Social Media Impact on Young Female Mental Health

Abstract

❖ The purpose of our research was to determine the impact that social media usage had on the mental health of young females between the ages of 18 and 29.

❖ To achieve this, we conducted a detailed data analysis from survey datasets, focusing on depression and anxiety.

❖ Our findings showed a strong correlation between high social media use and poor mental health in young women who sought validation and compared themselves to filtered beauty standards.

❖ This case study emphasized ethical data practices and highlighted the need for preventive approaches.

Introduction

❖ In the digital age, social media played an important role in the mental health of females between the ages of 18 and 29.

❖ This case study explored how social media affected young women's mental health and emotions, and how usage patterns related to these outcomes.

❖ Young females aged 18–29 spent time on social media platforms sharing their pictures and videos.

❖ This age group felt more pressure regarding good looks, body image, self-esteem, and self-comparison.

❖ Young women often compared themselves to idealized images on social media, which harmed self-esteem and led to anxiety, depression, and eating disorders.

Data Science Application

❖ We compared two datasets to study how often young women used social media and how it affected their mental health.

❖ The two datasets were self-reported surveys capturing mental health symptoms and indicators.

❖ In the first dataset, we analyzed the "Depressed or down" column for signs of depression.

❖ In the second dataset, we focused on "Dominant Emotion" to assess anxiety and depression.

Problem Description

❖ Social media affected young females through body image issues, social comparison, and the need for validation.

❖ These factors appeared to be connected with seeking likes and followers.

❖ Social media platforms impacted mental health both positively and negatively, influencing issues such as anxiety, depression, and self-esteem.

Technical Details and Implementation

❖ **Data Acquisition:** Two datasets were collected and extracted from the Kaggle platform, consisting of surveys and questionnaires on self-reported mental health and social media usage.

❖ **Data Preprocessing:** In dataset one, columns were renamed, unnecessary ones removed, and the platforms column split. In dataset two, "Daily_Usage_Time" was converted to hours and matched with dataset one's "Time on social media" column.

❖ **Tools and Libraries:** For this analysis, we used Python with Pandas for data manipulation and Seaborn for data visualization.

Ethical Analysis

❖ Ethical implications were the main focus in all studies involving personal experiences, especially mental health.

❖ Ethical concerns included data misuse or mislabeling, lack of transparency, and ineffective data security.

❖ Data came from surveys, interviews, tracking, and more.

❖ Key ethical principles included transparency, consent, and data security.

❖ In sensitive studies, ethical risks could cause emotional distress, loss of trust, and breaches of privacy among young women.

Evaluation of Current Practices

❖ Digital Awareness Interventions: Some school districts and educational institutions offered counseling, mental health sessions, and training on responsible social media use.

❖ Gaps and Limitations: A one-size-fits-all approach overlooked gender-specific needs, with limited mental health resources—especially in rural or low-income areas—and most efforts were reactive, not preventive.

Related Work

❖ Social media was part of daily life, with people spending hours on it.

❖ Studies showed that females were more affected by mental health issues than males.

❖ Many people with mental health conditions used social media to share experiences, seek support, and learn more about their illness.

❖ Research showed that people with extended social media usage had an increased number of anxiety and depression cases.

❖ While the use of these platforms showed positive results, it also posed risks like cyberbullying and hostile interactions, which could worsen anxiety or depression.

Implementation and Evaluation

❖ To investigate and understand the impact of social media usage on young female mental health, we prepared a dataset focused on females aged 18–29.

❖ The dataset included details like time on social media, sleep issues, and feelings of depression.

❖ We conducted further research to support our case study and used charts from exploratory data analysis to show links between social media use and young female mental health.

Impact of Social Media Comparision on Depression in Young Females 18-29
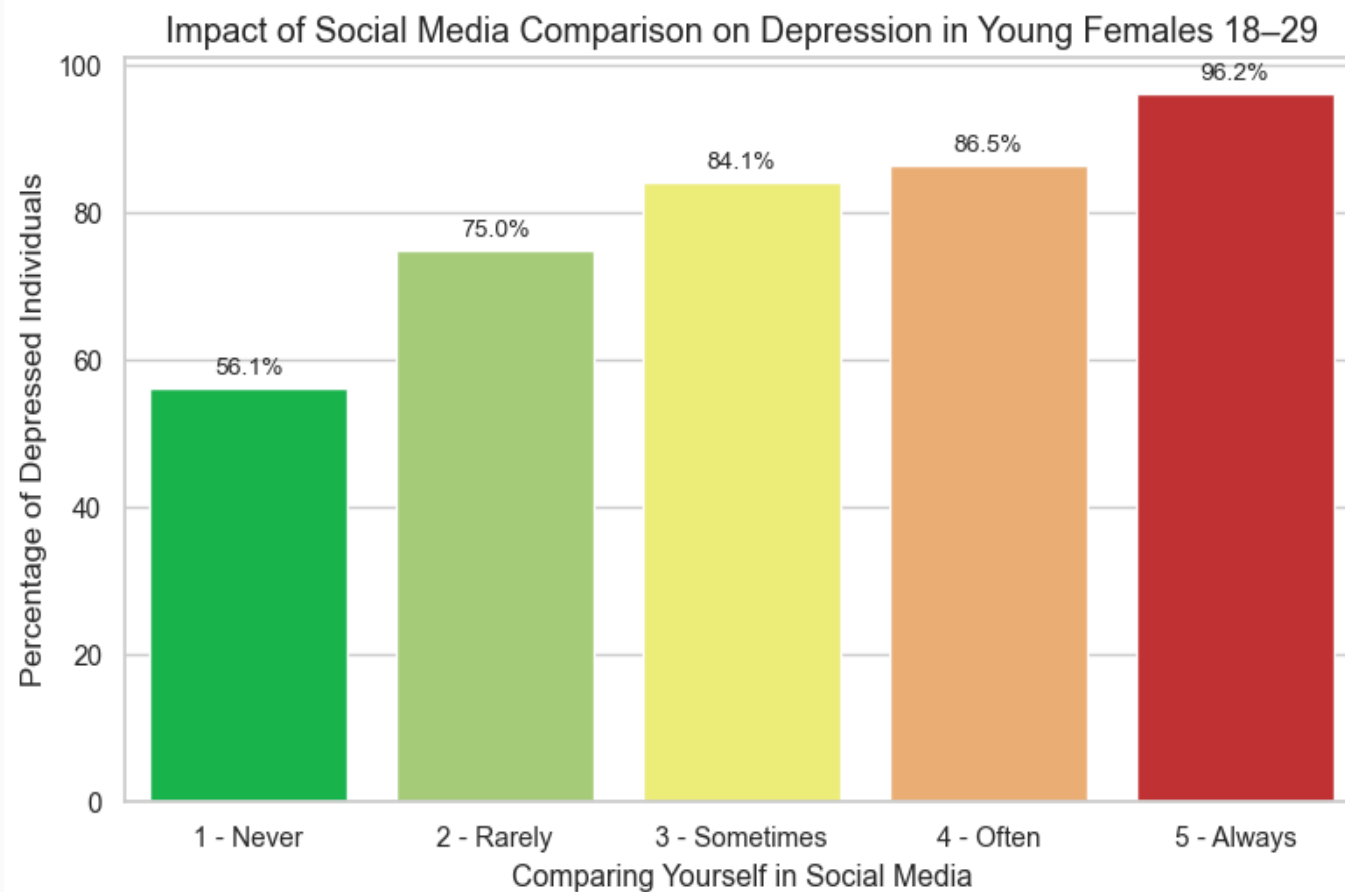
❖Young females often compared themselves on social media, leading to feelings of depression.

❖This graph indicated that as frequency increased, depression approached 96%.

Relationship Status of Depressed Young Females

Relationship Status of Depressed Young Females

Married

9.1%

In a relationship

25.7%

65.1%
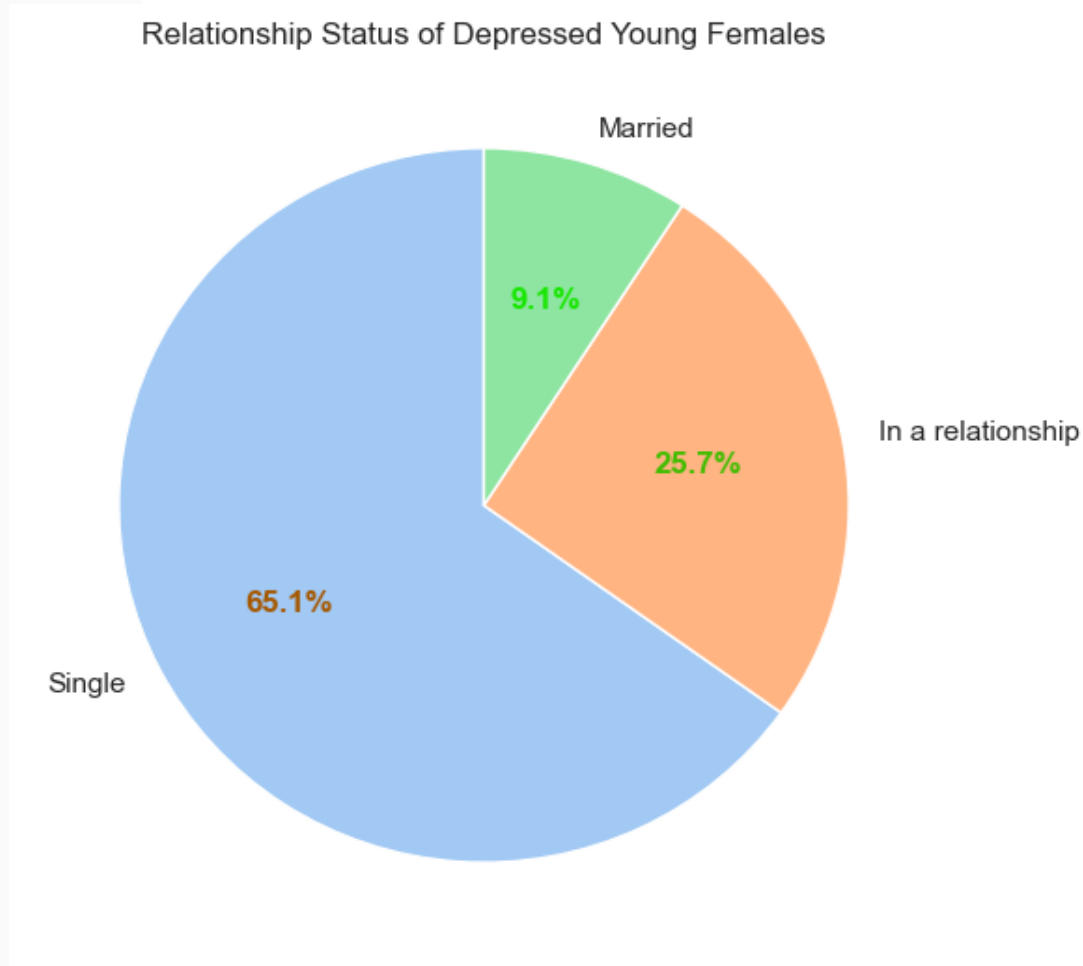
Single

❖This chart showed the relationship status of depressed young females.

❖65% of them were single.

❖26% were in a relationship.

❖9% were married.

Depressed or Down vs. Social Media Usage
(Young Females 18-29)

Depressed or Down vs Social Media Usage (Young Females 18-29)
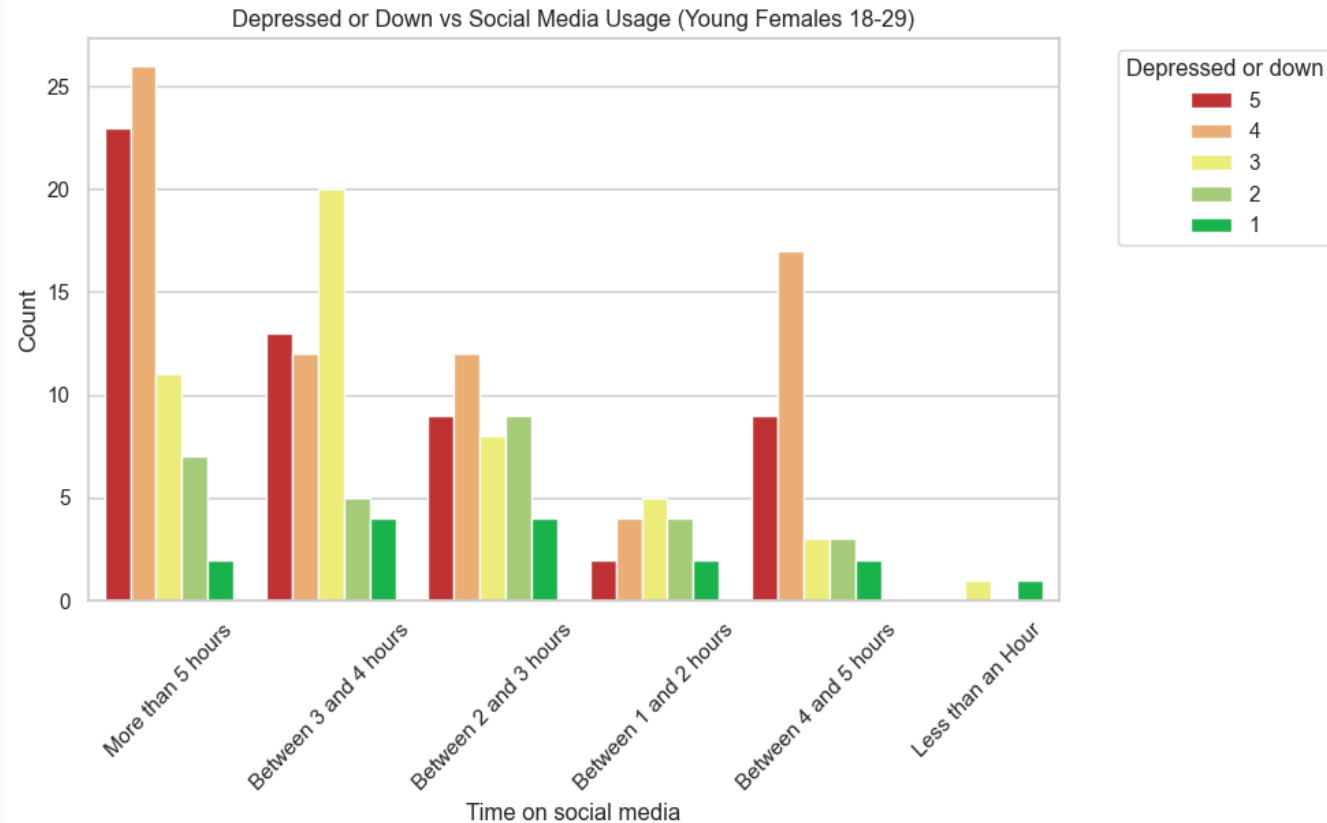
❖ Our studies showed that individuals who used one hour of screen time per day had the lowest impact on depression.

❖ Individuals who spent an extensive amount of time on social media experienced an impact on social activities, such as physical or interpersonal interactions.

❖ These results were extracted from the first dataset used in this case study.

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

Dominant Emotion vs Social Media Usage Category (Young Females 18-29)
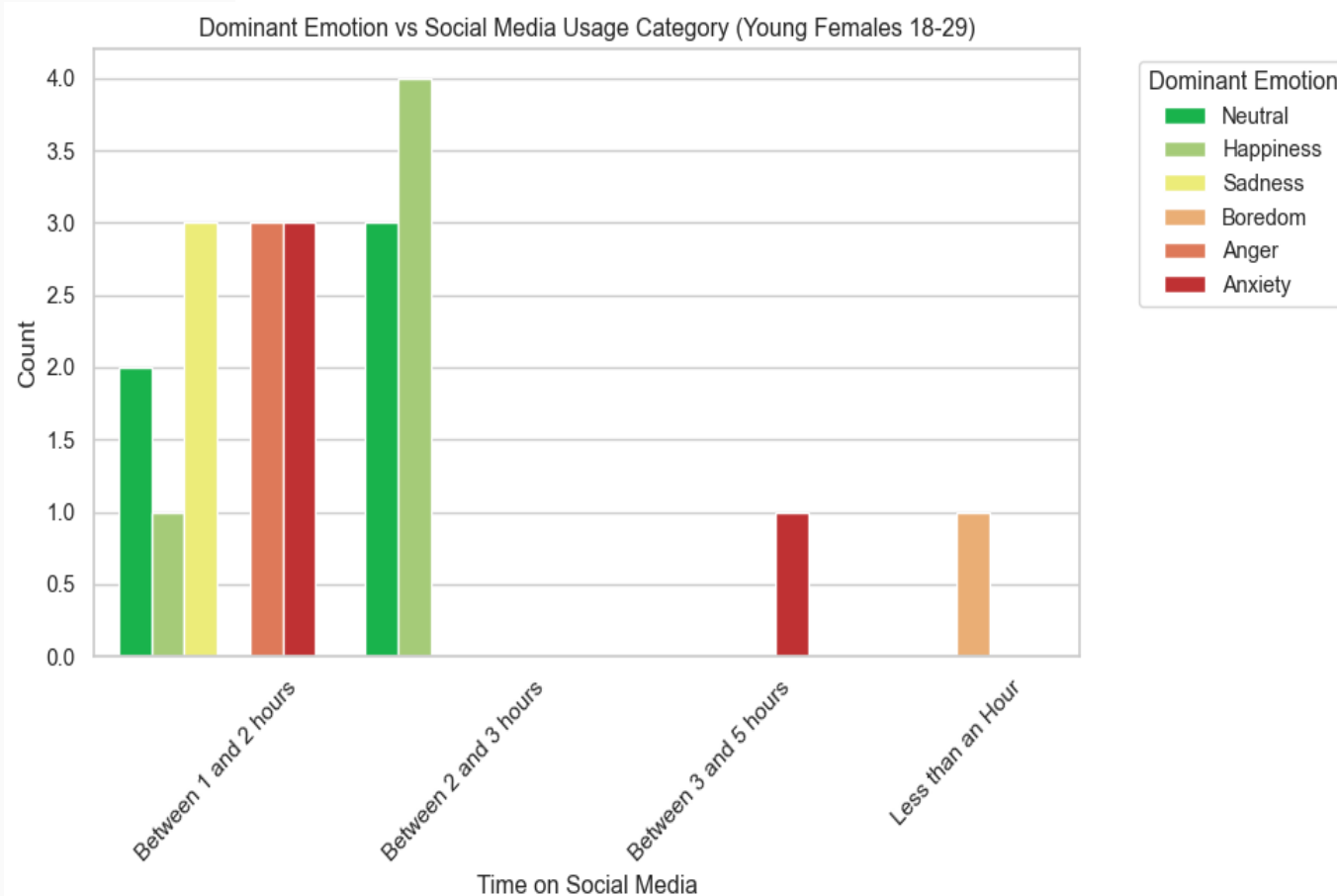
❖Dataset one showed a correlation between time on social media and depression.

❖Dataset two revealed that users spending 2–3 hours showed neutral or happy emotions, those under 1 hour felt bored, and those spending 1–2 or 3–5 hours showed emotions associated with depression.

Dominant Emotion Among Young Females

Dominant Emotion Among Young Females

Boredom — 4.8%
Anger — 14.3%
Neutral — 23.8%
Sadness — 14.3%
Happiness — 23.8%
Anxiety — 19.0%
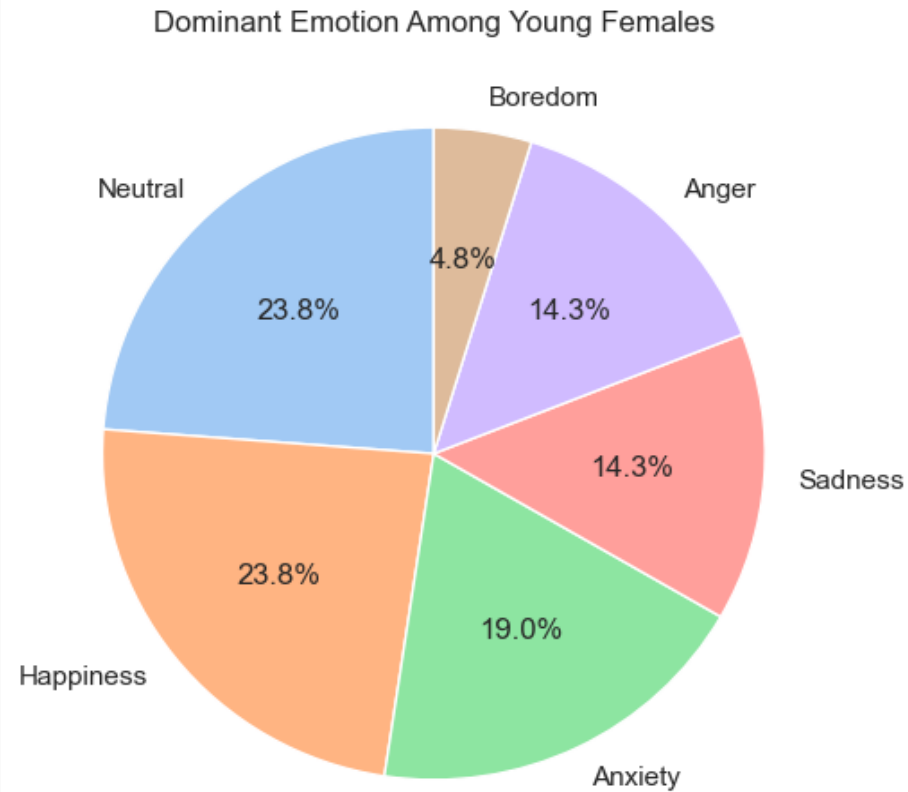
❖ This pie chart showed that more than 50% of individuals displayed depressive symptoms or dispositions of depression.

Recommendations

❖ The analysis helped uncover key patterns in how social media affected the mental health of young females.

❖ Identified Risk Factors

❖ Created a Community

❖ Promoted Positive Content

❖ Exploratory data analysis and visualization helped identify patterns between mental health and social media use in young females.

❖ To improve the mental health impact of social media on young females, strategies and interventions were implemented.

Conclusion

❖ Social platforms offered ways to stay connected, share achievements, and find inspiration, but they also caused emotional and psychological effects.

❖ This case study examined the impact of social media use on the mental health of young women in this age group.

❖ Our analysis used mental health and social media data to find patterns and contributing factors.

❖ The study offered ethical, data-driven strategies to support positive mental health in young females.

Thank you, Dr Ghulam Mujtaba.

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