

# FACTORS CONTRIBUTING TO THE ACADEMIC PERFORMANCE OF UNDERGRADUATE MEDICAL STUDENTS IN PESHAWAR

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## ABSTRACT

**BACKGROUND:** The academic performance of a student at the undergrad level is a vital determinant of their future careers. The performance of a student at this level is affected by several different factors ranging from their external environment to their mental health amongst many others which we aim to explore in this study. Determining the level of influence each factor has individual as well as relative to one another on a student's academic performance is important for future awareness as well as planning and analysis of a lifestyle that can be deemed healthy and equipped with all the needed elements for the most optimal utilization of a student's time and resources for them to excel within their chosen course of academic study.

## OBJECTIVE:

- To determine the factors associated with academic performance on an undergraduate level.

**METHODOLOGY:** A cross-sectional study was conducted via a questionnaire at different medical colleges based in Peshawar among the medical students from March to October 2021. The questionnaire was filled out by 200 hundred students.

**RESULTS:** The results showed that with a percentage of 72.2% of excellent-scoring students, and 93.2% of good-scoring students opted for self-study as the preferred study method. The most popular source of study (long books) amongst all 3 categories of students, was the most popular amongst excellent-scoring students (76.3%), followed by good-scoring students (69.9%). Family pressure is the most frequent motivation among average-scoring students (91.7%) and good-scoring students (52.6%).

**CONCLUSION:** Several factors seem to affect the academic performance of undergraduate medical students such as self-study, attending college regularly, and studying from books as compared to other means positively affect performance. On the other hand, some factors like family pressure negatively affect performance.

**KEYWORDS:** Academic performances, study method, sleep hours, assessments attended

## INTRODUCTION

A student's academic performance at the undergrad level is a vital determinant of their future careers. The performance of a student at this level is affected by several different factors ranging from their external environment to their mental health amongst many others which we aim to explore in this study.<sup>1</sup> Determining the level of influence each factor has individual as well as relative to one another on a student's academic performance is important for future awareness as well as planning and analysis of a lifestyle that can be deemed healthy and equipped with all the needed elements for the most optimal utilization of a student's time and resources for them to excel within their chosen course of academic study. Some of the factors we aim to include in our study are physical activity, screen time, and parents' careers.<sup>2</sup>

Many national and international studies are already been conducted to know the contribution of different factors on the academic performance of medical students, which include; determinants of academic performance in medical students. According to research Evidence from medical schools in Matriculation Examination, and students who visited their

families on a weekly basis, were more likely to have better academic performances than other students.<sup>3</sup> A study on factors potentially influencing academic performance among medical students at King Abdul Aziz University Jeddah was carried out and according to this research those students who had good academic performance, didn't use social networking for prolonged periods of time, and they had strong motivation and study enjoyment.<sup>4</sup>

A study to assess factors affecting the performance of undergraduate medical students in academic examinations in community medicine revealed that various factors such as age, gender, students using spectacles, and electronic devices, sleep hours before the examination, and meal consumption before the exam determined the academic performance of students.<sup>5</sup> Stress in medical undergraduates and its association with academic performance in medical university of medicine and dental college Faisalabad was conducted, and according to this research, higher achievers were less stressed as compared to low achievers, among all the most stressed students were from final year.<sup>6</sup>

A descriptive study based on the academic performance of MBBS students of central Pak Medical College Lahore was done and the findings of this study supported the fact that pre-admission grades may prove to be predictors of performances later in professional college life, factors like parent's occupation and place of accommodation had little role in the academic achievement of a medical student, those students who learned through interactive manner achieved better grades as compared to others.<sup>7</sup>

We have decided to undertake this study to gain a better understanding of Whether certain factors reign over others in influencing a student's Scholastic abilities and whether there may be any unusual correlation between 2 or more factors that may negatively or positively influence one another. In addition, such a study has not yet been done within Peshawar.

#### METHODOLOGY:

A cross-sectional prevalent study was conducted among medical students via a questionnaire at Rehman medical college, Khyber medical college Peshawar, Pak international medical college, and Khyber Girls medical college from March to October 2021. The sample size was calculated using the software Epi info. The questionnaire was used to interview 200 hundred students and was validated via conducting a pilot study on 15 students. The questionnaire covered demographic factors, physical fitness, family occupation, study hours, marital status of parents, study pattern, transportation of student, education of parents, use of technology and social media, vacation before the exam, sleep hours during examination, diet, preferred study time, mode of study, the financial position of the family, the students were scaled on the basis of percentage in their last professional exam. All consenting medical students enrolled in the educational institutes were selected to be included in the study. 1st-year MBBS Students were excluded since they were new to the college dynamics. .

#### RESULTS:

After complying with the stated inclusion criteria, the data obtained from the students were analyzed. The students were divided into 3 categories, based on their most recent Professional examination score percentage- Average (less than 60%), Good (60-70%), and Excellent (70% and above) students.

The study conducted revealed that the frequency of self-study was the highest among all 3 groups, with a percentage of 72.2% of excellent-scoring students, and 93.2% of good-scoring students opting for self-study as the preferred study method.

The study revealed that a majority (66.7%) of average scoring students spent only 2 hours a day studying, while a majority of both good and excellent scoring students spent 2-5 hours studying per day, with 53.4% of good scoring students and 36.4% of excellent scoring students opting for 2-5 hours a day. Furthermore, 32.7% of excellent-scoring students also spent 2 hours a day studying.

The study revealed that long books were the most popular source of study amongst all 3 categories of students, being the most popular among excellent-scoring students (76.3%), followed by good-scoring students (69.9%) (Table 1).

Family pressure is the most frequent motivation among average-scoring students (91.7%) and good-scoring students (52.6%) while attaining a good academic position in the class is the most popular reason for good marks amongst Excellent scoring students (49.1%). Students in all 3 categories slept more than 8 hours. All 3 groups of students had a moderate level of involvement in extracurricular activities (Table 2).

The study shows that 66.7% of average students had employed parents, while a respective 92.5% and 81.2% of good and excellent students had employed parents (Figure 1). The study revealed that 83.3% of average-performing students reside within a hostel, while a majority of both good and excellent-performing students were day scholars (Figure 2). The study revealed that 50% of average students belonged to the middle class and 50% to the upper class of SES. 73.7% of good students belonged to the upper class and 50.9% of excellent students also belonged to the upper class (Table 3). The study showed that all 3 categories of students attendant 60-80% of assessments. Half of the average groups of students are regular attendants whereas the other halves are irregular attendants. In addition, 78.2% of good students attended college regularly while 94.5% of excellent students attended college regularly (Table 4).

#### DISCUSSION

A variety of factors come into play when determining the ultimate outcome of a student's academic performance. Our study revealed that the most striking difference between excellent and good-scoring students versus average-scoring ones was the motivation for attaining good academic marks. The study shows that 49.1% of excellent-scoring students and 52.6% of good-scoring students used the attainment of a good academic position in class as the driving force for studying, while most of the average-scoring students (91.7%) only studied due to family pressure. This indicates that those who performed better in class did so due to their own internal drive to excel, and not due to any external pressure or force, while those that performed average were often forced to study due to outside influences. Another study explores the correlation between motivation and higher academic achievements stating the most effective way of motivating students to excel academically is to first gain an understanding of the motivational kinetics causing the behavior and then, in collaboration with the student, bring about effective changes in the school program.<sup>8</sup> Furthermore, the place of residency greatly varied between average students and the other 2 groups, with a majority (83.3%) of average students residing within hostels, while good and excellent students were mainly day scholars. This was further emphasized in a study on students residing in hostels which elaborated that frequent academic and psychosocial stressors were reported by students who were

TABLE 1: Impact of Personal factors on Academic Performance

	Average Students (Frequency)	Good Students (Frequency)	Excellent Students (Frequency)
Motivation for good marks			
Family pressure	11	70	19
Peer pressure	1	14	5
Good position	0	49	27
Bright future	0	0	4
Total	12	133	55
Sleep hours			
2-5 hours	1	22	13
5-8 hours	0	10	4
More than 8 hours	11	101	38
Total	12	133	55
Involvement in extracurricular activities			
less	0	10	10
moderate	11	115	40
more	1	8	5
Total	12	133	55

TABLE 2: Impact of Study Pattern on Academic Performance

	Average Students (Frequency)	Good Students (Frequency)	Excellent Students (Frequency)
Study Methods			
Self-study	12	124	39
Group study	0	9	16
Total	12	133	54
Study Hours			
2 hours	8	45	18
2-5 hours	3	71	20
Less than 2 hours	1	6	4
More than 5 hours	0	11	13
Total	12	133	55
Source of Study			
Short Books	1	25	10
Long Books	10	93	42
Online Learning	1	15	3
Total	12	133	55

TABLE 3: Impact of Socioeconomic status on Academic Performance

	Last_Proff_Result			Total
	Average student (Frequency)	Good student (Frequency)	Excellent student (Frequency)	
SES				
Lower middle class	0	4	8	12
middle class	6	31	19	56
upper class	6	98	28	132
Total	12	133	55	200

TABLE 4: Impact of Attendance and assessment on Academic Performance

Number of assessments attended	Average students (Frequency)	Good students (Frequency)	Excellent students (Frequency)	Total
	40 – 60%	1	15	
60 – 80%	6	116	54	176
80 – 100%	5	2	1	8
Total	12	133	55	200
College attendance				
Regular (= > 80%)	6	104	52	162
Irregular (< 80%)	6	29	3	38
Total	12	133	55	200

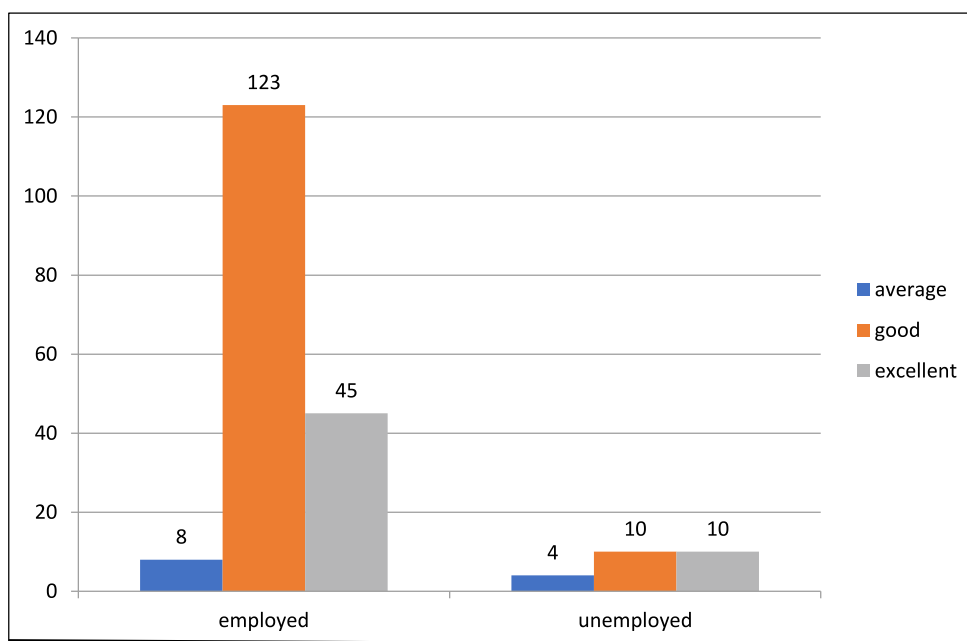


Figure 1: Impact of Parents' employment status on academic performance

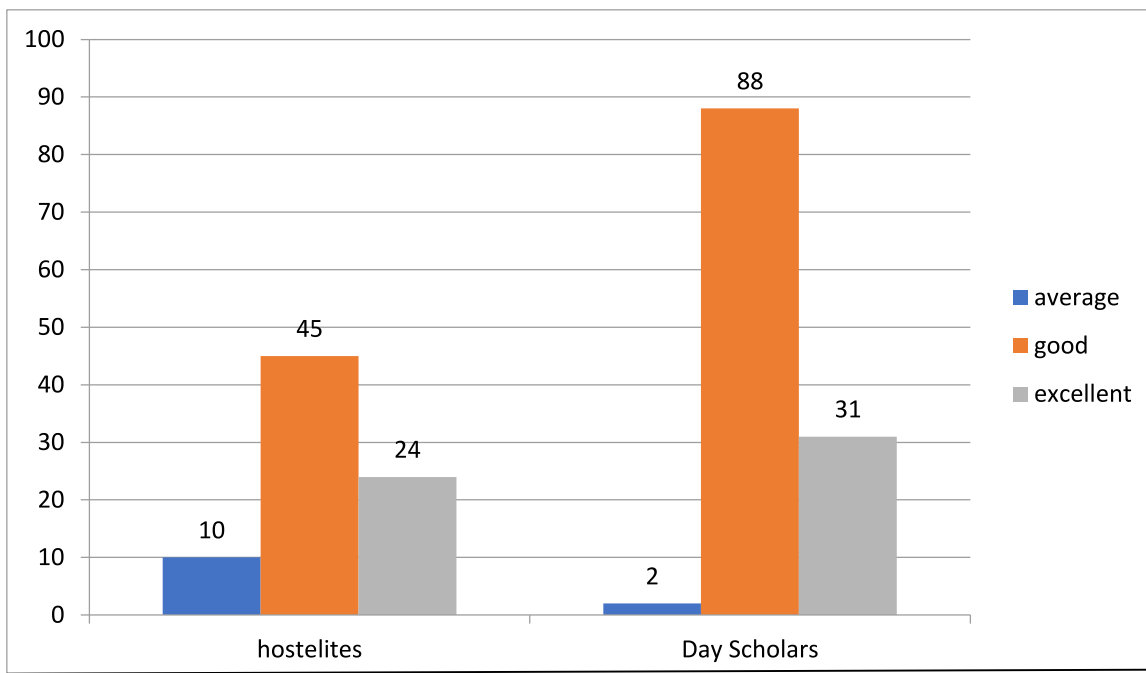


Figure 2; Impact of residence on academic performance

living far away from their homes.<sup>9</sup> This may suggest that the conditions and environment within a hostel are not in accordance with focused, stress-free studying, which is understandable as quite often students in a hostel may have to share rooms and hence not be given the entire freedom to choose their study hours, and they may also be distracted by the many people that reside there. In addition, the number of hours spent studying per day affected the performance of students as well, with a major fraction of the excellent and good-scoring students spending 2-5 hours a day studying. However, an interesting finding was observed, with 32.7% of excellent scoring students only spending 2 hours a day studying, similar to average scoring students within whom a majority only spent 2 hours a day studying as well. This may indicate that although the hours spent studying affected the outcome of a majority (36.4%) of excellent-scoring students, a comparable number of excellent students (32.7%) spent quite less time studying per day, indicating that there may be other factors that come into play when determining the academic performance of these students. As per a systematic review of Self-regulated learning strategies & academic achievement, time management along with other factors like metacognition, effort regulation & critical thinking predicts grades, which supports our study findings.<sup>10</sup> College attendance is high amongst both the good and excellent-scoring students, while only half of the average students attended classes regularly- indicating that on-campus classes do influence the ultimate academic performance of students in exams, which might be due to the easy accessibility to professors in regards to answering queries, and also the environment on campus being in agreement with learning. In

contrast, our study shows that the number of assessments attended, number of sleep hours, parent employment status, study resources, and involvement in extracurricular activities were the same within all 3 groups of students, indicating that these factors did not influence the academic performance of the students at all.

### CONCLUSION

Based on the findings in this research we were able to resolve that several factors seem to affect the academic performance of undergraduate medical students such as self-study positively affects performance. Also attending college is associated with good performance. In addition, choosing to study from long books positively affect performance. Also performing well in assessments will positively affect performance. On the other hand, some factors like family pressure negatively affects performance. Finally attending online lectures and residence of students whether in a hostel or home is not significant enough to affect performance.

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