Suicide Data Visualization

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Objective

Death by suicide is sensitive topic that causes pain to hundreds of thousands of people every year around the world. There is a need for this data to be understood properly in order to possibly reduce amount of suicides anually.

Our main objective in this project:

- Create a better way to view patterns and understand what causes throughout the world in attempt to see what could help reduce the ammount of annual suicides.

Why we chose this project.

- It is a leading cause of death in the United States.
- Death by suicide is an extremely complex issue that causes pain to hundreds of thousands of people every year around the world. According to estimates from the World Health Organization (WHO), Suicide is the second leading cause of death among 15-29 years old and over 800,000 people die because of it every year. Such large numbers motivated us to work on this topic.
- According to the NIH (National Institute of Mental Health), the main factors of suicides are:
    - A prior suicide attemptDepression and other mental health disorders
    - Substance abuse disorder
    - Family history of a mental health or substance abuse disorder
    - Family history of suicide
    - Family violence, including physical or sexual abuse
    - Being in prison or jail
    - Being exposed to others' suicidal behavior, such as a family member, peer, or media figure
    - Medical illness
    - Being between the ages of 15 and 24 years or over age 60

landing page
pg 1

TITLE OF PROJECT - short description

MAP

legend
1 years (5 yr groups)
2 country - changes
color or highlights
 (mouse over or click)

Pie chart
break down by gender %

Bar Chart
Age group and Number of Suicides

METRIC OF WRITTEN DATA
EX - in x country there were n
suicides in the year

Project Outline

- Data sources
  - World Health Organization (WHO)
  - Kaggle
- Data cleanup
  - ETL
  - Jupyter Notebook
- Data storage
  - PostgreSQL
- Site rendering
  - Flask

Visualizations

- Map
  - Leaflet
- Dashboard views
  - Plotly
  - Jquery (Not taught in class)
  - Popper.js
- Trend page
  - D3
- Analysis by Age, Gender, Country, and Generation
  - Plotly
  - Jquery

Challenges

- Modifying Geojson file
  - Combined data
  - Reduced size via mapshaper.org
- Technical Issues
  - Map Visualization
  - Responsive Dashboard
- API structure
  - Streamlining a flexible method
- Housekeeping Issues
  - Merging
  - Branch usage

Future Analysis

- Complete Data
  - More countries and better data collection
- GDP vs Suicide analysis
  - Correlations between GDP and Suicide in countries
- Further specify population groups
  - States or Regions
  - Education level
  - Income
- Replace dropdown menus with slidebars
  - Cleaner views
  - Faster and more responsive views
- Explore possibilities for more aesthetically pleasing and sophisticated views
  - Chart.js