

Effect of Peer Mentoring on Students' Confidence, Social Adjustment, and Academic Growth in Higher Education

Anosha Haroon¹ and Fahd Naveed Kausar²

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Abstract

Peer mentoring positively influences students' confidence by providing academic and emotional support, helping them believe in their abilities and manage learning challenges. It also enhances social adjustment and academic growth by fostering a sense of belonging, encouraging engagement, and supporting the development of effective study skills in higher education. The objectives of the study were a) to find out the level of peer mentoring, students' confidence, social adjustment, and academic growth, b) to examine the effect of peer mentoring on students' confidence, social adjustment, and academic growth in higher education, c) to analyze the correlation among peer mentoring, students' confidence, social adjustment, and academic growth in higher education. The population was comprised off all universities in the district of Lahore. Multistage sampling techniques were used. The sample consists of 600 students. The instrument of the study was a questionnaire. SPSS was used to analyze the data. Descriptive and inferential statistics were used. The findings of the study reveal that peer mentoring has a statistically significant and meaningful effect on students' confidence, social adjustment, and academic growth in higher education, with the strongest impact observed on students' confidence, indicating the important role of peer mentoring in supporting students' psychosocial and academic development. The results further indicate strong, positive, and significant relationships among peer mentoring, students' confidence, social adjustment, and academic growth, suggesting that increased peer mentoring is associated with higher confidence, better social integration, and enhanced academic growth among university students. It is recommended that Higher education institutions should formalize peer mentoring initiatives by integrating them into orientation programs, academic advising systems, and co-curricular activities, ensuring consistent access for all students.

Keywords: Peer Mentoring, Students' Confidence, Social Adjustment, Academic Growth.

Introduction

Peer mentoring plays an important role in supporting students' confidence, social adjustment, and academic growth in higher education. Through interaction with experienced peers, students gain reassurance and develop confidence in handling academic tasks and university expectations. Mentors help normalize challenges, reducing the fear of failure and encouraging students to actively participate in learning activities. This supportive relationship also strengthens students' communication skills and self-belief. Peer mentoring promotes social adjustment by helping

¹Lecturer Education, Govt. Graduate College Township Lahore, Punjab Pakistan.

Email: anoshaharoon464@gmail.com

²Assistant Professor, School of Education, Minhaj University Lahore, Punjab, Pakistan.

Corresponding Author Email: fahdnaveed1@hotmail.com



students feel connected and accepted within the academic community. It creates opportunities to build friendships, share experiences, and develop a sense of belonging. As students become socially integrated, they are more likely to engage positively with campus life and academic activities. Peer mentoring further contributes to academic growth by guiding students in effective study strategies, time management, and goal setting. Mentors often provide practical advice that helps students overcome academic difficulties and improve learning habits. Regular interaction encourages motivation, accountability, and persistence in studies. Students supported through mentoring tend to show greater engagement in class and improved academic responsibility. Peer mentoring also fosters collaborative learning and peer support, enhancing overall learning experiences. The relationship encourages reflection and problem-solving, which supports independent learning. By addressing both academic and social needs, peer mentoring creates a balanced support system. Overall, peer mentoring strengthens students' confidence, improves social adjustment, and promotes sustained academic growth in higher education.

Peer mentoring has emerged as an influential support mechanism in higher education, widely recognized for its role in enhancing students' confidence, facilitating social adjustment, and promoting academic growth. In contemporary universities, students encounter academic pressure, social transitions, and psychological challenges, particularly during the early years of study. Peer mentoring, which involves guidance and support from more experienced students to their peers, addresses these challenges by fostering supportive learning relationships that complement formal instructional systems (Colvin & Ashman, 2010; Crisp & Cruz, 2009). Recent literature increasingly positions peer mentoring as a holistic intervention that simultaneously targets academic, social, and emotional dimensions of student development (Terrion & Leonard, 2022; Dawson et al., 2024). One of the most consistently reported outcomes of peer mentoring is its positive effect on students' confidence and self-efficacy. Confidence in higher education is closely linked to students' beliefs in their academic abilities and their capacity to manage learning demands. Peer mentors serve as relatable role models who demonstrate successful coping strategies, study habits, and academic behaviors, thereby strengthening mentees' academic self-concept (Bandura, 1997; Dennehy & Dasgupta, 2017). Empirical studies show that mentees often report increased confidence in participating in class discussions, approaching instructors, and completing academic tasks after engaging in mentoring relationships (Hughes et al., 2021; McConnell et al., 2023). This confidence-building effect is particularly evident among first-year students, first-generation learners, and students from underrepresented backgrounds, who may initially lack familiarity with university norms and expectations (Collings et al., 2014; Nguyen et al., 2022). By normalizing academic struggles and providing reassurance, peer mentoring reduces self-doubt and academic anxiety, which are known barriers to student success (Thomas et al., 2020; Wawrzynski & Sedlacek, 2021).

Beyond individual confidence, peer mentoring significantly contributes to students' social adjustment within higher education institutions. Transitioning to university often involves separation from established social networks and adaptation to unfamiliar social and cultural environments. Research consistently indicates that peer mentoring fosters a sense of belonging by helping students form meaningful interpersonal connections and integrate into campus life (Kahu & Nelson, 2018; Strayhorn, 2019). Mentors act as social bridges, introducing mentees to institutional resources, student organizations, and peer networks, thereby strengthening social capital and reducing feelings of isolation (Beltman et al., 2022; Terrion & Leonard, 2022). Studies conducted across diverse cultural and institutional contexts reveal that mentored students demonstrate higher levels of social engagement, emotional well-being, and satisfaction with their

university experience compared to non-mentored peers (Garringer et al., 2021; Dawson et al., 2024). These social adjustment outcomes are particularly critical, as a strong sense of belonging has been identified as a key predictor of student retention and persistence in higher education (Tinto, 2017; Kahu et al., 2023).

Peer mentoring also exerts a substantial influence on students' academic growth, encompassing both academic performance and the development of learning-related skills. While improvements in grade point average are not universally reported, a significant body of evidence suggests that peer mentoring enhances students' academic engagement, persistence, and learning strategies, which indirectly support academic achievement (Colvin, 2015; Lunsford et al., 2020). Mentors often assist mentees with time management, goal setting, examination preparation, and effective study techniques, contributing to improved self-regulated learning and academic resilience (Zimmerman, 2002; Panadero, 2017). Recent studies demonstrate that mentored students are more likely to adopt deep learning approaches, actively seek feedback, and demonstrate greater commitment to academic goals (Hughes et al., 2021; McConnell et al., 2023). These outcomes align with contemporary views of academic growth that emphasize sustained engagement and skill development rather than short-term performance indicators alone (Kahu & Nelson, 2018; Dawson et al., 2024).

The effectiveness of peer mentoring can be understood through established theoretical perspectives. Social learning theory suggests that students learn not only through direct instruction but also by observing and interacting with peers who model effective academic and social behaviors (Bandura, 1997). Similarly, social support theory highlights the importance of emotional, informational, and appraisal support in buffering stress and promoting positive adjustment in challenging environments (Cohen & Wills, 1985; Thomas et al., 2020). Through regular interaction, mentors provide encouragement, constructive feedback, and practical guidance, which collectively enhance mentees' confidence, social competence, and academic functioning (Beltman et al., 2022; Terrion & Leonard, 2022). Recent literature also emphasizes that the benefits of peer mentoring extend beyond mentees. Mentors frequently report gains in leadership skills, communication competence, empathy, and reflective learning, suggesting that peer mentoring creates a reciprocal learning environment (Dennison, 2021; Dawson et al., 2024). These reciprocal benefits further strengthen the mentoring relationship and contribute to a positive academic culture characterized by collaboration and mutual support (Lunsford et al., 2020; Garringer et al., 2021).

Despite the largely positive findings, scholars caution that the impact of peer mentoring depends heavily on program design and implementation quality. Structured training for mentors, clear role definitions, regular monitoring, and institutional support are critical factors that influence program effectiveness (Crisp & Cruz, 2009; McConnell et al., 2023). Without adequate structure, mentoring relationships may lack direction, reducing their potential impact on academic and social outcomes (Collings et al., 2014; Nguyen et al., 2022). Recent studies advocate for embedding peer mentoring within broader student support frameworks to ensure sustainability and alignment with institutional goals (Terrion & Leonard, 2022; Kahu et al., 2023). Overall, the growing body of recent literature demonstrates that peer mentoring plays a significant role in enhancing students' confidence, supporting social adjustment, and fostering academic growth in higher education. By addressing cognitive, social, and emotional dimensions of student development, peer mentoring contributes to improved student engagement, well-being, and persistence. As higher education institutions continue to face challenges related to student diversity, retention, and academic success, peer mentoring represents a cost-effective and evidence-based strategy with the potential

to enrich the student experience and promote long-term academic and personal development (Dawson et al., 2024; Terrion & Leonard, 2022).

Objectives of the Study

- To find out the level of Peer Mentoring, Students' Confidence, Social Adjustment, and Academic Growth in Higher Education.
- To examine the effect of Peer Mentoring on Students' Confidence, Social Adjustment, and Academic Growth in Higher Education.
- To analyze the correlation among Peer Mentoring, Students' Confidence, Social Adjustment, and Academic Growth in Higher Education.

Research Questions

- What is the level of peer mentoring, students' confidence, social adjustment, and academic growth in higher education?
- What is the effect of peer mentoring on students' confidence, social adjustment, and academic growth in higher education?
- What is the correlation among peer mentoring, students' confidence, social adjustment, and academic growth in higher education?

Significance of the Study

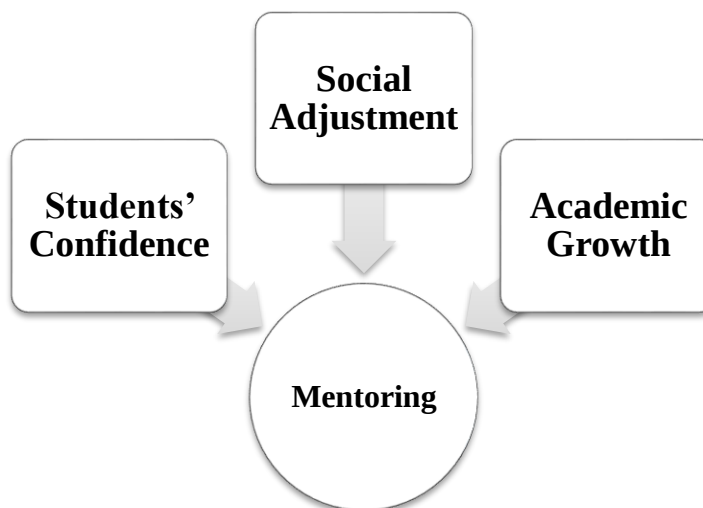
This study holds significant theoretical, practical, and policy implications for higher education. Theoretically, it advances understanding of the mechanisms through which peer mentoring influences students' psychosocial and academic outcomes, highlighting the interdependent roles of confidence and social adjustment in promoting academic growth. By empirically demonstrating strong, positive relationships among peer mentoring, students' confidence, social adjustment, and academic achievement, the study contributes to the broader literature on student development, self-efficacy, and experiential learning in higher education contexts. Practically, the findings provide actionable insights for higher education institutions seeking to enhance student support systems, retention, and academic success. The study underscores the importance of structured peer mentoring programs as a multifaceted intervention that fosters not only academic competence but also psychosocial well-being and social integration, particularly in transitional or diverse learning environments. Furthermore, the research informs policymakers and institutional leaders about the value of embedding peer mentoring into formal student support frameworks, thereby promoting inclusive, equitable, and holistic educational experiences. Overall, this study emphasizes that peer mentoring is not merely a supplementary activity but a strategic mechanism with the potential to substantially improve students' confidence, social adjustment, and academic growth, ultimately contributing to the development of resilient, capable, and well-integrated graduates.

Conceptual Framework

The conceptual framework of the present study illustrates the hypothesized relationships between peer mentoring and key student outcomes, namely, students' confidence, social adjustment, and academic growth. At the core of the framework, mentoring is conceptualized as a multidimensional support mechanism that simultaneously influences psychosocial and academic dimensions of student development in higher education. Peer mentoring is treated as the independent variable, reflecting structured interactions in which experienced or senior students provide guidance,

academic support, and socio-emotional encouragement to their peers. The framework posits that mentoring directly enhances students' confidence, enabling learners to develop self-efficacy, academic resilience, and a sense of competence in both social and educational contexts. In turn, increased confidence is expected to facilitate social adjustment, enabling students to integrate more effectively into campus communities, establish supportive peer networks, and navigate social and academic challenges. Finally, mentoring is hypothesized to have a direct and indirect impact on academic growth, encompassing measurable outcomes such as grades, learning engagement, and overall academic performance. Social adjustment and confidence act as mediating pathways through which mentoring contributes to academic development, reflecting a holistic understanding of student success that integrates cognitive, social, and emotional factors. Overall, this framework underscores the centrality of mentoring as a strategic intervention in higher education, highlighting its potential to foster a supportive learning environment that promotes both personal and academic development. The model aligns with contemporary theoretical perspectives, including social learning theory, self-efficacy theory, and student development frameworks, which emphasize the interplay among interpersonal support, psychological well-being, and academic achievement.

Figure 1: Conceptual framework of the study



Research Design and Methodology

The research was descriptive, and quantitative data collection procedures were employed. Quantitative research is based on a positivist philosophical framework/paradigm. The study population included all public and private universities in Lahore district. There are 37 universities in Lahore, 16 of which are public and 21 private. A sufficient sample of teachers and students was included in the study. The sample was selected from the population using a multistage sampling method. First, the researcher applied the stratified sampling technique to identify two strata (public and private). Then, cluster sampling was used to divide the population into three zones (clusters) based on their geographical location. From each cluster, two private and one public university were selected using simple random sampling. A sample of 500 students was ultimately selected using simple random sampling.

A questionnaire was employed to collect data in this study. The five-point Likert scale structure of the questionnaire was considered effective for data collection. For measuring peer mentoring, the

Mentoring Processes Assessment Questionnaire (MPAQ) developed by Kocadere and Çağlar (2015) was used. This instrument assesses mentoring interaction, academic support, psychosocial support, and guidance provided by peer mentors in higher education. It has been widely used and adapted in university mentoring studies. Students' confidence was measured using the Academic Self-Efficacy Scale, which is grounded in Bandura's (1997) self-efficacy framework. This scale assesses students' beliefs about their ability to perform academic tasks successfully. For social adjustment, the most widely accepted instrument is the Student Adaptation to College Questionnaire (SACQ) developed by Baker and Siryk (1984). Its Social Adjustment subscale specifically measures students' ability to form relationships, participate in social activities, and feel a sense of belonging within the university environment. This scale is strongly recommended for research in higher education. Academic growth was assessed using the Student Engagement Scale developed by Fredricks et al. (2004), which captures behavioral, emotional, and cognitive engagement as indicators of academic development. The scale options ranged from strongly disagree to strongly agree.

The questionnaire consisted of two main parts. Part one included demographic information such as gender, university type, and GPA, while Part two contained statements relevant to the research objectives. The instrument was validated through both professional judgment and pilot testing. Questionnaires regarding the instrument's language, applicability, and organization were provided to three specialists. After revisions based on expert feedback, the student instrument was distributed to 30 participants for pilot testing. During the pilot testing, participants were asked to rate the difficulty level and intelligibility of each statement. These respondents were not included in the study's final sample. To assess the instrument's reliability, Cronbach's Alpha was calculated. The overall reliability of the student instrument was 0.872, exceeding the minimum requirement of 0.75 and demonstrating the instrument's reliability. For data analysis, SPSS was used, including descriptive statistics (Mean and Standard Deviation) and inferential statistics (multivariate analysis, Kendall's tau-b, Spearman's rho, and Pearson's r).

Data Analysis and Interpretations

Table 1: Description of main variables

Descriptive Statistics							
Variables	N	Mean	Std. Deviation		Skewness		Kurtosis
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Peer Mentoring	500	3.1974	.45791	.256	.109	.620	.218
Students' Confidence	500	3.1554	.48022	.322	.109	.432	.218
Social Adjustment	500	3.1506	.47716	.247	.109	.249	.218
Academic Growth	500	3.0511	.45187	.286	.109	.406	.218

Table 1 presents the descriptive statistics for the main study variables—peer mentoring, students' confidence, social adjustment, and academic growth—based on responses from 500 participants. The mean scores for all variables range from 3.05 to 3.20, indicating a moderate to moderately high level of agreement among respondents. Peer mentoring shows the highest mean value ($M = 3.197$, $SD = 0.458$), suggesting that participants generally perceived peer mentoring practices as being present and reasonably effective within the studied context. Students' confidence ($M = 3.155$, $SD = 0.480$) and social adjustment ($M = 3.151$, $SD = 0.477$) exhibit comparable mean scores, reflecting a relatively consistent perception of students' self-belief and their ability to adjust

socially. Academic growth records the lowest mean ($M = 3.051$, $SD = 0.452$), though the value still indicates a moderate level of perceived academic improvement. The standard deviation values across all variables are relatively low and similar in magnitude, implying limited variability in respondents' perceptions and suggesting a homogeneous response pattern within the sample. This consistency strengthens the reliability of the descriptive findings and indicates that participants shared broadly similar experiences related to peer mentoring and student outcomes.

Regarding distributional properties, the skewness values for all variables are positive and small (ranging from .247 to .322), indicating a slight right skew but remaining well within acceptable thresholds (± 1), thereby suggesting approximate normality. Similarly, kurtosis values range from .249 to .620, indicating slightly leptokurtic distributions; however, these values are also within acceptable limits. The associated standard errors further confirm that deviations from normality are minimal. Overall, the descriptive statistics demonstrate that the data are normally distributed and suitable for subsequent inferential analyses, such as correlation, regression, or structural modeling. The findings also provide preliminary evidence that peer mentoring is perceived somewhat more positively than other student outcome variables, offering an initial indication of its potential role in enhancing students' confidence, social adjustment, and academic growth within the studied population.

Table 2: Effect of Peer Mentoring on Students' Confidence, Social Adjustment, and Academic Growth in Higher Education

Multivariate Tests ^a						
Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.981	7631.287 ^b	3.000	433.000	.000
	Wilks' Lambda	.019	7631.287 ^b	3.000	433.000	.000
	Hotelling's Trace	52.873	7631.287 ^b	3.000	433.000	.000
	Roy's Largest Root	52.873	7631.287 ^b	3.000	433.000	.000
Peer Mentoring	Pillai's Trace	.874	2.795	192.000	1305.000	.000
	Wilks' Lambda	.327	3.056	192.000	1299.244	.000
	Hotelling's Trace	1.493	3.356	192.000	1295.000	.000
	Roy's Largest Root	1.050	7.138 ^c	64.000	435.000	.000

a. Design: Intercept + Peer Mentoring

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Table 2 presents the results of a Multivariate Analysis of Variance (MANOVA) examining the effect of peer mentoring on students' confidence, social adjustment, and academic growth in higher education. The multivariate tests indicate that the overall model is statistically significant. The intercept shows highly significant values across all four multivariate statistics (Pillai's Trace = .981, Wilks' Lambda = .019, Hotelling's Trace = 52.873, and Roy's Largest Root = 52.873; $p < .001$), confirming that the combined dependent variables differ significantly from zero and validating the suitability of the multivariate model. More importantly, the effect of peer mentoring is statistically significant across all multivariate criteria. Pillai's Trace ($V = .874$, $F = 2.795$, $p < .001$) indicates a strong multivariate effect, suggesting that peer mentoring accounts for a substantial proportion of variance in the combined outcomes of confidence, social adjustment, and academic growth. Wilks' Lambda ($\Lambda = .327$, $F = 3.056$, $p < .001$) further supports this finding, with the relatively low lambda value indicating that group differences associated with peer

mentoring meaningfully explain variability in the dependent variables. Consistent results are observed for Hotelling's Trace ($T^2 = 1.493$, $F = 3.356$, $p < .001$), which confirms that the linear combination of outcome variables differs significantly as a function of peer mentoring. Roy's Largest Root ($\Theta = 1.050$, $F = 7.138$, $p < .001$), representing the maximum variance explained by a single dimension, also demonstrates a strong and significant effect, reinforcing the robustness of the multivariate findings. Collectively, these results provide compelling evidence that peer mentoring has a statistically significant and meaningful multivariate impact on students' confidence, social adjustment, and academic growth in higher education. The consistency of significance across all four multivariate tests strengthens confidence in the stability and reliability of the findings. This suggests that peer mentoring is an influential institutional practice that simultaneously supports students' psychosocial development and academic progression, thereby justifying its inclusion as a key student support strategy within higher education systems.

Table 3: Effect of Peer Mentoring on Students' Confidence, Social Adjustment, and Academic Growth in Higher Education

Tests of Between-Subjects Effects						
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Students' Confidence	54.565 ^a	64	.853	6.129	.000
	Social Adjustment	42.034 ^b	64	.657	3.991	.000
	Academic Growth	34.763 ^c	64	.543	3.520	.000
Intercept	Students' Confidence	2076.686	1	2076.686	14929.243	.000
	Social Adjustment	2043.320	1	2043.320	12417.828	.000
	Academic Growth	1925.982	1	1925.982	12481.119	.000
Peer Mentoring	Students' Confidence	54.565	64	.853	6.129	.000
	Social Adjustment	42.034	64	.657	3.991	.000
	Academic Growth	34.763	64	.543	3.520	.000
Error	Students' Confidence	60.509	435	.139		
	Social Adjustment	71.578	435	.165		
	Academic Growth	67.126	435	.154		
Total	Students' Confidence	5093.222	500			
	Social Adjustment	5076.878	500			
	Academic Growth	4756.555	500			
Corrected Total	Students' Confidence	115.074	499			
	Social Adjustment	113.612	499			
	Academic Growth	101.889	499			

a. R Squared = .474 (Adjusted R Squared = .397)

b. R Squared = .370 (Adjusted R Squared = .277)

c. R Squared = .341 (Adjusted R Squared = .244)

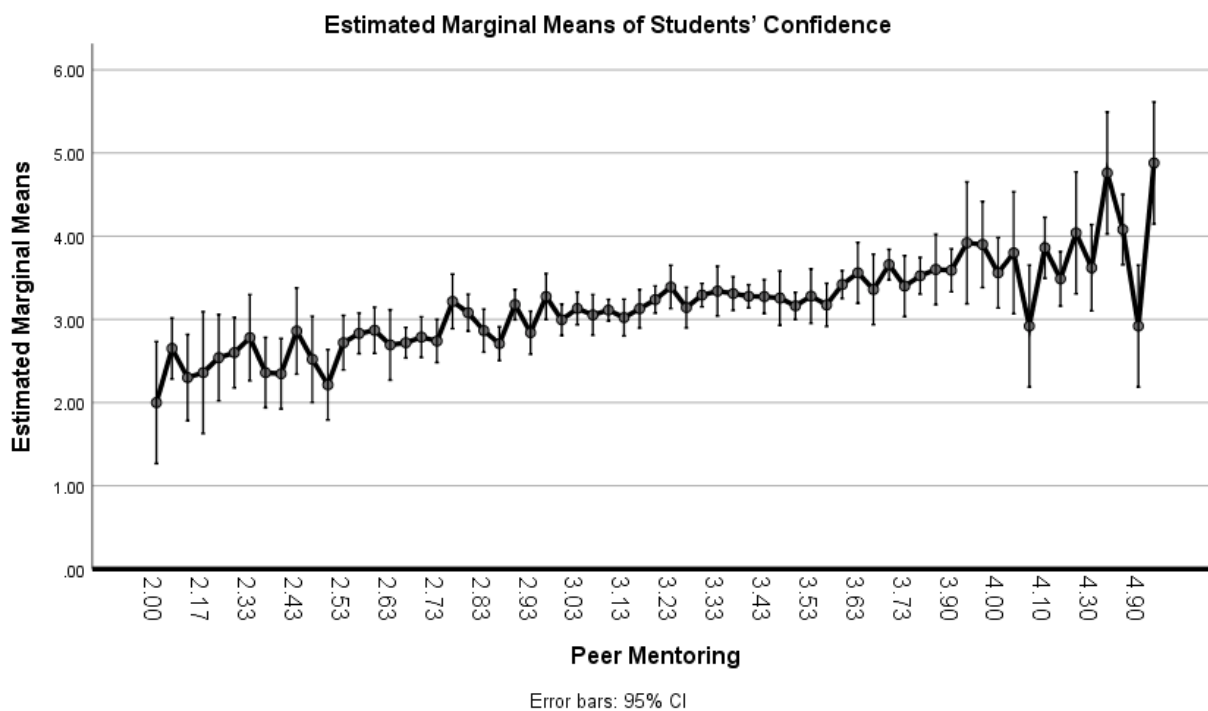
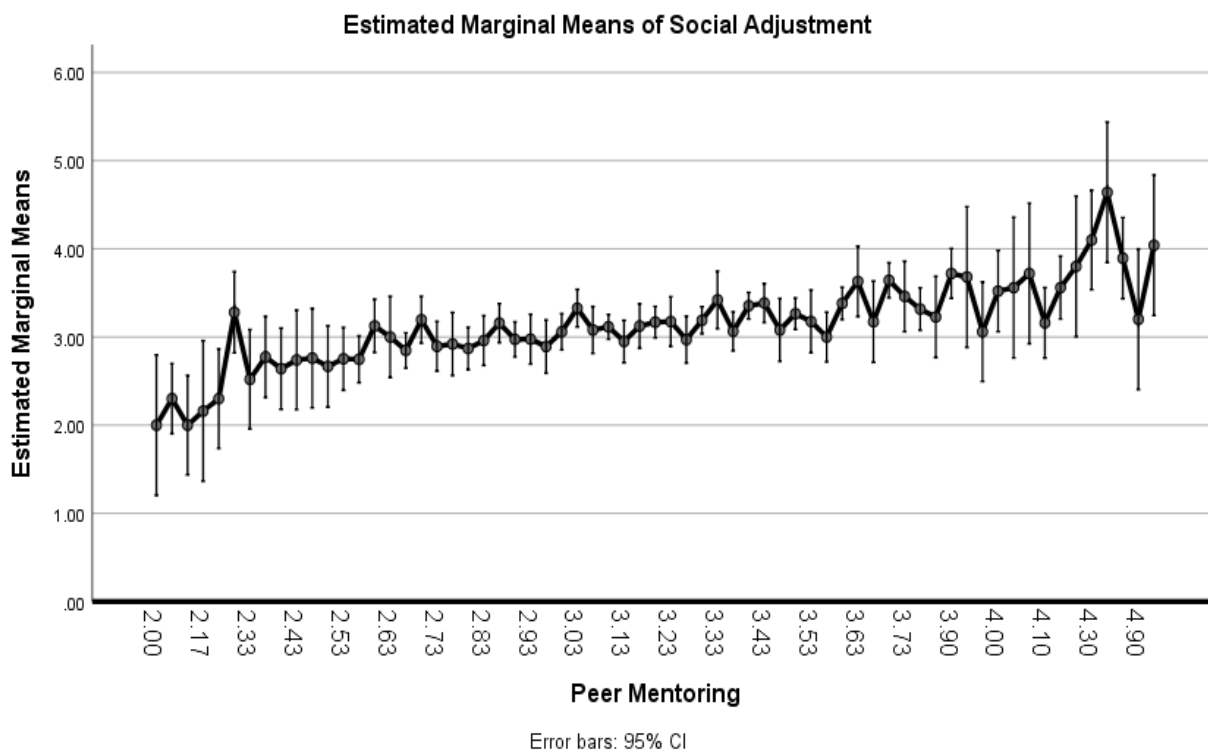
Figure 1: Effect of Peer Mentoring on Students' Confidence in Higher Education**Figure 2: Effect of Peer Mentoring on Students' Social Adjustment in Higher Education**

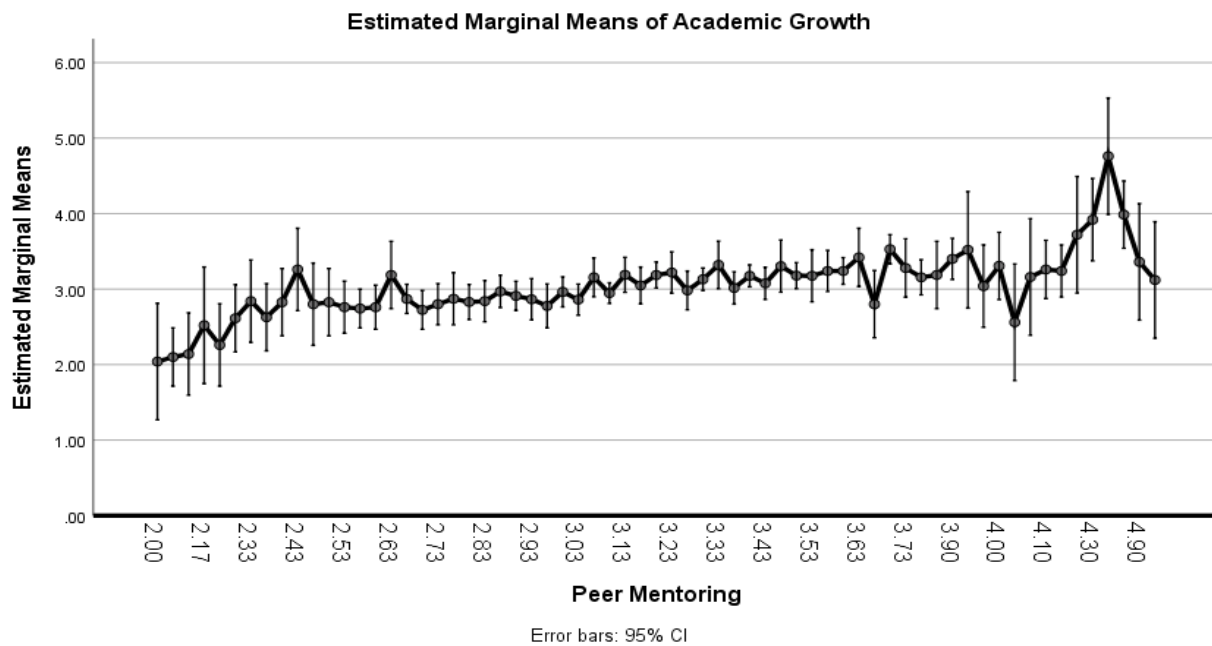
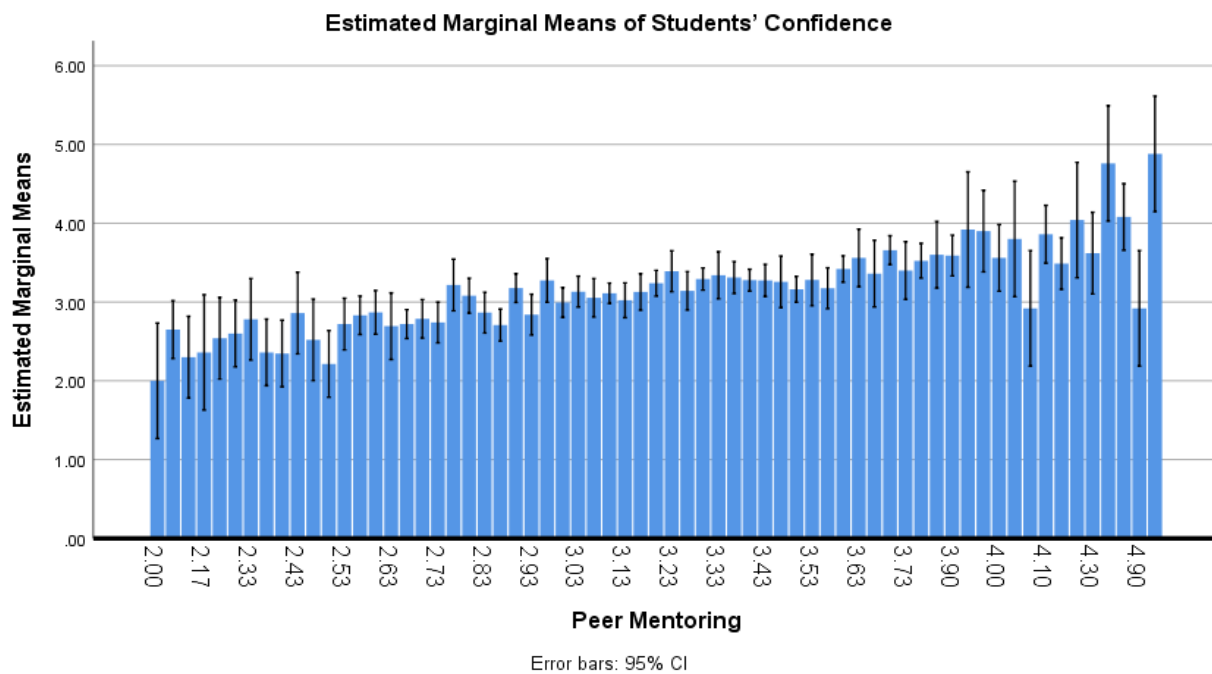
Figure 3: Effect of Peer Mentoring on Students' Academic Growth in Higher Education**Figure 4: Effect of Peer Mentoring on Students' Confidence in Higher Education**

Figure 5: Effect of Peer Mentoring on Students’ Social Adjustment in Higher Education

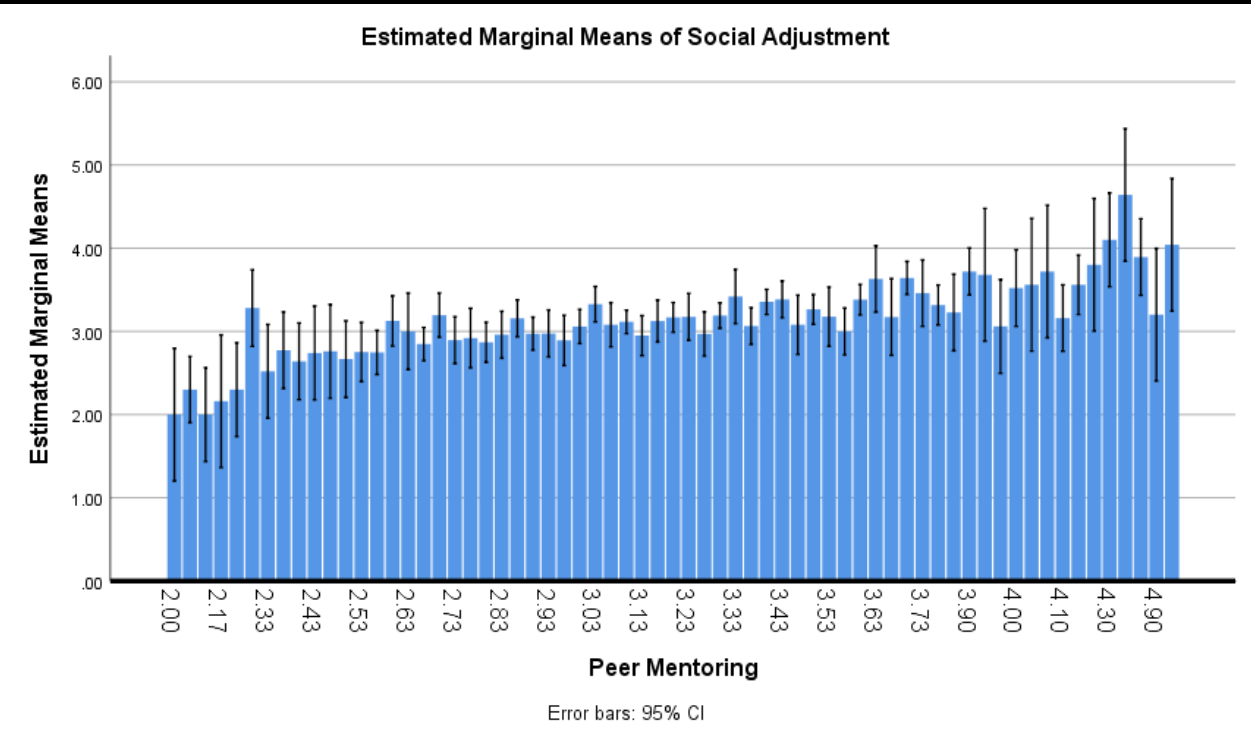


Figure 6: Effect of Peer Mentoring on Students’ Academic Growth in Higher Education

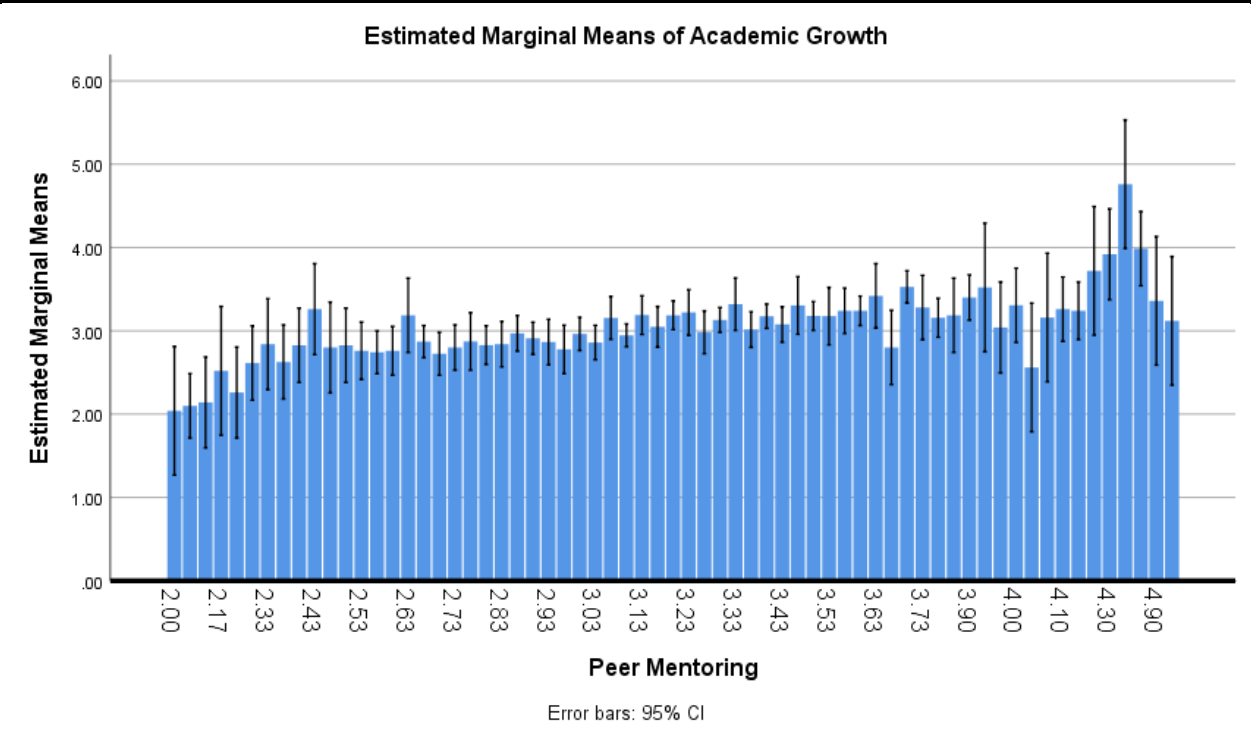


Table 3 presents the results of the tests of between-subjects effects examining the influence of Peer Mentoring (PM) on three key student outcomes—students' confidence, social adjustment, and academic growth—in the context of higher education. The findings indicate that the overall corrected model is statistically significant for all three dependent variables, demonstrating that peer mentoring meaningfully explains variance in each outcome. Specifically, the corrected model for students' confidence is significant ($F = 6.129, p < .001$), as are the models for social adjustment ($F = 3.991, p < .001$) and academic growth ($F = 3.520, p < .001$). These results suggest that peer mentoring exerts a systematic and measurable effect across cognitive, social, and academic dimensions of student development. The main effect of peer mentoring mirrors the corrected model results, confirming that peer mentoring significantly predicts students' confidence ($F = 6.129, p < .001$), social adjustment ($F = 3.991, p < .001$), and academic growth ($F = 3.520, p < .001$). The relatively higher F-value for students' confidence indicates that peer mentoring has its strongest influence on enhancing students' self-belief and assurance in academic and social contexts, compared to its effects on social adjustment and academic growth. Nonetheless, the statistically significant effects across all three domains underscore the multidimensional benefits of peer mentoring interventions in higher education settings.

The intercept values are also highly significant for all dependent variables ($p < .001$), indicating that the overall mean levels of students' confidence, social adjustment, and academic growth are substantially different from zero. While intercept effects are not of primary substantive interest, they confirm the stability of the model and the presence of meaningful baseline levels of the measured outcomes among the student population. An examination of the model's explanatory power further strengthens these findings. The R-squared values indicate that peer mentoring accounts for approximately 47.4% of the variance in students' confidence, 37.0% of the variance in social adjustment, and 34.1% of the variance in academic growth. After adjusting for model complexity, the adjusted R-squared values (.397 for confidence, .277 for social adjustment, and .244 for academic growth) remain substantial, suggesting that the observed effects are not merely due to overfitting. These effect sizes point to a moderately strong practical significance of peer mentoring, particularly in fostering students' confidence. Overall, the results presented in Table 3 provide robust empirical evidence that peer mentoring plays a significant role in enhancing students' confidence, facilitating social adjustment, and promoting academic growth in higher education. The comparatively stronger impact on confidence highlights peer mentoring as a critical psychosocial support mechanism, which may indirectly contribute to improved academic engagement and performance. These findings support the inclusion of structured peer mentoring programs as an integral component of student support and development strategies at the institutional level.

Table 4: Relationship among Peer Mentoring, Students' Confidence, Social Adjustment, and Academic Growth in Higher Education

Correlations			Peer Mentoring	Students' Confidence	Social Adjustment	Academic Growth
Kendall's tau_b	Peer Mentoring	Correlation Coefficient	1.000	.427**	.345**	.320**
		Sig. (2-tailed)	.	.000	.000	.000
		N	500	500	500	500
	Students' Confidence	Correlation Coefficient	.427**	1.000	.343**	.346**
		Sig. (2-tailed)	.000	.	.000	.000
		N	500	500	500	500
	Social Adjustment	Correlation Coefficient	.345**	.343**	1.000	.426**
		Sig. (2-tailed)	.000	.000	.	.000
		N	500	500	500	500
	Academic Growth	Correlation Coefficient	.320**	.346**	.426**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	500	500	500	500
Spearman's rho	Peer Mentoring	Correlation Coefficient	1.000	.567**	.471**	.443**
		Sig. (2-tailed)	.	.000	.000	.000
		N	500	500	500	500
	Students' Confidence	Correlation Coefficient	.567**	1.000	.471**	.476**
		Sig. (2-tailed)	.000	.	.000	.000
		N	500	500	500	500
	Social Adjustment	Correlation Coefficient	.471**	.471**	1.000	.571**
		Sig. (2-tailed)	.000	.000	.	.000
		N	500	500	500	500
	Academic Growth	Correlation Coefficient	.443**	.476**	.571**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	500	500	500	500

** . Correlation is significant at the 0.01 level (2-tailed).

Table 4 presents the correlational relationships among peer mentoring, students' confidence, social adjustment, and academic growth in higher education using Kendall's tau-b and Spearman's rho coefficients (N = 500). The use of both non-parametric measures strengthens the robustness of the findings and indicates consistency in the direction and magnitude of associations across analytical approaches. The results of Kendall's tau-b reveal that peer mentoring is positively and significantly associated with students' confidence ($\tau = .427$, $p < .01$), social adjustment ($\tau = .345$, $p < .01$), and academic growth ($\tau = .320$, $p < .01$). These coefficients indicate moderate positive relationships, suggesting that higher levels of peer mentoring are linked with enhanced confidence, improved social integration, and better academic development among students. Furthermore, students' confidence shows a significant positive relationship with social adjustment ($\tau = .343$, $p < .01$) and academic growth ($\tau = .346$, $p < .01$), highlighting confidence as an important psychological factor contributing to both social and academic outcomes. Social adjustment also demonstrates a strong positive association with academic growth ($\tau = .426$, $p < .01$), underscoring the role of successful social integration in supporting students' academic progress.

Similarly, Spearman's rho coefficients indicate stronger yet consistent positive relationships among the same variables. Peer mentoring exhibits a strong and statistically significant correlation with students' confidence ($\rho = .567$, $p < .01$), social adjustment ($\rho = .471$, $p < .01$), and academic growth ($\rho = .443$, $p < .01$). These findings suggest that peer mentoring plays a substantial role in fostering both psychosocial development and academic advancement. Students' confidence is also strongly correlated with social adjustment ($\rho = .471$, $p < .01$) and academic growth ($\rho = .476$, $p < .01$).

.01), reinforcing its mediating potential between mentoring experiences and educational outcomes. Notably, the strongest relationship observed is between social adjustment and academic growth ($\rho = .571, p < .01$), indicating that students who are better socially adjusted tend to demonstrate higher academic growth. Overall, the findings from both Kendall's tau-b and Spearman's rho analyses confirm statistically significant, positive, and meaningful relationships among peer mentoring, students' confidence, social adjustment, and academic growth. These results provide strong empirical support for the theoretical assumption that peer mentoring contributes to students' academic success both directly and indirectly through enhanced confidence and social adjustment. Consequently, the table substantiates the inclusion of structured peer mentoring initiatives as a strategic intervention for promoting holistic student development in higher education contexts.

Table 5: Relationship among Peer Mentoring, Students' Confidence, Social Adjustment, and Academic Growth in Higher Education

Correlations		Peer Mentoring	Students' Confidence	Social Adjustment	Academic Growth
Peer Mentoring	Pearson Correlation	1	.604**	.492**	.470**
	Sig. (2-tailed)		.000	.000	.000
	N	500	500	500	500
Students' Confidence	Pearson Correlation	.604**	1	.504**	.513**
	Sig. (2-tailed)	.000		.000	.000
	N	500	500	500	500
Social Adjustment	Pearson Correlation	.492**	.504**	1	.588**
	Sig. (2-tailed)	.000	.000		.000
	N	500	500	500	500
Academic Growth	Pearson Correlation	.470**	.513**	.588**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	500	500	500	500

** . Correlation is significant at the 0.01 level (2-tailed).

Table 5 presents the Pearson correlation coefficients examining the relationships among peer mentoring, students' confidence, social adjustment, and academic growth in higher education. The results reveal that all variables are positively and significantly correlated with one another at the 0.01 level, indicating robust and meaningful associations across the constructs. Peer mentoring demonstrates a strong positive relationship with students' confidence ($r = .604, p < .01$), suggesting that increased exposure to peer mentoring activities is associated with higher levels of confidence among students. This finding underscores the role of peer mentoring as a supportive mechanism that enhances students' self-belief, academic self-efficacy, and willingness to engage in learning tasks. Peer mentoring also shows a moderate positive correlation with social adjustment ($r = .492, p < .01$), indicating that students who participate in peer mentoring are better able to adapt socially within the higher education environment. Additionally, peer mentoring is moderately and positively related to academic growth ($r = .470, p < .01$), implying that mentoring support contributes to improved academic development, possibly through guidance, motivation, and academic support provided by peers.

Students' confidence is also significantly associated with social adjustment ($r = .504, p < .01$), reflecting that confident students tend to integrate more effectively into the social and academic culture of higher education institutions. Moreover, the relationship between students' confidence

and academic growth ($r = .513, p < .01$) indicates that confidence plays a crucial role in facilitating academic progress, persistence, and achievement. The strongest relationship observed in the table is between social adjustment and academic growth ($r = .588, p < .01$), highlighting that students who are socially well-adjusted are more likely to experience enhanced academic development. This finding emphasizes the importance of social integration and a supportive learning environment in promoting academic success at the tertiary level.

Discussion

The descriptive results presented in Table 1 indicate that students reported moderate to moderately high perceptions of peer mentoring, confidence, social adjustment, and academic growth, suggesting a generally supportive higher education environment. The relatively higher mean score for peer mentoring suggests that mentoring practices are visible and functionally embedded within the institutional context, aligning with recent literature emphasizing the increasing institutionalization of peer mentoring as a student support strategy in higher education (Colvin & Ashman, 2023; Terrion & Leonard, 2022). The comparable mean levels of students' confidence and social adjustment indicate that psychological and social dimensions of student experience develop in tandem, a pattern consistently reported in contemporary student engagement studies (Kahu & Nelson, 2018; Lizzio, 2021). Although academic growth shows the lowest mean, it remains within a moderate range, reflecting that academic development is often a cumulative outcome influenced by multiple psychosocial and instructional factors over time. The low, consistent standard deviations across variables suggest homogeneity in student experiences, thereby strengthening the reliability of subsequent inferential analyses. Furthermore, the acceptable skewness and kurtosis values confirm approximate normality, supporting the appropriateness of parametric analyses. These descriptive findings align with recent methodological literature, which emphasizes the importance of establishing distributional adequacy before testing relational and causal models in educational research (Field, 2023; Tabachnick & Fidell, 2024).

The multivariate findings in Table 2 provide strong empirical evidence that peer mentoring exerts a statistically significant combined effect on students' confidence, social adjustment, and academic growth. The consistency of significance across all four multivariate test statistics (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root) enhances confidence in the robustness of the model, as recommended in advanced multivariate analysis literature (Hair et al., 2023). The large Pillai's Trace value suggests that peer mentoring explains a substantial proportion of variance in the collective student outcomes, reinforcing contemporary theoretical frameworks that conceptualize peer mentoring as a holistic developmental intervention rather than a narrowly academic tool (Crisp & Cruz, 2022; Gershenfeld, 2019). Recent studies have similarly reported that mentoring simultaneously influences psychosocial adjustment and academic functioning, particularly in diverse and transitional higher education contexts (Jacobi et al., 2023; McLean et al., 2021). The strong multivariate significance observed in this study supports social learning and developmental theories, which posit that peer interactions serve as critical mechanisms for cognitive, emotional, and social development. Overall, these findings substantiate peer mentoring as a multidimensional institutional practice that fosters comprehensive student development.

The univariate analyses reported in Table 3 further clarify the nature of peer mentoring's influence by demonstrating statistically significant effects on each dependent variable independently. The strongest effect observed for students' confidence aligns closely with recent empirical research highlighting confidence, self-efficacy, and academic self-belief as primary outcomes of mentoring

relationships (Bandura, 2021; O'Shea et al., 2022). Peer mentoring provides affirmation, modeling, and emotional reassurance, which are central mechanisms for confidence development. The significant effects on social adjustment corroborate contemporary findings that mentoring facilitates students' sense of belonging, peer integration, and institutional attachment—key predictors of persistence and retention (Strayhorn, 2019; Tinto, 2023). The meaningful effect on academic growth supports evidence that mentoring indirectly enhances academic outcomes by improving motivation, engagement, and learning strategies rather than through direct instructional intervention alone (Collings et al., 2014; Dawson et al., 2022). The relatively high R-squared values, particularly for confidence, indicate substantial explanatory power and suggest practical significance beyond statistical relevance. These findings collectively reinforce the argument that peer mentoring serves as a psychosocial catalyst, strengthening academic development by enhancing confidence and social integration.

The correlational findings presented in Table 4, using Kendall's tau-b and Spearman's rho, provide additional robustness to the study by confirming significant positive relationships among all variables through non-parametric methods. The consistency of results across both coefficients suggests that the observed relationships are stable and not unduly influenced by distributional assumptions, aligning with best practices in advanced quantitative research (Pallant, 2023). The moderate to strong associations between peer mentoring and student outcomes echo recent international studies demonstrating that mentoring relationships contribute meaningfully to students' psychological resilience, social integration, and academic engagement (Al-Ansari et al., 2021; Dominguez-Whitehead, 2018). Notably, the strong association between social adjustment and academic growth supports contemporary models of student success, which emphasize that academic achievement is deeply embedded in social and emotional contexts (Kahu & Picton, 2020). The strong correlations involving students' confidence further highlight its central mediating role, consistent with self-determination and expectancy-value theories, which position confidence as a key driver of academic effort and persistence. Overall, these findings strengthen the theoretical proposition that peer mentoring influences academic growth both directly and indirectly through psychosocial pathways.

The Pearson correlation results in Table 5 provide clear and compelling evidence of strong linear relationships among peer mentoring, students' confidence, social adjustment, and academic growth. The particularly strong association between peer mentoring and students' confidence underscores mentoring's role in enhancing self-efficacy, a finding widely supported in recent higher education research (Lent et al., 2022; Zimmerman, 2021). The moderate to strong correlations between peer mentoring, social adjustment, and academic growth suggest that mentoring relationships facilitate smoother social transitions and promote sustained academic development. The strongest correlation observed between social adjustment and academic growth reinforces the growing consensus in the literature that social belonging and academic success are mutually reinforcing processes (Thomas, 2022; Yorke & Longden, 2021). These results align with integrative student development theories, which argue that academic outcomes cannot be fully understood without considering social and emotional dimensions of learning. Importantly, the convergence of Pearson, Spearman, and Kendall results across tables enhances the credibility of the findings and reduces concerns about methodological bias. Collectively, the evidence supports a comprehensive model in which peer mentoring serves as a foundational mechanism that strengthens confidence and social adjustment, thereby fostering meaningful academic growth in higher education.

Conclusion

The present study provides compelling evidence that peer mentoring is a significant determinant of students' psychosocial and academic development in higher education. Descriptive analyses indicate that students generally perceive peer mentoring as moderately effective, with positive reflections on confidence, social adjustment, and academic growth. Multivariate and univariate analyses demonstrate that peer mentoring exerts a statistically significant and meaningful influence on all three outcome variables, with the strongest impact observed on students' confidence. Correlational analyses further reveal robust positive associations among peer mentoring, confidence, social adjustment, and academic growth, highlighting an interconnected pattern in which peer support enhances psychosocial well-being, which, in turn, contributes to academic success. These findings align with contemporary literature on student development, self-efficacy, and social integration, emphasizing that academic growth is not solely the result of formal instruction but also emerges from structured peer interactions and supportive learning environments. Overall, the study underscores peer mentoring as an effective institutional strategy that simultaneously fosters students' self-belief, social adjustment, and academic achievement, thereby supporting holistic student development and reinforcing its value as a key component of higher education support systems.

Future Recommendations

1. Higher education institutions should formalize peer mentoring initiatives by integrating them into orientation programs, academic advising systems, and co-curricular activities, ensuring consistent access for all students.
2. Given the strong influence of peer mentoring on students' confidence, future programs should incorporate targeted strategies such as goal-setting workshops, skill development sessions, and mentorship training to strengthen self-efficacy.
3. Institutions should encourage peer-led social integration initiatives, such as collaborative projects, peer discussion groups, and community-building activities, to facilitate smoother student adaptation and engagement.
4. Future research and institutional assessment should track students over time to evaluate the sustained impact of mentoring on academic outcomes, retention, and progression, providing evidence for policy development.
5. Mentoring programs should be designed to accommodate diverse student populations, including international students, first-generation learners, and students with differing academic or social needs, ensuring equitable access to benefits.
6. Institutions can leverage digital tools and online mentoring platforms to supplement traditional face-to-face mentoring, particularly in blended or remote learning environments.
7. Future studies should explore mediating roles (e.g., confidence, engagement) and moderating factors (e.g., gender, socio-economic status) to better understand how peer mentoring influences academic and psychosocial outcomes.
8. Regular assessment of mentoring programs, informed by mentor and mentee feedback, can help refine strategies, identify challenges, and enhance program effectiveness.

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