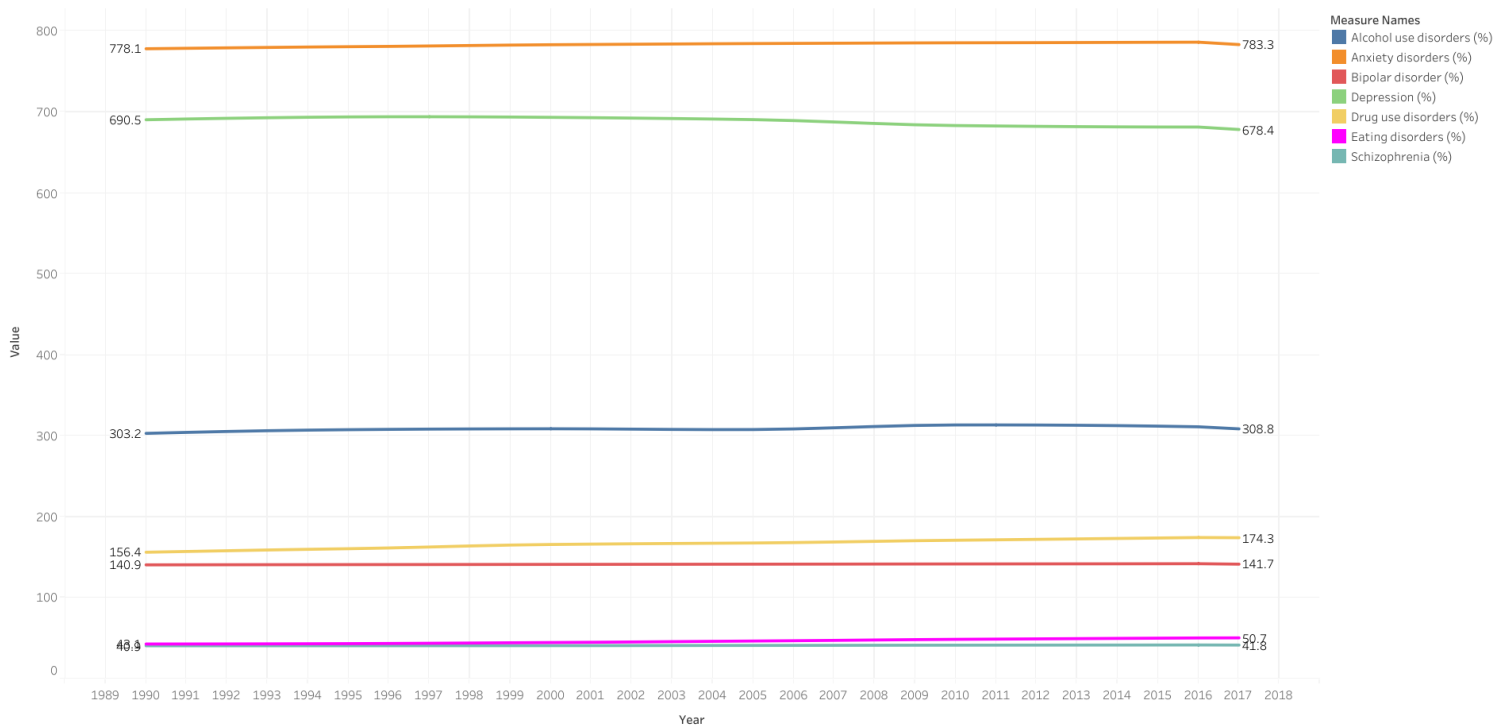
Key Features of the Dataset:

1. **Entity**: Represents the country or region being analyzed.
2. **Year**: The year for which the data is recorded, spanning from 1990 to 2017.
3. **Prevalence Rates**: The dataset includes percentage prevalence rates for several mental health disorders:
   - Schizophrenia (%)
   - Bipolar disorder (%)
   - Eating disorders (%)
   - Anxiety disorders (%)
   - Drug use disorders (%)
   - Depression (%)
   - Alcohol use disorders (%)
4. **Gender-Specific Prevalence**:
   - Prevalence in males (%)
   - Prevalence in females (%)
5. **Population**: The total population of each entity for the corresponding year.
6. **Suicide Rate**: The number of deaths by suicide per 100,000 individuals.
7. **Depressive Disorder Rates**:
   - Number suffering per 100,000 individuals.
   - Total number of people suffering from depressive disorders across all ages and both sexes.

Exploratory Data Analysis

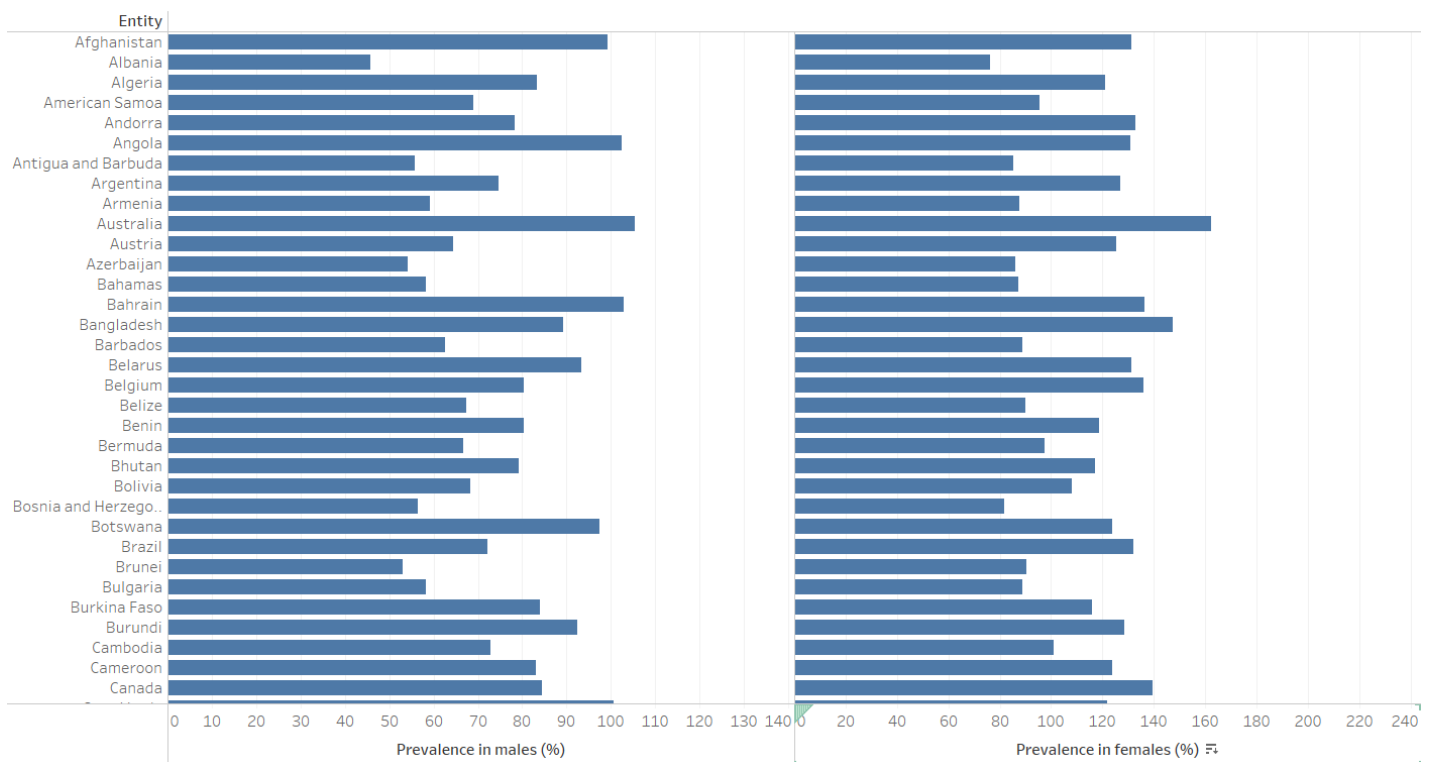1. **What is the overall trend in the prevalence of mental health disorders over the years?**
   - **Interpretation:** Analysing this trend will reveal whether mental health disorders are increasing or decreasing over time. A rising trend may indicate growing awareness or worsening conditions, while a declining trend could suggest successful interventions.
   - **Graph Type:** Line Graph

2. **How do mental health disorder rates differ between males and females?**

- **Interpretation:** This question will highlight gender disparities in mental health prevalence. Understanding these differences can guide targeted interventions and resource allocation to address specific needs. As we can observe, in the majority of countries, mental health disorder rates are generally higher in females than in males.
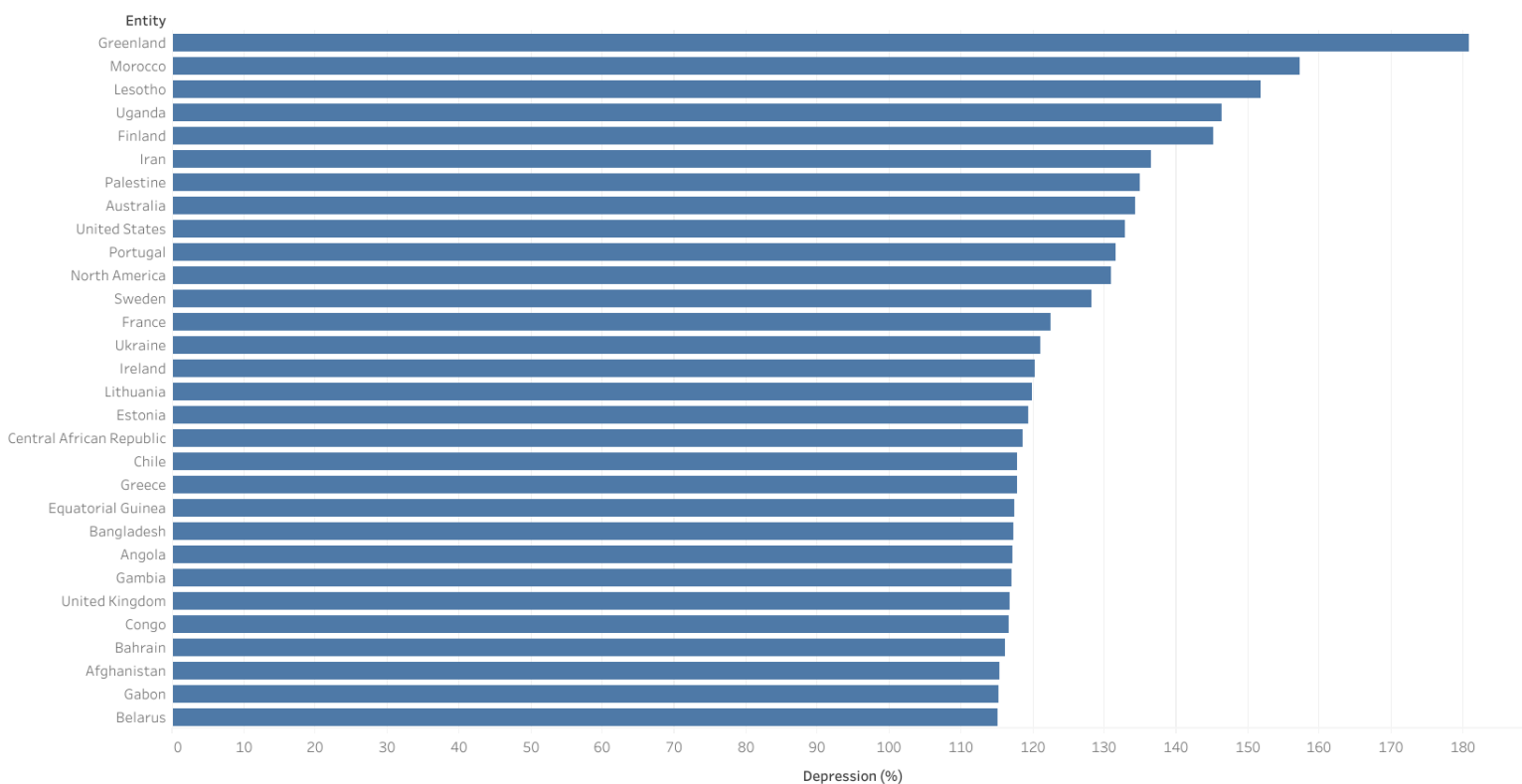
- **Graph Type:** Bar Graph

3. Which country has the highest prevalence of depression (Top 30)?

- **Interpretation:** Identifying the country with the highest depression rates can help focus international mental health initiatives. It may also prompt further investigation into cultural or healthcare factors contributing to these high rates. Greenland has the highest prevalence of depression but this might indicate this is an outlier since Greenland has such a high value.
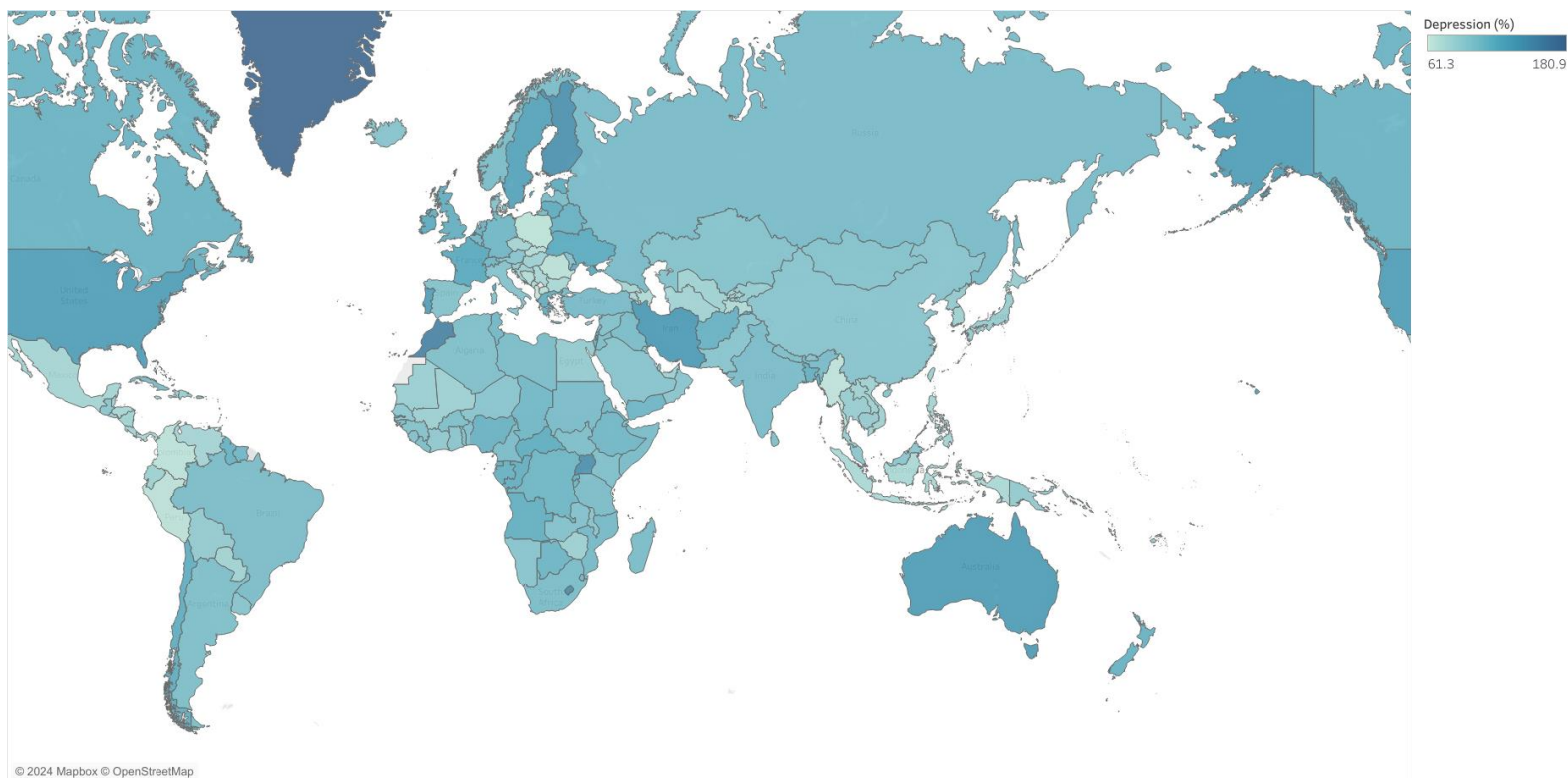
  Greenland's high prevalence of depression could be influenced by several factors, including geographic isolation and socio-economic challenges.

- **Graph Type:** Bar Graph

Entity

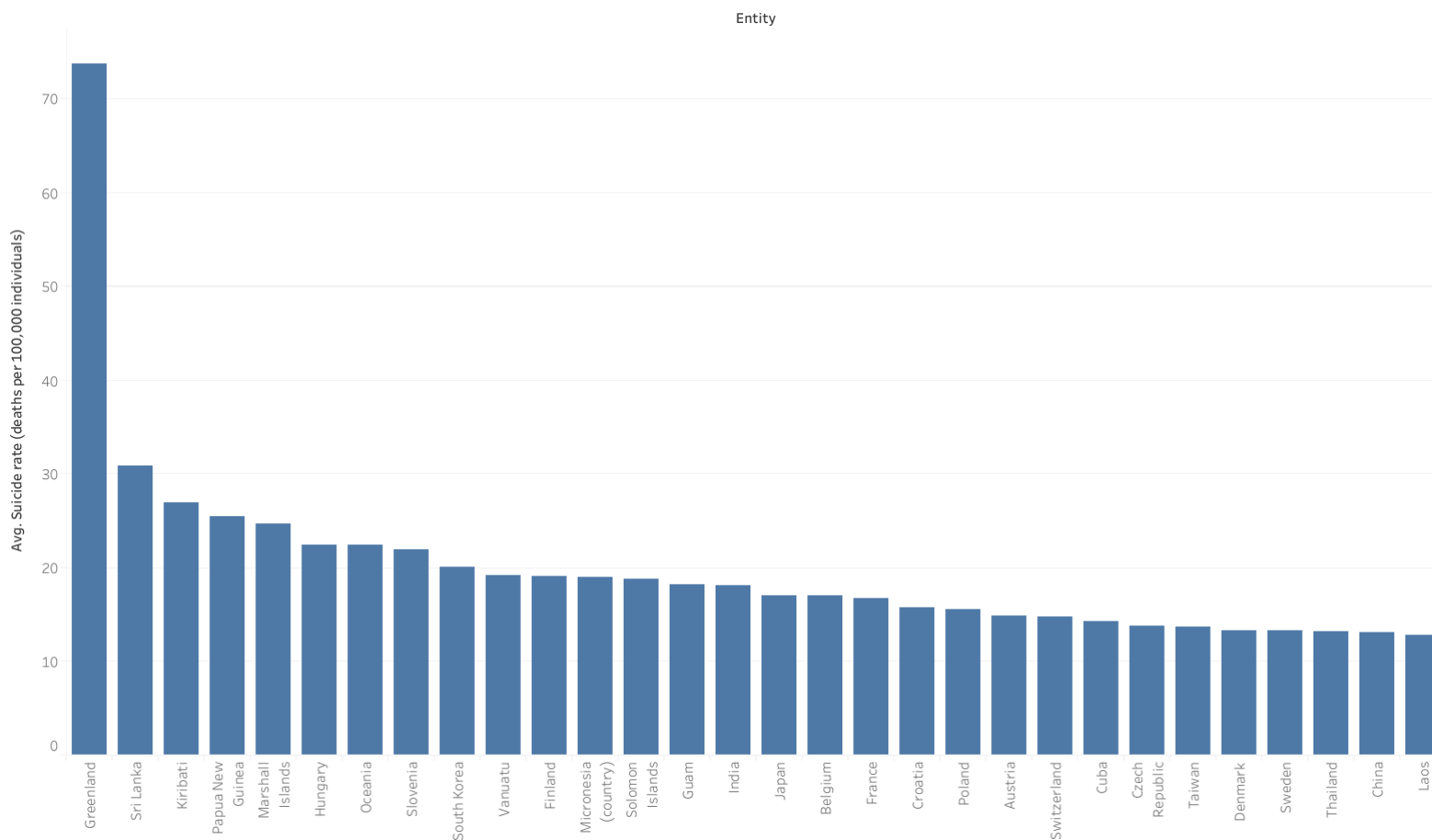|	
Greenland	
Morocco	
Lesotho	
Uganda	
Finland	
Iran	
Palestine	
Australia	
United States	
Portugal	
North America	
Sweden	
France	
Ukraine	
Ireland	
Lithuania	
Estonia	
Central African Republic	
Chile	
Greece	
Equatorial Guinea	
Bangladesh	
Angola	
Gambia	
United Kingdom	
Congo	
Bahrain	
Afghanistan	
Gabon	
Belarus	

Depression (%)

4. **What does the choropleth graph reveal about depression prevalence across different countries?**
    - **Interpretation:** A choropleth graph will visually represent how depression varies geographically, allowing for quick identification of regions with significant challenges in mental health. Teal colour indicates a higher depression prevalence and lighter colour indicates a lower depression prevalence.
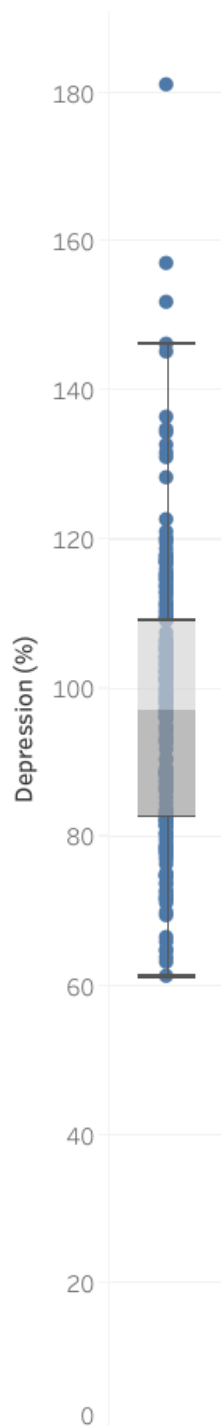
    - **Graph Type:** Choropleth Graph

Depression (%)
61.3   180.9

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5. **What is the average suicide rate for countries with high schizophrenia prevalence?**

   - Interpretation: This analysis can shed light on the relationship between schizophrenia and suicide rates, indicating a need for improved support systems in countries with high schizophrenia rates. Greenland has the highest suicide rate for people suffering from schizophrenia, although assuming if Greenland is an outlier, then Sri Lanka has the highest suicide rate for people suffering from schizophrenia.

   - **Graph Type:** Bar Graph

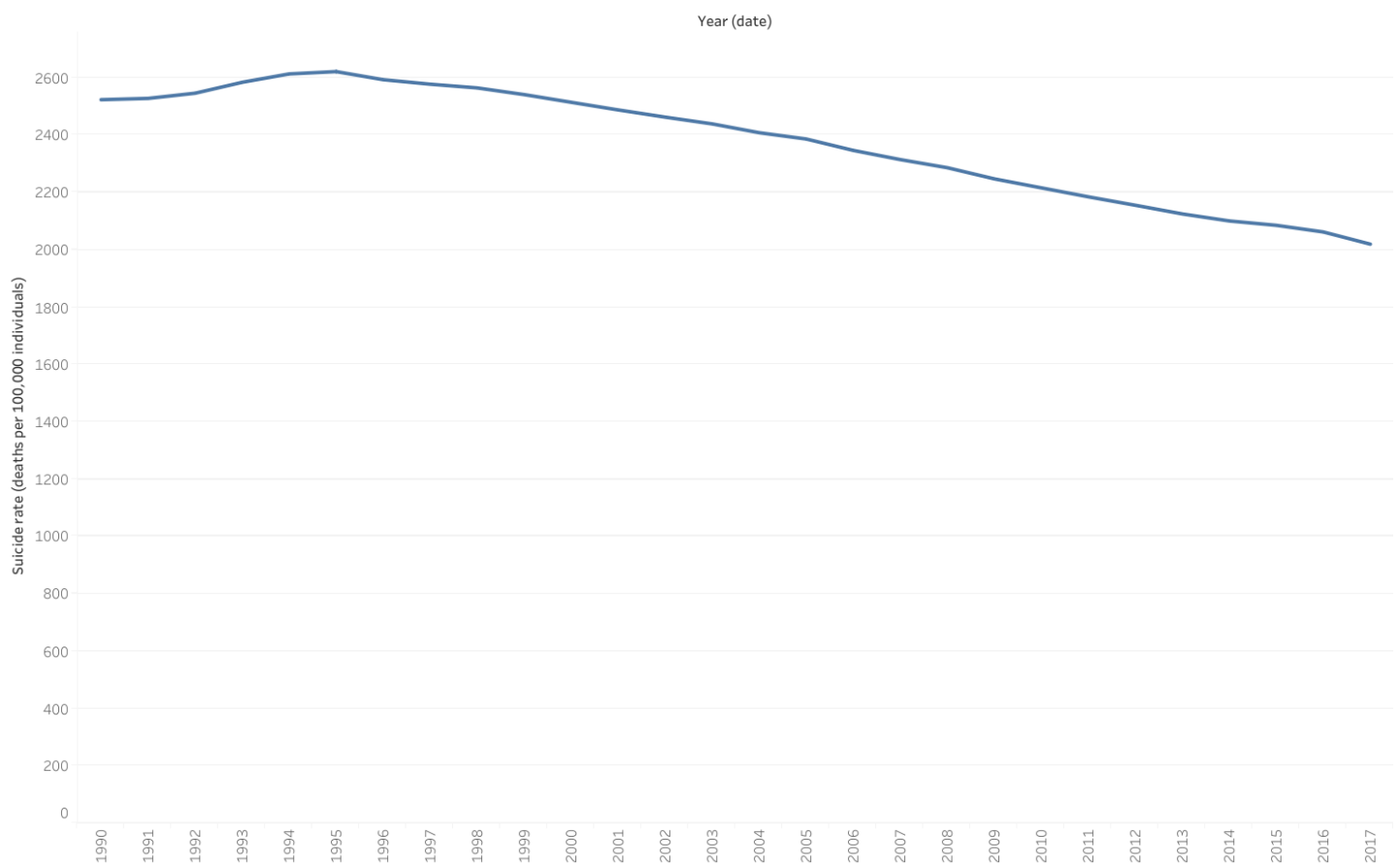**6. Are there any notable outliers in depression rates among countries?**

- **Interpretation:** Identifying outliers can reveal countries facing extreme challenges or those that have successfully managed their mental health issues, prompting further investigation into contributing factors. Here Lesotho, Morocco and Greenland are outliers.
- **Graph Type:** Box Plot

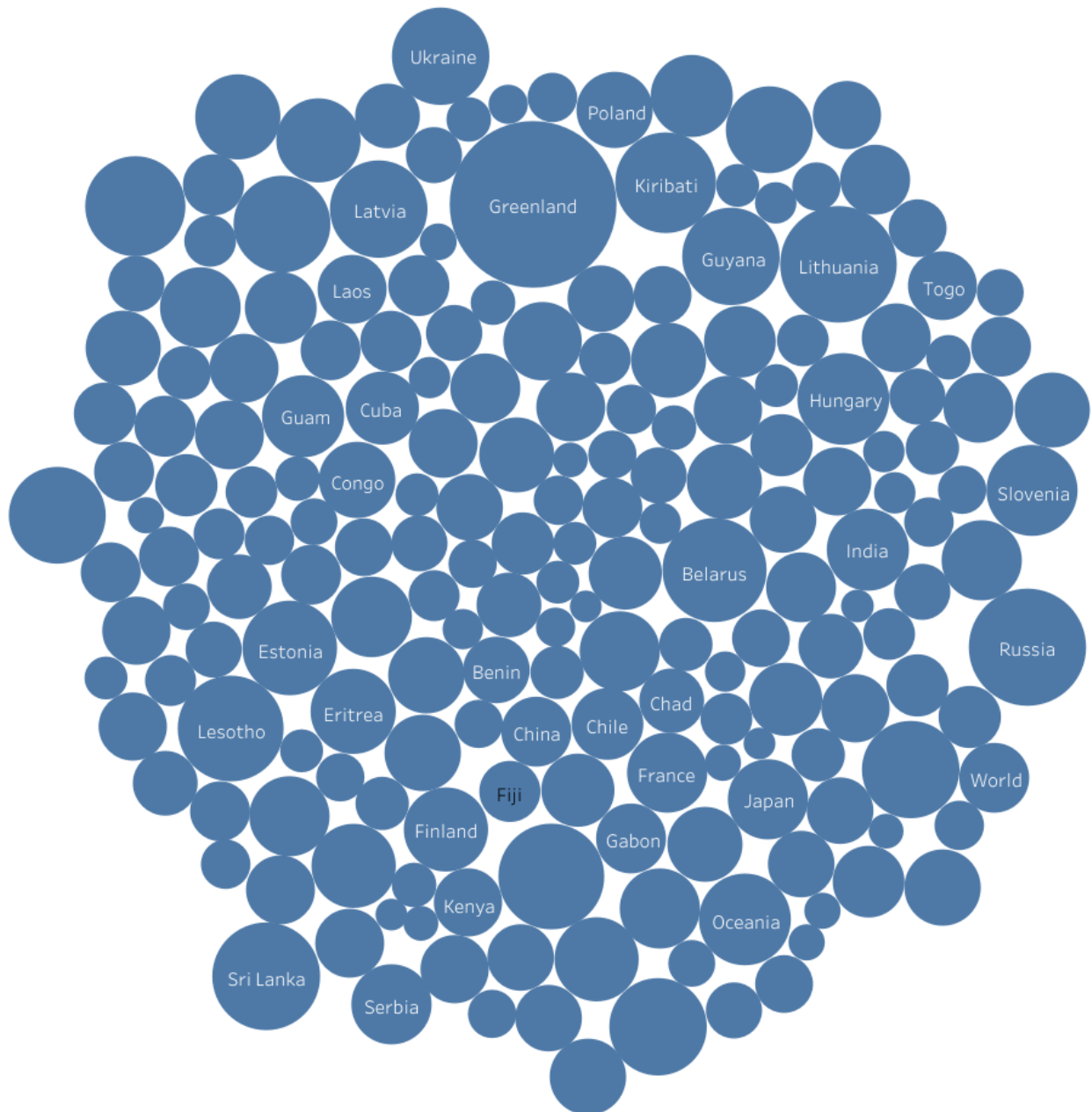## 7. What is the trend of suicide rates over the years?

- **Interpretation**: Analysing trends in suicide rates will provide insights into public health effectiveness and societal changes affecting mental health, indicating areas needing urgent attention. The suicide rate has decreased over the years. Globally, suicide rates have decreased over the years, though regional variations exist.
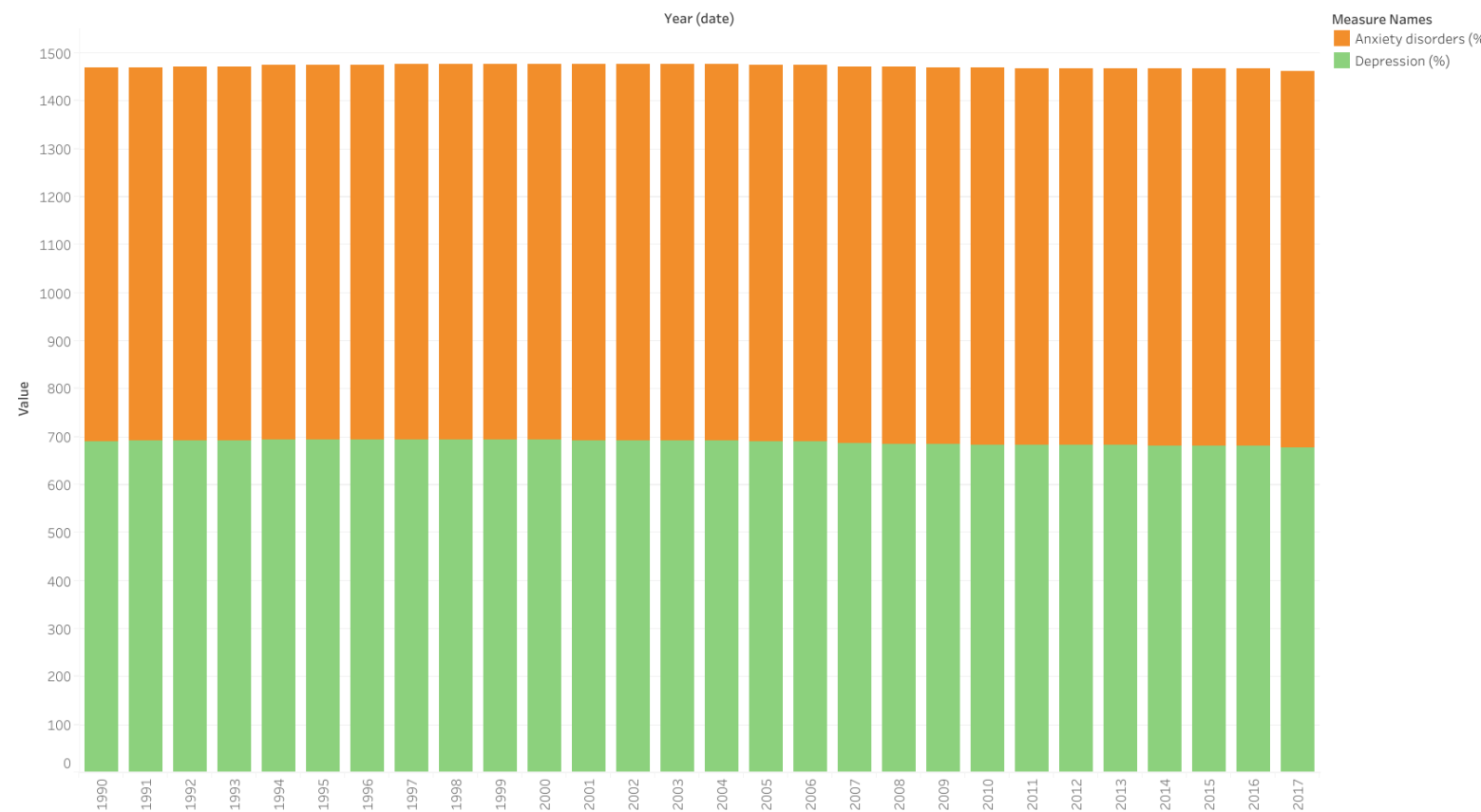
- **Graph Type:** Line Graph

Year vs suicide rate

Year (date)

8. How does the suicide rate vary across different countries?

- **Interpretation:** This question will allow for comparative analysis of suicide rates globally, highlighting countries that may require more robust mental health policies. Again Greenland, Russia have high suicide rates
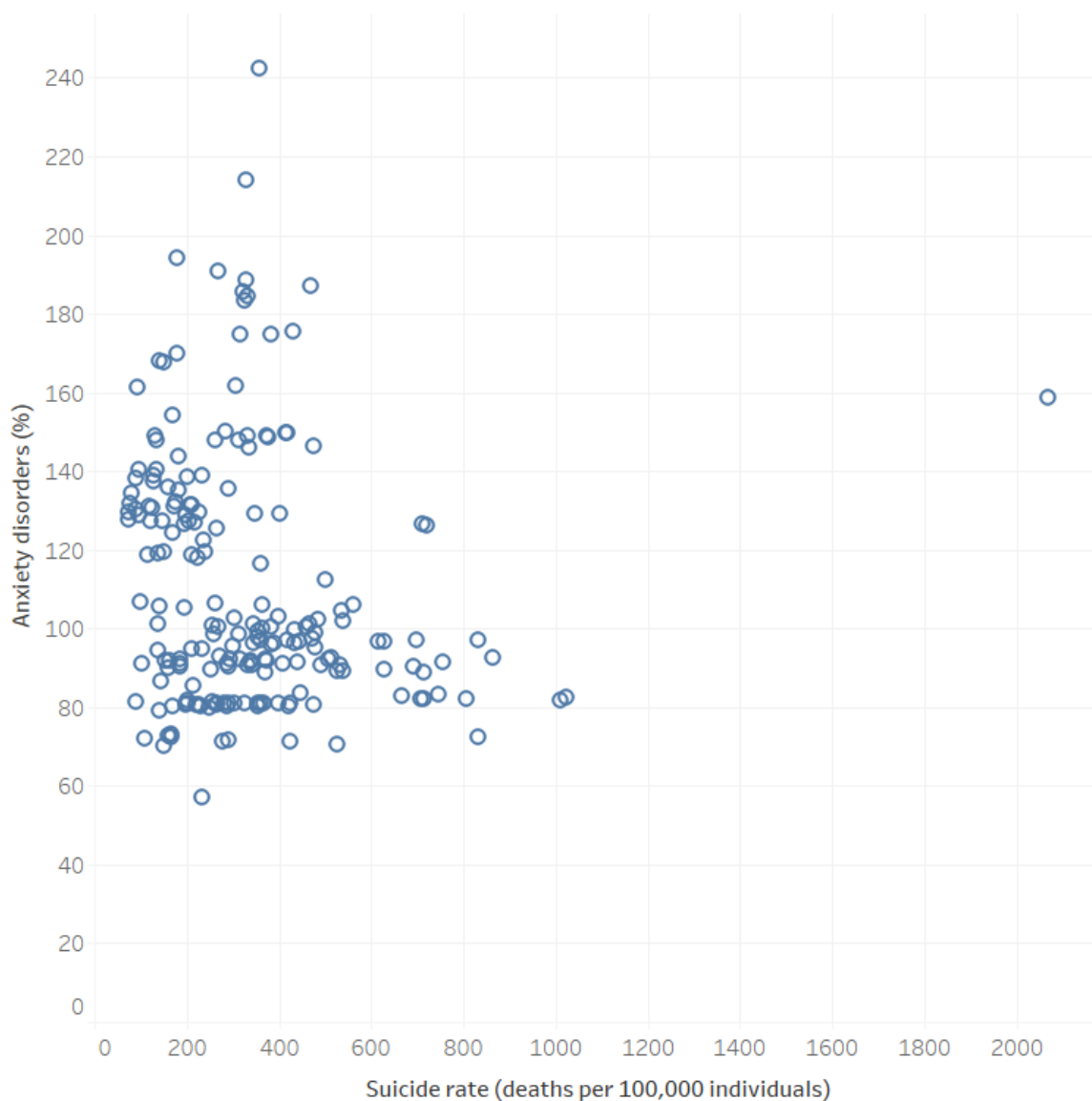
- **Graph Type:** Bubble Graph

9. **What percentage of individuals suffering from depression also have anxiety disorders?**

   - **Interpretation:** Understanding comorbidity between depression and anxiety can inform integrated treatment approaches necessary for effective care.

   - **Graph Type:** Stacked Bar Graph

10.What is the relationship between the prevalence of anxiety disorders and the suicide rate across different countries?

- **Inference:** There is no clear positive or negative correlation between suicide rates and anxiety disorder prevalence across countries. Countries with high suicide rates do not necessarily have high anxiety disorder prevalence and vice versa. The extreme outlier(Greenland) indicates that certain countries might have unique circumstances contributing to abnormally high suicide rates, which may not be directly linked to anxiety disorder rates.
- **Graph Type: Scatter Plot**

11.What insights can be drawn from the choropleth graph showing depression prevalence across all genders and age groups?

- **Interpretation:** This comprehensive visualization will provide a holistic view of depression prevalence across demographics, informing targeted public health initiatives aimed at specific populations most affected by depression. Teal colour indicates a higher depression prevalence and lighter colour indicates a lower depression prevalence.

- **Graph Type:** Choropleth Graph

Conclusion

The analysis of mental health data through various questions and visualizations provides critical insights into the state of mental health globally. By understanding trends, disparities, and relationships among different disorders, stakeholders can develop more effective strategies to address these pressing issues. As we continue to analyse this dataset using tools like Tableau, we can better inform policies that aim to improve mental health outcomes for individuals and communities worldwide. The findings emphasize the need for ongoing research and targeted interventions to combat the growing challenges posed by mental health disorders.