

## ORIGINAL ARTICLE

**Factors Affecting Academic Performance of Medical Students**

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**ABSTRACT**

**Objective:** To determine the perception of medical students about factors affecting academic performance and to associate them with academic performance.

**Study Design:** Cross sectional.

**Place and Duration of Study:** The study was carried out in the Department of Community Medicine at Wah Medical College, Wah Cantt from January 2018 to August 2018.

**Materials and Methods:** After explaining purpose of the study and taking informed consent, questionnaires were distributed to students and collected after two days. Data was analyzed by SPSS version 19. Frequency tables and charts were constructed for qualitative and quantitative variables accordingly. Association of academic performance with factors affecting academic performance were determined by chi-square.

**Results:** The factors that affect the academic performance most were parental concern (87.2%), time spent on social media (78.4%), influence of friends (74.4%), silence during study (88.8%) and style of teaching (80.8%). Significant association was found between academic performance and place of residence, daily breakfast, peer academic performance, night study and joining medical profession on own will.

**Conclusion:** Supervision by parents, academically competent peers, apposite institutional environment, pertinent use of media and good teaching strategies mostly affect the academic performance.

**Key Words:** Gender, Parenting, Social Media.

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**Introduction**

Education is considered as the first step towards achieving any goal in this revolutionary and technological era. It is directly linked with an individual's wellbeing and personality development.<sup>1</sup> Academic performance of a medical student allures attention of medical professionals. Performance of students in various subjects across the course of study reflects their level of interest, therefore medical educationists have keen interest as it can be used for career counseling.<sup>2</sup> Among several other factors, parenting style is the one significant factor that affects the academic performance of college students. Healthy, strong and balanced relationship between parents and their children is one of the basic factors influencing

an individual's health both physically and psychologically.<sup>3</sup> The life style behavior of early adolescents (teenagers) including diet, physical activity, sleep and screen usage also contributes to a person's health and personal health is in turn associated with the performance at studies.<sup>4</sup> Loneliness, exam anxiety and pressure of meeting expectations also have a great impact on academic performance.<sup>5</sup> Motivation is also known as a predictor for students' perseverance, continuation and psychological wellbeing such as bearing stress and burn out during study.<sup>6</sup> Medical students having higher emotional intelligence bear lower levels of stress and better coping ability which is linked with their academic and professional success.<sup>7</sup> Recently two such studies have been conducted regarding factors potentially influencing academic performance among medical students.<sup>2,5</sup> The one which was conducted at Saudi Arabia found that 60.7% students having GPAs > 4.5 spend less than 2 hours on social networking in comparison to 42.6% with lower GPAs. In addition, 79% of high GPA students prefer to study alone, 68% required silence with no interruption and 47% revise their material at least once before exams. Another study showed that students who are financially well off ( $P=0.026$ ), stay

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in state hostels ( $P=0.032$ ), do not smoke ( $P=0.042$ ) and regularly engage in sports ( $P=0.016$ ) were significantly more successful as compared to others. We conducted this study to investigate the factors that affect the academic performance of our students in order to work with them to improve their performance. The objective of the study was to identify different factors and their association with students' academic performance.

### Materials and Methods

A cross sectional study was conducted in the Department of Community Medicine at Wah Medical College, Wah Cantt from January to August 2018 after IRB approval. The WHO sample size calculator was used to calculate a sample size of 250. All the students of Wah Medical College were included in the sampling frame except the students who were conducting the study. The sample was drawn by using systematic sampling technique. For data collection a questionnaire was designed by the authors themselves after extensive review of the literature. The questionnaire comprised of two sections. First section was about the demographic characteristics and academic performance (in the last professional examination) of the student. The second section comprised of twenty close-ended questions about the probable factors affecting the academic performance of the students and two open-ended questions about the most effective way of learning and any additional factor that affected academic performance. After taking the informed consent and explaining the purpose of study the questionnaires were distributed to the students and collected after two days. The data was analyzed by SPSS version 21. The academic performance was categorized in to good, average and poor based on their percentage in the last professional examination. i.e. 80% and above as good, 60%-79% as average and less than 60% as poor. Frequency tables and charts were constructed for qualitative and quantitative variables accordingly. Chi-square test was applied to find the association of academic performance with various factors affecting academic performance.

### Results

The response rate was 100%. Most of the students in our research were in the age group 21-23 ( $21.66 \pm 1.42$ ). There were 158 (63%) females and 92

(37%) male' respondents in the study. Most of the students 74 (26.90%) chose practical lab sessions as the most effective way of teaching while 69 (27.60%) opted for lectures, 64 (25.60%) for SDL/CBL/PBLs and 43 (17.20%) for tutorials. Table 1 shows the perceptions of medical students about factors affecting their academic performance. It was found that silence during study, parental check/ guidance and joining medical profession of their own will were the most important factors affecting academic performance addressed by almost 80% of the students. Significant association was found between academic performance and place of residence, daily breakfast, peer academic performance, night study and joining medical profession by choice. (Table 2).

**Table 1: Perceptions about Factors Affecting Academic Performance**

S. No	Factors Affecting Academic Performance	Percentage
1.	Silence during study	88.8%
2.	Parental check and guidance	87.2%
3.	Joining medical profession by own will	81.6%
4.	Style of teaching	80.8%
5.	Less screen time	78.4%
6.	Influence of friends' good academic performance	76.4%
7.	Group study	68.8%
8.	Regular meals	66%
9.	Duration of sleep in normal days	62.4%
10.	Consumption of caffeinated drinks	59.6%
11.	Living with family	58.4%
12.	Adequate sleep during exams	58.4%
13.	Medical background	56%
14.	Healthy breakfast	53.6%
15.	Seniors' guidance	52.4%
16.	Time spent on hobbies	42%
17.	Supporting parents	41.2%
18.	Night time study	35.6%
19.	Participation in sport activities	33.6%

### Discussion

In this study, the mean age of students was  $21.66 \pm 1.422$  with 157 (62.8%) females and 93 (37.2%) males. Most important factors affecting academic performance are parental check and guidance about studies (87.2%); less time spent on social media (78.4%), good grades of friends (74.4%), studying alone without distraction (88.8%) and teaching style

**Table 2: Association of Various Factors with Academic Performance**

		Academic Performance			P-value
		Good	Average	Poor	
Place of residence	Home	44	64	38	0.014
	Hostel	16	49	39	
Daily breakfast	Yes	40	65	29	0.004
	No	20	48	48	
Peer academic performance	Good	54	82	55	0.012
	Bad	6	31	22	
Night study	Yes	15	38	36	0.03
	No	45	75	41	
Joined medical profession by own choice	Yes	53	98	53	0.002
	No	7	15	24	

(80.8%).

Studies conducted by Sharif et.al and Singh showed that adequate learning facilities, good communication skills and proper parenting guidance were important factors that affect academic performance.<sup>8-12</sup> Research conducted at Saudi Arabia and India supported our results that teaching strategies have a positive effect on the performance of students.<sup>13,14</sup> In a study from Turkey, 22.3% students preferred independent learning<sup>15</sup> which shows that studying alone in silence increases concentration leading to enhanced learning and retention. Some international studies also found out an association between sleep quality and academic performance.<sup>16,17,18</sup> A study conducted at University of Newcastle, Australia showed a significant association between daily breakfast intake and academic performance<sup>9</sup> similar to our study. Healthy breakfast in the morning boosts up the energy level and opens up the pathways for learning and retention. Academic performance in our study was also related to parental style as was the case in a study from Iran.<sup>3</sup> Parental check and guidance is a key to success in every aspect of life. Our study showed an insignificant association of academic performance with social media however a previous study carried out in India showed that high achievers spent less time on social media than low achievers.<sup>17</sup> Similarly a research in Saudi Arabia found out a significant negative association between the two.<sup>13</sup> Contrary to our results, Australian research found a positive correlation between coffee, tea and energy drink intake during study time with academic

performance.<sup>18</sup>

Our results have shown that similar factors are affecting academic performance of our students which are reported in the literature.

## Conclusion

We conclude that supervision of students by their parents, academically competent peers, positive environment, and good teaching style mostly affect the academic performance.

The limitations of our study were lack of comparison between different medical colleges and focus group discussions with participants.

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