**Investigation of the Impact of Social Media Usage on Mental Health**

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**Abstract**

This study embarks on a diverse expedition of the detailed connection in between social networks use and psychological wellness. With a mix of measurable and qualitative techniques, we carefully look at the effect of different periods of social networks involvement on psychological health. Our study checks out use durations varying from 1 to 4 hours, finding a range of influences on individuals' psychological health. Notably our searching to expose both measurable information, such as anxiety prices gauged by the BDI, as well as qualitative understandings right into the individual experiences of individuals. We observe a unique pattern where much shorter periods of social media use represent reduced circumstances of depressive signs, compared to high depressive symptoms amongst those involved for longer durations. This research supplies a detailed understanding of the complicated characteristics in social media sites use patterns as well as psychological wellness results supplying beneficial understandings for people, professionals, and policymakers alike.

*Keywords*: social media usage, pattern

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# **Background of the Study**

## **Introduction**

Recently the widespread impact of social networks on numerous elements of human life has gathered significant focus. With billions of customers worldwide, social networks systems have come to be important to contemporary interaction, social communication along with info circulation. Nonetheless together with their extensive fostering issues have arisen concerning the possible effect of too much social networks use on people’s emotional wellness. While some research recommends favorable results, such as raised social connection as well as assistance others emphasize the destructive results, consisting of increased degrees of stress and anxiety, clinical depression, and isolation.

This research embarks on a varied exploration to unwind the thorough link in between social networks use together with mental wellness. By utilizing a mix of measurable together with qualitative methods we intend to thoroughly analyze the influence of various periods of social media sites interaction on people’s psychological well-being. With a strenuous expedition of use durations varying from one to 4 hours, we look for to clarify the refined characteristics underlying this intricate partnership.

## **Assumptions**

To accept the hypothesis this paper is determining the region of acceptance at a significant level (α = 0.05).

## **Research Hypothesis**

We theorize a straight partnership in between social media sites use period plus BDI clinical depression ratings. We especially prepare for that longer periods of social media sites interaction will favorably associate with greater BDI clinical depression ratings, while much shorter durations will certainly reveal reduced ratings. This theory is based on the concept that extended direct exposure to social media sites might intensify depressive signs and symptoms.

**Case Study**: The Impact of Social Media Usage on Depression Scores

H0: There is no relationship between social media usage and BDI depression scores.

H1: Increased social media usage directly correlates with higher BDI depression scores.

## **Study Model**

This paper employs a correlational research design to explore the presence and strength of the relationship between two variables. Utilizing this design allows for the analysis of the degree of association between the identified variables without manipulating them, thereby offering valuable insights into their potential connection.

# **Methodology**

## **Population and Sampling Model**

In this paper the population is the entire table given in the final project. Since the

population consists of only 5 students. The sample for this analysis is also 5 students, so the entire population.

## **Data Collection**

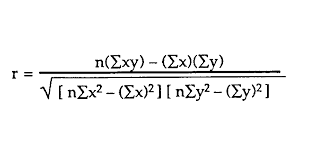
**Issue:** *(The Impact of Social Media Usage on the BDI Depression Score)*

In this case there are 2 variables that will be taken into analysis:

* Social Media Usage - independent variable.
* BDI Depression Score - this variable will be considered as dependent on the other variable.

## **Data Analysis Method**

From this last graph it is possible to see a case of linear regression. Now, to establish the relationship between those variables, the correlation coefficient is used from the given formula bellow:



The formula has a range of -1 to 1, being close to 0 means a weak or nonexistent correlation, and close to the extremities a strong negative or positive correlation, respectively.

To confirm or deny a hypothesis this paper uses critical values tables. Let’s start with the calculation of the degree of freedom:

**df** = n – 2

The ‘n’ is 6, making the degree of freedom equal to 4. Next step is comparing the *α* = 0.05 to the df, making it approximately -0.600. Then we have the *r* ≈ 0.653.

Since the r falls outside of the non-significant range, we would reject the null hypothesis. The correlation between the variables is significantly positive.

## **Data Analysis**

**Issue:** *(The Impact of Social Media Usage on the BDI Depression Score)*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Person | Social media usage (hours/day) (X) | BDI Depression Score (out of 63) (Y) | X\*Y | X² | Y² |
| A | 2,5 | 8 | 20,0 | 6,3 | 64 |
| B | 2,5 | 10 | 30,0 | 9,0 | 100 |
| C | 1,5 | 5 | 7,5 | 2,3 | 25 |
| D | 4,0 | 12 | 48,0 | 16,0 | 144 |
| E | 2,0 | 7 | 14,0 | 4,0 | 49 |
| Sum | 13,0 | 42 | 119,5 | 37,5 | 382 |

|  |  |
| --- | --- |
| SOCIAL MEDIA USAGE |  |
| Mean | 2,6 |
| Median | 2,5 |
| Mode | DNE |
| Standard Deviation | 0,961769203 |
| First Quartile | 2 |
| Third Quartile | 3 |

|  |  |
| --- | --- |
| NORMAL DISTRIBUTION OF SOCIAL MEDIA USAGE |  |
| 1,5 | 0,215668706 |
| 2 | 0,341450569 |
| 2,5 | 0,412564316 |
| 3 | 0,380433362 |
| 4 | 0,143787722 |

|  |  |
| --- | --- |
| DEPRESSION SCORE |  |
| Mean | 8,4 |
| Median | 8,0 |
| Mode | DNE |
| Standard Deviation | 2,701851217 |
| First Quartile | 7 |
| Third Quartile | 10 |

|  |  |
| --- | --- |
| NORMAL DISTRIBUTION OF DEPRESSION SCORE |  |
| 5 | 0,066893295795 |
| 7 | 0,129105899812 |
| 8 | 0,146045857899 |
| 10 | 0,123907721356 |
| 12 | 0,060776812254 |

# **Conclusions**

## **Conclusion**

The correlation coefficient is a strong positive with 0.99 showing a positive linear relationship when comparing both variables. Meaning that is shown a linear trend with the increase of social media usage to the BDI depression score also increasing.

This implies that as the use of social media boosts, the BDI clinical depression ratings tend to increase. Meaning that this research is an important step to make social media liable for the decrease of mental health of their users and they should be thinking on doing a healthier and more moral approach to it. Also, it discourages people struggling with mental health from using these services.

## **Limitations**

The lack of scope and size of the project, only having 5 students to get the data from what is a concerning low sample size, may generalize or dissuade the results. Also, the sample size cannot look at diverse cultures or demographics, ignoring changes that culture may have on the data.

Also, the research does not have a control group possibly persuading the data due to a lack of a baseline. Another issue may come to the lack of specific social media that the samples used; different social media may cause a different impact on the BDI scores.