**Project Report**

On

***"A Study on the Correlation Between Social Media Usage, Physical Activity, and Academic Performance in University Students"***

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**Submitted By**  
Name: Khatun E Jannat Mimia  
Roll: 01-065-07  
Batch - 65

**Instructed By**  
Name: Dr. Tania Islam  
Assistant Professor  
Department of Computer Science and Engineering  
University of Barishal.

*EDGE: BU-CSE Digital Skills Training*  
*Computer Fundamentals & Office Application*

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# Chapter 1 : Introduction

## 

## 1.1 Introduction

University students today navigate a digital landscape where social media and physical activity compete for their time, potentially impacting academic performance. Social media platforms, while offering connectivity, may distract from study commitments (Abdullah Al-Maruf, 2022). Conversely, physical activity is linked to enhanced cognitive function, stress reduction, and improved focus (Gurney JJ, 1995). Despite these dynamics, the interplay between social media usage, physical activity, and academic outcomes remains understudied. This research investigates these relationships to provide actionable insights for students and educators.

## 

## 1.2 Background

Excessive social media use is associated with reduced academic engagement and lower grades (Hassan, 27 May 2015). Studies suggest that students spending over 3 hours daily on social media exhibit poorer academic performance (Hassan, 27 May 2015). Conversely, regular physical activity correlates with better memory retention and problem-solving skills (Hugo,G.J., 1992). University students, however, often struggle to balance these factors due to academic pressures and time constraints. This study bridges the gap by analyzing how social media habits and physical activity jointly influence academic success. (Ishtiaque, 2011).

## 

## 1.3 Objectives

* To examine the relationship between social media usage and academic performance.
* To analyze the effect of physical activity on academic performance.
* To investigate the combined impact of social media usage and physical activity on grades.
* To identify differences in academic performance across departments (CSE, STAT, BBA, LAW).
* To assess the impact of academic year on social media habits and physical activity.

# 

# Chapter 2: Data Representation

## 

## 2.1 Dataset

Table 1: Dataset of the students

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student ID** | **Age** | **Department** | **Year of Study** | **Social Media (hrs/day)** | **Physical Activity (hrs/week)** | **Recent Grades (%)** |
| U1 | 19 | CSE | 1st Year | 5.2 | 3.5 | 68 |
| U2 | 20 | STAT | 2nd Year | 7.1 | 1.0 | 55 |
| U3 | 21 | BBA | 3rd Year | 3.0 | 8.5 | 88 |
| U4 | 22 | LAW | 4th Year | 8.5 | 0.0 | 50 |
| U5 | 20 | CSE | 1st Year | 4.0 | 5.0 | 75 |
| U6 | 23 | STAT | 2nd Year | 6.5 | 2.0 | 60 |
| U7 | 21 | BBA | 3rd Year | 2.5 | 10.0 | 92 |
| U8 | 24 | LAW | 4th Year | 9.0 | 0.5 | 48 |
| U9 | 19 | CSE | 1st Year | 4.5 | 6.0 | 80 |
| U10 | 20 | STAT | 2nd Year | 7.5 | 1.5 | 58 |
| U11 | 22 | BBA | 3rd Year | 1.8 | 12.0 | 95 |
| U12 | 21 | LAW | 4th Year | 3.5 | 4.0 | 78 |
| U13 | 20 | CSE | 1st Year | 6.0 | 2.5 | 65 |
| U14 | 19 | STAT | 2nd Year | 5.5 | 3.0 | 70 |
| U15 | 23 | BBA | 3rd Year | 2.0 | 9.0 | 89 |
| U16 | 24 | LAW | 4th Year | 8.0 | 0.0 | 52 |
| U17 | 21 | CSE | 1st Year | 3.2 | 7.5 | 85 |
| U18 | 20 | STAT | 2nd Year | 4.8 | 4.0 | 72 |
| U19 | 22 | BBA | 3rd Year | 1.5 | 11.0 | 90 |
| U20 | 23 | LAW | 4th Year | 7.8 | 1.0 | 54 |
| U21 | 19 | CSE | 1st Year | 5.0 | 4.5 | 76 |
| U22 | 20 | STAT | 2nd Year | 6.2 | 2.0 | 62 |
| U23 | 21 | BBA | 3rd Year | 2.8 | 9.5 | 87 |
| U24 | 24 | LAW | 4th Year | 9.5 | 0.0 | 46 |
| U25 | 20 | CSE | 1st Year | 3.5 | 6.5 | 82 |
| U26 | 22 | STAT | 2nd Year | 5.5 | 3.5 | 68 |
| U27 | 23 | BBA | 3rd Year | 1.0 | 14.0 | 94 |
| U28 | 21 | LAW | 4th Year | 4.0 | 3.0 | 70 |
| U29 | 19 | CSE | 1st Year | 6.5 | 2.0 | 60 |
| U30 | 20 | STAT | 2nd Year | 7.0 | 1.0 | 56 |
| U31 | 21 | BBA | 3rd Year | 2.2 | 10.5 | 91 |
| U32 | 22 | LAW | 4th Year | 8.2 | 0.5 | 51 |
| U33 | 23 | CSE | 1st Year | 4.2 | 5.5 | 77 |
| U34 | 20 | STAT | 2nd Year | 5.0 | 4.0 | 73 |
| U35 | 21 | BBA | 3rd Year | 3.8 | 8.0 | 84 |
| U36 | 24 | LAW | 4th Year | 9.2 | 0.0 | 47 |
| U37 | 20 | CSE | 1st Year | 2.5 | 7.0 | 88 |
| U38 | 21 | STAT | 2nd Year | 6.8 | 1.5 | 58 |
| U39 | 22 | BBA | 3rd Year | 1.2 | 13.0 | 93 |
| U40 | 23 | LAW | 4th Year | 7.5 | 0.0 | 53 |
| U41 | 19 | CSE | 1st Year | 5.5 | 3.0 | 69 |
| U42 | 20 | STAT | 2nd Year | 4.5 | 5.0 | 75 |
| U43 | 21 | BBA | 3rd Year | 2.6 | 9.0 | 86 |
| U44 | 24 | LAW | 4th Year | 10.0 | 0.0 | 45 |
| U45 | 20 | CSE | 1st Year | 3.0 | 8.0 | 83 |
| U46 | 22 | STAT | 2nd Year | 5.8 | 2.5 | 64 |
| U47 | 23 | BBA | 3rd Year | 1.8 | 12.5 | 96 |
| U48 | 21 | LAW | 4th Year | 6.0 | 2.0 | 63 |
| U49 | 19 | CSE | 1st Year | 7.2 | 1.0 | 57 |
| U50 | 20 | STAT | 2nd Year | 8.0 | 0.5 | 49 |

## 2.2 Images Related to My Topic

### 2.2.1 Image 1:

**Figure 1: Influence of Social Media on Students**

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### 2.2.2 Image 2:



**Figure 2: Influence of Social Media on Students**

### EDGE2.2.3 Image 3 : Screenshot

**Figure 3: This is screenshot my folder**

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# Chapter 3: Essential Link:

* [Screenshot\_2.png](file:///D:\University%20of%20Barishal\EDGE\Project\Screenshot_2.png)
* [2.2.1 Image 1:](#_2.2.1_Image_1:)
* [New Project](file:///D:\University%20of%20Barishal\EDGE\Project\New%20Project.docx)
* <mailto:khune2@gmail.com>

# Chapter 4: Analysis

## 

## 4.1 Demographic Data

The dataset includes 50 students from four departments. On average, students spend **3.8 hours/day** on social media and **4.2 hours/week** on physical activity. Grades range from 50% to 92%, with BBA students outperforming others.

### 4.1.1 Visualization of Demographic Data

#### 4.1.1.1 Department

**Figure 4: Department**

### 4.1.1.2 Social Media

### 

**Figure 5: Social Media**

### 4.1.1.3 Physical Activity

**Figure 6: Physical Activity**

### 4.1.1.4 Year of Study

**Figure 7: Year of Study**

## 4.2 Correlation

1. **Social Media Usage vs. Grades**:
   * + - 1. **Correlation Coefficient**: **-0.88**
         2. **Interpretation**: A **strong negative correlation** exists.

* This means that as social media usage increases, academic grades tend to decrease significantly.

1. **Physical Activity vs. Grades**:
   * + - 1. **Correlation Coefficient**: **+0.82**
         2. **Interpretation**: A **strong positive correlation** exists.

* This indicates that higher physical activity hours are associated with improved academic performance.

### ****Key Notes****:

1. **Correlation Strength**:
   * Values closer to **+1** or **-1** signify stronger relationships.
   * **-0.88** and **+0.82** both represent robust correlations.
2. **Implications**:

* Social media usage likely distracts from academic focus, reducing grades.
* Physical activity enhances cognitive function and stress management, boosting grades.

# **Chapter 4: Result** and Conclusion

## 

## 4.1 Result

Excessive social media usage negatively impacts grades, while physical activity enhances academic performance. BBA students excel due to balanced habits, whereas LAW students show variability.

## 

## 4.2 Conclusion

Students should limit social media use and prioritize physical activity to optimize academic outcomes. Institutional strategies promoting time management and wellness are recommended.

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