

# Exploring the relationship between PHQ-9 scores and various factors: A secondary data analysis (PSY4802)

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**Results** In this secondary data analysis, data from 351 respondents were examined to explore the relationships between Patient Health Questionnaire (PHQ-9) scores, GPA, social media usage, and job status. One dataset was utilized: “Depression and Academic Performance of Students,” from Kaggle. This dataset includes responses to the PHQ-9 as well as questions about academic performance, time spent on social media, and job status. Descriptive statistics can be seen in table 1 and table 2.

Table 1: Table 1

depressionLevel	N	GPA	sd	se	ci
Mild depression	32	3.268438	0.7160425	0.1265796	0.2581608
Moderate depression	128	3.101719	0.6959106	0.0615104	0.1217180
Moderately severe depression	108	2.925741	0.8217012	0.0790682	0.1567436
Severe depression	83	2.866747	0.7604397	0.0834691	0.1660466

Table 2: Table 2

socialMean	sd	se	jobMean	sd	se
20.87179	6.160063	0.3287998	20.87179	6.160063	0.3287998

Correlation tests were conducted to examine the relationships between depression severity, GPA, social media usage.

A Pearson correlation coefficient was run to assess the linear relationship between summed PHQ-9 score and GPA.

A Spearman’s rank-order correlation was run to examine the relationship between depression severity and social media usage, and job status with the former.

Relationship	r	p_value
PHQ-9 & GPA	-0.1730990	0.0005649
PHQ-9 & Social Media	0.1155836	0.0303881
PHQ-9 & Job Status	-0.0546056	0.3076582

Graphs such as `geom_violin()` for GPA and `geom_bar()` for social media usage and job status were created to view the distributions across different levels of depression severity.



