The Effect of Peer Relation and Peer Pressure on the Performance of University Students: A Quantitative Study

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ABSTRACT

Peer relations shows a pivotal role in the academic journey of university students, encompassing both supportive relations and the influence of peer pressure. This study delves into the connections among peer relations, peer pressure, and the academic achievements of university students. Its primary objective is to investigate the links between the quality of peer interactions and the degree of peer pressure with academic performance. This study adopts a quantitative research design, survey design with random sampling and tries to investigate how these peer-related characteristics affect students' performance. Random sampling will be utilised to pick a representative sample of 600 university students from diverse faculties and academic years. The research is based on data obtained, and the following significant conclusions were observed: the analysis of the data revealed a positive association between peer relations and peer pressure, showing that as peer relations improve, peer pressure tends to grow. Positive link is found in the study involving peer pressure and academic achievement, suggesting that students confronting complicated degrees of peer pressure tended to perform better academically. This conclusion urges additional inquiry into the mechanisms by which peer pressure can contribute to improved academic achievement. Positive social relations can be considered as a vital benefit for academic performance, while the function of peer pressure in determining academic outcomes is an exciting subject for further research. Understanding the complexities of peer interactions and their impact on academic performance is crucial for educators, politicians, and students alike. Further research is needed to delve deeper into the intricacies of these relationships and to explore potential interventions and strategies that can enhance the overall university experience for students.

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1. Introduction

Students who are in the higher education period are theme to peer pressure meanwhile they regularly chance to their peers for provision and incline to survey their lead deprived of inquisitive if it is suitable for them. According to Adeniyi and Kolawole (2015), growth student’s qualities are enhanced when they meet new fellows, learn with them and support each other to get to the higher level of appreciation The social contextualization notions make people more susceptible to temptation; for instance, when people are socializing, they are more inclined to partake in doings like working with peers, interact and supports the practical work (Bonein & Denant-Boémont, 2015). Since they are more inclined to communicate with their friends at this time, students, adolescent social settings may have an effect on them. As they progress and enter adolescence, students depend less on their families and more on their friends, particularly
the decision making of students and forming ethical values (Uslu, 2013). Humans socialize with other people in their environment, which affects how they develop. It is explicitly hypothesized that student academic achievements are associated by the supports of classmates, family members and teachers that students receive that influences their degree of educational enactment (Chen, 2008). The focus of education has historically centered on relationships. Most research indicates a connection between good interpersonal relationships and academic success (Sial, Naz, & Rasheed, 2021). The results of the limited reading on the relations among diverse interpersonal connections and academic ability are contradictory.

Students tends to spend time with their fellows in activities tasks and other academic chores. Pressure of the fellow students sometimes tend to be good and sometimes it would be bad, and since it encourages ongoing erudition, it may even have no effect (Gulati, 2017). During the academic sessions, the academic performance is being influenced by the fellow’s practices. The way they are affected by their peers—whether favorably or unfavorably—is what matters (Moldes, Biton, Gonzaga, & Moneva, 2019). Students find comfort in conversing with strangers they encounter in the company of their peers and be situated uniform conscious of the intelligent effects their generations have on them (Kayani, Shiza, & Sidra, 2019). The study clarifies the crucial part that peer relationships and peer pressure play in influencing university students' academic achievement. The creation of focused academic assistance programs and interventions to enhance student results can be informed by an understanding of these processes. The research offers policymakers in education useful information. They can use this research to craft policies that foster positive peer relationships and mitigate negative peer pressure, ultimately enhancing the quality of education. Educators and teachers can use the study's insights to better understand the influence of peer dynamics on their students. This knowledge equips them to offer guidance and support to students dealing with peer-related challenges. The research contributes to the well-being of university students by highlighting the significance of positive peer relations. This understanding can help students build healthier relationships and manage peer pressure, ultimately leading to improved mental health and academic performance. The study aims to understand how the quality of peer relations and the level of peer pressure are related with academic performance. The following were the objectives of the study

1. To determine the extent to which peer relations impact the academic performance of university students.
2. To assess the influence of peer pressure on the academic achievements of university students.
3. To analyze the relationship between peer relations, peer pressure, and academic performance.
4. To investigate whether gender and age differences exist in the influence of peer relations and peer pressure on academic performance.

2. Literature Review

Forthcoming theoretic and applied instruction development will benefit from knowing which kind of human interactions are utmost carefully connected to theoretical recital. Only a few research (Altermatt, 2019; Chen, 2005; Lam et al., 2012; Leung et al., 2021; Vargas-Madriz & Konishi, 2021) consume associated in what way thriving, various kinds of individual interactions correspond with student academic achievement. Results were not consistent across the existing research, which is important. Some studies go into greater detail about the particular kinds of partnerships that are crucial. For instance, Altermatt (2019) discovered that neither parents nor professors could predict academic self-efficacy independently, only perceived peer academic support could. According to Gao and Xue (2020), parental involvement was more effective at explaining disparities in scholar educational achievement than noble impact and had a bigger impact on students' academic success. According to Vargas-Madriz and Konishi (2021), the association among parental provision and educational involvement is direct, but the relationship between peer and educator provision and educational association is refereed through learners' feelings of university belonging.

In contrast to other personal relationships, some partnerships have a lower correlation with academic success, according to other studies. Studies have shown that relationships between students and their parents and peers have a stronger correlation with academic success.
than interactions between students and their teachers. As, Leung et al. (2021) found that although the excellence of student-teacher interactions at Time 1 was not substantially linked with academic accomplishment, the worth peer relationships was significantly connected with academic achievement after regulatory for educational accomplishment Suleiman (2023). In contrast, some research discovered that ties between students and their parents and teachers were more strongly associated with academic success than those between students and their peers. For instance, researchers looked at how Mexican American students viewed the expectations with support they received from their parents, instructors, and peers in connection to their social behavior and academic performance. Significant determinants of social behavior included peer factors. According to Lam et al. (2012)’s analysis of fellows organizational reckoning modelling, maintenance from educators and parents was found to be more directly related to academic performance through student involvement than perceptions of peer support. As a result, different studies have produced varied conclusions about the association between various kinds of student interactions and academic achievement. These conflicting outcomes through different associated issues.

First of all, there were variations in the samples' ages, sizes, and societal and traditional circumstances. Think about the dual readings as an illustration. The study conducted by Altermatt (2019) included a total of 107 apprentice scholars, consisting of 79 females and 28 males. These students were enrolled in introductory psychology courses at a liberal arts college located in the Midwest of the United States. The participants in this study were of standard college age, with a mean age of 20.14 years. A significant majority, comprising 92% of the participants, self-identified as Caucasian. In contrast, Leung et al. (2021) conducted a longitudinal research project in Hong Kong, China. They collected data from a sample of 786 primary school pupils who had similar socioeconomic backgrounds and academic achievements. Data was collected in two waves for this study. In the literature, various academic fields were used to measure academic success. Used, for instance, the English, Chinese, and math final exam scores after the semester right before the experiment. Z-scores for the three subjects were produced by standardizing each participant's scores within each class. Each student's academic performance was measured using the three Z scores added together. Contrarily, Bacete, Tinoco, Perrin, and Remírez (2021) used student scores on end-of-year tests for the first, second, fourth, and sixth grades in mathematics and Spanish, using a 5-point scale. The new learning types changes in a huge trial based on these variables that could affect the research outcomes, which can lessen the drawbacks of earlier studies. In two investigations, we compared three student relationships utilizing various academic fields. We can identify the link that is most closely associated to academic success using this strategy. The hypothesis of the study are as follows;

1. There is no significant association between peer relation and academic performance of university students.
2. There is no significant association between peer pressure and academic performance of university students.
3. There is no significant effect of peer relation and peer pressure on performance of university students

3. **Methodology**

The research aims to examine the effect of peer relations and peer pressure on the educational enactment of university students. This study employs a quantitative research design, survey design with random sampling and aims to understand how these peer-related factors affect students' performance. Random sampling will be used to select a representative sample of 600 university students from various faculties and academic years. This method ensures that the sample accurately represents the broader university student population. A self-developed structured questionnaire will be administered to the 600 university students. The survey questionnaire was include items related to peer relations, peer pressure, academic performance, as well as demographic information (e.g., age, gender). Data were be collected using the structured questionnaire. Academic records was obtained through official university channels. Confidentiality and anonymity of participants were maintained throughout the study. Quantitative analysis of data were include the procedure of numerical software (e.g., SPSS). Descriptive statistics were castoff to abridge demographic data. Inferential statistics, such as relationship analysis and regression analysis, were employed to assess the associations among peer relations, peer pressure, and academic performance.
4. Data analysis

The table 1 shows the mean GPA for female students (M = 3.62) is notably higher than that of male students (M = 3.45). This suggests, female students overtake their male complements in reports of academic achievement. The standard deviation for both genders indicates some variability in academic performance within each group, with females exhibiting slightly less variation. Students under the age of 20 have a higher mean GPA (M = 3.58) compared to students aged 20 and older (M = 3.48). This finding suggests that, on average, younger students tend to perform better academically. The standard deviation for both age groups indicates that there is some degree of variation in academic performance within each age group, with older students demonstrating slightly more variability than younger students on average. This variation may be greater within the older student population.

Table 1: Descriptive statistic of the variables of the study

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>Mean (GPA)</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic performance</td>
<td>Male</td>
<td>250</td>
<td>3.44</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>350</td>
<td>3.61</td>
</tr>
<tr>
<td>Age group</td>
<td>Between 20-25</td>
<td>200</td>
<td>3.57</td>
</tr>
<tr>
<td></td>
<td>Above 25</td>
<td>400</td>
<td>3.47</td>
</tr>
<tr>
<td>Peer pressure</td>
<td>Low</td>
<td>280</td>
<td>3.54</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>320</td>
<td>3.51</td>
</tr>
<tr>
<td>Peer relationship</td>
<td>Low</td>
<td>180</td>
<td>3.41</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>420</td>
<td>3.56</td>
</tr>
</tbody>
</table>

Students who are subjected to low levels of peer pressure have a mean grade point average that is slightly higher than those who are subjected to high levels of peer pressure, which is 3.55 rather than 3.50. This suggests that there is a minor difference in academic performance due to peer pressure, with students in the group with low peer pressure performing somewhat better on average than students in the group with high peer pressure. Because the standard deviations for all groups are comparable to one another, this finding suggests that there is comparable variability in academic achievement across all degrees of peer pressure. Students who have higher-quality peer relationships have a mean grade point average (GPA) of 3.57, which is significantly higher than the mean GPA (3.42) of students who have lower-quality peer relationships. This provides support for the hypothesis that healthy peer connections are linked to higher levels of academic achievement. The standard deviation for the high-quality peer relationship group is lower, indicating less variability in academic performance among students with strong peer relationships. In contrast, the standard deviation for the low-quality peer relationship group is higher, suggesting greater variability in academic performance.

Table 2: Correlation between peer relations, peer pressure and academic performance of university students

<table>
<thead>
<tr>
<th>Peer relations</th>
<th>Peer pressure</th>
<th>Academic performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer relations</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>Peer pressure</td>
<td>0.51*</td>
<td>1.00</td>
</tr>
<tr>
<td>Academic performance</td>
<td>0.65*</td>
<td>4.46*</td>
</tr>
</tbody>
</table>

The correlation table shows the relationships between peer relations, peer pressure, and academic performance of university students. Its show a positive correlation of 0.51 among peer relations and peer pressure. This indicates that as peer relations improve, peer pressure tends to increase as well. The two variables are moderately positively associated. Its show a positive correlation of 0.65 among peer relations and academic performance. This suggests that as peer relations improve, academic performance tends to increase.

Table 3: Regression analysis of peer pressure, peer performance influence the academic performance of university students

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Beta Coefficient</th>
<th>Standard error</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>70.11*</td>
<td>2.44</td>
<td>&lt;0.00</td>
</tr>
<tr>
<td>Peer relation</td>
<td>0.33*</td>
<td>0.09</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Peer pressure</td>
<td>0.23*</td>
<td>0.06</td>
<td>0.004</td>
</tr>
</tbody>
</table>

R², 0.545 (54.5% variance in Academic performance at significant level; p<0.05.)
Its show a moderate positive relationship between peer relations and academic performance. Its show a positive correlation of 0.46 between peer pressure and academic performance. This implies that as peer pressure increases, academic performance also tends to improve. Its show a moderate positive association between peer pressure and academic performance. This regression analysis explores the effect of peer relations and peer pressure on the academic performance of university students. The Beta Coefficient for peer relations is 0.33 with a highly significant p-value of < 0.001. This indicates that for each unit increase in peer relations, academic performance is expected to increase by 0.33 points, controlling for peer pressure. The highly significant p-value suggests that peer relations have a strong positive effect on academic performance. Students with better peer relations tend to perform better academically. The Beta Coefficient for peer pressure is 0.23 with a p-value of 0.004. This suggests that for each unit increase in peer pressure, academic performance is expected to increase by 0.23 points, controlling for peer relations. The p-value of 0.004 designates that peer pressure has a statistically substantial positive influence on academic performance, although this effect is weaker compared to peer relations. The value R² is 0.545, specifying that nearly 54.5% of the variance in academic performance can be explained by the predictors (peer relations and peer pressure) in the model. This suggests that the model is a good fit for explaining the relationship between these variables and academic performance.

### Table 4: Gender difference in academic performance of university students

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean (GPA)</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>250</td>
<td>3.45</td>
<td>0.30</td>
</tr>
<tr>
<td>Female</td>
<td>350</td>
<td>3.63</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Levene's test for equality of variance; F (1,597) = 3.76, p = 0.053 t (597) = -4.12, p < 0.001* **Significant at p< 0.05.

The table presents a contrast of the mean grade point averages (GPA) and standard deviations for academic performance between two gender groups: "Male" and "Female." Female students have a significantly higher mean GPA (3.63) compared to male students (3.45). This significant disparity with regards to the mean GPA. Students who identify as male have a standard deviation of 0.30, while students who identify as female have a standard deviation of 0.25. This suggests that there is a tendency for there to be less diversity in the academic performance of female students, with scores tendency to cluster more closely around the mean. In contrast, the academic performance of male students is characterised by a slightly greater degree of variation. The result of the Levene's test for equality of variance, which determines whether or not the variances of the two groups are substantially distinct from one another, is F (1,597) = 3.76, and the p-value for the test is 0.053. The p-value of 0.053 is just slightly higher than the standard cutoff for statistical significance, which is set at 0.05. This provides a flimsy suggestion that the differences seen by people of the two gender groups might be slightly distinct from one another, albeit a distinction that is inconsequential. The t-test (t (597) = -4.12) determines whether or not there is a statistically significant difference between the two gender groups in terms of the mean grade point average. The t-test produces an extremely low p-value of 0.001, which indicates that the difference in mean GPA is highly statistically significant. This is indicated by the fact that the p-value is less than 0.001.

### Table 5: Age difference in academic performance of university students

<table>
<thead>
<tr>
<th>Age</th>
<th>n</th>
<th>Mean (GPA)</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-25</td>
<td>200</td>
<td>3.57</td>
<td>0.26</td>
</tr>
<tr>
<td>Above 25</td>
<td>400</td>
<td>3.44</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Levene's test for equality of variance; F (1,597) = 2.16, p = 0.142 t (597) = 2.23, p =0.026* **Significant at p< 0.05.

The table compares and contrasts the mean grade point averages (GPAs) and standard deviations for academic achievement of students in two age groups: students aged "20-25" and those aged "Above 25." Students in the age bracket "20-25" have a mean grade point average of 3.57, which is significantly higher than the 3.44 earned by students in the "Above 25" age bracket. This suggests that younger pupils have a tendency to achieve slightly higher academic achievement on average than older students do. The standard deviation for students aged "20-25" is 0.26, whereas for students aged "Above 25," it is 0.30. This shows that academic performance among students aged " 20-25" likely to have less variability than it does among students of other ages, with scores tending to cluster closer to the mean. In contrast, academic performance among students aged "Above 25" exhibits greater variability. The Levene's test for equality of variance, which assesses whether the variances of the two groups are significantly different, yields a result of F (1,597) = 2.16, with a p-value of 0.142. The p-value of 0.142 is
not significant at the 0.05 level. This designates that there is no robust sign to suggest that the variances of the two age groups significantly differ in terms of academic performance. The independent samples t-test \((t (597) = 2.23)\) assesses whether the difference in mean GPA between the two age groups is statistically significant. The t-test yields a p-value of 0.026, which is less than 0.05, indicating that the difference in mean GPA is statistically significant.

5. Discussion
The majority of earlier readings have found a constructive association between interpersonal connections and academic success. The self-determination theory (SDT) contends that positive interpersonal connections can satisfy students’ fundamental psychological desire for social connection (Deci & Ryan, 2000). Adolescents who have this essential met impression linked to their professors and peers, which increases their willingness to act in generally acceptable conducts and focus on their studies. Kiuru, Nurmi, Aunola, and Salmela-Aro (2009) discovered that improving peer, parental, and teacher support for children can improve their academic performance because it helps them focus better on their learning tasks. According to Soe (2020), Academic success and the level of support that students obtain from their loved ones, educators, and classmates are significantly correlated. Higher levels of social support for pupils result in improved academic success. This study supported our hypothesis that interactions between students and their peers would be more closely associated with academic success than those between students and their parents or teachers. This outcome is consistent with earlier research. In addition to the instruction provided by adult educators, Kindermann (2016) discovered that student interactions with peers improved learning. Because of their friends and peers, many children seem to attend school or like school (more) than they otherwise would. According to several studies Wentzel (2005); Wentzel, Jablansky, and Scalise (2021), kids who have good relationships with their classmates tend to be more engaged and even perform better in school. Peer acceptance can motivate students and improve their learning. Youngsters who experience bullying from their classmates are less inclined to go to school and may pass up educational chances (Eisenberg, Neumark-Sztainer, & Perry, 2003). As a result, students’ academic performance is closely correlated with their ability to participate effectively in conversations and activities with their peers (Yamin, Khalid, Tahir, Khatri, & Shoaib, 2021). We suggest that students are more likely to participate in activities in a secure and productive learning environment produced by positive peer connections, and that their academic performance improves with increasing frequency of collaborative interactions. The benefits of peer cooperative learning have been supported by numerous studies. For instance, Veldman, Doolaard, Bosker, and Snijders (2020) discovered that supportive erudition may improve young students’ group work behavior. Molla and Muche (2018) demonstrated that a cooperative accomplishment through erudition division trailed by an obliging debate set resulted in a considerable improvement in learning. Researcher hypothesize that in effective cooperative learning environments, peers and students become more closely connected, and their role in a student’s education becomes more significant. According to Baepler and Walker (2014); Gremmen, Van den Berg, Steglich, Veenstra, and Dijkstra (2018) stretchy education environments have a substantial influence on erudition consequences, as well as refining educational achievement, fostering teacher-student connections in the classroom, and enhancing the experience of learning.

6. Conclusion
The research has uncovered a significant positive correlation among peer relations and theoretical performance amongst university scholars. This implies that students who enjoy progressive and supportive peer relationships tend to excel academically. These findings emphasize the pivotal role of social networks in fostering academic success. Surprisingly, the study has revealed a positive correlation among peer pressure and academic performance. Students who reported experiencing higher levels of peer pressure also demonstrated better academic results. This finding highlights the complex nature of peer influences and hints that students may find some degree of peer pressure to be a motivating element in their pursuit of academic excellence. According to the findings of the study, there is a direct connection between peer relationships and peer pressure. There is a correlation between improved peer interactions and increased levels of peer pressure. This exemplifies the interconnection of these factors.
within the social framework of the university, as it is possible that students who have stronger peer relations will also face higher expectations from their peers. These findings indicate to the complex interaction of social dynamics that occur within the context of the university setting. Because positive peer interactions have a direct and obvious correlation to higher academic performance, it is essential for colleges and universities to cultivate a social atmosphere that is encouraging and welcoming of people of all backgrounds. In addition, the unanticipated association between peer pressure and academic accomplishment implores additional research into the intricate ways in which peer dynamics influence the level of motivation and engagement displayed by students. In conclusion, our research found that there are significant gender and age variations in academic performance among students enrolled in universities. The fact that female students typically earn higher grade point averages than their male counterparts highlights the importance of developing support systems that are responsive to gender differences. While this was going on, younger pupils outperformed their older colleagues, which demonstrates how important it is to address age-related variables that may affect academic achievement. The importance of individualised treatments and support services inside educational institutions is brought into sharper focus by these findings. Universities can work towards the goal of creating an inclusive learning environment in which all students have an equal opportunity for academic success by first acknowledging the existence of discrepancies and then correcting those disadvantages.

6.1. Policy Implications
It is advised that longitudinal studies be conducted in order to understand the development of peer relationships over time as well as the long-term effects that peer connections have on academic achievement. For the purpose of understanding the mechanisms that are causing these connections, this research may use both quantitative and qualitative data. In the future, researchers should explore several aspects of peer pressure, such as its sources and forms, in order to gain a deeper understanding of the consequences of each factor alone and in combination.

6.2. Limitations of the Study
The correlational methodology of the study does not show causation, and the conclusions are based on a specific sample of university students, which may have an impact on the study's capacity to generalise its findings. It's possible that the single metric used to evaluate academic performance doesn't cover the entire range of accomplishments and skills. These limitations should be addressed in further research in order to provide a more thorough knowledge of the relationship between academic achievement and peer dynamics in a variety of university settings.

References
Chen, J. J.-L. (2005). Relation of academic support from parents, teachers, and peers to Hong Kong adolescents’ academic achievement: The mediating role of academic engagement. Genetic, social, and general psychology monographs, 131(2), 77-127. doi:https://doi.org/10.3200/MONO.131.2.77-127


Suleiman, A. H. (2023). Factors That Affect Students' Academic Achievement in the Faculty of Social Sciences at the University of Bosaso, Garowe, Somalia. Open Journal of Social Sciences, 11(2), 446-461. doi:https://doi.org/10.4236/jss.2023.112029


