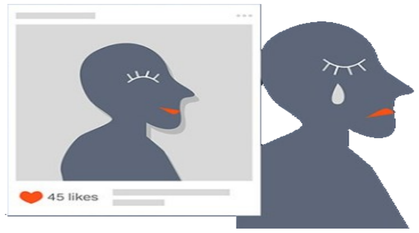
# Social Media Effects On Mental Health During Pandemic

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**How do our interactions on platforms that have not existed for more than even 20 years affect our mental health?**

## Introduction

The increase in social networking sites (SNSs) has had an impact on society both positively and negatively. Among the challenges of mental health impacts due to social media engagement is 1. the time spent on social media and 2. how you are using the platforms. Given the pandemic and presidential elections, there was an increase in social media use. We investigated social media posts from October to November to understand the connection between depression, suicide rates, and social media use. Our results can be the foundation for determining reasonable solutions to the problem of increasing suicide rates by involving biometrics to detect and monitor mental health in social media users.

## Objectives

Our goal is to determine what percent of Twitter users expressed mood decline due to the pandemic and elections based on their timeline posts. Based on the results, we will then determine if using manipulation on natural posts and collecting heart rate during social media engagement can be used as a digital biomarker or indicator for detecting mood decline in users. This is essential for decreasing depression and suicide rates.

## Materials & Methods

Using storywrangler and a Twitter scraper, we scraped all tweets using keywords such as depressed, sad, lonely, pandemic and election between 10/27/2020 and 11/23/2020. The data was used to identify the amount of users who have used these keywords and our results showed the level of mental health impact (see figures).


## Results & Discussion

Of the seven keywords we used, pandemic and sad more so correlated that there was a decrease in mood during the time period of October through November. Depression and annoyed keywords were also correlated and showed a spike in the use of these terms in Twitter users feeds during October and lowered at the beginning of November. The results from our data would indicate that there were an increase in feelings of depression, annoyance, pandemic and sadness. However, there was not an increase in the term, lonely. Using more keywords may have shown a broader impact as to whether there was mood decline in Twitter users given the increase of engagement due to both the pandemic and elections.

## Future Work

Several studies have been conducted in an effort to find correlation between social media use and mental health. Given the results from our data, we will include manipulation on Twitter and other social media platform posts to determine mood outcome and if comparison aids to an increase in depression and suicide rates. In addition, we are going to collect heart rate on social media users to determine how social media is impacting users. This will help us to indicate the appropriate digital biomarkers in this domain.

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