

Original article

Time-Management Practices and Their Impact on Academic Performance Among Medical Students

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ABSTRACT

Keywords.

Time Management, Academic Performance, Student Perceptions, Procrastination.

This cross-sectional descriptive study, conducted in December 2025, examined student perceptions of time-management strategies and their relationship to academic challenges. A total of 267 valid responses were collected using a structured questionnaire assessing planning behaviors, stress management, and academic performance. Results indicated that many students reported insufficient daily planning (68%), limited weekly and monthly organization (48% and 66%, respectively), and frequent procrastination (66%). Poor planning was strongly associated with perceived academic decline (74%), while sleep deprivation was identified as a major factor negatively affecting performance (86%). Despite these difficulties, most students expressed commitment to meeting deadlines (76%) and acknowledged the need to improve their time-management skills (88%). The findings provide a clear overview of prevailing practices and perceptions, emphasizing the central role of time management in shaping academic experiences. This study highlights the importance of addressing time-management challenges within higher education and offers evidence to guide interventions aimed at enhancing student performance and well-being.

Introduction

Time management is widely recognized as a fundamental skill influencing academic achievement and student well-being. In higher education, effective time management encompasses the ability to plan, prioritize, and allocate tasks within limited timeframes, thereby reducing stress and enhancing productivity. Several studies have demonstrated that students who adopt structured time-management strategies achieve better academic outcomes, improved concentration, and greater satisfaction with their studies (1,2). Conversely, poor time management has been consistently linked to procrastination, academic decline, and heightened psychological distress (3).

The importance of time management has become more pronounced with the expansion of online and blended learning environments, where students are required to exercise greater autonomy in organizing their academic responsibilities. Research indicates that the absence of effective time-management skills in such contexts often results in reduced engagement and lower performance (4). Moreover, time management is not only associated with academic success but also with psychosocial outcomes such as resilience, motivation, and stress reduction (5).

In the Libyan context, studies have highlighted similar challenges. A recent investigation into Libyan graduate students studying abroad found that deficiencies in time-management skills were strongly correlated with lower academic performance and increased stress levels (6). Local surveys of Libyan medical students also reveal that many struggle with balancing coursework, clinical responsibilities, and personal obligations, underscoring the need for structured planning and prioritization (7). These findings align with global evidence, reinforcing the notion that time management is a universal determinant of academic success, yet one that requires contextual understanding within specific educational systems. The aim of this study was to evaluate student perceptions of time-management strategies and their relationship to academic challenges.

Methodology

Study Design and Population

This study employed a cross-sectional descriptive design targeted at undergraduate students enrolled in medical and health sciences programs in December 2025. A total of 299 questionnaires were initially collected; however, after data cleaning procedures that involved the removal of incomplete responses and duplicate entries, 267 valid questionnaires were retained for final analysis, yielding a response rate of 89.3%.

Data Collection Instrument

Data were collected online using a structured, self-administered questionnaire developed from published literature (8,9). To ensure content validity, the initial draft was reviewed by a panel of three subject matter experts to ensure the items adequately represented the constructs of complication mitigation and professional barriers. A pilot study was conducted with a small representative sample of 5 to assess the clarity and flow of the questions; minor phrasing adjustments were made based on their feedback. The instrument included sections on demographic and professional characteristics, complication mitigation strategies, and perceived barriers and opportunities for improvement. Most items were assessed using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). To establish internal consistency reliability, Cronbach's alpha was calculated for the Likert-scale dimensions, with a coefficient of $\alpha \geq 0.70$ considered acceptable. Multiple-choice questions were used to capture demographic variables.

Data Analysis

Responses were coded and analyzed using descriptive statistics using SPSS software. Frequencies and percentages were calculated for categorical variables, while mean values were reported for continuous measures. Comparative analysis was performed to evaluate differences in perceptions across groups, and results were presented in tables and figures to facilitate interpretation.

Ethical Considerations

The study protocol was reviewed and approved by the Ethical Committee of Maaref International University. Participation was entirely voluntary, and all participants provided informed consent electronically before proceeding to the survey. To ensure confidentiality and anonymity, no personally identifiable information was collected. Participants were informed of their right to withdraw from the study at any time without penalty. All data were stored securely and used solely for academic research purposes in accordance with the university's data protection policies.

Results

As shown in Figure 1, the distribution of students' levels of study indicates that the majority of participants are concentrated in the 2nd, 4th, and 5th semesters (26%, 22%, 22%; respectively). Collectively representing over two-thirds of the sample.

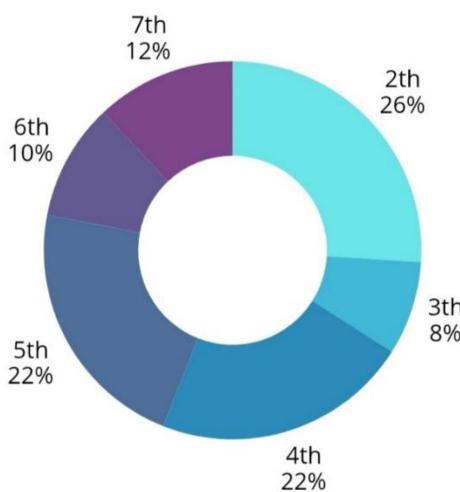


Figure 1. Students' level of study

Table 1 presents student perceptions regarding time-management and academic challenges. Most students rejected the notion that time-management strategies are ineffective (66% disagreement; $\bar{x} = 2.56$, $SD = 0.95$). Two-thirds (66%) found the academic year challenging, reflected in a relatively high mean score ($\bar{x} = 3.76$). Stress-management responses were mixed, with considerable variability (34% disagreed, 44% agreed; $SD = 0.96$). Poor planning was strongly associated with academic decline, with 74% total agreement and a high mean score ($\bar{x} = 3.84$).

Daily time-management preferences were divided, with 42% neutral and 50% in agreement ($\bar{x} = 3.52$). A majority (68%) reported insufficient time to complete daily tasks ($\bar{x} = 2.50$), while long-term planning was notably weak, with monthly planning being the least practiced ($\bar{x} = 2.62$, $SD = 0.90$). Semester goals were set by 54% of students, yet half reported lacking yearly plans ($\bar{x} = 2.88$).

Sleep deprivation was the most widely recognized factor contributing to performance decline (86% agreement), yielding one of the highest mean scores in the study ($\bar{x} = 4.22$, $SD = 0.89$). Understanding of

radiology lectures was largely neutral (42%), with a moderate mean score ($x^- = 3.18$). Deadline adherence was strong (76% agreement; $x^- = 3.88$), though procrastination remained common (66%; $x^- = 3.74$).

Workload management showed moderate confidence (56% agreement), but an overwhelming 88% of students acknowledged the need to improve their time-management skills. This item reached the highest level of consensus in the survey ($x^- = 4.46$, SD=0.71). Finally, while priority-setting was affirmed by 58% ($x^- = 3.68$), distraction control remained weak, with 42% disagreement ($x^- = 2.94$).

Table 1. Student Perceptions on Time-Management and Academic Challenges

Question Statement	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)	Mean	SD
Time-management strategies are ineffective.	1 (2%)	33 (66%)	5 (10%)	9 (18%)	2 (4%)	2.56	0.95
The academic year is challenging (online).	0 (0%)	4 (8%)	13 (26%)	24 (48%)	9 (18%)	3.76	0.85
I can manage stress with conflicting tasks.	0 (0%)	17 (34%)	9 (18%)	22 (44%)	2 (4%)	3.18	0.96
Performance declined due to poor planning.	0 (0%)	6 (12%)	7 (14%)	26 (52%)	11 (22%)	3.84	0.91
I prefer to manage my time daily.	0 (0%)	4 (8%)	21 (42%)	20 (40%)	5 (10%)	3.52	0.79
I have enough time to complete daily tasks.	0 (0%)	34 (68%)	8 (16%)	7 (14%)	1 (2%)	2.50	0.81
I have a clear weekly plan.	0 (0%)	24 (48%)	7 (14%)	16 (32%)	3 (6%)	2.96	1.03
I have a clear monthly plan.	0 (0%)	33 (66%)	3 (6%)	14 (28%)	0 (0%)	2.62	0.90
I set goals for the semester.	0 (0%)	15 (30%)	8 (16%)	23 (46%)	4 (8%)	3.32	1.00
I have a yearly plan.	0 (0%)	25 (50%)	6 (12%)	19 (38%)	0 (0%)	2.88	0.94
Performance declines due to lack of sleep.	0 (0%)	4 (8%)	3 (6%)	21 (42%)	22 (44%)	4.22	0.89
I understand radiology lectures completely.	0 (0%)	11 (22%)	21 (42%)	16 (32%)	2 (4%)	3.18	0.83
I meet deadlines for academic work.	0 (0%)	4 (8%)	8 (16%)	28 (56%)	10 (20%)	3.88	0.82
I often delay or postpone tasks.	0 (0%)	9 (18%)	8 (16%)	20 (40%)	13 (26%)	3.74	1.05
I can manage my workload effectively.	0 (0%)	7 (14%)	15 (30%)	25 (50%)	3 (6%)	3.48	0.81
Time-management skills need improvement.	0 (0%)	0 (0%)	6 (12%)	15 (30%)	29 (58%)	4.46	0.71
I set priorities effectively.	0 (0%)	6 (12%)	15 (30%)	18 (36%)	11 (22%)	3.68	0.96
I use my time wisely and avoid distractions.	0 (0%)	21 (42%)	14 (28%)	12 (24%)	3 (6%)	2.94	0.96
I adapt and remain flexible during changes.	0 (0%)	14 (28%)	12 (24%)	23 (46%)	1 (2%)	3.22	0.89

Discussion

The findings of this study highlight significant challenges in time-management practices among medical students, with clear implications for academic performance. A majority of participants reported insufficient time to complete daily tasks (68%), limited weekly and monthly planning (48% and 66%, respectively), and widespread procrastination (66%). These results align with international evidence indicating that poor time-management behaviors are strongly associated with academic stress, reduced productivity, and lower achievement (10,11).

The strong association between poor planning and academic decline observed in this study (74% agreement) is consistent with earlier findings that ineffective scheduling and prioritization contribute to diminished academic outcomes. Macan et al. demonstrated that time-management behaviors are positively correlated with academic performance and inversely related to stress levels (12). Similarly, Häfner and Stock reported that structured time-management training significantly improved student performance and reduced procrastination tendencies (13).

Sleep deprivation emerged as a major factor influencing performance, with 86% of students acknowledging its negative impact. This finding resonates with global studies linking insufficient sleep to impaired cognitive function, reduced concentration, and lower academic achievement (14,15). Misra and McKean further emphasized that poor time management often exacerbates stress and sleep problems, creating a cycle of declining performance (16).

Local Libyan studies reinforce these observations. Elfituri and Elmabrouk found that medical students in Libya frequently struggle with balancing coursework, clinical duties, and personal obligations due to inadequate planning and prioritization (8). Tata's study of Libyan graduate students abroad similarly reported that deficiencies in time-management skills were strongly correlated with lower academic performance and increased stress (7). These local findings mirror the global literature, underscoring that time-management challenges are both universal and context-specific, shaped by institutional demands and cultural factors.

The high proportion of students recognizing the need to improve their time-management skills (88%) suggests strong awareness of the issue, yet the persistence of procrastination and weak planning indicates a gap between recognition and practice. This discrepancy has been noted in previous research, where students often acknowledge the importance of time management but fail to implement effective strategies consistently (17). Moreover, the mixed responses regarding stress management and adaptability (34% disagreed, 44% agreed; 28% disagreed, 48% agreed) reflect variability in coping mechanisms, which has been documented in studies linking resilience and self-regulation to academic success (18).

Conclusion

This study revealed that students face notable challenges in managing their time effectively. While many expressed awareness of the importance of time management, the findings showed limited daily and long-term planning, frequent procrastination, and the negative impact of sleep deprivation on academic performance. Despite a strong commitment to meeting deadlines, students reported difficulties in balancing tasks and controlling distractions. Overall, the results provide a clear snapshot of prevailing perceptions and highlight the central role of time-management practices in shaping academic experiences.

Conflict of Interest

The authors declare that they have no conflicts of interest related to this study.

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