



Social Media Impact on Young Female Mental Health

Abstract



- The purpose of our research is to determine the impact that social media usage has on the mental health of young females between the ages of 18 and 29 years old. To achieve this purpose, we conducted a detailed data analysis from survey datasets, focusing on depression and anxiety.
- Our findings show a strong correlation between the higher usage of social media and negative mental health results, among young women who engage in social media looking for validation and comparing themselves to pictures and videos with beauty filters that make models and influencers perfect accordingly to "beauty standards".
- This case study emphasizes ethical data practices and focuses on the need for preventive approaches. We propose improving education on media knowledge and promoting supportive online communities to moderate the effects of social media on this analyzed demographic.

Introduction

In digital age, Social media plays an important role in everyone's daily life, especially for young females' life. Young females aged 18-29 are very active in social media platforms. In the USA, 72% of people use social media. This age group feels more pressure on good looks, body image, self-esteem and self-comparison. They compare their pictures with another's well-crafted images on social media, which may trigger young women to compare their traits with unrealistic ones, or too-perfect-to-be-true images, which can negatively impact their self-esteem, leading to anxiety, depression, and eating disorders



Data Science Application



- To assess the impact of social media on mental health for young females, we will use two datasets for comparison. We are focusing on the frequency of use, and how often an individual uses social media platforms, such as how many hours per day.
- The mental health indicators and survey-based data are two datasets, which are self-reported questionnaires covering symptoms of mental health. For dataset one, we will focus on the column "Depressed or down" for depression, and for dataset two, we will focus on the column "Dominant Emotion" for anxiety and depression.

Problem Description

Young females are affected by social media's impacts and influences. Some of the factors that are body image, social comparison, and validation seeking. These factors seem to have a connection with looking for likes and followers. Social media platforms can affect mental health positively and negatively, and they can impact mental health issues such as anxiety, depression, and self-esteem. The purpose of this analysis is to analyze how different patterns of social media correlate with mental health outcomes in young females.



Technical Details and Implementation



- **Data collection:** Two datasets were collected and extracted from the Kaggle platform, from surveys and questionnaires of the self-reported mental health and social media.
- **Data Preprocessing:** For the dataset one, the columns were renamed, dropped unnecessary columns, and split the platforms column into different columns. For dataset two, the Daily_Usage_Time (minutes) was converted to hours, and then categorized it to match dataset one 'Time on social media' column.
- **Tools and Libraries:** For this analysis, we are using Python with Pandas for data manipulation, and Seaborn for data visualization as libraries.

Ethical Analysis

- Ethical implications are the primary focus in all studies involving personal experiences, especially mental health. They concerns the misuse or mislabeling of data, insufficient transparency and ineffective data security. Data collection is another major challenge.
- Data can be collected from various sources such as surveys, observations, experiments, interviews, online tracking and others. While collecting data, three ethical principles must be followed: transparency, consent, Data security.



Evaluation of Current Practices



- **Digital awareness Interventions:** Some school districts and educational institutions offer counseling, mental health sessions, and training on responsible social media use.
- **Gaps and Limitations:** A one-size-fits-all approach does not address gender-specific concerns. Institutions may not have sufficient mental health resources, and in many rural or low-income areas, access to these services can be challenging. Many approaches are reactionary instead of preventive.

Related Work

- Social media is starting to be a daily activity; people are spending hours of their day there. One study showed that females are more likely to be affected by mental health than males.
- Social media is part of life for many people with any mental health condition, such as depression or other critical illnesses. The population with mental illness uses those platforms to share their experiences, look for support, and find more information about their condition.
- The use of the platform shows great results, but it can also cause worse conditions, such as depression or anxiety, for example, due to the risks of cyberbullying and hostile interactions online



Proposed Solutions



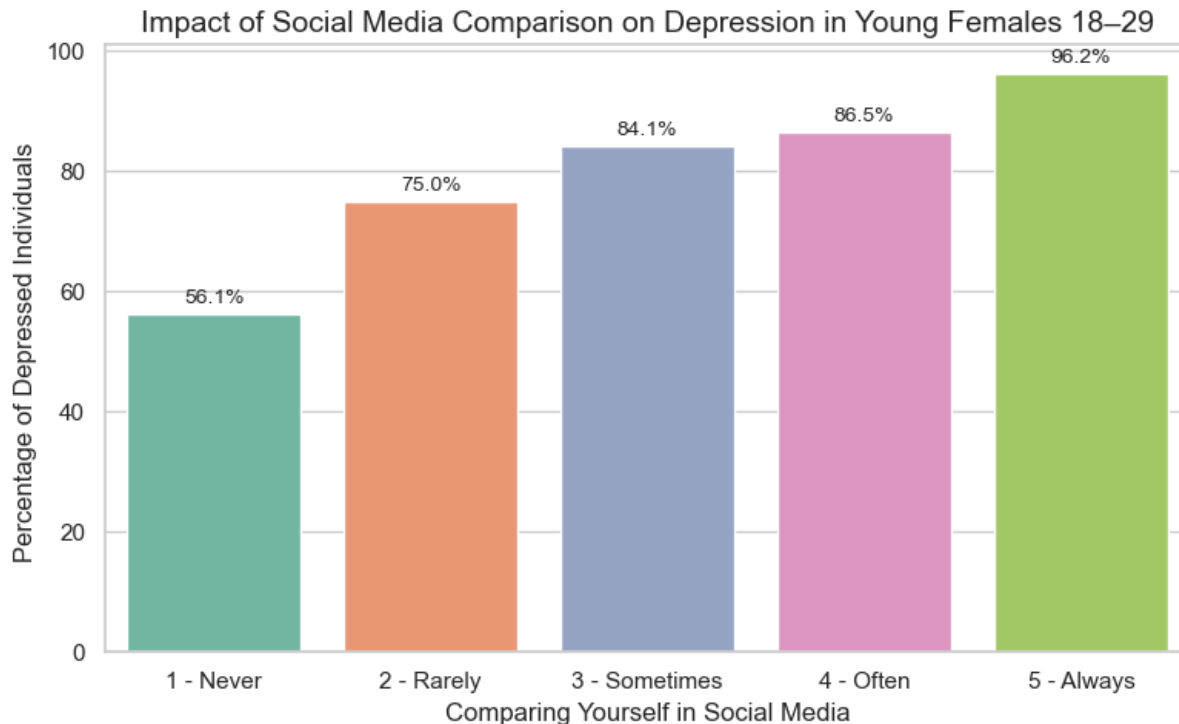
The analysis is helping uncover key patterns in how social media affects the mental health of young females.

- **Identifying Risk Factors.**
- **Creating a Community.**
- **Promoting Positive Content.**

By applying exploratory data analysis and data visualization, it is possible to identify patterns on mental health in young females and social media usage. To improve the mental health impact on social media for young females, there should be strategies and interventions implemented.

Implementation and Evaluation

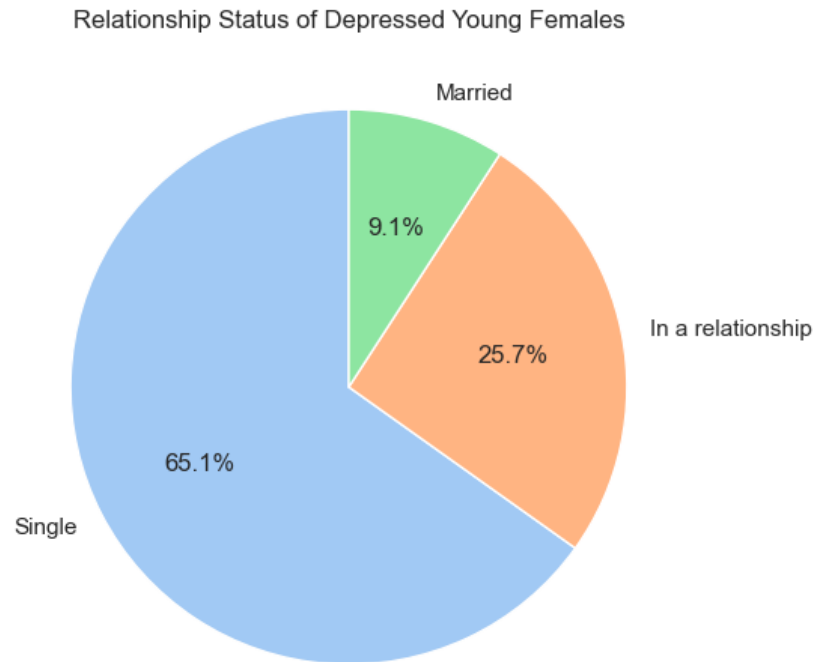
Explored correlations between social media usage and its impact on young females' mental health.



- Young female comparing themselves in social media and feeling depression. Our dataset included different rows, such as time spent on social media, sleeping issues and feeling depressed or down. We added the results of our exploratory data analysis through charts and graphs .
- This graph indicates as frequency increased the depression approached to 96%.

Implementation and Evaluation

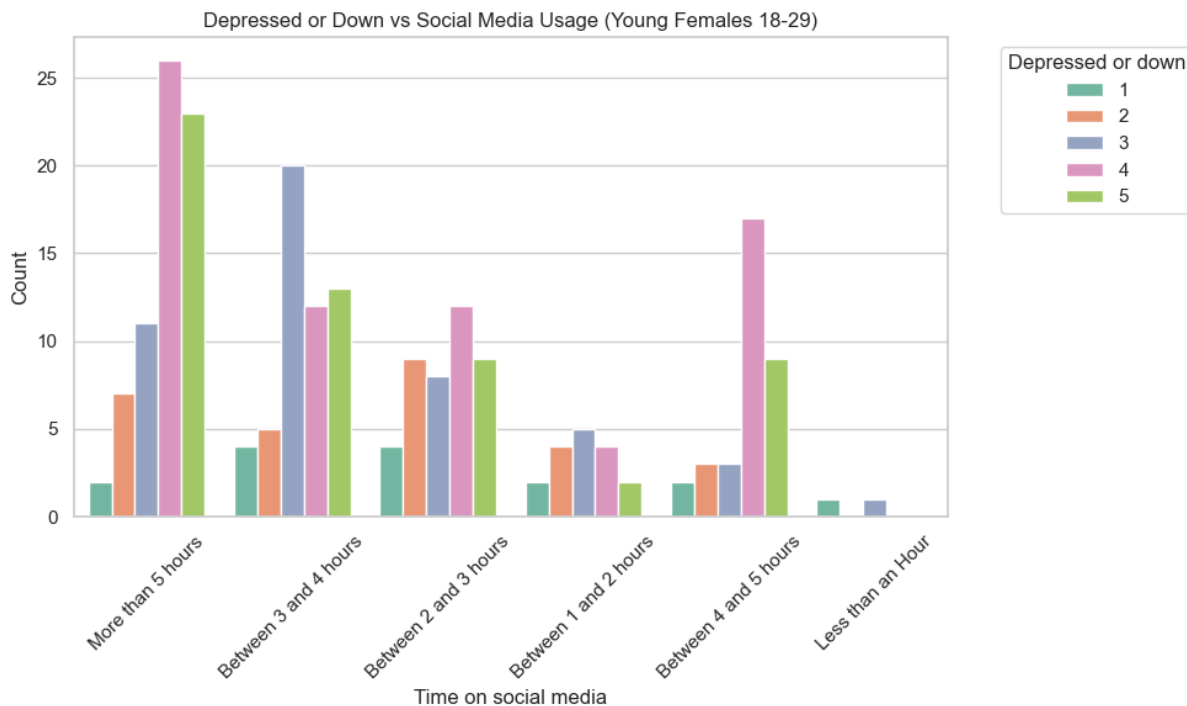
Relationship Status of Depressed Young Females



- This chart shows the relationship status of the depressed young female.
- 65% of them are single
- 26% (almost) are in a relationship
- 9% are married.

Implementation and Evaluation

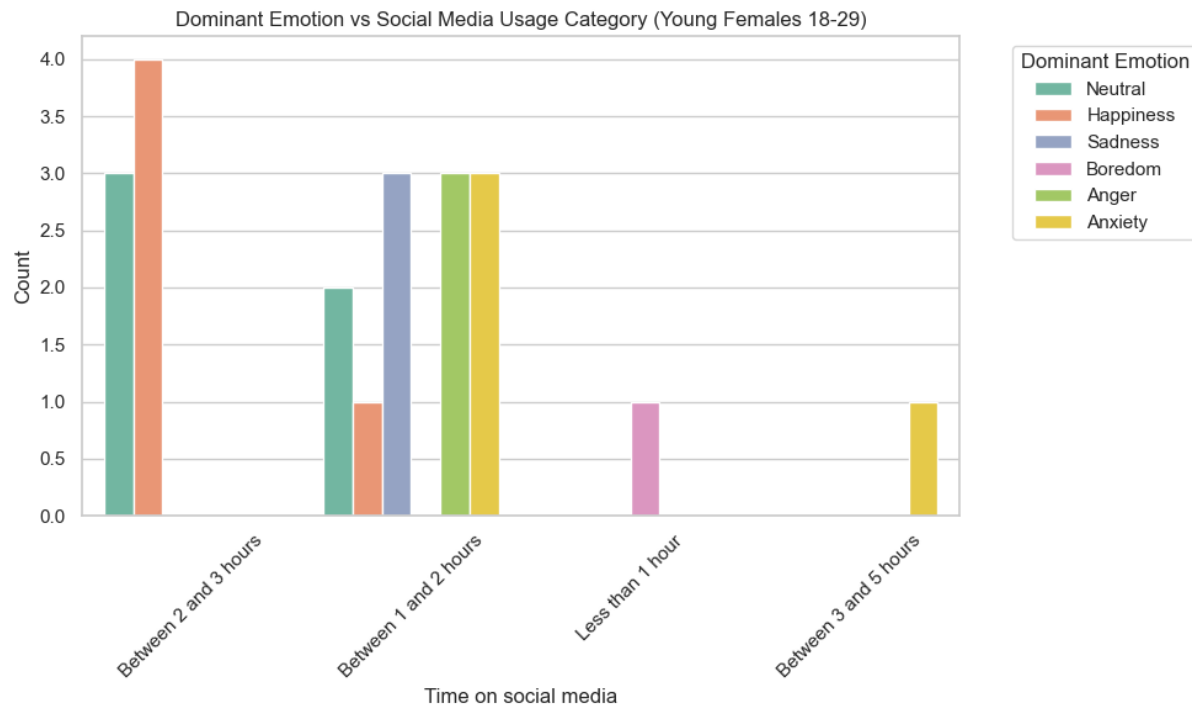
Depressed or Down vs. Social media usage(young females 18-29)



- Our studies shows, individuals who use one hour of screen time per day have the lowest impact on depression, while individuals who spend an extensive amount of time on social media experience an impact on social activities, such as physical or interpersonal interactions.
- These results were extracted from the first dataset used in this case study.

Implementation and Evaluation

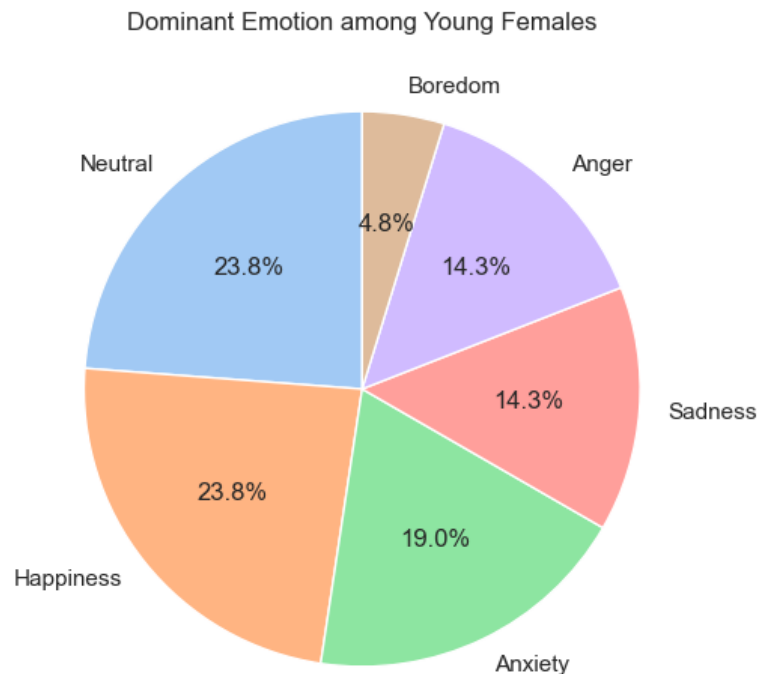
Dominant Emotion vs Social Media Usage Category(Young Females 18-29)



- While dataset one presented a correlation between time spent on social media and depression, dataset two shows that individuals using social media between two and three hours present a neutral or happy emotion, individuals using social media for less than a hour present boredom, and individuals using social media between one and two hours and between three and five hours present emotions associated with depression.

Implementation and Evaluation

Dominant Emotion Among Young Females



- This pie chart shows that more than 50% of individuals present depressive symptoms or dispositions of depression.

Conclusion

- While social platforms offer ways to keep people connected, promote inspiration, and share their personal achievements, they can also develop emotional and psychological effects on users.
- Previous studies suggest that frequent exposure to unrealistic content can trigger feelings of anxiety and low self-esteem. Young females in this age group feel pressure to achieve “beauty standards”, leading to comparisons with idealized images and videos online.
- We aim to understand not only the limits of the problem but also the contributing factors for this matter

