Project One

Today we will focus on overlooking data that corresponds with Suicide rates focusing on the year 2020. The team will create visualizations on the three general data points such as overall suicide rates in countries. We will focus on a recent year to observe more relevant data in modern times. Today we will explore specific data that will ask if household income affects suicide rates and the types of mental illness? Does the generation people live in play a role in this situation? What kind of people are affected by this, are males or females generally more affected?

* How suicide rates in countries vary by generation?
  + Intro Slide: It is reasonable to believe that those born in later generations are at a higher risk for suicide than those born earlier, more so in nations with lower standards of living than those that are more developed.
  + Individuals born in later generations have endured many hardships such as war and financial instability over the course of their life. It was common advice to “man up” and take whatever happens to them and go on about their life. It was generally looked down upon to express your emotions and talk about your feelings, which may lead many to take their own life instead of seeking treatment.
  + Here we have 4 separate graphs depicting suicide rates between 4 generations: The GI generation born from 1901 to 1927, Silent generation from 1928 to 1945, Baby boomers from 1946 to 1964 and Gen X 1965 to 1980.
  + When looking at the data, it is seen that as generations pass, the average suicides drop. There is a very high rate of suicides for the GI generation and Silent generation. Both of which served in WW1 and WW2. It is proposed that this could be because of the lower standards of living and generational mindset, but the data shows otherwise. There is a diverse mix of nations that are more developed and less developed throughout the data.
  + Despite this there is one consistency between the GI generation and Silent generation, that being the high rate of suicides in Lativa, Estonia, Serbia, Sloviena, Lithuania, and Kazakhstan. All of which are post Soviet Bloc countries. This is most likely due to the terrible living conditions of the early Soviet Union and the trauma faced during WW1 and WW2 as both men and women were forced to serve in the war .
  + This is evident when looking at the Baby Boomers and Gen X for the same countries as the suicide rates substantially drop. These generations grew up during a time of no physical war and in a more developed Soviet Union.
  + Still looking at the graphs for Baby Boomers and Gen X, we can see that countries that are highly developed still experience high rates of suicide. These being Iceland, Mauratis, and Australia as an example. This proves that high standards of living does not diminish suicide rates.
  + Based on the data found, suicide rates are not dependant on the country’s standard of living but rather the factors and events that the generation experienced. As previously mentioned, generations that grew up in the Soviet Bloc have substantially higher suicide rates than newer generations living in post-war modern states. This may be attributed to low quality of life and trauma from war. On the contrary, nations with high standards of living still experience high suicide rates as seen with earlier generations in Iceland and Australia. This may be attributed to factors such as COVID-19 as this data was sampled in 2020, although this can not be confirmed
* Checking Global Suicide Rate between countries genders
  + When comparing the data we can see that Males have a higher average index, compared to the female counterpart. There are a handful of possible reasons this may occur. There is a standard that males have to live up to in today's society. For generations men have been told to “man up” and provide protection and financial stability for their families or for themselves. Men in recent years tend to struggle in these situations, due the cost of living being double or triple of what it once was. Or just due to flat out inflation, a majority of them decide to just “deal with it” while others may be too embarrassed or may not want to burden others. The outliers are those who believe that this idea is just a “Stigma” and tend to ignore help or the idea altogether. (Men may also try to hide mental illness from employers because they believe it will affect employment opportunities.) When Viewing the data we can see that countries such as the United States, Germany, and Mexico have lower overall rates. This is because gender equality has a larger effect on the population.Notice the large number of men in Russian Allied countries, this data can be a cause of political issues.Tensions between Russia and Ukraine starting to build is the primary cause of conflict.
  + More men were being drafted to serve during this time to help aid in the beginning war efforts with Ukraine. This could be due to older men possibly being redrafted or possibly the loss of a loved one during a covid era, Many fall into mental health problems after losing someone close to them. Older generations are more groomed to the stigma where they need to uphold a certain social status.
  + We notice a drop in overall rates as younger generations start to look into personal care including mental health. With current social aspects such as social media being more available to younger audiences we notice a drop in overall rates. In generation X we notice the rates start to even out even fallin below 2.0 index. This is largely believed to be due to mental health being a more socially accepted topic and society being more comfortable seeking outlets to help aid with coping skills.
* Household Income vs. Suicide rates:
  + Our hypothesis is that individuals with lower household incomes are at a higher risk of suicide than those with higher incomes because of higher levels of financial stress and limited access to mental health services, which can increase the risk of suicide.
  + From the analysis we made though, the correlation coefficient (r-value) indicated no correlation of household income with the suicide rates of a country.
  + There might be factors other than household income affecting the rate of suicides. Afterall, suicide is a complex issue and there are many factors that can contribute to it. While household income might be one of these factors, it's important to consider other factors.
* Does a country’s HDI reflect its suicide rates?
  + Intro: HDI, or Human Development Index, is a scaling system between 0 to 1 that takes the life expectancy, education, and per capita income to measure how developed a country is. This index is used by the UN to rank nations on their development. Because of the factors the scale takes into account, countries with a higher HDI are more developed than those with lower scores.
  + Due to the scaling system describing how developed a country is, it is reasonable to believe that countries with higher HDI will effectively have lower suicide rates. These countries may have better access to mental health programs, overall happier populations, and safer, more stress-free environments.
  + Looking at the data, the R value indicates a weak positive correlation. This means it is more likely that as HDI rises, so do suicide rates. Because of this, HDI seemingly has an adverse effect on suicide rates then what was proposed. The data may be more positively correlated without the inclusion of Soviet Bloc countries as they have a higher than normal suicide rate compared to other countries.
  + Conclusion: Based on the data found, suicide rates are not dependant on the country’s HDI score and instead have an negative effect on suicide rates. This may be in result to many factors, such as the higher workload and social pressures in higher developed countries. It is also worth mentioning that the data is slightly skewed due to Soviet countries and their higher suicide rates. With a wider dataset, we may see a higher correlation between HDI and suicide rates.
* Household Income vs. Mental Disorders:
  + We know that mental disorders can contribute to suicide rates, so this is an anlysis of household income and the rates of mental disorders across countries.
  + Our hypothesis is that individuals with lower household incomes may be at higher risks of experience mental disorders because of financial and housing insecurity and limited access to healthcare.
  + What we found, however, is that schizophrenia (r-value=0.79), eating disorders (r-value=0.68), anxiety disorder (r-value=0.85), depression (r-value=0.55), and drug use disorder (r-value=0.41) have a positive correlation with household income. This indicates that the higher the income, the more likelihood of having a mental disorder. On the contrary, the higher the income, the lower the rates of alcohol use disorder, with an r-value of -0.37. At the meantime, bipolar disorder does not have a correlation with household income (r-value=0.23).
  + One possible explanation for this relationship is that higher-income individuals may experience other kinds of stressors, such as high work demands, long work hours, and pressure to maintain their social status and meet certain expectations. These stressors may contribute to stress and mental health issues such as anxiety, depression, and burnout.
  + Higher-income individuals may also have more access to substances such as drugs, which can increase the risk of mental health issues such as addiction and mood disorders. We suspect that it may be because of this reason that higher-income people have lower rates of alcohol, since they have the ability to access more higher priced substances, for example, cocaine.