International Journal of Preventive, Curative & Community Medicine
Volume 10, Issue 1&2 - 2024, Pg. No. 26-31
Peer Reviewed & Open Access Journal

Research Article

# A Cross-Sectional Study on Time Management among Medical Students of a Medical College in East India

Shweta Goswami[1], Susmita Chaudhuri[2], Mitasha Singh[3]

[1]Assistant Professor, Maulana Azad Medical College, Delhi, India.
[2]Associate Professor, ESI-PGIMSR, Joka, Kolkata, India.
[3]Assistant Professor, Dr BSA MCH, Rohini, Delhi, India.
**DOI:** https://doi.org/10.24321/2454325X.202405

## I N F O

**Corresponding Author:**
Mitasha Singh,Dr BSA MCH, Rohini, Delhi, India.
**E-mail Id:**
mitasha.17@gmail.com
**Orcid Id:**
https://orcid.org/0000-0002-1402-2222
**How to cite this article:**
Goswami S, Chaudhuri S, Singh M. A Cross-Sectional Study on Time Management among Medical Students of a Medical College in East India. Int J Preven Curat Comm Med. 2024;10(1&2):26-31.

Date of Submission: 2024-04-30
Date of Acceptance: 2024-05-25

## A B S T R A C T

*Introduction:* Time management is of utmost importance in a student's life as time squandering can have several negative effects including academic performance, personal growth, future opportunities, social connection, and skill development. As time management is never taught in the curriculum, it is to be learned. Can excessive and chronic inability to effectively manage time adversely impact academic performance?

*Objective:* The objective of the study was to assess the time management practices and their correlates among medical students of a tertiary care centre.

*Method:* An institution-based cross-sectional study was carried out among medical students of a tertiary care institute using convenience sampling. A validated self-administered questionnaire was used to collect the data and analysed using MS Excel.

*Results:* Out of the total, 314 students gave consent and nearly 60% of the participants scored moderate to low score on time management. Females and hostelers were found to have better time management scores than their counterparts. Those students had a low TMQ score, their academic performance was also low. The majority of the participants possessed moderate to low-level time management scores which means that the students lack a sufficient amount of knowledge about how to manage their time efficiently.

*Conclusion:* The low level of academic performance among medical students was associated with poor time management and demands adequate training.

**Keywords:** Medicos, Efficiency, Academic Performance, Medical Curriculum, Time Management

## Introduction

Time is a continuum in which events succeed one another from the past through the present to the future. Time management is the art of arranging, organising, scheduling, and budgeting one's time to generate more effective work and productivity.[1] It is especially seen among medical students, who need to attend lecture classes, seminars, wards, and OPDs throughout the day and eventually find themselves in a shortage of time for study, socialisation, and other essential work at the end, which makes them depressed and stressful and they are even unable to utilise their time properly to do these works. Good time management, which seems to be effective in these conditions, helps one to work in an organised manner. Prioritisation of tasks may make studying less overwhelming and more enjoyable. Time management is a self-management skill that perhaps impacts the student's academic performance.

Similar kinds of studies done previously in different regions revealed that students lack a sufficient amount of knowledge about how to manage their time efficiently, have better time management skills, and better academic performance.[2–4] Women have more time management skills than men. Mature-aged students (21–25 years) have a better way of time management. However, Indian data on medical students is scarce and needs to be explored. This study was carried out to estimate time management skills and their correlates among medical students.

## Method

### Study design and population

It was a descriptive cross-sectional study conducted at a medical college in Kolkata, West Bengal, India. There were four MBBS batches and one internship batch comprising 100 students each. The target population comprised of 400 participants. The MBBS course is divided into four phases, one, two, three part one, and part two. All the undergraduate students and interns of the medical college were invited (400) to participate in the study. Convenience sampling was used. The study was conducted during the three months period extending from March to May, 2018.

### Study Tools and Techniques

The time management questionnaire (TMQ) developed by Britton and Tesser (1991) was used.[3,5] It includes 18 questions distributed in 3 dimensions: short-range planning includes 7 questions; time attitudes include 6 questions and long-range planning includes 5 questions. The questionnaire also included information regarding academic performance in terms of the percentage of marks obtained in the last professional exam. The interns reported their phase three part two exams and other batches reported their immediate past professional exam results.

### Ethical consideration

Participants were provided with information about the study, including its purpose, procedures, potential risks and benefits, and their rights as participants. They voluntarily agreed to participate in the study after understanding this information. The institutional ethical approval was sought from ESI-PGIMSR, Joka, Kolkata, West Bengal.

## Data Collection, Analysis, and Interpretation Phase

A questionnaire was distributed to students and interns after explaining to them the purpose of the study. Informed consent was taken and those who consented were given the questionnaire to complete. Collected data was compiled and analysed in an MS Excel worksheet. Analysis was done in MS Excel in terms of frequency and percentages.

All the TM questions were value based on the Likert scale of five value scores: Always (5), frequently (4), sometimes (3), infrequently (2), and never (1) except for questions numbers 8, 10, 12 and 14, where the responses were reverse. The range of possible scores was 18–90 on the 18 questions of time management scale. Higher values on the scale correspond to better time management practices. Pearson's correlation coefficient was used to calculate the correlation between TMQ score and academic performance. The TMQ score was categorised into three groups poor (≤ 46), average (47–57), and good (≥ 58). The association of students' characteristics and categorised scores was tested using the chi-square test. A p value less than 0.05 was taken as statistically significant.

## Results

The response rate was 62.8%. Out of the total 314 students, 208 (66.24%) were hostelers. Maximum responses (54.14%) came from the age group of 21–24 years. Maximum respondents were from the batch 2017–18 and the least number of responses came from the batch 2014–15. 43.31% of the subjects were males (Table 1).

About 60% of the participants possessed moderate and low-level time management scores (Figure 1). The total mean score (± SD) of TMQ was 54.54 (± 10.03) with the short-term planning domain mean score of 20.32 (± 6.28) being the highest among all three domains (Table 2).

There is a weak positive significant correlation between the percentage of marks and time management score (r: 0.14, p: 0.01) (Figure 2). Academic performance-wise, 27.3% scored 50–59%, and 53.2% scored between 60% and 69%. Among the low-level time management group, the majority were males (71.7%) and among the better time

ISSN: 2454-325X
DOI: https://doi.org/10.24321/2454325X.202405

management group, the majority were females (52.0%) (p: 0.01). The best time management group mainly comprised first-year/ professional students (31.7%). 75.7% of those with best time management, 72.5% of those with moderate time management and 66.6% of those with poor time management secured more than 60% marks in their last exams. The best time management group majorly included hostelers (72.4%) (Table 3).

**Table 1.Distribution of Study Subjects**

N = 314

| Batch Year | No. of Students | Percentage of Students |
|---|---|---|
| Interns | 62 | 19.75 |
| Third professional part two | 47 | 14.97 |
| Third professional part one | 69 | 21.97 |
| Second professional | 61 | 19.43 |
| First professional | 75 | 23.89 |
| **Sex** | | |
| Male | 136 | 43.31 |
| Female | 178 | 56.69 |
| Residence | | |
| Day scholar | 106 | 33.76 |
| Hostel | 208 | 66.24 |
| **Age group (years)** | | |
| 17–20 | 120 | 38.22 |
| 21–24 | 170 | 54.14 |
| 25–28 | 24 | 7.64 |

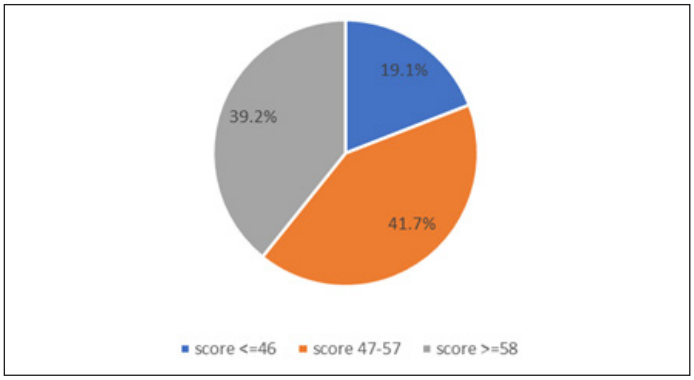


**Figure 1.Distribution of Study Subjects according to Time Management Levels Score (N = 314)**

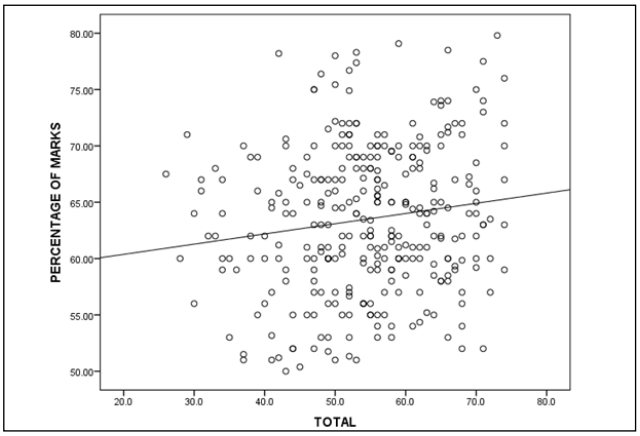


**Figure 2.Scatter Plot showing the Correlation between Marks and Time Management Score**

**ISSN: 2454-325X**
**DOI: https://doi.org/10.24321/2454325X.202405**

**Table 2.Time Management Subdomain Scores**

| Domain/ Subdomain | Mean (± 2SD) |
|---|---|
| Total time management score | 54.54 (10.03) |
| Short term planning | 20.32 (6.28) |
| Time attitude | 19.41 (3.25) |
| Long range planning | 14.82 (3.67) |

**Table 3.Correlates of Time Management Score of MBBS Students**

| Variables | Time Management Score | | | Total Percentage | p Value |
|---|---|---|---|---|---|
| Batch year | ≤ 46 Poor | 47-57 Average | ≥ 58 Good | | |
| Total | 60 (100) | 131 (100) | 123 (100) | 314 (100) | - |
| **Gender** | | | | | |
| Male | 43 (71.7) | 76 (58.0) | 59 (48.0) | 178 (56.7) | 0.01 |
| Female | 17 (28.3) | 55 (42.0) | 64 (52.0) | 136 (43.3) | |
| **Batch** | | | | | |
| Interns | 13 (21.7) | 21 (16.0) | 28 (22.8) | 62 (19.7) | 0.09 |
| Third professional part two | 11 (18.3) | 19 (14.5) | 17 (13.8) | 47 (15.0) | |
| Third professional part one | 13 (21.7) | 34 (26.0) | 22 (17.9) | 69 (22.0) | |
| Second professional | 11 (18.3) | 33 (25.2) | 17 (13.8) | 61 (19.4) | |
| First professional | 12 (20.0) | 24 (18.3) | 39 (31.7) | 75 (23.9) | |
| **Academic performance (%)** | | | | | |
| 50–59 | 20 (33.3) | 36 (27.5) | 30 (24.4) | 86 (27.4) | 0.17 |
| 60–69 | 35 (58.3) | 66 (50.4) | 66 (53.7) | 167 (53.2) | |
| ≥ 70 | 5 (8.3) | 29 (22.1) | 27 (22.0) | 61 (19.4) | |
| **Age group (years)** | | | | | |
| 17–20 | 22 (36.7) | 48 (36.6) | 50 (40.7) | 120 (38.2) | 0.94 |
| 21–24 | 33 (55.0) | 74 (56.5) | 63 (51.2) | 170 (54.1) | |
| 25–28 | 5 (8.3) | 9 (6.9) | 10 (8.1) | 10 (8.1) | |
| **Residence** | | | | | |
| Day scholar | 22 (36.7) | 50 (38.2) | 34 (27.6) | 106 (33.8) | 0.18 |
| Hosteler | 38 (63.3) | 81 (61.8) | 89 (72.4) | 208 (66.2) | |

## Discussion

This study conducted on undergraduate medical students reported a weak but positive correlation between last academic performance and time management. Karasoke reported a strong positive and significant relationship between time management score and performance rating ($r = 0.771$, $p = 0.00$).[6] Bin Abdulrahman et al. from Saudi Arabia also reported a significant correlation between study habits and students' academic accomplishments.[7] Highly efficient medical students demonstrated specific study habits that contributed to their success, including managing time effectively, setting goals, studying alone for knowledge retention, utilising multiple learning sources efficiently, contributing to peer teaching, and maintaining motivation for self-gratification and family dreams. A probable reason for the weak correlation in the current study could be due to different academic performances being considered for different phase students. The evaluation is subjective and the difficulty level varies in each phase.

ISSN: 2454-325X
DOI: https://doi.org/10.24321/2454325X.202405

The study from the Medical Faculty of King Abdulaziz University included medical students with a grade point average (GPA) of 4.5 or higher and compared them to randomly selected medical students with a GPA below 4.5. The data collected from these two groups of students were analysed to explore factors that potentially influence the academic excellence of medical students. The study highlighted various factors that may influence academic performance, such as study habits, exam preparation habits, time management, social life, and lifestyle influences.[8]

The study by Murphy et al. utilised a mixed-methods approach to evaluate the effectiveness of the time management and task prioritisation curriculum for medical students rotating on an inpatient unit for a paediatric or internal medicine sub-internship. It included 39 medical students whose confidence levels in time management and task prioritisation skills after the workshop improved significantly. By employing a combination of surveys, pre-workshop activities, workshop implementation, and evaluation methods, the study was able to assess the impact of the curriculum on students' time management and task prioritisation skills effectively.[9]

Another cross-sectional study was conducted among 243 undergraduate medical students of a tertiary healthcare institution in Puducherry. The time management skill was assessed using a time management questionnaire (TMQ). The mean (standard deviation) of the TMQ score was 52.7 (± 9.8) overall which was lower in comparison to the current study score (54.54 ± 10.03). The subdomain score in short-range planning and time attitude was higher in the current study in comparison to Naik et al., but the long-range planning domain score was lower in the current study.[10] This reflects in the performance of professional exams that the planning is done only when exams are around. This has been reported by Khanam et al., that students tend to push their assignments till the night before the deadline.[5] More than two-thirds of the students of Puducherry were found to have poor to average time management skills in comparison to the current study, in which, it was around 61%. In the current study, more female students were classified in good time management however more males in comparison to females were classified in the average time management group. Naik et al. reported a non-significant association of gender and TM score, with males scoring marginally higher than females.[10] The phase-wise distribution shows that the senior-most and junior-most students had reported good time management. It reflects that most junior first-year students are the sincerest from their experience from school and the senior most from their experience of the last three years.

## Limitations

The possible limitations could be using different phase academic performances for correlation with time management. The time management was also self-reported introducing a socially desirable response bias. Establishing an association needs a repeated follow-up study and intervention in the form of imparting time management workshops for students in the first year itself. Results cannot be generalised because the sample is taken from a single medical college.

## Conclusion

The current study highlights the time management of students of a medical college in East India using a time management questionnaire. Good time management was reported by 39% of students. The students belonged to different phases of medical education. However, when correlated with their academic performance, a weak positive correlation was observed with their marks scored in the last professional exam.

**Source of Funding:** None

**Conflict of Interest:** None

## References

1. Time Management And Its Implications To The Academic Performance. (2022, February 21). Edubirdie. Retrieved September 10, 2024, from https://edubirdie.com/examples/time-management-and-its-implications-to-the-academic-performance/
2. Aduke AF. Time management and students academic performance in higher institutions, Nigeria – a case study of Ekiti State. Int Res Educ. 2015;3(2):1-12. [Google Scholar]
3. Britton BK, Tesser A. Effects of time-management practices on college grades. J Educ Psychol. 1991;83(3):405-10. [Google Scholar]
4. Al Khatib AS. Time management and its relation to students' stress, gender and academic achievement among sample of students at Al Ain University of Science and Technology, UAE. Int J Bus Soc Res. 2014;4(5):47-58. [Google Scholar]
5. Khanam N, Sahu T, Rao EV, Kar SK, Quazi SZ. A study on university student's time management and academic achievement. Int J Community Med Public Health. 2017;4(12):4761-5. [Google Scholar]
6. Karakose T. The relationship between medical students' time management skills and academic achievement. Stud EthnoMed. 2015;9(1):19-24. [Google Scholar]

7. Bin Abdulrahman KA, Khalaf AM, Bin Abbas FB, Alanazi OT. Study habits of highly effective medical students. Adv Med Educ Pract. 2021;12:627-33. [PubMed] [Google Scholar]
8. Al Shawwa L, Abulaban AA, Abulaban AA, Merdad A, Baghlaf S, Algethami A, Abu-Shanab J, Balkhoyor A. Factors potentially influencing academic performance among medical students. Adv Med Educ Pract. 2015;6:65-75. [PubMed] [Google Scholar]
9. Murphy M, Pahwa A, Dietrick B, Shilkofski N, Blatt C. Time management and task prioritization curriculum for pediatric and internal medicine subinternship students. MedEdPORTAL. 2022;18:11221. [PubMed] [Google Scholar]
10. Naik BN, Rangasamy S, Vrushabhendra HN. Time management among undergraduate medical students: a study from a tertiary health-care teaching institution in Puducherry. J Integr Health Sci. 2019;7:39-43. [Google Scholar]

ISSN: 2454-325X
DOI: https://doi.org/10.24321/2454325X.202405