Faculty of Computing and Informatics (FCI)
Multimedia University
Cyberjaya

T DS3401 – Data Visualization

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Lecture Session: TC1L
Tutorial Session: TT4L

ASSIGNMENT 2 REPORT

for:

Wong Lai Kuan

from:

Student ID	Name	Email	Phone number
1181103271	Muhammad Khairulrazi Bin Mohd Riza	1181103271@student.mmu.edu.my	0193428300

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1. Introduction

The dataset provides a comprehensive overview of mental health disorders, specifically focusing on depression. It include information on various mental health disorders, prevalence rates by age and gender, suicide rates, depression cases by country, and insightful data on depression categorized by education levels. The dataset offers valuable insights of the nature of depression and its impact.

2. Most insightful visualization

With the dataset chosen, multiple visualizations are created in order to discover any insights that could explain this data in a meaningful way. The one that stands out the most is the Bar Chart that I created to differentiate the age of which someone becomes depressed.
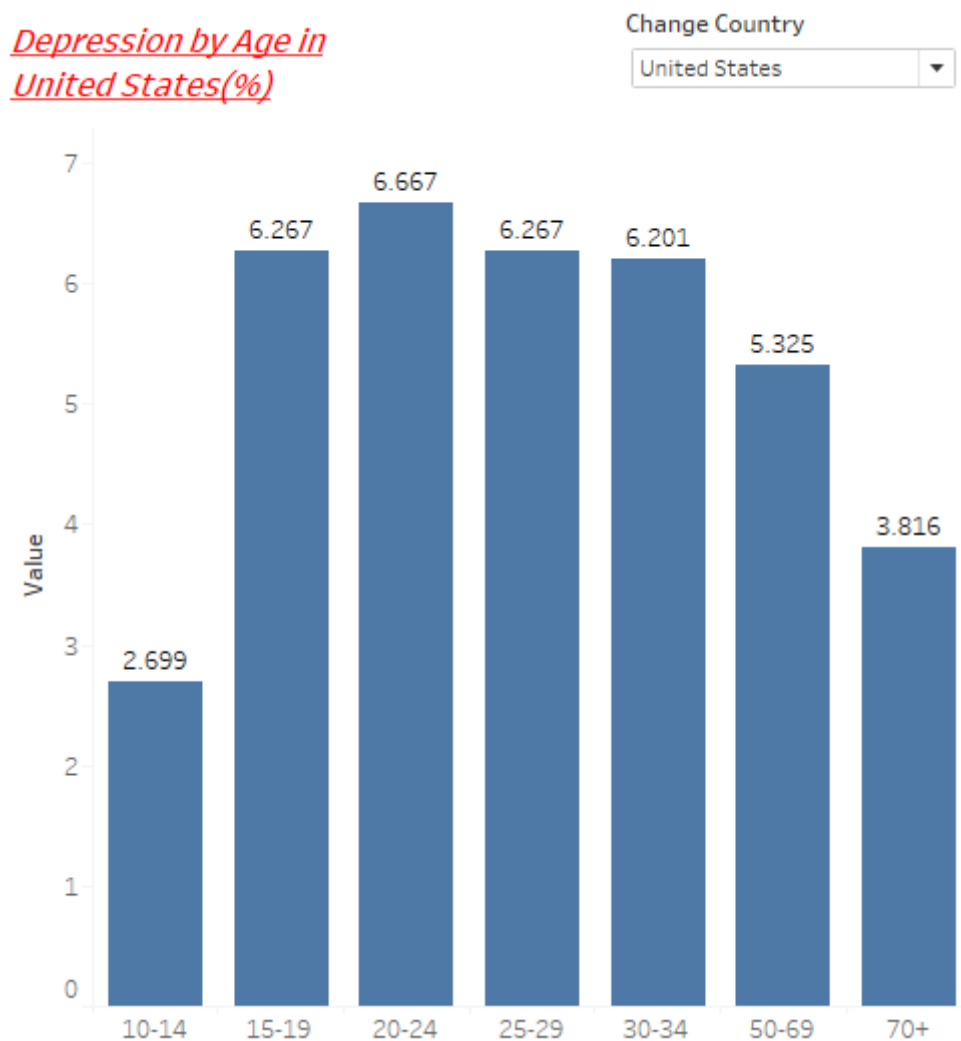

Figure 1. Bar Chart of Depression by Age in USA (%)

The bar chart exploring the distribution of depression across different age groups in the United States uncovered some truly fascinating insights. It revealed that teenagers between the ages of 15 and 19 faced a significant surge in depression, reaching its peak during the early twenties (20-24). However, as people entered their late twenties and thirties, the prevalence of depression gradually decreased. Interestingly, the data also indicated that individuals in their fifties to sixties and those aged 70 and above experienced relatively lower rates of depression. These findings emphasize the importance of providing timely support and intervention during the critical transition into adulthood while tailoring mental health initiatives to meet the unique needs of diverse age groups.
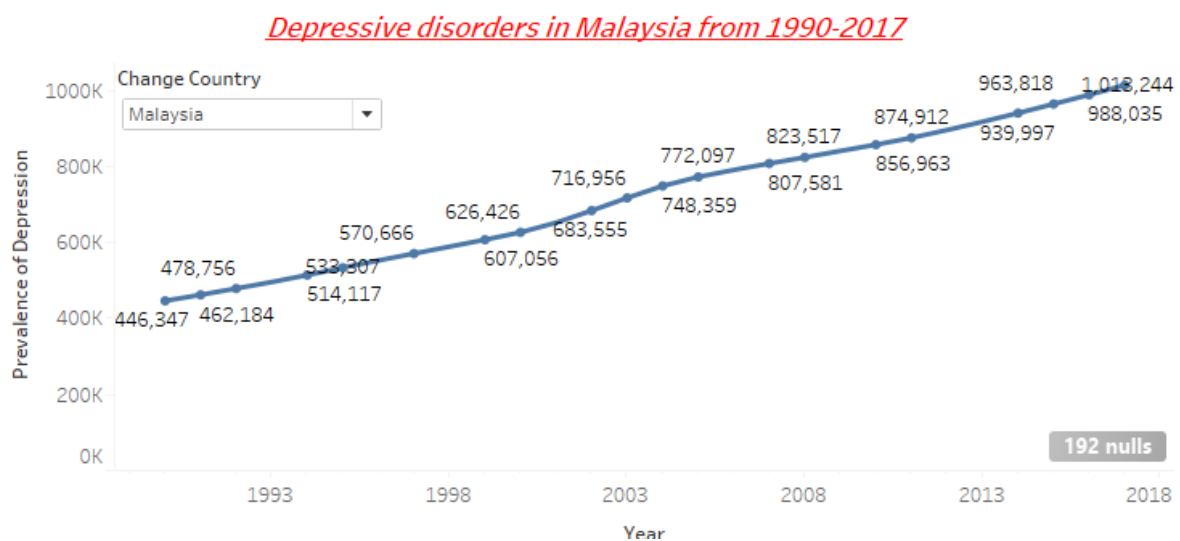
2.2. Pattern and relationship

Figure 2. Line chart of people suffering with depression in Malaysia over time

The line chart depicting the prevalence of depression over time (1990-2017) in Malaysia reveals a concerning trend. The chart indicates a consistent and continuous increase in the number of depression cases without any signs of decline. This finding underscores the growing burden of depression within the country across the decades. The reasons for this upward trajectory could be multifaceted, influenced by factors such as societal changes, increased awareness and reporting, stressors in modern life, and limited access to mental health resources. It highlights the urgent need for proactive measures, including increased mental health awareness campaigns, improved accessibility to mental health services, and comprehensive support systems to address the escalating rates of depression and promote overall well-being in Malaysia.

2.3. Explanation of pattern and relationship

While observing the trend in the line chart about prevalence of depression over time in Malaysia, it is important to acknowledge certain assumptions. It is assumed that the data is representative and accurately reflects the true prevalence of depression cases in the country.

The upward trend in depression cases could be attributed to multiple factors. Rapid urbanization, economic development, and the accompanying lifestyle changes may have led to increased stress, social isolation, and a higher prevalence of risk factors for depression. The growing awareness and de-stigmatization of mental health issues might have also prompted more individuals to seek diagnosis and treatment, resulting in higher reported cases.

2.4. Design principles

The guide that I used for my visualizations is the Shaffer's 4C which are Concise, Clear, Correct and Compelling.

1. Concise - I keep my visualizations by focusing on the most important information which is the number of depression cases per country and from the year 1990-2017.
2. Clear - The clarity of my visualizations and their intended message is effectively conveyed to the audience through the use of appropriate labeling and titles, which provide necessary context and guide interpretation.
3. Correct - The data that I used has been double checked and corrected to avoid misleading and misinterpreted information.
4. Compelling - The colors chosen for my visualization is kept minimal to avoid any disorganization and to keep it aesthetically pleasing.

3. Conclusion

In conclusion, this visualization project on mental health, specifically depression, has shed light on crucial insights. The analysis of age groups affected by depression in the United States highlighted the vulnerability of young adults, emphasizing the need for targeted interventions during this critical stage. The examination of depression prevalence over time in Malaysia uncovered a concerning upward trend, necessitating urgent attention to address the growing burden. These findings underscore the importance of early intervention, increased mental health awareness, and improved accessibility to mental health resources. By harnessing the power of data visualization, this project has provided valuable insights to inform strategies, policies, and support systems aimed at promoting mental well-being and tackling the challenges posed by depression