Research Article

TIME MANAGEMENT SKILLS AMONG TO IMPROVE ACADEMIC AS WELL AS CLINICAL PERFORMANCE OF MEDICAL UNDERGRADUATES

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ABSTRACT

Background: Time management is the process of planning and controlling one's schedule to increase output and effectiveness. Time management skills (TMS) make us more settled and systematised, which raises productivity and efficiency and, in turn, leads to a healthier existence for us.

Aim: To evaluate the undergraduate medical students at the NCRIMS Medical College and Hospital in Meerut's time management abilities.

Methodology: This cross-sectional study involved 130 undergraduate medical students from a tertiary healthcare facility in Meerut called the NCR Medical College and Hospital. A time management questionnaire (TMQ) with ten items on 5-point Likert scales was used to evaluate the time management competence. The TMQ consists of ten questions, each of which must be scored using a five-point Likert scale. The results show that: One, two, three, four, and five are never, never, occasionally, frequently, and always, respectively. A higher score is indicative of more effective time management.

Results: Of all students, 80% selected codes 4 (16.9%) and 5 (63.8%). After post-analysis utilising combination answers of codes, this frequency increased to 88%. The majority of students selected codes 1, 2, and 3 in the previous analysis, as shown by the heat plot. But it seems to have returned to codes 4 and 5 after more research.

Conclusion: One of the possible causes is that there may not have been any workshops, awareness campaigns, or debates on this hot topic in medical colleges. Consequently, future research on the relationship between time management and academic performance may be undertaken, and students' time management skills may be enhanced by the organisation of workshops, poster presentations, tasks with deadlines, and counselling.

Keywords: Multitasker, Time Management Questionnaire, Medical Students, Deadlines, Self-Directed Learning Readiness.

INTRODUCTION

One of the main problems facing today's medical students is a lack of "Effective or Efficient Time Management." The standard for efficient time management is not only reaching established objectives but also completing them within the predetermined timeframe. Nowadays, one of the most important questions is how to make the most use of the time that is available. "Time" is a rigid, non-renewable resource, and there are currently no techniques for gathering and amplifying time.1

A student experiences worry, obstacles, low confidence, etc. when they are unable to finish academic tasks and assignments. This ultimately leads to subpar academic performance. One important strategy for student achievement and improved academic presentation is effective time management.2

The main components of time management include prioritising tasks, using available time wisely, and completing them by the deadline. In a professional course such as MBBS, students are expected to deconstruct assignments into manageable pieces and list all necessary activities ahead of time. Additionally, it causes anxiety, disappointment about not meeting expectations for academic achievement, and sleep deprivation.3. In the end, the pupils' mental and physical health declines, which hinders their ability to learn new skills and information. Given the huge amount of academic and extracurricular activities throughout MBBS, time management becomes crucial since the National Medical Council of India forecasts that a medical graduate would be a lifelong learner.4

Effective time management not only makes life better and more organised, but it also enables us to enjoy it more by setting apart and spending more time with our loved ones, friends, and family.5 Time management is now seen as being crucial to both individual and team performance, particularly in the workplace. Higher academic achievement is linked to efficient time management, whereas students who manage their time poorly report feeling more stressed.6

A few things that might make students more stressed and result in subpar academic performance are not knowing how to manage their time well and studying for tests at the last minute. Occasionally, unexpected external occurrences like strikes, accidents, crises, or unscheduled events might cause students to lose time in class and negatively impact their academic performance.7. In most cases, students have less influence over these unanticipated problems. On the other hand, students' internal time-wasting factors may even outweigh the external ones.

Procrastination, lack of prioritisation, and distractions are a few of these variables. The assignment may overwhelm some pupils, so they put it off until later.8 The reason for this postponement is ingrained laziness. Instead of allowing us to finish the work, it increases the strain. In students, tardiness and a lack of prioritisation are the two biggest issues. Procrastination can result from poor time management, particularly when students miss deadlines.9. Students might lose time studying if they are distracted. Some students may become sidetracked because they mistakenly believe that some irrelevant and inconsequential activities require their immediate attention. This might occur when students are browsing idly for a suitable time to study and have a tonne of work to complete.

Medical students are known to having a very demanding curriculum. Some of them could find it challenging to balance their free time with studies, which could result in stress.10 Research on the academic performance, time management abilities, and reported academic satisfaction of UP medical students appears to be lacking. Thus, the purpose of this study was to: (a) evaluate the time management abilities of UP medical students; and (b) investigate the relationship between the participants' overall time management score and other aspects of their academic performance. Therefore, the purpose of this study was to evaluate the undergraduate medical students' time management abilities in a tertiary care hospital.

MATERIALS AND METHODS

This observational study was conducted on the medical students of Rama Medical College and Hospital, Hapur, Uttar Pradesh. The study did not include student self-reports who were receiving psychiatric care or chronic absentees. There were four portions to the self-administered study instrument. A semi-structured proforma was used in the first segment to gather basic participant data. Time management questionnaires (TMQs) were sent along with a variety of data collection forms, including age, gender, class 12 board, language of class 12 board, domicile (rural/urban), and current stay (hostel/day scholar). The TMQ consists of ten questions, each of which must be scored using a five-point Likert scale. The results show that: One, two, three, four, and five are never, never, occasionally, frequently, and always, respectively. A higher score is indicative of more effective time management. It was requested of the students to gather in the lecture hall.

The lead investigator gave an explanation of the research's methods and instruments, and students who provided written informed consent were given self-administered study materials.There was no guarantee of conversation or debate among the pupils. The unpaired t test was used to evaluate the relationship between time management scores and sociodemographic factors; a P value of less than 0.05 was deemed statistically significant.

Statistical Analysis: The Kolmogorov Smirov test was used to determine the normality of continuous data. When comparing the groups for non-normal continuous data, NPr was utilised when needed. Frequencies of the categorical data were displayed. The mean and standard deviation were used to depict the age data. The statistical package for the

social sciences, version 22 (SPSS-22, IBM, Chicago, USA), was used to do the statistical analysis, and Prizm software was used to prepare the graphics. A two-tailed p-value of less than 0.05 is regarded as significant.

RESULTS

Based on a questionnaire, we studied 150 MBBS students; however, we discovered that only 130 of the questionnaires were completed, thus we could only investigate 130 people. The study's mean age ($\pm$ SD) for cases and controls is 19.83$\pm$ 1.5 years, with 38.4% of the population being male and 61.5% being female. Do you schedule your day in advance for study and other activities? That was the first question posed in this survey. Approximately 38% of students acknowledged that they do it occasionally (code C3), 26% that they do it regularly (code 4), and 15% that they do it consistently (code 5).

After post-analysis, there was a 50% decrease in the frequency of code 3 (p<0.01), and a 21% and 50% rise in the frequency of codes 4 and 5, respectively (code 4: pre 26% vs post 33% and code 5: pre 15% vs 32%) (all p <0.05).

However, it was discovered that there was no difference between the before and post analyses for codes 1 and 2 (p>0.05).

Going on to the following questionnaire question (Q2), do you establish goals at the start of the week to be accomplished? Code 3 was agreed upon by the majority of students (43%) followed by code 4 (26.9%), code 5 (11.5%) = code 2 (11.5%), and code 1 (6.9%). Following post-analysis, codes 4 and 5 showed a significant increase once more (all p<0.05).

"Do you set your priority on the basis of its urgency, importance, and utility?" was the third question. Of the students, 42% agreed to do it occasionally (code C3), whereas 15% and 23% selected codes 4 and 5, respectively. However, this number rose with codes 4 and 5 and declined dramatically with code 3 (all p<0.01). After post-analysis, it was shown that students were more comfortable with codes 4 and 5 than with 1, 2, and 3.

The following inquiry from the survey (Q4) asked, "Have you ever seen the distractions that Did you know that 32% of students agreed to engage in their list of diversions regularly (code C4), while 25% and 24% selected codes 5 and 3, respectively.

Just 14% and 3% of pupils, respectively, selected codes 1 and 2. Following post-analysis, there was no discernible change in frequency (p>0.05). That is, after post-analysis, the difference was determined to be non-significant. Going on to question number five (Q5), we found that 46% of students agreed to change or reschedule their plan at least once a week (code C3), whereas 25% and 16% selected codes 4 and 2, respectively. Just 6.2% of pupils selected codes 1 and 5. Additionally, during post-analysis, the difference was shown to be nil (all p>0.05). The following query (Q6) asked if the person who was trying to multitask and establish goals would, in fact, succeed in doing so.

While 34% and 3.8% of students selected codes 3 and 1, 38% of students agreed to do so on demand (code C5). Just 11.5% of pupils selected codes 2 and 4. After post analysis, the percentage of cases with code 5 increases to 38 to 53% (all p<0.01). It was shown that students favoured codes 5 above other codes after post-analysis.

Next question (Q7): do you have a calendar on your study table? We discovered that 26.9% of students agreed to do so frequently (code C4), while 23.8% and 21.5% selected codes 5 and 3, respectively. Do you maintain a record of significant dates on a single calendar and review it regularly? Of the pupils, just 15.4% and 12.3% selected codes 1 and 5, respectively.

After post-analysis, it was concluded that there was no change (all p>0.05). Going on to the following query (Q8): Do you have a time objective or restriction in mind for finishing your goals? Of the MBBS students, about 41.5% acknowledged that they do it occasionally (code C3), 22.3% that they do it defiantly (code 5), and 15% that they do it constantly (code 4). Students who selected codes 2 and 1 were 13.1% and 7.7%, respectively. After post-analysis, there was a substantial decrease (p<0.01) in the frequency of codes 1 through 3, but a 31% and 58% rise in the frequency of codes 4 and 5, respectively (Code 4: pre 15.4% vs post 21.5% and Code 5: pre 22% vs 53%) (all p <0.05). Turning to the second-to-last question (Q9), we found that 45.4% of students agreed to edit their notes (code C4) with the most frequency, while 32% and 13% selected codes 3 and 5, respectively. After post-analysis, there was a 50% decrease in the frequency of codes 4 (pre 45% vs. 21%) and a 50% rise in the frequency of code 3 (pre 32% vs. post 44%; all p <0.05).

Was "there must be the chances for the improvement and implementation of managing the time to achieve the goal" something that respondents agreed with, according to question 10? Eighty percent of the students selected codes 4

(16.9%) and 5 (63.8%). Following post-analysis using a combination answer of codes 4 and 5 ($p>0.05$), this frequency increased somewhat to 88% (Tables 1 and 2).

A data visualisation technique called a heat map (or heatmap) uses colour to represent a phenomenon's magnitude in two dimensions. The reader will be given clear visual clues about how the occurrence is clustered or fluctuates over space if the colour changes in hue or intensity.

. In this investigation, we create heat maps that show two distinct work timelines, pre and post question kinds by five distinct levels (C1: never, C2: seldom, C3: sometimes, C4: frequent, and C5: defiantly). This chart is a table where the cells display the frequency of a specific code. The colour changes to its greater scale value at high frequency (Figure 1). The majority of students selected codes 1, 2, and 3 in the previous analysis, as shown by the heat plot. But it seems to have returned to codes 4 and 5 after more research.

DISCUSSION

"Time management" is a crucial ability that all students should learn for improved academic performance, but regrettably, TMS is one of the main issues that today's medical students face. Bashir, S. et al. (2010) provided a clear explanation of the fact that meeting objectives in the shortest amount of time is just as important as accomplishing them. The main issue at hand is how to meet our deadlines while still achieving our goal. The students have the chance to introduce and improve their time management skills more successfully throughout the TMS sessions. Medical students who establish their TMS early on will develop effective time management abilities as a habit. Numerous prior investigations as well as Gruppen, L.D. et al.11 attest to this reality. In general, female students outperform male students in terms of time management. Improved organisation, planning, and listening have all been cited as the reasons for this.

Nonetheless, our study did not find any noteworthy differences in the time management abilities of male and female students. Additionally, Dalli M et al. (12) and Khanam et al. (13), did not find a statistically significant correlation between time management abilities and gender.

According to the present study's findings, 54% of medical students lack sufficient time management abilities. Additionally, we discovered that there was no discernible variation in the participants' time management abilities based on their gender, whether they were attending government or private medical schools, whether they lived in homes or hostels, whether they were from rural or urban backgrounds, or whether their parents had a high school diploma.

Additionally, we found a strong positive association between the participants' perceived academic happiness and their overall time management scores, as well as the total percentage of their most recent test grades. According to Covey SR et al. (2014) and Khatib AS et al. (2015), some students plan their days before classes begin. However, in our study, we found that very few students—regardless of gender—plan their days in terms of their studies and other activities. The majority of them don't plan their days, and those who do, find it difficult to stick to their plans. Nevertheless, following a discussion of this topic with examples, the majority of students expressed support for the idea.

As we go on to the second and third questions, which do students use to create a list of goals at the start of each week and rank them according to urgency? Goal-setting and prioritisation are two of life's pillars, as we all know, but we have to grasp their significance and apply them to our own everyday lives. After being made aware of the importance of goal planning and prioritisation in their lives, students in our study shown a noteworthy reaction, according to Bashir R et al.'s research from 2016. Since these are the essential skills for achieving the objective, we also need to help pupils acquire the ability to multitask and create goals from an early age.

"Do students have a list of their distractions? Yes, some of them have acknowledged this point, but few even don't know what their distractions are," is the next query that has to be addressed. We made them aware of the quantity and variety of diversions available to them, and we talked with them about how social media and newspapers are the main sources of diversion. According to Deshpande J et al. (2017) and Demirci K et al. (2018), everyone has been imprisoned in the Gazette period, not only students. As we go to the next query, how often do they change the timetable or alter their weekly schedule?

They were unable to follow the exchanges from the start, so there was no need to reschedule. However, once they were made more aware of the situation, they responded favourably in the post-test. As we go into the second section of the conversation and get to question number 6, do students genuinely believe that goal-setting and multitasking are the means by which they may accomplish their objectives in a constrained amount of time? So, at first, they were unable to

explain how to create goals and how to multitask in order to do the work in a constrained amount of time? Following a thorough debate of this crucial issue, they were persuaded and made the decision to outline their assignment.

Going on to the second half of the questions: do students keep track of the dates on a single calendar that they check on a regular basis, or do they have a calendar on their study table? We spoke about how most students use calendar apps on their phones, which is a serious issue because crucial dates and a list of unfinished assignments should constantly be in front of your eyes to help you remember to finish them. same issue raised by Dermirci K et al. (18), however on the phone, we frequently ignored it all since we were always using other applications. Thus, following a little conversation, the students were persuaded.

As we go on to the final two and three questions, Do they make final revisions to their notes once a month and establish timelines for completing their goals? The influence of time and self-efficacy on academic performance was also discussed by Alay S. et al. (19) and Nadinloyi KB et al. (20), although most students did not establish deadlines or edit their notes on a weekly or monthly basis. They said that they wouldn't begin studying until under pressure—that is, until an exam or test was imminent. They were actually aware of what a deadline meant, but they were persuaded after talking and becoming briefed.

Do they think there is space for development in the way you manage your time, according to the final questionnaire question? In the past, they seemed to be unable to comprehend the query, "Do you think there is a chance to modulate to refining of your schedule?" Certain of them demonstrated that there are many approaches to enhance time management, and a considerable portion of students believed that these results aligned with the research carried out by and Sevari k et al. in the post-test.21

Study limitations: Owing to limited resources, the research was limited to examining the immediate impact of MAPM on time management. Future research can be carried out in larger, comparable formats to gain a better understanding of this method's long-term consequences.

CONCLUSION

In conclusion, in addition to the course material, MBBS students need to be trained in management skills including time management for improved academic success. By planning time management seminars for students enrolled in foundation courses, this may be accomplished. With students bearing the major responsibility, the teaching and learning process should change from being passively teacher-centric to actively student-centric. This will help students study more effectively, manage their time more effectively, and achieve well academically.

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TABLES

		Frequency				
	Pre C1 N (%)	Pre C2 N (%)	Pre C3 N (%)	Pre C4 N (%)	Pre C5 N (%)	Total
Q1	16 (12.3)	10 (7.7)	50 (38.5)	34 (26.2)	20 (15.4)	**130**
Q2	9 (6.9)	15 (11.5)	56 (43.1)	35 (26.9)	15 (11.5)	**130**
Q3	10 (7.7)	15 (11.5)	55 (42.3)	20 (15.4)	30 (23.1)	**130**
Q4	4 (3.1)	19 (14.6)	32 (24.6)	42 (32.3)	33 (25.4)	**130**
Q5	8 (6.2)	21 (16.2)	60 (46.2)	33 (25.4)	8 (6.2)	**130**
Q6	5 (3.8)	15 (11.5)	45 (34.6)	15 (11.5)	50 (38.5)	**130**
Q7	20 (15.4)	16 (12.3)	28 (21.5)	35 (26.9)	31 (23.8)	**130**
Q8	10 (7.7)	17 (13.1)	54 (41.5)	20 (15.4)	29 (22.3)	**130**
Q9	2 (1.5)	9 (6.9)	42 (32.3)	59 (45.4)	18 (13.8)	**130**
Q10	4 (3.1)	5 (3.8)	16 (12.3)	22 (16.9)	83 (63.8)	**130**
	Post C1 N (%)	Post C2 N (%)	Post C3 N (%)	Post C4 N (%)	Post C5 N (%)	Total
Q1	14 (10.8)	9 (6.9)	22 (16.9)	43 (33.1)	42 (32.3)	**130**
Q2	7 (5.4)	6 (4.6)	45 (34.6)	51 (39.2)	21 (16.2)	**130**
Q3	6 (4.6)	9 (6.9)	25 (19.2)	33 (25.4)	57 (43.8)	**130**
Q4	8 (6.2)	8 (6.2)	32 (24.6)	40 (30.8)	42 (32.3)	**130**
Q5	11 (8.5)	21 (16.2)	62 (47.7)	25 (19.2)	11 (8.5)	**130**
Q6	13 (10)	8 (6.2)	20 (15.4)	20 (15.4)	69 (53.1)	**130**
Q7	23 (17.7)	15 (11.5)	33 (25.4)	34 (26.2)	25 (19.2)	**130**
Q8	2 (1.5)	7 (5.4)	28 (21.5)	29 (22.3)	64 (49.2)	**130**

Q9	3 (2.3)	13 (10)	58 (44.6)	28 (21.5)	28 (21.5)	**130**
Q10	2 (1.5)	2 (1.5)	11 (8.5)	23 (17.7)	92 (70.8)	**130**

Table 1: Distribution of frequency and % of study subjects

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
NPr test	6329.0	6765.0	6926.5	7612.0	8108.5	7127	7921	5119	7627	7726.54
Wilcoxon W	14714.0	15150.0	15441.5	15997.0	16623.5	15512.0	16436.0	13504	16142	16243
Z	-3.52	-2.83	-2.66	-1.33	-0.49	-2.22	-0.79	-5.66	-1.33	-1.34
Asymp. Sig. (2-tailed) *P* value	0.01*	0.005*	0.008*	0.183	0.625	0.027*	0.430	0.00001*	0.048	0.150

Table: 2 Statistical comparison of study questionnaire

Figure 1: Heat map analysis of pre and post frequency data from 10 examined questions.