COVID-19's Mental Health Impact on College Communities

Student Researchers: Rebekah Couturier, Jack Poole, Kishan Patel
Faculty Mentor: Fredrick Kaefer

Introduction

The overall purpose of this study is to research how the COVID-19 pandemic impacted the mental health of faculty and staff and students as we suspect that the transition to online learning impacted both groups of people.

Abstract

- Focus on the rising issue of mental health of college students enrolled in 2020 and 2021 in the greater Chicago area
- Factors contributing to poor mental health in college students
  - Seasonal Affective Disorder (SAD)
  - Heavy course loads
  - Adjusting to campus life.
- Other COVID-19-related factors:
  - Economic strain
  - Job losses
  - Social injustices
  - Mass violence

Methods and Research Design

1. **"The Psychological Toll of a Chicago Winter"**
- Discusses harsh reality of Chicago winters and the impact it has on Chicagoans' mental health
- Seasonal Affective Disorder (SAD), lack of sunlight, and increased body weight during the winter are addressed, as well as tips to combat Chicago's winter season.
https://www.thechicagoschool.edu/insight/psychology/psychology-chicago-winter-sad-2/

2. **"Top 5 Mental Health Challenges Facing College Students and How to Get Help"**
- Mental health experts and researchers often use terms like "epidemic" and "crisis" to describe mental health challenges many U.S. college students face today
- In the Fall 2021 National College Health Assessment, about 30% of student respondents said anxiety negatively affected their academic performance
- More than 1 in 5 students reported having been diagnosed with depression by a healthcare professional. Mood disturbances represent just some of the mental health conditions many college students have.
  - Other common challenges: suicide and suicidal ideation, eating disorders, and substance misuse
https://www.bestcolleges.com/resources/top-5-mental-health-problems-facing-college-students/

3. **"The Impact of Covid-19 on Adolescent Wellness in Chicago"**
- Study targeted high school students
- Discusses impact of COVID-19 on students' opinions:
  - Quality of balance
  - Education
  - Pre-COVID life
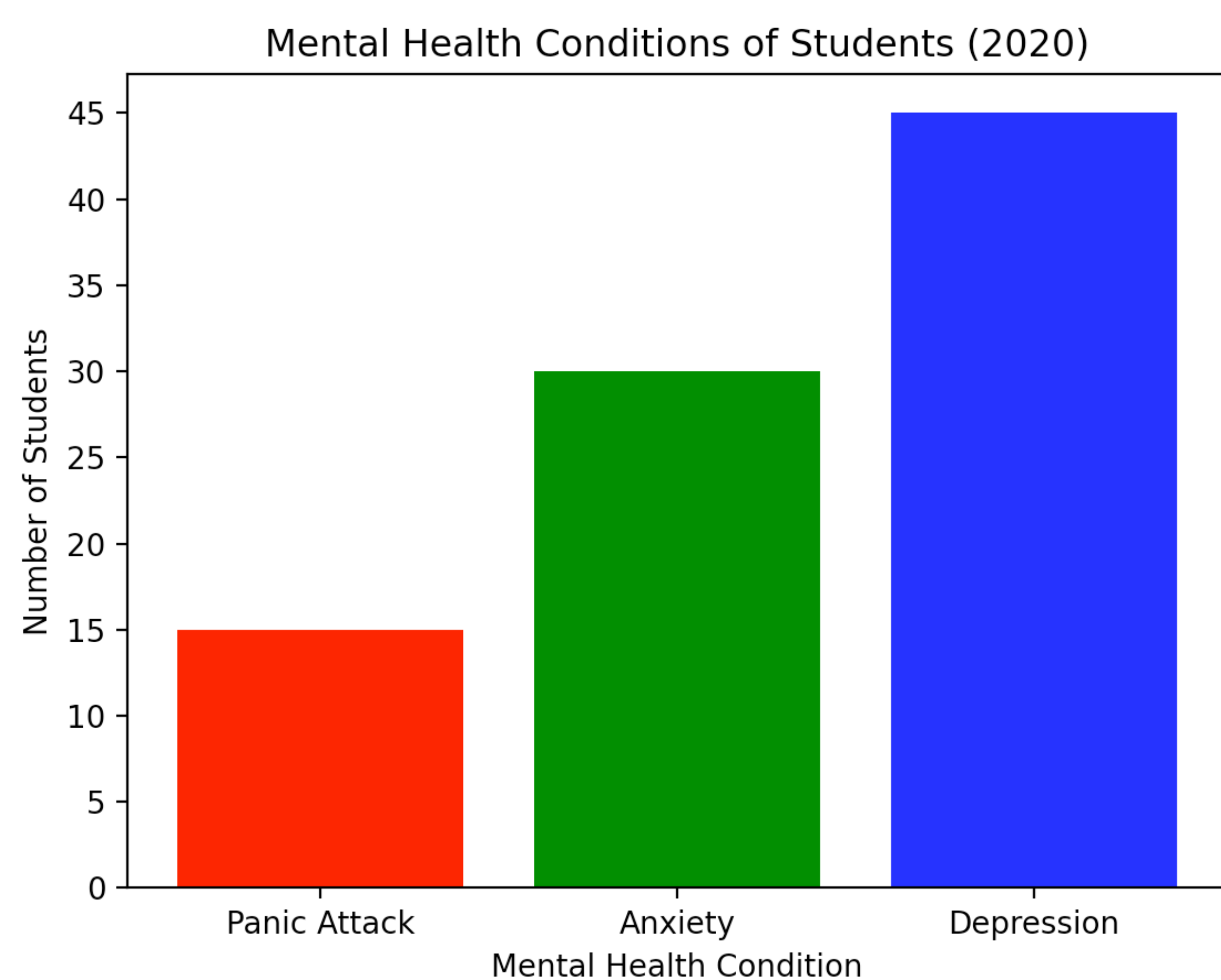https://onlinelibrary.wiley.com/doi/full/10.1111/cch.12994

Conclusion

Our study reveals there is a strong correlation between the rise of COVID-19 cases and mental health issues in students. As the pandemic has caused disruptions in daily life and led to social isolation, anxiety, depression, and stress levels have increased in college students. It is crucial to address this issue and provide support to mitigate the impact of the pandemic on their mental health.
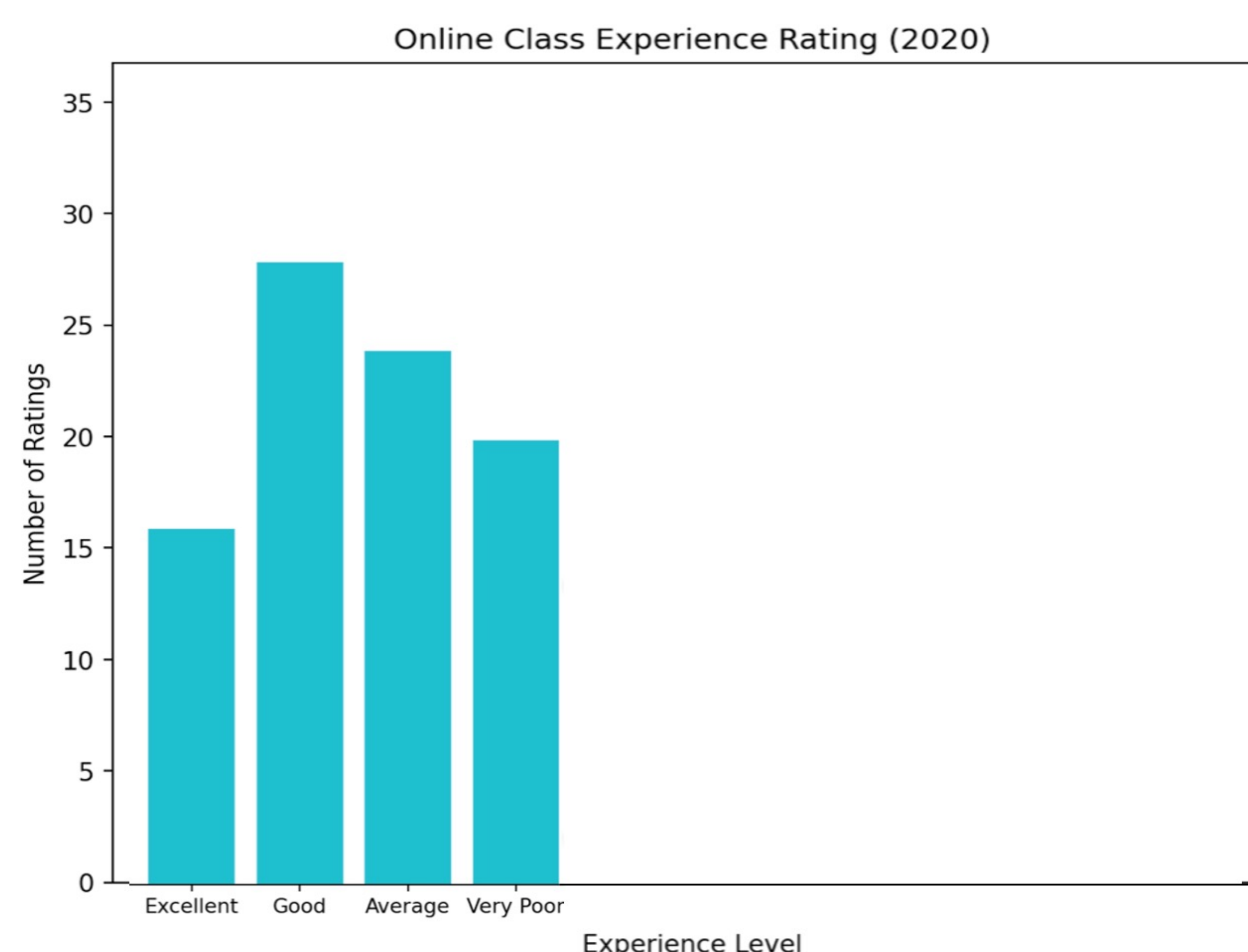
Resources

https://data.cityofchicago.org/api/views/naz8-j4nc/rows.csv?query=select%20*%20where%20%60lab_report_date%60%20%3E%3D%20%272020-02-01%27%20AND%20%60lab_report_date%60%20%3C%20%272021-05-01%27&read_from_nbe=true&version=2.1&accessType=DOWNLOAD

https://www.kaggle.com/code/nikhilsharma1212/student-mental-health-analysis/input

```
1   # Bar chart showing students' mental health conditions (3)
2
3   import matplotlib.pyplot as plt
4
5   mental_health = ['Panic Attack', 'Anxiety', 'Depression']
6   students = [15, 30, 45]
7
8   plt.bar(mental_health, students, color=['red', 'green', 'blue'])
9
10  plt.xlabel('Mental Health Conditions')
11  plt.ylabel('Number of Students')
12  plt.title('Mental Health Conditions of Students')
13
14  plt.yticks(range(0, 50, 5))
15
16  plt.show()
```

```
1   import pandas as pd
2   import matplotlib.pyplot as plt
3
4   # Read the data from the CSV file
5   data = pd.read_csv("covid_student_survey.csv")
6
7   # Filter the data to only include the four desired categories
8   data = data[data["Rating"].isin(["Excellent", "Good", "Average", "Very Poor"])]
9
10  # Count the number of ratings for each experience level
11  rating_counts = data["Rating"].value_counts()
12
13  # Create a bar chart showing the number of ratings for each experience level
14  plt.bar(rating_counts.index, rating_counts.values)
15
16  # Set the title and axis labels
17  plt.title("Online Class Experience Rating (2020)")
18  plt.xlabel("Experience Level")
19  plt.ylabel("Number of Ratings")
20
21  # Show the plot
22  plt.show()
```

```
1   ### Every other month ###
2
3   import pandas as pd
4   import matplotlib.pyplot as plt
5   from matplotlib.dates import MonthLocator, DateFormatter
6
7   # Read the CSV file
8   df = pd.read_csv('https://data.cityofchicago.org/api/views/naz8-j4nc/rows.csv?query=sel
9
10  # Filter the data to only include 'Cases - Total' and 'Cases - Age 18-29'
11  df = df[['lab_report_date', 'Cases - Total', 'Cases - Age 18-29']]
12
13  # Convert the 'lab_report_date' column to a datetime object
14  df['lab_report_date'] = pd.to_datetime(df['lab_report_date'])
15
16  # Set the 'lab_report_date' column as the index
17  df.set_index('lab_report_date', inplace=True)
18
19  # Increase the figure size and add a grid
20  plt.figure(figsize=(10, 6))
21  plt.grid(True)
22
23  # Create a line plot of the data using different colors for each line
24  plt.plot(df.index, df['Cases - Total'], color='blue', label='Total Cases')
25  plt.plot(df.index, df['Cases - Age 18-29'], color='green', label='Cases Age 18-29')
26
27  # Set the chart title and labels for the x and y axes
28  plt.title('COVID-19 Cases in Chicago (Jan 2020-March 2021)')
29  plt.ylabel('Number of Cases')
30  plt.xlabel('Time')
31
32
33  # Set the x-axis tick locator and formatter to show month names
34  locator = MonthLocator(interval=2)   # specify a step size of every 2 months
35  formatter = DateFormatter('%B')
36  plt.gca().xaxis.set_major_locator(locator)
37  plt.gca().xaxis.set_major_formatter(formatter)
38
39  # Show the plot with a legend
40  plt.legend()
41  plt.show()
```


Mental Health Conditions of Students (2020)

Online Class Experience Rating (2020)

COVID-19 Cases in Chicago (Jan 2020-March 2021)