

Final Project

Impact of Social Media on Academic Performance

Chapter 4

Statistical Analysis & Findings Discussion

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Chapter 4: Statistical Analysis & Findings Discussion

Note: All figures in this chapter are illustrative example values used to demonstrate the correct structure and reporting style. Replace every table and statistic with the actual output from your own SPSS/Excel analysis of the collected questionnaire responses (n = 150).

4.1 Introduction

This chapter presents the results of the data analysis carried out on the responses collected through the questionnaire. It begins with a profile of the research sample, followed by validity and reliability tests of the instrument. It then reports the descriptive statistics for the research variables in order to answer the research questions, before testing the study hypotheses through correlation and regression analysis. Finally, the findings are connected with the literature reviewed in Chapter 2.

4.2 Sample Profile (Descriptive Statistics for the Research Sample)

A total of 150 valid questionnaires were received and analysed. The demographic characteristics of the respondents are summarised in Table 4.1.

Table 4.1 – Demographic profile of respondents (n = 150)

Characteristic	Frequency	Percentage
Gender – Male	64	42.7%
Gender – Female	86	57.3%
Age – 18–20	60	40.0%
Age – 21–23	70	46.7%
Age – 24 and above	20	13.3%
Daily use – less than 2 hrs	18	12.0%
Daily use – 2 to 4 hrs	57	38.0%
Daily use – 4 to 6 hrs	49	32.7%
Daily use – more than 6 hrs	26	17.3%

The sample is fairly balanced by gender, with a slight majority of female students (57.3%). Most respondents are between 18 and 23 years old (86.7%). Notably, half of the students (50%) report spending more than four hours a day on social media, indicating heavy usage within the sample.

4.3 Validity & Reliability Tests for the Questionnaire

The content validity of the questionnaire was supported by basing the items on previous validated studies and on the variables defined in Chapter 3. The internal reliability of each scale was assessed using Cronbach's alpha; values above 0.70 are considered acceptable.

Table 4.2 – Reliability statistics (Cronbach's alpha)

Scale	No. of items	Cronbach's α
Social media usage	5	0.84
Academic performance	5	0.81
Overall instrument	10	0.86

All alpha values exceed the 0.70 threshold, confirming that the questionnaire scales are reliable and internally consistent.

4.4 Descriptive Statistics for Research Variables (Answering the Research Questions)

Table 4.3 reports the means and standard deviations of the two main variables, measured on a five-point Likert scale.

Table 4.3 – Descriptive statistics for research variables

Variable	Mean	Std. Dev.
Social media usage	3.92	0.74
Academic performance (perceived)	2.68	0.81

These results are now used to answer the three research questions stated in Chapter 1:

1. **Does social media affect academic performance?** Yes. The high mean for social media usage (3.92) alongside the lower mean for perceived academic performance (2.68) suggests that students perceive a negative effect of social media on their academic work.
2. **How many hours do students use it?** On average students reported about 4.3 hours of daily social media use, with half of the sample exceeding four hours per day.
3. **Is there a relationship with GPA?** Yes. As shown in Section 4.5, heavier social media usage is significantly associated with lower self-reported GPA and academic performance.

4.5 Testing Hypotheses

The hypotheses from Chapter 1 were tested at a significance level of 0.05:

- **H1:** Social media usage has a negative impact on academic performance.
- **H0:** Social media usage has no significant effect on academic performance.

Pearson's correlation and simple linear regression were used to test the relationship. The results are shown in Tables 4.4 and 4.5.

Table 4.4 – Correlation between social media usage and academic performance

Relationship	Pearson r	Sig. (p)
Social media usage – Academic performance	-0.52	0.000

Table 4.5 – Simple linear regression results

Predictor	β	R ²	F	Sig.
Social media usage	-0.49	0.27	54.8	0.000

The correlation coefficient ($r = -0.52$, $p < 0.01$) indicates a moderate, statistically significant negative relationship: as social media usage increases, academic performance decreases. The regression shows that social media usage explains about 27% of the variation in academic performance ($R^2 = 0.27$), with a significant negative coefficient ($\beta = -0.49$, $p < 0.001$). Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted: social media usage has a significant negative impact on academic performance.

4.6 Connecting the Results with the Literature

The findings of this study are consistent with the literature reviewed in Chapter 2, which reported that heavy social media usage is linked to lower academic performance, largely because of distraction and reduced study time. The significant negative relationship found here supports earlier work by Smith (2022) and Brown (2021), who also observed that excessive use of social networking platforms competes with study time and weakens concentration. The result aligns with the broader argument in the Journal of Educational Research (2023) that the effect of social media depends heavily on the intensity of use. At the same time, the moderate strength of the relationship ($R^2 = 0.27$) confirms that social media is one important factor among several, rather than the only determinant of academic outcomes, which echoes the mixed results highlighted in the literature.

4.7 Conclusion

This chapter analysed the data collected from 150 university students. The questionnaire proved reliable, with all Cronbach's alpha values above 0.80. Descriptive statistics showed high levels of social media usage and a lower perception of academic performance. Correlation and regression analysis confirmed a significant negative relationship between the two variables, leading to the rejection of the null hypothesis. These results, which are consistent with previous research, suggest that reducing excessive social media use could help improve students' academic performance. The

final chapter will summarise the study, present its conclusions and offer recommendations.

4.8 References

The following references are added to the reference list of the project (additional methodology sources combined with the original Chapter 2 references):

1. Brown, T. (2021). Social media and student concentration. Academic Press.
2. Field, A. (2018). Discovering Statistics Using IBM SPSS Statistics (5th ed.). SAGE Publications.
3. Journal of Educational Research (2023). The intensity of social media use and learning outcomes.
4. Pallant, J. (2020). SPSS Survival Manual (7th ed.). Open University Press.
5. Saunders, M., Lewis, P., & Thornhill, A. (2019). Research Methods for Business Students (8th ed.). Pearson.
6. Smith, J. (2022). The effect of social media usage on university GPA. Journal of Higher Education Studies.