



جامعة مصر للمعلوماتية
EGYPT UNIVERSITY
OF INFORMATICS

Egypt University of Informatics
Computer and Information Systems
Data Analysis Course

The Analysis of Peer pressure & Its Correlation With Academic performance

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Introduction:

This is a survey aimed at understanding the relationship between peer pressure and academic performance. Peer pressure, the influence exerted by peers to conform to certain behaviors, attitudes, or values, is a prevalent aspect of adolescent and young adult life. In the academic realm, peer pressure can manifest in various ways, from expectations to perform well academically to influencing academic decisions.

Research question:

Is there a correlation between peer pressure and academic performance?

Hypothesis:

My hypothesis for this topic is that students tend to be positively affected by peer pressure, directly or indirectly, if a student is surrounded by other students who are performing well academically they will be influenced to do the same.

Population of interest:

The population of interest for this survey primarily includes students, particularly adolescents and young adults, who are currently enrolled in educational institutions such as schools or universities.

Sampling methods used:

Convenience Sampling and Stratified Random Sampling.

Convenience sampling and stratified random sampling are good choices for this survey because:

1. **Easy to Reach Participants:** Convenience sampling lets us quickly find participants, like students, through platforms they often use, like social media.
2. **Represents Different Groups:** Stratified random sampling helps make sure our sample includes a variety of students, like different grades or backgrounds, so our findings are more accurate and apply to more people.
3. **Gets a Diverse Group:** Using both methods lets us include students from all kinds of backgrounds, which helps us understand how peer pressure affects academics for everyone.
4. **Practical and Efficient:** These methods help us gather data effectively without needing lots of time or resources, making the survey easier to carry out while still being reliable.

Bias Identification:

During the process of conducting this survey, it was ensured that almost no bias would occur by carefully constructing neutral and clear questions.

Survey Questions:

1. On a scale of 1 to 5, how often do you feel pressured by your peers to perform well academically?
2. On a scale of 1 to 5, how often do you feel pressured by your peers to perform well academically?
3. Do you find that peer pressure affects your academic performance/habits?
4. Have you ever made academic decisions (e.g., course selection, academic path selection, etc..) based on peer pressure?
5. What is your CGPA?

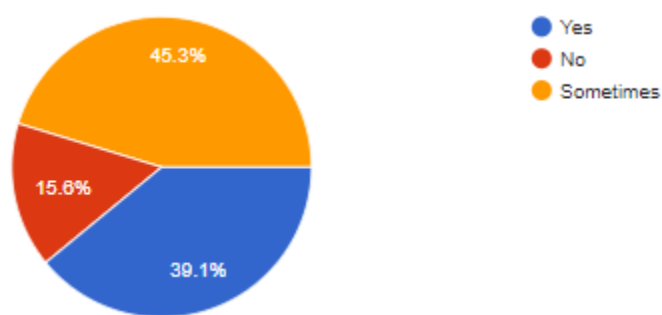
Online survey link: <https://forms.gle/dp3u76s3DtuvyYfRA>

Number of samples collected: 65

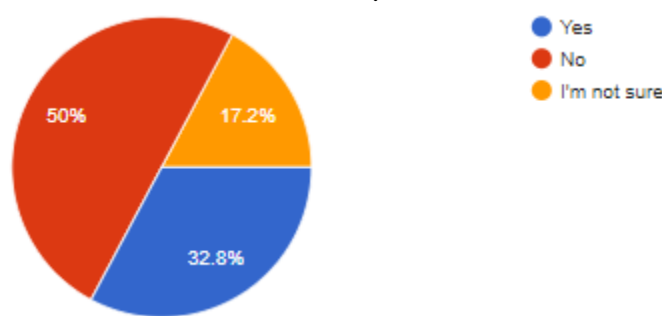
Analysis:

To analyze the data collected from this survey, we will calculate basic descriptive statistics such as the mean, median, and mode. We will also create visual representations of the data using charts and graphs to help identify any trends or patterns.

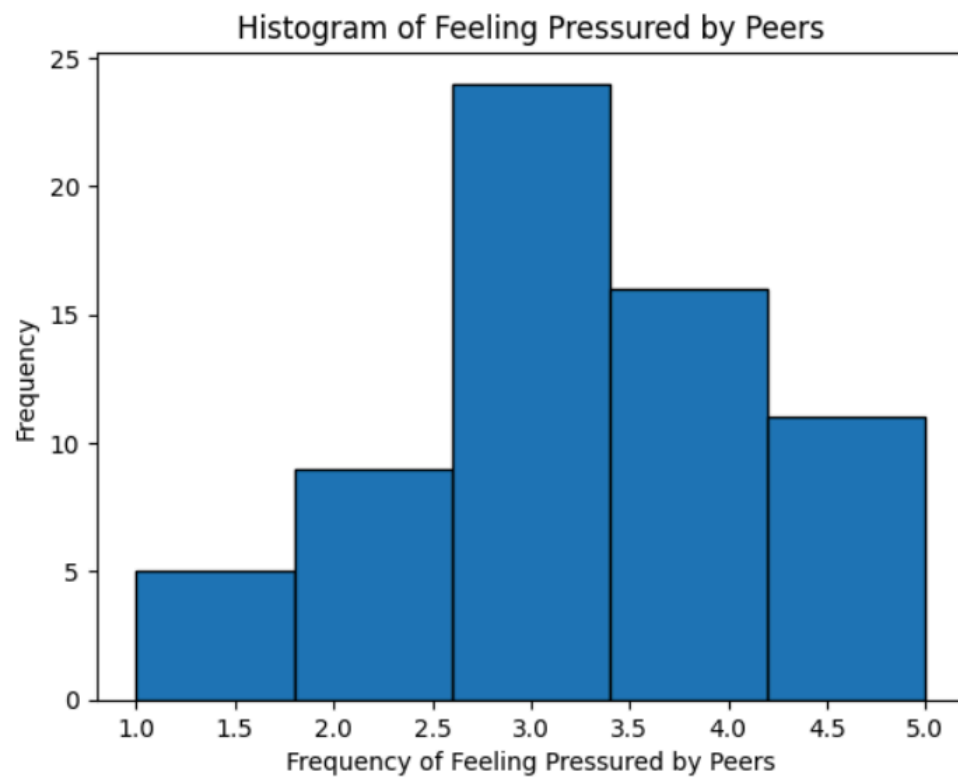
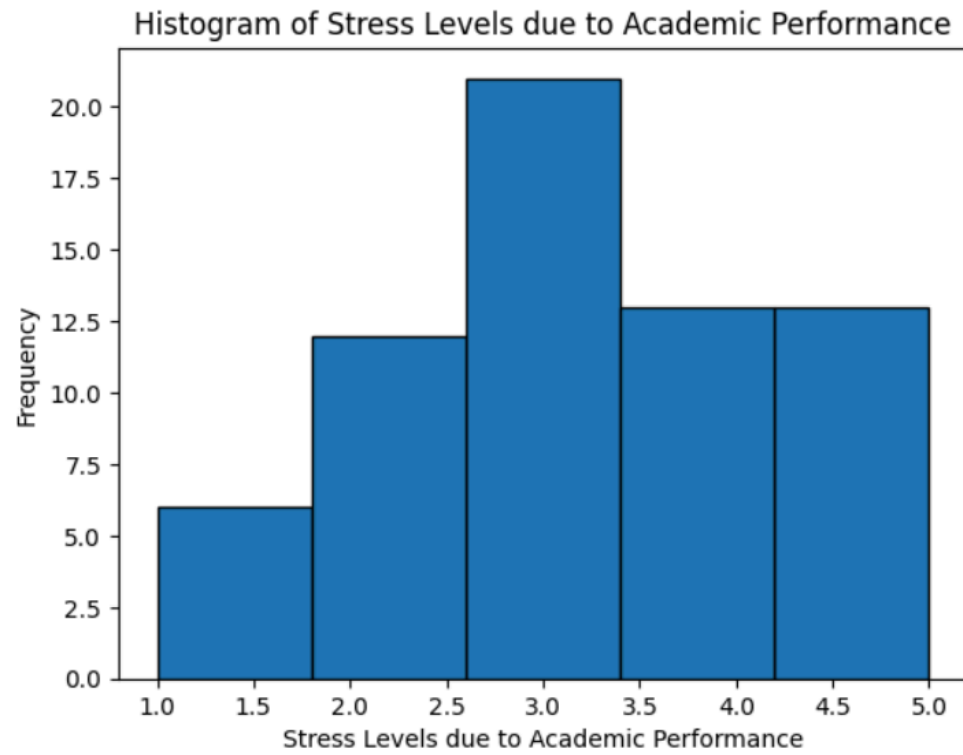
Question: Do you find that peer pressure affects your academic performance/habits?



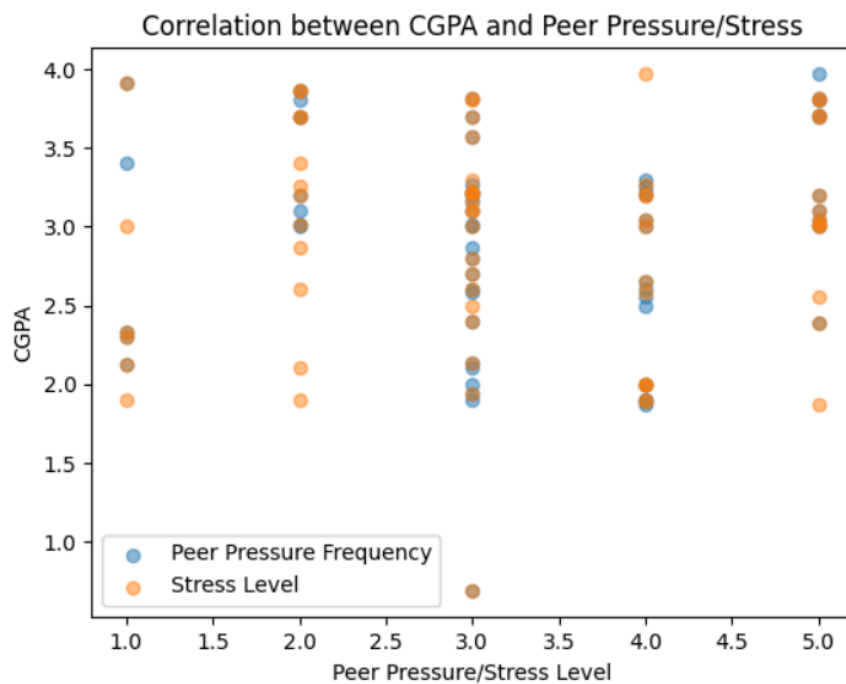
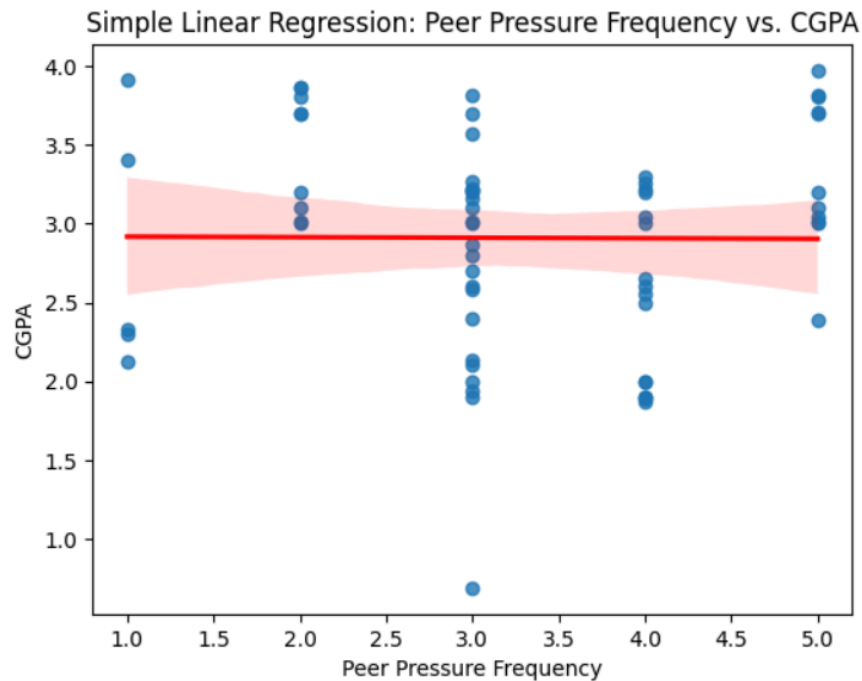
Question: Have you ever made academic decisions (e.g., course selection, academic path selection, etc..) based on peer pressure?



	On a scale of 1 to 5, how often do you feel pressured by your peers to perform well academically?	On a scale of 1 to 5, how stressed do you feel about your academic performance due to peer pressure?	What is your CGPA?
count	65.000000	65.000000	65.000000
mean	3.292308	3.230769	2.908923
std	1.141861	1.234520	0.681433
min	1.000000	1.000000	0.690000
25%	3.000000	2.000000	2.400000
50%	3.000000	3.000000	3.010000
75%	4.000000	4.000000	3.270000
max	5.000000	5.000000	3.970000



In the scatter plot and linear regression graph shown below, we can conclude that there is little to no correlation between peer pressure and academic performance.



Conclusion:

The conclusion I gathered from this series of questions is that peer pressure may have an impact on most students, but it doesn't necessarily have to do with their grades.

Potential issues:

After the data collection and reviewal process, there seemed to be a hidden bias that revealed itself. Even though the survey questions were pretty straightforward and clear, some can arise due to various factors, including the survey design, wording of questions, sampling methods, respondent characteristics, and the context in which the survey is conducted. One of the issues I encountered was with the last question, a number of respondents tended to answer inaccurately, this issue was tackled by replacing some values with the mean but all of which led to a percentage of inaccuracy in the graphs.