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Unlocking the secrets of success: learning and relaxing techniques among high achiever medical students attending a private medical school in Lahore

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ABSTRACT

Background and Objective: The environment in medical college itself is recognized as inherently stressful. The competitive atmosphere, constant evaluations, and high expectations can contribute to a feeling of constant pressure and anxiety among students. This study aimed to determine the learning and relaxation techniques adopted by high-achieving medical students studying in a private medical college in Lahore.

Methods: It was a cross-sectional study completed in 6 months duration. A self-designed, customized, and expert-validated questionnaire was used to collect data from consecutive medical students who scored above 70% in their last professional examinations and were enrolled in a five-year MBBS program at Central Park Medical College, Lahore, Pakistan. The data were analyzed using statistical software and the percentages of responses were calculated by keeping the power of study at 80% with ≤ 0.05 significance level.

Results: The results showed that the most frequently adopted learning techniques were group study [63(61.8%)], discussing with classmates [54(85.7%)], selective study pattern but reading once [56(54.9%)], studying a week before the test [51(50%)], and revising twice [60(58.8%)]. More than 49% ($p = 0.04$) of students sleep for 4 hours before examination. The most common media for learning was YouTube (78.4%). The most practiced method of memorization of course content (78.4%) was understanding the concept. The relaxing techniques were watching dramas and seasons (55%). Considering the coping mechanism for stress 72.5% preferred praying.

Conclusion: The high achiever undergraduate medical students employed different learning strategies while the most favored medium for studying was YouTube channels. Concurrently, brief breaks during study sessions, listening to music, watching movies, and other forms of visual entertainment were the most reported relaxation techniques. The most often used coping strategies for stress were prayer and rest.

Keywords: High achievers, undergraduates, MBBS, medical education, study method, relaxing techniques.

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Introduction

Embarking on a journey through medical college is a monumental step in an individual's academic and professional life.¹ This transformative experience, while rich in knowledge and opportunity, is often characterized by a unique set of challenges and stressors.¹ The life of a medical student is a rigorous and demanding one. Unlike their previous academic experiences, medical students face an immense workload with a vast amount of complex material to absorb in a relatively short period.¹ The intensity of the

curriculum in medical college is much higher than what most students have experienced before, making it a significant source of stress. Every hour is spent studying to keep pace with the subject matter, reading several books thoroughly, developing a good understanding, and then solidifying the concepts by continuous repetition leads to burnout.² Within a narrow period, one has to remember the enormous volume of the syllabus. One has to give up sleep, especially during assessments and examinations. The mental health of medical students is greatly affected, they are always under

Table 1. Cross tabulation of gender with different learning techniques among the high achiever medical students.

Variables	Male N = 43 (42%) n (%)	Females N = 59 (58%) n (%)	p-value*
Taking notes			0.841
No	22 (51)	28 (47.5)	
Yes	21 (48.8)	31 (52.5)	
Refer to notes			1.0
No	22 (51)	29 (49)	
Yes	21 (48.8)	30 (51)	
Indulge in group discussion			0.141
No	21 (49)	18 (31)	
With classmates	18 (42)	36 (61)	
With seniors	4 (9.3)	5 (8.5)	
Listen to lectures			0.92
No	19 (44)	16 (27)	
Yes	24 (56)	43 (73)	
Revision of syllabus			0.21
First times	10 (23)	21 (36)	
Second times	30 (70)	30 (51)	
Third times	3 (7%)	6 (10)	
Fourth or more times	0 (0)	2 (3)	
Study pattern selective			0.18
Selective and read once	8 (19)	7 (12)	
Thorough	26 (60.5)	30 (51)	
Thorough	9 (21)	22 (37)	
Taking breaks			0.09
No	0	2 (3)	
≤15minutes	25 (58)	26 (44)	
Half an hour	16 (37)	20 (34)	
≥an hour	2 (4.7)	11 (19)	
Sleep hours			0.04
2	5 (12)	0	
3	0	2 (3)	
4	21 (49)	22 (37)	
5	1 (2)	4 (7)	
6	13 (30)	23 (39)	
8	3 (7)	8 (13.6)	
Amount of sleep affects performance			0.06
No	15 (35)	10 (17)	
Yes	28 (65)	49 (83)	
Taking regular classes			0.06
NO	6 (14)	2 (3)	
Yes	37 (86)	57 (97)	
Study routine			0.11
Daily	6 (14)	9 (15.3)	
1 day before test	20 (47)	16 (27)	
1 week before test	17 (40)	34 (58)	
Study timings			0.02
Early morning	5 (12)	16 (27)	
Afternoon	4 (9)	12 (20)	
Evening	13 (13)	9 (15)	
Night	21 (49)	22 (37)	
Place of study			0.70
Own room	26 (61)	42 (71)	
Home	10 (23)	9 (15)	
Library	6 (14)	7 (12)	
Any other	1 (2)	1 (1.7)	

*Chi-square test. p-value <0.05 was taken as significant.

Table 2. Frequency distribution of preferred media for study.

Prefer media	n	%
College lecture slides	2	2.0
E-books	1	1.0
Google	4	3.9
Google; E-books	5	4.9
Google; Online lectures	1	1.0
Online lectures from college lecture slides	1	1.0
YouTube	31	30.4
YouTube; College lecture slides	2	2.0
YouTube -books	2	2.0
YouTube; Google	22	21.6
YouTube; Google; College lecture slides	4	3.9
YouTube; Google; E-books; College lecture slides	1	1.0
YouTube; Google; E-books; Online lectures from any source	1	1.0
YouTube; Google; Online lectures from any source	7	6.9
YouTube; Google; Online lectures from any source; College lecture slides	2	2.0
YouTube; Online lectures from any source	9	8.8
YouTube; Online lectures from any source; College lecture slides	2	2.0

pressure, strain, and stress.³ The increased work demands, tough academic aspects, peer pressure, intense competition, examination fear, and financial problems all contribute to the issue of stress and depression among undergraduate medical students.⁴

Despite all the burdens and distress, there tend to be students who do better than the others. These high achievers take the place on top of the result lists of their academic assessments. They display traits such as resilience, consistency, openness, and conscientiousness as they outshine others.⁵ Moreover, they have productive study habits and efficient study methods. The learning method of the high achievers serves to be an essential factor for their success in medical school.⁶ Despite attending the same medical college, getting lectured by the same instructors, and having the same period to study, these few students outdo their classmates. In addition, the method used by high achievers to relax, relieve stress, and refresh themselves also adds up to their increased success rate.⁷ Efficient methods produce outstanding results.

The technique used by the students to learn varies from one to the other. The amount of time taken to concentrate, understand, memorize, and retain information also varies.⁸ Research has proved that individual differences exist. However, using effective techniques overshadows these differences.⁹ With regards to learning methods,

a study denoted that techniques such as elaborative interrogation, self-explanation, summarization, keyword mnemonic, imagery, and practice testing boosted academic performance.¹⁰ Likewise, practicing relaxation techniques is a great way to help with stress management which benefits everyone regardless of gender, age, or other variations.^{11,12} Basically, relaxation techniques draw the individual's attention towards something soothing and calming. Various relaxation techniques include deep breathing, meditation, yoga, music therapy, aromatherapy, hydrotherapy, visualization, or entertainment content such as dramas and movies.¹²

The published literature regarding the learning and relaxing techniques of medical students enrolled in medical colleges in Pakistan is scarce. Since the choice of study techniques has been proven to be effective, these techniques may help students identify important facts and retain information better and may foretell achievement in the examination. This study was conducted to identify the learning and relaxation techniques used by high achievers in a private medical college in Lahore, Pakistan. This study will help all those students who want to improve themselves concerning education, learning, retaining information, and academic performance in general as it portrays the methods that are used by successful students.

Methods

It was a cross-sectional study conducted at the Central Park Medical College, Lahore, Pakistan, after formal approval from the institutional Ethical Review Committee. The total duration of the study was 6 months. A sample size of 102 was calculated by the World Health Organization calculator. All students from first to final year MBBS, who fulfilled the inclusion criteria of high achievers that is those who secured more than 70% in their last professional examinations were enrolled. The identities of the students were not revealed.

Informed consent was obtained from each student. Data were collected from a self-designed, customized, expert-validated, and structured questionnaire after pilot data collection. The Cronbach's alpha score was 0.8 for the Questionnaire to ensure reasonable reliability.

For data collection, a purposive sampling technique was used. The Questionnaire was distributed online using Google Forms, through WhatsApp groups by the Principal investigator and co-authors, the response rate was monitored by the Google Form response sheet. The total duration of data collection was 1 week. The data were collected by maintaining anonymity and confidentiality.

Statistical analysis

The data were entered and analyzed using Statistical Package Software version 23. The participants' replies were evaluated by calculating the percentages of responses by keeping the power of study at 80%. The relationship between the variables was calculated by applying the chi-square test with a significance level of ≤ 0.05 .

Results

The data were collected from 102 participants. The response rate was 80%. A total of 43 (42.2%) participants were male and the remaining 59 (57.8%) were females. About 21 (20.6%) of the students were from MBBS first year, 17 (16.7%) of the students were from MBBS second year, 15 (14.7%) were from MBBS third year, 21 (20.6%) of the students were from MBBS fourth year, and remaining 28 (27.5%) of the students were from MBBS fifth year. About 43 (42.2%) of the students were hostelites while the remaining 59 (57.8%) were day scholars.

Nearly 94 (92%) of the students were those who were taking regular classes. A total of 51 (50%) students preferred taking notes, 54 (53%) had group discussions with classmates, 60 (58.8%) revised the syllabus twice before the examination, and 67 (65.7%) were attentive during lectures.

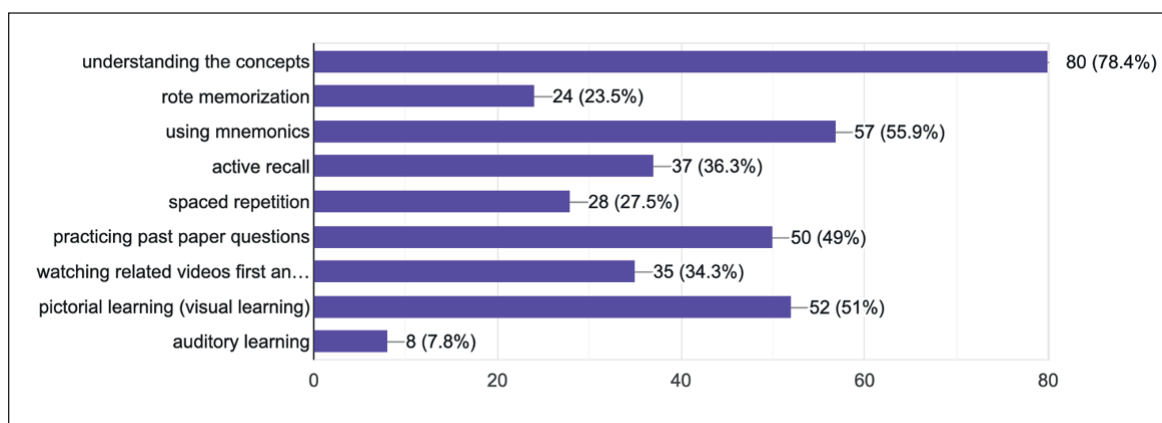


Figure 1. Frequency distribution of the most practiced method of memorization of the course content.

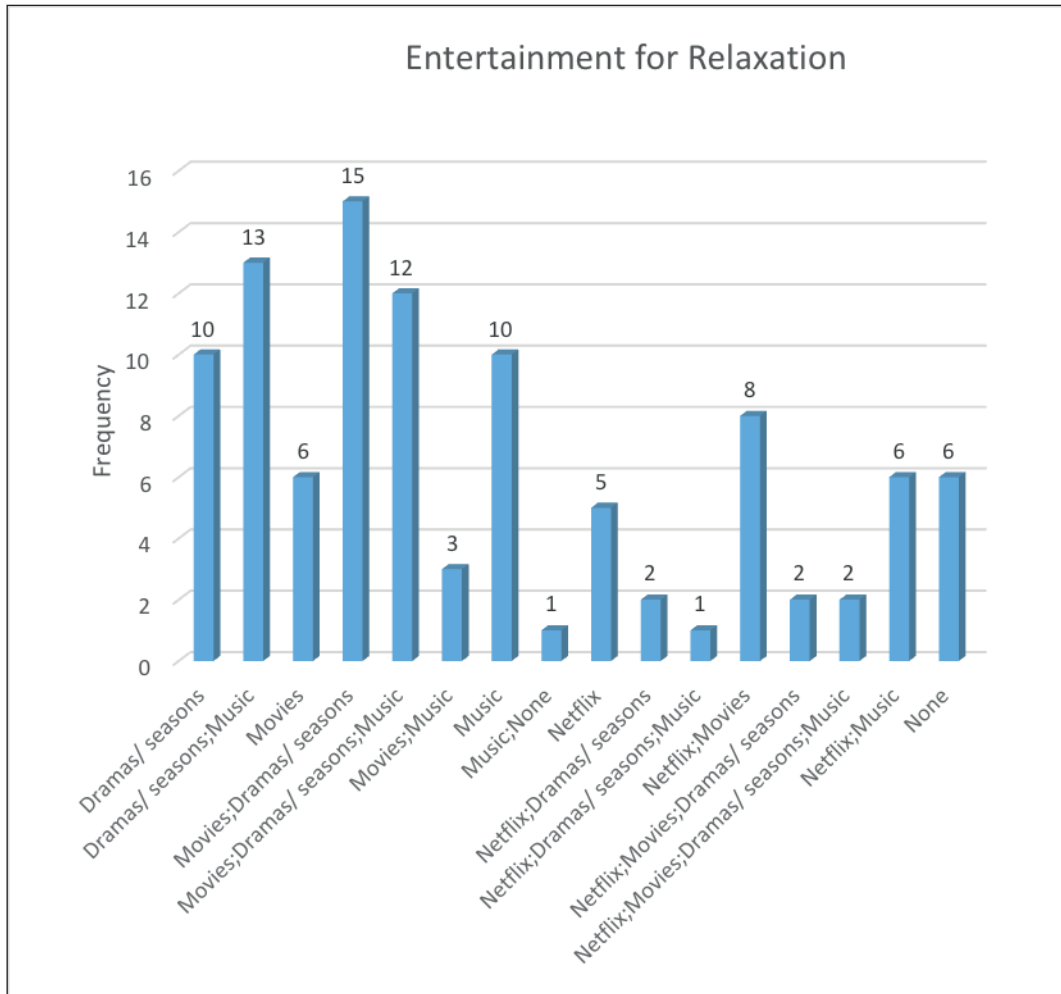


Figure 2. Frequency of various modes of entertainment for relaxation adopted by high achiever MBBS students.

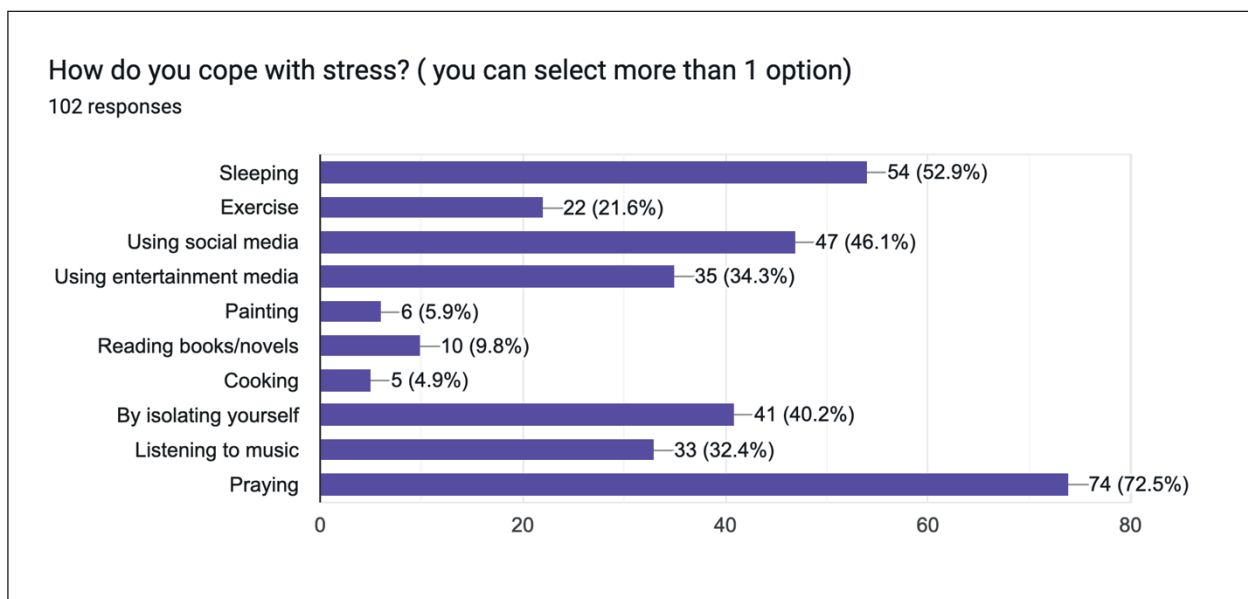


Figure 3. Frequency of various modes of coping mechanisms adopted by high achiever students.

The preferred time for the preparation in 50 (51%) students was 1 week before their examinations. The majority [56 (54.9%)] of the students preferred selective but read-type study while 51 (50%) students used to take small breaks of less than 15 minutes during their study hours. More than three-quarters of students reported that less sleep had an effect on examination performance. About 43 (42.2%) of the students used to study at night (Table 1). About 77 (75.5%) of the students said that the amount of sleep affected their performance in the examinations. Most of the students reported getting four hours of sleep during examinations ($p = 0.04$) while both male and female students preferred studying at night ($p = 0.02$) (Table 1).

The most common media for self-directed learning was YouTube followed by combined Google and YouTube. The least common mode of learning used by the students was lecture (powerpoint slides) from any source (Table 2). The most practiced method by 80 (78.4%) students for memorization of the course content was understanding the concept (Figure 1).

As regards the relaxing techniques during studies, watching dramas together with seasons and movies was the most common entrainment method preferred by 15 (14.7%) students. Other relaxing techniques adopted by the students during studies are shown in Figure 2. Considering the coping mechanism for stress 74 (72.5%) preferred praying, 54 (52.9%) preferred sleeping and 47 (46%) preferred using social media (Figure 3).

Discussion

Although attending medical college is a life-changing experience, there are particular difficulties and pressures involved. Medical students struggle to maintain a healthy work-life balance due to their rigorous curriculum and heavy workload.² High expectations, a competitive environment, and ongoing assessments all lead to tension and anxiety, which can have a detrimental effect on both academic achievement and general health.² The emotional toll that disease, suffering, and death have on medical students further complicates their educational experience.³ Recent curriculum modifications seek to address these issues by lowering academic pressure and enhancing work-life balance, which will create avenues for the young mind to learn relaxation techniques¹³

According to our research, there are 50% of students start studying 1 week before examinations, 35% of students start studying 1 day before examinations, and 14% of students study daily; it shows majority of high achievers study 1 week before examinations. A past study showed that high achievers reading the material before lectures and starting the examination preparation 15 days before examinations help them grasp in-depth knowledge.¹⁴ They further added

that this habit helps them to have long-term retention of the topic as compared to the shallow study.

About two-thirds of the high achievers in our study prefer to study selective content but read once. Another systematic review results proposed that the investment of time in self-directed learning in the life of a student is essential. It depends on students' adaptability and their speed, and efficiency in the work and their preparation.¹⁵ It is also supported by other published research that self-directed learning reduces stress and anxiety.¹⁶

Our study shows that high achievers pay attention in class as well as take notes during lectures. These results are supported by Kirkwood¹⁷ who concluded that listening attentively to a lecture helps understand concepts that are taught in class. The high achievers seem to follow a set study pattern in which they cover the portion taught in the class and revise it later on which saves time.

In the present study, the majority of the high achievers take 4-hour sleep during examinations while only a few students used to sleep 6 hours or more ($p = 0.04$) with 75.5% of students reporting that the amount of sleep affects their performance in the examinations while remaining one-quarter of students think otherwise. It is seen in the literature that enough sleep prevents burnout.¹⁸ Moreover, it also helps students to cover a wide variety of topics due to good energy levels. Lack of sleep leads to wastage of time as more time is spent to cover a topic due to draining energy. Another study on medical students from Brazil shows that students who do not get enough sleep face difficulties with their learning.¹⁹ Humans require sleep as part of their everyday routine. It not only serves to refresh the brain, but it also helps to boost the normal functioning of the body. Sleep aids in the removal of toxic metabolites at the cellular levels. Those who do not get enough sleep are more likely to have behavioral issues. A study on undergraduate students of the Dominican University of California reveals that sleep deprivation has been demonstrated to cause and exacerbate a variety of psychological issues in people of all ages.²⁰

Students also prefer to take a break for relaxation during study. According to our study, 50% of students stated that they take a break of 15 minutes while studying, and 35% mentioned that a break of half to an hour while studying. The students who take breaks while studying grab more knowledge in less time and these small breaks always keep their mind fresh and they do not get frustrated while studying.²¹ Taking breaks while studying is important as it increases the productivity and efficiency of the mind.²¹

Our study shows that the majority of students use YouTube to clear their concepts and to get a better understanding followed by lecture slides. A study done in Ghana on senior high school students showed that high achievers use the

Internet for study purposes.²² It is seen that in addition to gaining extra knowledge, this habit also helps them develop confidence and learn how to accomplish a task without having the help of others. Literature supports that the Internet helps students figure out the required information as well as makes them think critically and creatively.²³ It also makes them collaborative and cooperative workers and find solutions to their problems.²³ Studies have shown that there are many different learning techniques beneficial for students out of which visual learning is very students who use YouTube and other media to gain concepts are good at visual learning can be very constructive.^{23,24} It helps them hold knowledge for a longer time period.^{24,25} Our statistics support that all those students who use media gain more knowledge as some learn by simply reading from the book while others prefer watching videos on YouTube and other media.

The present research shows that the most common way of relaxation that high achievers opt for is praying followed by listening to music, watching seasons, and movies. Literature shows that different entertainment media play a vital role in student's relaxation. Entertainment provides peace to the student's mind that helps them in learning and by relying on prayers they do not lose hope.^{26,27} Based on the study findings, low achievers can improve their performance by taking small breaks, listening to music, and watching movies and other visual entertainment for relaxation. However, watching reliable YouTube academic resources can be a good source of learning.

Conclusion

A variety of learning strategies were adopted by the high-achiever undergraduate medical students. YouTube academic resources were the most preferred medium for self-studying. Concurrently preferred relaxation techniques included taking brief breaks during study sessions, listening to music, watching movies, and engaging in other forms of visual entertainment. The two most popular coping mechanisms adopted for stress were praying and taking sleep.

Limitations of the study

It was a single-center study done due to feasibility issues. Further exploratory interviews could not be conducted which could lead to an in-depth understanding of the phenomenon of learning and relaxing techniques adopted by these students.

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Conflict of interest

None to declare.

Grant support and financial disclosure

None to disclose.

Ethics approval

The study was approved by the Institutional Review Committee of Central Park Medical College, Lahore, Pakistan, vide Letter No. CPMC/IRB-No-1366/22 dated 12th September, 2022.

Authors' contributions

MS: Concept and design of study, acquisition, and analysis of data, drafting of manuscript

HA: Concept and design of study, acquisition, and analysis of data, drafting of manuscript, reviewing it critically for important intellectual content.

FS, HI: Acquisition and analysis of data, drafting of manuscript

ALL AUTHORS: Approval of the final version of the manuscript to be published.

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