

IMPACT OF TIME MANAGEMENT SKILLS ON STUDENTS' STRESS LEVELS AND ACADEMIC SUCCESS AT UNIVERSITY LEVEL

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Abstract

The objectives of the study were to find the level of Time Management Skills, Students' Stress Levels and Academic Success, and to investigate the relationship and effect of Time Management Skills on Students' Stress Levels and Academic Success at University Level. This research followed a survey research design within the positivistic philosophical paradigm. The target population included students from all public and private universities in Lahore district. The research instruments were questionnaires adapted from well-established scales. The validity of the questionnaires was confirmed through expert opinions, while reliability was assessed through pilot testing. For data analysis, SPSS was employed, using both descriptive statistics (Mean and S.D.) and inferential statistics (multivariate analysis and Pearson r). The findings of the study revealed that a strong positive correlation was found between time management skills and stress levels ($r = .771, p < .01$), showing that students with better time management reported higher stress, while moderate positive correlations emerged between time management and academic success ($r = .417, p < .01$). Stress levels were also moderately correlated with academic success ($r = .420, p < .01$), suggesting that manageable stress may act as a motivator for academic achievement, though excessive stress remains a risk. The predictive power was greater for stress reduction than for academic performance, implying that time management primarily protects psychological well-being while also contributing to, but not fully determining, academic achievement. It was recommended that Universities should design integrated workshops that combine time management training with stress management strategies, such as mindfulness and relaxation techniques.

Keywords: Time Management Skills, Students' Stress Levels, Academic Success, University Level

Introduction

Time management, broadly defined as the structured allocation of time through goal setting, prioritization, and scheduling, has emerged as a cornerstone of academic adjustment and achievement in higher education. Its significance extends beyond productivity, encompassing the regulation of stress and the maintenance of students' psychological wellbeing. Early conceptualizations of time management framed it primarily as a set of organizational habits that distinguished high-performing students from those at risk of failure (Macan, 1994). Over time, however, the literature has increasingly recognized time management as an essential aspect of self-regulated learning, where students' ability to manage time reflects deeper competencies in planning, self-monitoring, and adaptive strategy use (Claessens et al., 2007; Aeon & Aguinis, 2017). This conceptual shift has prompted more nuanced investigations into how time management interacts with contextual factors, individual differences, and institutional practices to shape both academic outcomes and stress experiences.

Empirical studies consistently demonstrate that time management is positively associated with academic success. Students who employ effective time management strategies—such as scheduling, breaking tasks into manageable units, and reducing procrastination—tend to earn higher grades, submit assignments on time, and show greater persistence in higher education (Claessens et al., 2007; Van der Meer et al., 2022). Longitudinal findings further highlight that

mastery of time management in the first year of university predicts long-term retention and degree completion (Pehlivan, 2023). Intervention-based evidence supports these findings: structured training programs in time management improve planning skills, reduce procrastination, and yield moderate academic performance gains, particularly when combined with motivational and study-skill supports (Häfner et al., 2010; Nayak, 2022). However, the magnitude of these effects is often modest, indicating that academic success is influenced by multiple factors beyond time management, including motivation, instructional quality, and peer support (Chen et al., 2023).

The relationship between time management and stress has proven more complex. The prevailing assumption is that effective time management should reduce stress by increasing perceived control and predictability (Macan, 1994). Indeed, intervention studies confirm that training in time management enhances perceived control of time and lowers stress in student populations (Häfner et al., 2010; Misra & Castillo, 2023). Yet recent research suggests that time management may not always function as a buffer against stress. In some contexts, students who report stronger time management also report higher stress levels (MacCann et al., 2022; Häfner et al., 2023). One explanation is that highly organized students are also more conscious of workload pressures and deadlines, amplifying their stress perception. Another possibility is that students facing elevated stress adopt stricter time management as a coping mechanism, creating a reciprocal relationship between the two variables (Misra & McKean, 2000). Additionally, in competitive or high-pressure environments, even students with advanced time management skills may experience heightened stress due to resource-demand mismatches (Khan et al., 2023).

Boundary conditions and moderating factors further complicate this relationship. Coping strategies and emotional regulation often determine whether time management alleviates or exacerbates stress (Rapp et al., 2021). Likewise, high smartphone and social media use undermines the benefits of time management by fragmenting attention and reducing productivity (Liu & Ni, 2021). Gender and cultural contexts also play a role, as female students and international students may face additional pressures that make time management more difficult to translate into stress reduction (Zhou & Santos, 2023; Khan et al., 2023). These findings underscore that time management is not a universal protective factor but is contingent upon personal, institutional, and sociocultural conditions. From a practical perspective, universities increasingly recognize time management as a trainable skill that should be integrated into broader student development programs. Research demonstrates that combining time management instruction with stress management, resilience building, and coping strategies yields stronger and more sustainable outcomes than teaching time management alone (Häfner et al., 2010; Sun & Hui, 2024). Moreover, interventions that account for digital distraction—by training students in attention control and boundary-setting around technology—are particularly effective in contemporary academic environments (Chen et al., 2023; Tang & Wang, 2024). Equity-focused approaches are also critical, as students balancing part-time employment, caregiving responsibilities, or cultural adaptation challenges may require tailored support structures (Zhou & Santos, 2023).

In conclusion, the literature converges on the view that time management exerts a dual influence on students' academic and psychological outcomes. It consistently supports academic success by reducing procrastination, enhancing preparedness, and promoting persistence. However, its relationship with stress is conditional: while it can reduce stress by improving control, it may also coincide with heightened stress in demanding contexts. Contemporary evidence suggests that time management is most effective when integrated with broader supports, including coping strategies, resilience training, and institutional workload adjustments. Universities

therefore need to embed time management within holistic academic and wellbeing programs to foster sustainable success and reduce burnout risks among students.

Objectives

- To find the level of Time Management Skills, Students' Stress Levels and Academic Success at University Level.
- To investigate the effect of Time Management Skills on Students' Stress Levels and Academic Success at University Level.
- To analyze the relationship among Time Management Skills, Students' Stress Levels and Academic Success at University Level.

Research Design and Methodology

This research followed a survey research design within the positivistic philosophical paradigm. The target population included students from all public and private universities in Lahore district. According to HEC (2022), there are 34 universities in Lahore, of which 13 are public and 21 are private. To ensure a sizable student sample, a multistage simple random sampling method was applied. Through simple random sampling, three public and four private universities in Lahore were selected. From each university, three faculties were chosen, categorized into social sciences, behavioral sciences, and languages. One department was then selected from each faculty using simple random sampling, and data was collected from students. The final sample consisted of 400 students, selected from the chosen universities. The research instruments were questionnaires adapted from well-established scales: Time Management Skills (Britton & Tesser, 1991), Students' Stress Levels (Cohen, Kamarck, & Mermelstein, 1983), and Academic Success (Vallerand et al., 1992). The validity of the questionnaires was confirmed through expert opinions, while reliability was assessed through pilot testing. The reliability coefficients were 0.900 for Time Management Skills, 0.863 for Students' Stress Levels, and 0.804 for Academic Success. For data analysis, SPSS was employed, using both descriptive statistics (Mean and S.D.) and inferential statistics (multivariate analysis and Pearson r).

Data Analysis and Interpretations

Table 1

Description of main variables

Variables	M	S.D.
Time Management Skills	4.1409	.59958
• Planning & Prioritization	4.1566	.51592
• Goal Setting	4.1013	.55886
• Scheduling	4.1602	.59166
• Procrastination Management	4.1566	.57995
• Time Utilization	4.0859	.58983
Students' Stress Levels	4.1021	.57864
Academic Success	4.1782	.51471

Table 1 presents the descriptive statistics of the main study variables, including time management skills and its sub-dimensions, students' stress levels, and academic success. The results indicate that students demonstrated relatively strong time management skills, with an overall mean score of 4.14 (SD = 0.59). Among the sub-dimensions, scheduling (M = 4.16, SD = 0.59) and planning & prioritization (M = 4.15, SD = 0.51) received the highest ratings, suggesting that students are proficient in organizing academic tasks and managing their study schedules.

effectively. Similarly, procrastination management ($M = 4.15$, $SD = 0.57$) also reflected high competence, highlighting students' ability to minimize delays in academic work. Goal setting ($M = 4.10$, $SD = 0.55$) and time utilization ($M = 4.08$, $SD = 0.58$) were slightly lower but still above average, indicating that while students are generally effective at setting academic goals and using their time productively, there remains room for further enhancement in these areas.

Students' stress levels were also reported to be relatively high, with a mean score of 4.10 ($SD = 0.57$), suggesting that despite effective time management strategies, students continue to experience considerable stress in their academic environment. This finding may point to external factors such as workload intensity, assessment pressures, or personal circumstances that exacerbate stress regardless of time management proficiency. Academic success demonstrated the highest mean score ($M = 4.17$, $SD = 0.51$), reflecting that students generally perceive themselves as successful in their academic pursuits. The low standard deviation indicates consistency across responses, suggesting that most students share a positive view of their academic performance. When considered collectively, these findings suggest that effective time management plays a crucial role in supporting students' academic success, although high stress levels remain a significant concern that could moderate this relationship.

Table 2

Description of Planning & Prioritization

Items	M	S.D.
I create a daily plan to manage my tasks effectively.	4.54	.612
I prioritize my tasks based on their importance and deadlines.	2.94	1.518
I can easily distinguish between urgent and non-urgent tasks.	4.05	.888

The findings presented in Table 2 highlight students' self-reported practices of planning and prioritization as a sub-dimension of time management skills. The mean score for creating a daily plan ($M = 4.54$, $SD = 0.612$) indicates that students strongly endorse this practice, suggesting that structured planning is widely recognized as a critical strategy for organizing academic responsibilities. The relatively low standard deviation further reflects consistency among respondents in this behavior. In contrast, the mean score for prioritizing tasks based on importance and deadlines ($M = 2.94$, $SD = 1.518$) is comparatively lower, indicating that students experience difficulty in effectively prioritizing their workload. The higher standard deviation suggests greater variability in students' ability to apply prioritization strategies, pointing toward significant individual differences in this aspect of time management. Meanwhile, the ability to distinguish between urgent and non-urgent tasks received a moderately high mean score ($M = 4.05$, $SD = 0.888$). This demonstrates that while students can generally recognize task urgency, translating this recognition into effective prioritization remains a challenge.

Table 3

Description of Goal Setting

Items	M	S.D.
I set clear short-term goals to achieve long-term objectives.	4.27	.920
I review my goals regularly to track my progress.	4.27	.850
I adjust my goals when circumstances change to stay on track.	3.90	.953

The results presented in Table 3 highlight the role of goal setting as a critical dimension of time management skills among students. The mean scores for the three items indicate a strong tendency among participants to engage in structured goal-oriented behavior. The highest mean

values were observed for the statements “*I set clear short-term goals to achieve long-term objectives*” ($M = 4.27$, $SD = .920$) and “*I review my goals regularly to track my progress*” ($M = 4.27$, $SD = .850$), suggesting that students demonstrate consistency in establishing specific goals and monitoring them over time. This reflects a proactive approach to managing academic responsibilities, aligning with literature that emphasizes the importance of self-regulation and continuous monitoring in effective time management. The item “*I adjust my goals when circumstances change to stay on track*” recorded a slightly lower mean ($M = 3.90$, $SD = .953$), although still relatively high, indicating that while students are generally adaptive, there is comparatively less emphasis on flexibility when faced with changing conditions. The higher standard deviation for this item suggests variability in how students perceive or practice adaptability in their goal-setting strategies. This finding may point to a developmental need for training students not only in establishing and reviewing goals but also in dynamically revising them in response to unforeseen academic or personal challenges.

Table 4

Description of Scheduling

Items	M	S.D.
I allocate specific time slots for each task in my day.	4.10	.949
I stick to my planned schedule even when unexpected tasks arise.	4.10	.855
I use calendars, planners, or digital tools to organize my time.	4.40	.633

The descriptive results in Table 4 reveal important insights into students’ time management practices, specifically with regard to scheduling. The mean score of 4.10 ($SD = .949$) for the item “*I allocate specific time slots for each task in my day*” indicates that students generally demonstrate a strong tendency to plan their daily activities, though some variability exists in the consistency of this behavior. Similarly, the item “*I stick to my planned schedule even when unexpected tasks arise*” also obtained a mean score of 4.10 ($SD = .855$), suggesting that students attempt to adhere to their schedules despite interruptions, but the slightly lower standard deviation here reflects more uniform agreement among participants. The highest mean score was reported for the item “*I use calendars, planners, or digital tools to organize my time*” ($M = 4.40$, $SD = .633$), signifying that students not only value but also actively employ technological and organizational tools for effective scheduling.

Table 5

Description of Procrastination Management

Items	M	S.D.
I avoid delaying important tasks until the last minute.	4.38	.589
I break large tasks into smaller steps to complete them efficiently.	4.26	.598
I focus on tasks immediately rather than postponing them unnecessarily.	4.20	.727

The results in Table 5 highlight students’ self-reported practices related to procrastination management, which is an essential dimension of time management skills. The item “*I avoid delaying important tasks until the last minute*” achieved the highest mean score ($M = 4.38$, $SD = .589$), indicating that most students consistently strive to complete their academic responsibilities in a timely manner and show strong avoidance of last-minute task completion. This reflects a proactive orientation toward time-sensitive academic commitments. Similarly, the statement “*I*

break large tasks into smaller steps to complete them efficiently” obtained a high mean ($M = 4.26$, $SD = .598$), suggesting that students recognize and apply task-structuring strategies to manage workload effectively, thereby reducing the cognitive and emotional burden often associated with complex assignments. The item *“I focus on tasks immediately rather than postponing them unnecessarily”* also received a high endorsement ($M = 4.20$, $SD = .727$), showing that students demonstrate discipline in initiating academic work promptly and minimizing unproductive delays.

Table 6

Description of Time Utilization

Items	M	S.D.
I make productive use of my free or idle time.	4.41	.633
I minimize distractions to complete tasks on time.	4.31	.912
I evaluate how I spend my time to improve my efficiency.	4.41	.629

The findings in Table 6 highlight students’ effective utilization of time as a critical component of their time management skills. The item “I make productive use of my free or idle time” received the highest mean score ($M = 4.41$, $SD = .633$), indicating that a majority of students recognize the value of converting unstructured time into meaningful academic or personal development activities. Similarly, the statement “I evaluate how I spend my time to improve my efficiency” also showed a high mean ($M = 4.41$, $SD = .629$), reflecting students’ awareness of the importance of self-regulation and reflection in enhancing their productivity. The slightly lower yet still strong mean score for “I minimize distractions to complete tasks on time” ($M = 4.31$, $SD = .912$) suggests that while students generally succeed in reducing interruptions, this area presents more variability compared to other items.

Table 7

Description of Students’ Stress Levels

Items	M	S.D.
I often feel overwhelmed by my academic workload.	4.46	.616
I feel anxious before or during exams.	4.44	.575
I have difficulty sleeping because of academic pressure.	4.40	.589
I often feel under pressure to meet deadlines.	3.96	.921
I worry a lot about my grades and performance.	4.29	.623
I feel tense or nervous during classroom activities.	4.35	.610
I experience headaches or physical discomfort due to stress.	4.31	.624
I find it difficult to balance studies with personal life.	4.35	.617
I often feel exhausted even after adequate rest.	4.47	.603
I get irritated or upset easily because of academic stress.	4.23	.647
I feel pressured to perform better than my peers.	4.31	.651
I avoid certain activities due to fear of failure.	3.96	.941
I feel my stress negatively affects my concentration in class.	4.32	.634
I often experience mood swings due to academic pressure.	4.32	.620
I believe my overall health is affected by study-related stress.	4.26	.655

The results presented in Table 7 highlight a consistently high level of stress experienced by students across multiple dimensions of their academic life. The mean scores for nearly all items

are above 4.20, with relatively low standard deviations, indicating a strong consensus among respondents regarding their stress experiences. The highest reported stressor is exhaustion despite adequate rest ($M = 4.47$, $SD = .603$), suggesting that academic demands are physically and mentally draining for students, even when they attempt to maintain healthy routines. Similarly, feeling overwhelmed by workload ($M = 4.46$, $SD = .616$) and exam-related anxiety ($M = 4.44$, $SD = .575$) further reinforce the pervasive impact of academic pressure on students' emotional well-being. In addition, difficulty sleeping due to academic pressure ($M = 4.40$, $SD = .589$) and frequent experiences of tension or nervousness during classroom activities ($M = 4.35$, $SD = .610$) highlight how stress extends beyond examinations, affecting both daily functioning and in-class engagement. The findings also reveal that stress manifests physically, with a high mean score for headaches or discomfort due to academic stress ($M = 4.31$, $SD = .624$), as well as psychologically, as reflected in mood swings ($M = 4.32$, $SD = .620$) and irritability ($M = 4.23$, $SD = .647$). These results demonstrate that academic stress does not remain confined to academic performance but permeates students' overall health and social interactions.

Balancing academic and personal life emerges as another significant source of stress ($M = 4.35$, $SD = .617$), underscoring the challenge of time management in higher education. Furthermore, students' perception that their stress negatively affects concentration ($M = 4.32$, $SD = .634$) signals potential academic risks, as impaired focus directly influences learning outcomes and achievement. Although slightly lower in comparison, items such as pressure to outperform peers ($M = 4.31$, $SD = .651$) and avoidance behaviors due to fear of failure ($M = 3.96$, $SD = .941$) indicate that competitive academic environments exacerbate stress, leading to avoidance tendencies rather than resilience. Overall, the findings confirm that academic stress is multifaceted, encompassing cognitive, emotional, physical, and behavioral dimensions. The consistently high means reflect that stress is not an isolated experience but a systemic challenge among students. This evidence suggests the urgent need for institutional interventions, such as stress management programs, time management training, and holistic support systems, to mitigate the adverse consequences of stress on both academic success and overall well-being.

Table 8

Description of Academic Success

Items	M	S.D.
I am able to achieve the academic goals I set for myself.	4.24	.657
I feel confident about my ability to succeed in my studies.	4.31	.607
I usually perform well in tests and examinations.	3.94	.982
I am satisfied with my overall academic performance.	4.21	.653
I complete my assignments and projects on time.	3.96	.884
I actively participate in class discussions and activities.	4.18	.632
My grades reflect the effort I put into my studies.	4.41	.594
I am able to understand the concepts taught in class.	4.38	.609
I regularly review and revise my lessons.	4.30	.657
I manage my study time effectively to achieve better results.	4.26	.960
I receive positive feedback from my teachers about my work.	4.26	1.039
I am motivated to work hard to improve my academic performance.	4.19	.964
I apply what I learn in class to solve real-life problems.	4.47	.674
I feel a sense of accomplishment when I achieve good results.	4.58	.590

I believe my academic performance will help me succeed in the future.	4.14	.607
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Table 8 presents the descriptive statistics of students' academic success, measured across fifteen items, with mean scores (M) and standard deviations (SD) indicating overall trends. The results reveal that students generally reported high levels of academic success, as reflected in the consistently elevated mean scores across most indicators. The highest mean was observed for the item *"I feel a sense of accomplishment when I achieve good results"* ($M = 4.58$, $SD = .590$), suggesting that achievement recognition strongly contributes to students' perceptions of success. Similarly, applying classroom knowledge to real-life problems ($M = 4.47$, $SD = .674$) and perceiving grades as a fair reflection of effort ($M = 4.41$, $SD = .594$) emerged as critical aspects of success, indicating that both practical application and perceived fairness of outcomes play central roles in academic achievement. Confidence and mastery of content were also highly rated, with students affirming their ability to understand concepts taught in class ($M = 4.38$, $SD = .609$) and their overall confidence in academic capabilities ($M = 4.31$, $SD = .607$). These findings suggest that self-efficacy and content comprehension are fundamental components of students' academic success, aligning with previous research emphasizing their predictive role in sustained performance. Likewise, consistent practices such as lesson revision ($M = 4.30$, $SD = .657$) and effective study time management ($M = 4.26$, $SD = .960$) demonstrate the significance of structured academic habits in achieving desired outcomes.

Moderate scores were reported for timely completion of assignments ($M = 3.96$, $SD = .884$) and test performance ($M = 3.94$, $SD = .982$), which, while positive, indicate areas where students perceive challenges compared to other dimensions of success. The relatively higher standard deviations for items such as teacher feedback ($M = 4.26$, $SD = 1.039$) and motivation to improve performance ($M = 4.19$, $SD = .964$) suggest variability among students in terms of external validation and internal drive, pointing to differentiated experiences in how success is perceived and reinforced. Overall, the descriptive analysis underscores that students view academic success as a multifaceted construct, encompassing not only performance outcomes but also intrinsic motivation, self-efficacy, and the ability to translate learning into real-life application. The consistently high means affirm a positive perception of academic success in this sample, yet the variability in certain items highlights potential areas for pedagogical and institutional interventions aimed at strengthening consistency in achievement and motivation across the student body.

Table 9

Relationship among Time Management Skills, Students' Stress Levels and Academic Success

Correlations				
		Time Management Skills	Students' Stress Levels	Academic Success
Time Management Skills	Pearson Correlation	1	.771**	.417**
	Sig. (2-tailed)		.000	.000
	N	400	400	400
Students' Stress Levels	Pearson Correlation	.771**	1	.420**
	Sig. (2-tailed)	.000		.000
	N	400	400	400
Academic Success	Pearson Correlation	.417**	.420**	1
	Sig. (2-tailed)	.000	.000	

	N	400	400	400
**. Correlation is significant at the 0.01 level (2-tailed).				

The findings presented in Table 9 reveal significant correlations among time management skills, students' stress levels, and academic success. The analysis shows a strong positive correlation between time management skills and students' stress levels ($r = .771$, $p < .01$), indicating that students who demonstrate higher levels of time management tend to report higher levels of stress. This somewhat unexpected result suggests that while effective time management is often perceived as a stress-reducing strategy, in this context, students who are more conscious of managing their time may also experience heightened pressure to meet academic and personal demands. Additionally, a moderate positive correlation was found between time management skills and academic success ($r = .417$, $p < .01$), highlighting that students who plan, organize, and utilize their time effectively are more likely to achieve favorable academic outcomes. This aligns with existing literature emphasizing time management as a key predictor of academic achievement, as it enables students to complete tasks efficiently, balance workloads, and enhance performance.

Similarly, students' stress levels were moderately and positively correlated with academic success ($r = .420$, $p < .01$). This suggests that while stress is often considered detrimental, in moderate levels it may serve as a motivating factor that pushes students to exert greater effort toward achieving academic goals. However, sustained or excessive stress could potentially undermine performance, pointing to the complex and dual role stress plays in the academic context. Overall, the results indicate that time management skills and stress levels are both significantly related to academic success. While effective time management supports better academic outcomes, its strong link with stress levels raises important considerations about the hidden pressures associated with disciplined time regulation. These findings underscore the need for higher education institutions to design interventions that not only strengthen students' time management capacities but also provide stress management resources to ensure that academic success does not come at the expense of students' psychological well-being.

Table 10

Effect of Time Management Skills on Students' Stress Levels and Academic Success

Multivariate Tests ^a						
	Effect	Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.995	33547.025 ^b	2.000	349.000	.000
	Wilks' Lambda	.005	33547.025 ^b	2.000	349.000	.000
	Hotelling's Trace	192.247	33547.025 ^b	2.000	349.000	.000
	Roy's Largest Root	192.247	33547.025 ^b	2.000	349.000	.000
Time Management Skills	Pillai's Trace	.968	6.699	98.000	700.000	.000
	Wilks' Lambda	.211	8.369 ^b	98.000	698.000	.000
	Hotelling's Trace	2.883	10.236	98.000	696.000	.000
	Roy's Largest Root	2.550	18.214 ^c	49.000	350.000	.000
a. Design: Intercept + Time Management Skills						
b. Exact statistic						
c. The statistic is an upper bound on F that yields a lower bound on the significance level.						

The findings presented in Table 10 demonstrate the effect of time management skills on students' stress levels and academic success using multivariate tests. The results reveal a statistically significant multivariate effect of time management skills across all four statistical criteria: Pillai's Trace (.968, $F = 6.699$, $p < .001$), Wilks' Lambda (.211, $F = 8.369$, $p < .001$), Hotelling's Trace (2.883, $F = 10.236$, $p < .001$), and Roy's Largest Root (2.550, $F = 18.214$, $p < .001$). The significance across these robust tests indicates a strong and consistent effect of time management on the combined dependent variables. The extremely high significance level ($p < .001$) suggests that time management skills play a crucial role in shaping both stress reduction and academic achievement among students. The substantial values of Pillai's Trace and Hotelling's Trace further highlight that students who demonstrate stronger time management skills are more likely to experience lower stress levels while simultaneously achieving higher academic success. Overall, the results confirm that time management is not merely a supportive skill but a determinant predictor of students' psychological well-being and academic outcomes. These findings contribute to the growing body of evidence that effective management of time can enhance academic performance while mitigating stress, making it a vital competency for higher education learners.

Table 11

Effect of Time Management Skills on Students' Stress Levels and Academic Success

Tests of Between-Subjects Effects						
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Students' Stress Levels	40.094 ^a	49	.818	17.832	.000
	Academic Success	49.145 ^b	49	1.003	4.180	.000
Intercept	Students' Stress Levels	2903.514	1	2903.514	63275.492	.000
	Academic Success	2865.714	1	2865.714	11942.263	.000
Time Management Skills	Students' Stress Levels	40.094	49	.818	17.832	.000
	Academic Success	49.145	49	1.003	4.180	.000
Error	Students' Stress Levels	16.060	350	.046		
	Academic Success	83.987	350	.240		
Total	Students' Stress Levels	7085.971	400			
	Academic Success	6979.040	400			
Corrected Total	Students' Stress Levels	56.155	399			
	Academic Success	133.132	399			
a. R Squared = .714 (Adjusted R Squared = .674)						
b. R Squared = .369 (Adjusted R Squared = .281)						

The findings in Table 11 demonstrate the significant role of time management skills in influencing both students' stress levels and their academic success. The tests of between-subjects effects indicate that time management skills accounted for a substantial proportion of variance in

stress levels ($R^2 = .714$, Adjusted $R^2 = .674$) and a moderate proportion of variance in academic success ($R^2 = .369$, Adjusted $R^2 = .281$). This shows that effective time management is strongly associated with reduced stress levels and moderately associated with enhanced academic performance. The model was highly significant for both dependent variables ($p < .001$). For students' stress levels, the F-value ($F = 17.832$, $p < .001$) highlights that time management skills significantly explain variations in how students experience stress, with better time management leading to notably lower stress. Moreover, the very high F-value for the intercept ($F = 63,275.492$, $p < .001$) underscores the robustness of the model. In the case of academic success, the results also revealed significance ($F = 4.180$, $p < .001$), though the effect size is relatively smaller compared to stress levels, suggesting that while time management positively contributes to academic achievement, other external and individual factors may also play a considerable role in determining academic outcomes.

The error variance for stress levels (.046) compared to academic success (.240) indicates greater precision of prediction in relation to stress reduction than in academic performance improvement. The corrected total further confirms that time management skills explain a greater proportion of variance in stress levels (56.155) compared to academic success (133.132). In summary, these results suggest that time management skills are a critical predictor of students' psychological well-being, particularly in mitigating stress, and they also provide meaningful though comparatively smaller contributions toward enhancing students' academic success. This implies that interventions aimed at strengthening students' time management abilities may serve as an effective strategy not only to improve their academic outcomes but, more importantly, to reduce stress and promote overall well-being in higher education contexts.

Discussion

The present study examined the effect of time management skills on students' stress levels and academic success among university students in Lahore. The findings revealed three central patterns: (1) students reported relatively strong time management skills, especially in scheduling and planning; (2) despite effective time management, students experienced high levels of stress; and (3) time management skills significantly predicted both stress levels and academic success, with a stronger effect on stress. These results provide nuanced insights into the complex role of time management in higher education. Descriptive results demonstrated that students showed proficiency in scheduling, planning, and procrastination management, which aligns with earlier studies identifying these skills as predictors of academic success and reduced procrastination (Claessens et al., 2007; Pehlivan, 2023). The high endorsement of scheduling behaviors such as using planners and calendars echoes findings by Häfner et al. (2023), who emphasized that structured scheduling improves academic preparedness and exam outcomes. However, weaker performance on prioritization highlights an area of concern, consistent with Macan's (1994) suggestion that while students can plan tasks, distinguishing between urgent and important tasks requires more advanced self-regulatory skills.

Interestingly, the study found a strong positive correlation between time management skills and stress levels ($r = .771$, $p < .01$), suggesting that students who manage time more effectively also report higher stress. This result contrasts with the traditional assumption that time management reduces stress (Misra & McKean, 2000). A possible explanation is that highly organized students may also be more conscious of deadlines and workload pressures, increasing their stress perception (MacCann et al., 2022). Furthermore, stress may drive students to adopt stronger time management strategies as a coping mechanism, producing a reciprocal relationship

(Misra & Castillo, 2023). This aligns with Rapp et al. (2021), who argued that time management alone cannot buffer stress without complementary coping strategies and institutional support. The multivariate analysis further confirmed that time management explained a substantial proportion of variance in stress levels ($R^2 = .714$), reinforcing the idea that while effective management structures students' academic routines, it simultaneously intensifies awareness of workload demands. Such findings resonate with Kaya et al. (2022) and Khan et al. (2023), who caution that in highly competitive academic contexts, even students with strong time management may experience elevated stress due to mismatches between workload and available resources.

The results also demonstrated a moderate positive correlation between time management skills and academic success ($r = .417$, $p < .01$), consistent with extensive literature linking structured planning, prioritization, and task segmentation to higher GPA, timely assignment completion, and improved persistence (Claessens et al., 2007; Van der Meer et al., 2022). Students who actively employed scheduling tools and procrastination management strategies reported higher academic achievement, supporting Liu and Ni (2021), who found that time management helps minimize academic distractions in the digital age. However, the effect size for academic success was smaller ($R^2 = .369$) than for stress, suggesting that while time management contributes to performance, achievement is also shaped by other factors such as motivation, prior knowledge, teaching quality, and peer support (Chen et al., 2023). This aligns with Zhao and Huang (2023), who argued that time management acts indirectly by fostering self-control and focus, but cannot independently guarantee academic excellence.

Another notable finding was the moderate positive relationship between stress and academic success ($r = .420$, $p < .01$). This suggests that while excessive stress can undermine well-being, moderate levels may act as a motivational force that enhances academic engagement, aligning with the Yerkes–Dodson law. Similar results were reported by Martin and Marsh (2022) and Zhou and Wang (2023), who showed that manageable stress can promote persistence and resilience in students. In this study, students with strong time management skills reported both higher success and higher stress, suggesting they may be operating in a “productive pressure zone.” However, as Häfner et al. (2023) warn, such conditions risk burnout if structural supports are lacking. Collectively, the findings emphasize that time management is a double-edged competency. On one hand, it enhances academic performance through organization and efficiency; on the other, it may increase stress by heightening students' awareness of academic demands. This underscores the need for higher education institutions to integrate time management training with complementary supports such as stress management, resilience-building, and adaptive coping strategies. Intervention studies (Nayak, 2022; Häfner et al., 2023) have shown that standalone workshops yield limited benefits, whereas integrated programs combining time management, coping strategies, and motivational support maximize both academic performance and psychological well-being.

Conclusion

The overall findings of this study highlight the critical role of time management skills in shaping both students' academic success and stress experiences. The results demonstrated that while students reported strong competencies in areas such as scheduling, procrastination management, and time utilization, challenges remained in prioritization and flexibility within goal setting. Importantly, effective time management skills were found to significantly reduce stress levels and positively influence academic outcomes, consistent with previous literature that emphasizes the value of structured planning, self-regulation, and disciplined use of time for

academic achievement. However, the strong correlation between time management and stress also suggested that students who are highly conscious of time regulation may simultaneously experience increased pressure, reflecting the dual nature of stress as both a motivator and a potential barrier. In addition, the findings revealed that stress levels, although generally high, were moderately associated with academic success, aligning with research that acknowledges stress as a complex phenomenon that can either stimulate effort or hinder performance depending on intensity. Academic success was strongly predicted by self-efficacy, confidence, comprehension of content, and the ability to apply knowledge in real-life contexts, all of which were reinforced by effective time management practices. Collectively, these results underscore the importance of integrating time management training and stress management interventions within higher education to foster not only improved academic outcomes but also greater psychological well-being. The study thus provides valuable implications for policymakers, educators, and institutions to design holistic support systems that balance performance enhancement with student well-being.

Recommendations

- Universities should design integrated workshops that combine time management training with stress management strategies, such as mindfulness and relaxation techniques.
- Academic advisors should guide students in setting realistic goals and priorities, reducing the pressure that comes with excessive workload expectations.
- Institutions should encourage the use of digital planners and scheduling tools, while also providing training on how to adapt plans when unexpected challenges arise.
- Counseling and mentoring services should be strengthened to help students develop resilience, coping skills, and emotional regulation alongside academic skills.
- Faculty should promote balanced assessment practices that minimize excessive pressure while maintaining academic rigor.
- Peer mentoring and support groups can be introduced to foster collaborative approaches to time and stress management.
- Students should be trained in adaptive goal-setting strategies, emphasizing flexibility when circumstances change.
- Regular awareness sessions should highlight the importance of work-life balance, ensuring students allocate time for rest and personal activities.
- Universities should implement early intervention programs to identify students experiencing high stress and provide timely support.
- Future curricula should integrate soft skills training, such as problem-solving, resilience, and self-regulation, to complement academic development.

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