Original Article

The Association between Attendance and Academic Performance of MBBS Students of a Private Medical College in the Subject of Ophthalmology

Sidrah Riaz[1], Mariam Sheikh[2], Muhammad Tariq Khan[3], Ambreen Mumtaz[4], Muhammad Saghir[5]
[1-5]Akhtar Saeed Medical and Dental College, Lahore

ABSTRACT

Purpose: To study the association between attendance and academic performance of MBBS students belonging to a private medical college in the subject of ophthalmology.

Study Design: Cross sectional observational study.

Place and Duration of Study: Akhter Saeed Medical and dental college of Lahore, from January 2021 to October 2021.

Methods: A total of 152 students were included in study. The attendance record and test records of students in the subject of ophthalmology was retrieved. Both class test and ward tests included Short essay questions and multiple choice questions. Relationship between the attendance and test results was compared by using Pearson Correlation.

Results: Among 152 students, 62.5%were females and 37.5% were males. The mean attendance in 3rd year was 55.73 ± 20.44 and in 4th year was 77.25 ± 19.03. During 3rd year MBBS, 80.92% students had attendance below 75% and in 4th year 32.24% had below 75%. Passed students had mean attendance of 56.82% in 3rd year and 78.74% in 4th year. Failed students had mean attendance of 49.27% in 3rd year and 40% in 4th year. Regarding ward test, students who passed their batch test in first attempt had mean attendance of 60.92% and 83.54% in 3rd year and 4th year respectively. Positive relationship between pass candidates in send up exams and ward tests was demonstrated by Pearson Correlation, showing significant results at 0.01.

Conclusion: The academic performance of students is directly related with class attendance. The students with better class performance had better percentage of attendance and vice versa.

Key Word: Medical students, attendance, academic performance.

How to Cite this Article: Riaz S, Sheikh M, Khan MT, Mumtaz A, Saghir M. The Association between Attendance and Academic Performance of MBBS Students of a Private Medical College in the Subject of Ophthalmology. Pak J Ophthalmol. 2022, **38 (2):** 151-156.

Doi: 10.36351/pjo.v38i2.1369

Correspondence: Sidrah Riaz
Akhtar Saeed Medical and Dental College, Lahore
Email: sidrah893@yahoo.com

Received: January23, 2022
Accepted: March 16, 2022

INTRODUCTION

Professional education especially medical education is demanding and getting admission in institutes of professional education is tough because of competition.[1] It is also associated with economical concerns related to higher education.[2] The admission in medical college and successful completion of MBBS is not an easy job. To ensure producing a professionally competent and a good quality doctor, examining university has to set certain parameters to ensure professional competency standards. Attendance criteria is one of them and for medical students, a minimum of 75% attendance is mandatory to appear in exit exams.

Over the decades, it has been observed that students with better grades are more regular in their

theory and clinical classes and vice versa.[3] It is also documented that class attendance is a significant determinant of academic performance.[4-6] From technical point of view, a missed day is missed opportunity for a student to learn something new. There are number of factors, which determine students' attendance. Studies have shown that not only at university level but a primary school level, kids with absenteeism in school is associated with poor academic achievement and deficient general knowledge later in life.[7]

In private medical institutions of Pakistan, attendance of the students has always been the issue of great concern. Local data regarding this issue is scarce. This study was designed to see address this issue providing a preliminary data which can help the policy makers in further refining the quality standards.

METHODS

Total 152 students, who were promoted to 4th year MBBS class after passing 3rd professional university exam held in November 2020, were included in study. The students belonged to Akhtar Saeed Medical and Dental College (AMDC), Lahore. The attendance record of the students in 3rd year in the subject of ophthalmology was also noted from previous records (2020) and 4th year attendance of lectures and clinical classes was noted over the year (February to October 2021). The attendance of students was either marked by the teacher himself/herself or collected in the form of individually signed paper circulated in class during lecture and counter checked at the end of the class. This was done by getting the signatures of each student in front of his or her mentioned roll number. The attendance record was sent daily to medical education department of the college for computerized records. There were two lectures of ophthalmology of 40 minutes duration per week and a clinical batch class consisting of 20 to 25 students, 5 days a week for 3 hours. The academic performance of the students was noted in the form of class tests and ward test results. There were three (3) class tests held every 3 months which included all chapters at the end of 03 months. The class was divided in 08 clinical batches, which were rotated among different clinical subjects (Ophthalmology, ENT, Community Medicine, Pathology, Gynae Obs, Surgery and Medicine) over the academic year. The Ward test was taken at the end of each clinical ward rotation of Ophthalmology. Both class test and ward test included short essay question and multiple choice question papers and pass marks were 50%. The students who were not able to pass their ward test in first attempt or absent on the day of test were given a second chance to clear their test, as it was mandatory to appear in send up examination. No second chance was provided to students who failed the send up examination or were absent. They were not eligible to appear in the fourth professional examination. Seventy five percent attendance was mandatory criteria set by the university to appear in exams at the end of session. The parents and students were also given three monthly reminders in the form of mobile messages and letters, if their attendance was less than 75%.

RESULTS

Among the 152 students included in the study, 93 (62.5%) were females and 57 (37.5%) were males. The mean attendance in 3rd year was 55.73 ± 20.44, 63.05% for females and 43.55% for males. Mean attendance for 4th year students was 77.25 ± 19.03, 83.11% for females and 67.48% for males (Table 1). During 3rd year MBBS class 123 (80.92%) students had attendance below 75% and 29 (19.08%) above it (Graph 1). In 4th year MBBS 49 (32.24%) students had attendance below 75% and 103 (67.76%) had above it (Graph 2). The students who passed their send up examination had mean attendance of 56.82% in 3rd year and 78.74% in 4th year. Students who failed in send up examination had mean attendance of 49.27% in 3rd year and 40% in 4th year. Regarding ward test, students who passed their batch test in first attempt had mean attendance of 60.92% and 83.54% in 3rd year and 4th year respectively. Failed students who re appeared in second attempt had attendance of 48.08% in 3rd year and 68.83% in 4th year (Table 2).

In the first class-test, students who appeared and declared successful had attendance of 61.59% in 3rd year and 83.97% in 4th year. Further details are found in Table 3. The positive relationship between pass candidates in send up exams and ward tests was demonstrated by Pearson Correlation, showing significant test at 0.01 level (2 tailed) shown in table 4.

Table 1: *Send up Results and Mean Attendance of Students*.

Attendance MBBS Class	Mean Attendance	Female	Male	Send up Exam Result Pass	Fail	Absent
				Mean Attendance		
3rd Year	55.73%	63.05%	43.55%	56.82%	40.00%	16.07%
4th Year	77.25%	83.11%	67.48%	78.74%	49.27%	39.03%

Table 2: *Send up & Ward Results and Mean Attendance of Students*.

Ward Tests Attempt/Absent		Send up Results		3rd year MBBS Mean Attendance		4th Year MBBS Mean Attendance	
		Female	Male	Female	Male	Female	Male
Ward test passed in first attempt	Pass	71	31	66.75%	47.35%	86.64%	76.79%
	Fail	0	1	0.00%	67.86%	0.00%	73.17%
	Absent	0	0	0.00%	0.00%	0.00%	0.00%
Ward test passed in second attempt	Pass	20	19	54.64%	42.67%	76.71%	60.59%
	Fail	0	1	0.00%	35.71%	0.00%	58.54%
	Absent	1	0	32.14%	0.00%	78.05%	0.00%
Absent in ward test	Pass	2	2	33.93%	30.36%	46.34%	53.66%
	Fail	1	2	57.14%	19.65%	39.02%	37.81%
	Absent	0	1	0.00%	0.00%	0.00%	0.00%
		95 (62.5%)	**57 (37.5%)**			**152 (100%)**	

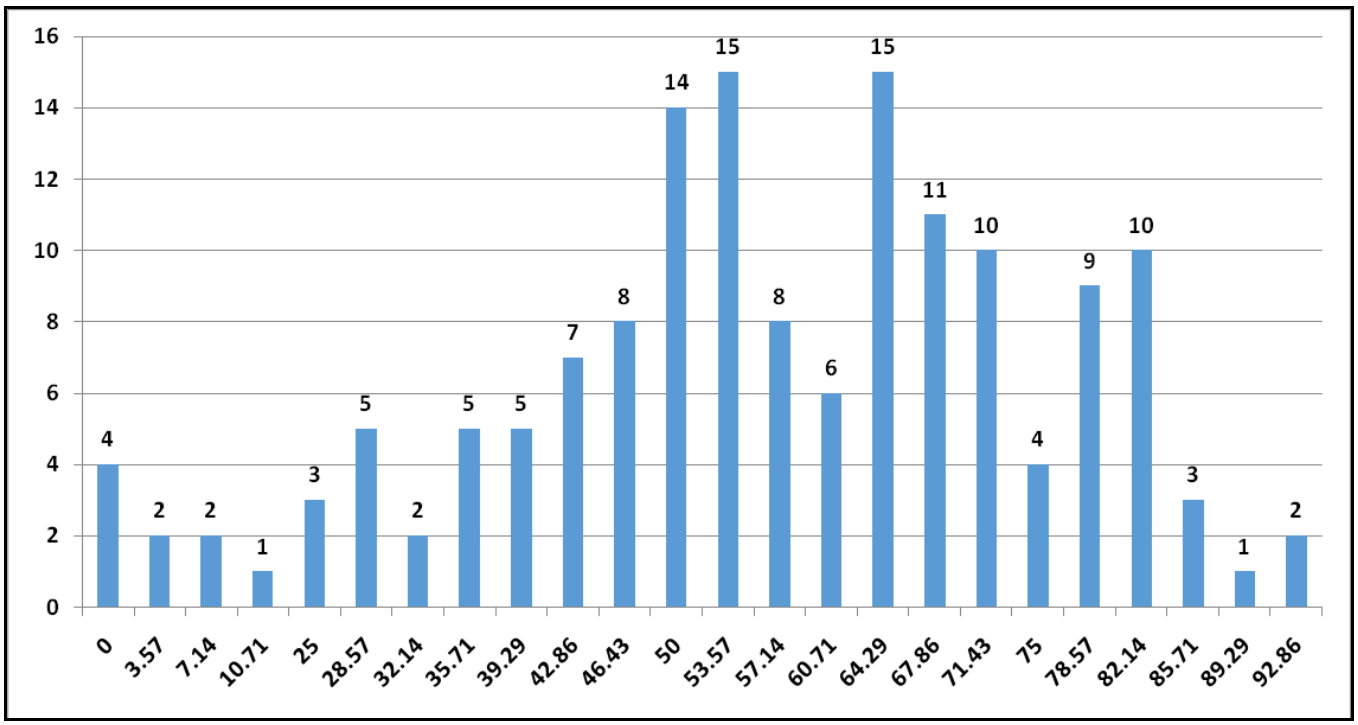
Table 3: *1st, 2nd & 3rd Class test Results and Mean Attendance of Students.*

MBBS Academic Year	First Class Test Results			Second Class Test Results			Third Class Test Results		
	Appeared in Test and Pass	Appeared in Test and Failed	Absent	Appeared in Test and Pass	Appeared in Test and Failed	Absent	Appeared in Test and Pass	Appeared in Test and Failed	Absent
Third Year MBBS Attendance (Mean)	61.59%	57.38%	32.59%	66.65%	51.52%	46.04%	58.85%	46.31%	26.19%
Forth Year MBBS Attendance (Mean)	83.97%	79.85%	49.29%	86.94%	78.05%	64.00%	82.17%	61.71%	37.40%

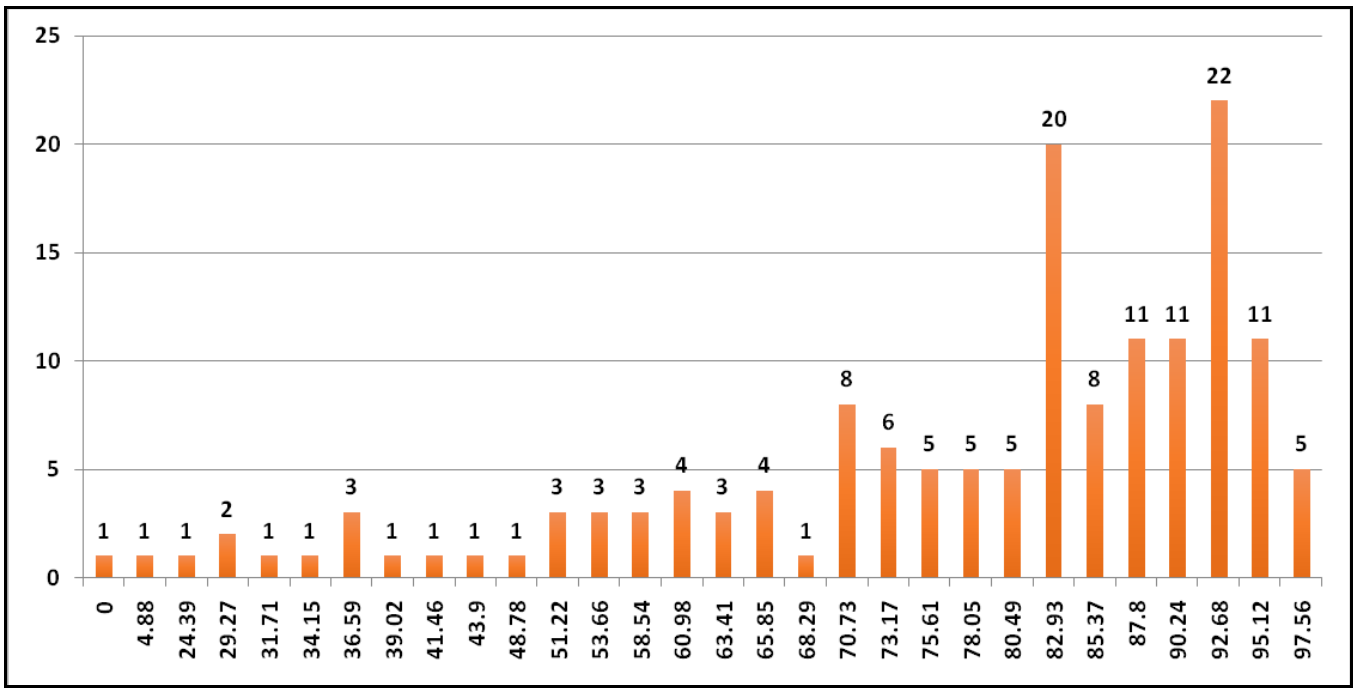
Table 4: *Showing correlation between attendance and academic performance*.

		Pearson's Correlations 3rd Year Attendance	4th Year Attendance	Send-up Results	Ward-test Results
3rd-Year Attendance	Pearson Correlation	1	.581**	-.268**	-.419**
	Sig. (2-tailed)		.000	.001	.000
	N	152	152	152	152
4th-YearAttandance	Pearson Correlation	.581**	1	-.354**	-.566**
	Sig. (2-tailed)	.000		.000	.000
	N	152	152	152	152
Send Up Exam	Pearson Correlation	-.268**	-.354**	1	.379**
	Sig. (2-tailed)	.001	.000		.000
	N	152	152	152	152
Ward Test	Pearson Correlation	-.419**	-.566**	.379**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	152	152	152	152

**.Correlation is significant at the 0.01 level (2-tailed).



Graph 1: Detail of %age attendance of student in 3rd year MBBS.



Graph 2: Detail of % age attendance of student in 4thyear MBBS.

DISCUSSION

This particular study showed that students are more likely to pass their examinations if they attend school regularly. Existing data has revealed that class attendance is a useful, effective and valuable indicator of successful attainment of any academic degree.[8-11]

The reasons why regulatory bodies are interested in attendance of medical students, are professional development and performance, as attendance is considered as its integral part.[12,13] Another logic is that attendance is the only variable that can be monitored, tracked and regulated to achieve good academic performance.

A study from Denmark with data of nearly1000 undergraduate students strongly correlated attendance with academic performance.[8] On the contrary, some studies have provided clue that good academic performance was not related with optimal roll call.[14]

Other studies have shown that absenteeism affected students in an adverse way. In addition to falling behind in academics, students who were not in school on a regular basis were more likely to get into trouble with the law and cause problems in their communities.[15] Studies also indicate that chronic absenteeism was also linked with less academic achievement, social withdrawal and isolation among students.[16,17]

This particular study showed that female medical students were more regular in attending the classes than their male counterparts. There mean attendance was 63.05% in 3rd year and 83.11% in 4th year MBBS class whereas boys had 43.55% and 67.48% in 3rdand 4th year respectively. It may be related to more female students in class. There were 93 females in the class of 152. Boys also had more outdoor interests like sports and social activities as compared to girls.[18,19] Overall, girls showed more serious behaviour toward attendance rules and remained abide by the regulations more proficiently.

The students showed 55.73% mean attendance in the subject of ophthalmology during 3rd year MBBS class, that was less than 75%, as compared to 77.25% mean attendance in 4thyear as it was examination subject in 4th year and not in 3rd year. Therefore students were less serious about its attendance in third year. In 3rd year, 9 (5.92%) students had attendance below 10% and 17 (1118%) had below 30%. In 4th year the students of the same class showed only 2 (1.32%) students below 10% and 5 (3.29%) below 30%. Another study from a private medical college showed similar results.[20]

There are different factors, which cause absenteeism among students.[21] When enquired about its reason, poor time management, working against nature's clock and being awake till late night leading to difficulty in early rising were told by the students in general discussion.

As attendance is considered an important predictor of pedagogical success, so a designated cell, under department of Medical Education, collects students' attendance of lectures and clinical classes, updates students and their parents regularly and maintains a smooth record. Different institutes have adopted different systems to mark attendance of students but our college has approved manual and biometric methods. The timely reminder about students' attendance, academic results, grades and missed assignments at regular intervals to their parents or guardians has reduced course failures and motivates pupils too to increase class attendance.[22] It is emphasized that lectures should be interesting and ward classes should be more practical to maintain interest of students.

Limitations of the study are that only a single subject was considered in this study. It was a private college and public sector data was not included in the study. Basic sciences were also not taken into account.

CONCLUSION

The academic performance of students when assessed over the year was directly related with class attendance. The students with better class performance had better percentage of attendance and vice versa.

Ethical Approval

The study was approved by the Institutional review board/Ethical review board (**M-21/74/-Ophthalmology).**

Conflict of Interest

Authors declared no conflict of interest.

REFERENCES

1. **Fatimah N, Hasnain Nadir M, Kamran M, Shakoor A, Mansoor Khosa M, Raza Wagha M,** et al. Depression among Students of a Professional degree: Case of Undergraduate Medical and Engineering Students. Int J Ment Health Psychiatry, 2016; **2:** 2. doi:10.4172/2471-4372.100012.
2. **Stanca L.** The effects of attendance on academic performance: Panel data evidence for introductory microeconomics. J Econ Educ. 2006; **37 (3)**: 251-266.

3. **Fadelelmoula T.** The impact of class attendance on student performance. Int Res J Med Sci. 2018; **6 (2):** 47-49. Doi: 10.30918/IRJMMS.62.18.021.
4. **Bamuhair SS, Al Farhan AI, Althubaiti A, Ur Rahman S, Al-Kadri HM.** Class attendance and cardiology examination performance: a study in problem-based medical curriculum. Int J Gen Med. 2016; **9:** 1-5.
5. **Westerman JW, Perez-Batres LA, Coffey BS, Pouder RW.** The relationship between undergraduate attendance and performance revisited: Alignment of student and instructor goals. Decision Sci J Innov Educ. 2011; **9 (1):** 49–67. https://doi.org/10.1111/j.1540-4609.2010. 00294.
6. **Crede´ M, Roch SG, Kieszczynka UM.** Class attendance in college a meta-analytic review of the relationship of class attendance with grades and student characteristics. Rev Educ Res. 2010; **80 (2):** 272–295. https://doi.org/10.3102/0034654310362998
7. **Romero M, Lee Y.** A National Portrait of Chronic Absenteeism in the Early Grades. New York, NY: The National Center for Children in Poverty. Columbia Academic Commons, 2007. https://doi.org/10.7916/D89C7650.
8. **Kassarnig V, Bjerre-Nielsen A, Mones E, Lehmann S, Lassen DD.** Class attendance, peer similarity, and academic performance in a large field study. PLoS One, 2017; **12 (11):** e0187078. https://doi.org/10.1371/journal.pone.0187078.
9. **Romer D.** Do students go to class? Should they? J Econ Perspectives. 1993; **7 (3):** 167–174. https://doi.org/10.1257/jep.7.3.167.
10. **Deane RP, Murphy DJ.** Student Attendance and Academic Performance in Undergraduate Obstetrics/ Gynaecology Clinical Rotations. J Am Med Assoc. 2013; **310 (21):** 2282-2288. doi:10.1001/jama.2013.282228.
11. **Kauffman CA, Derazin M, Asmar A, Kibble JD.** Relationship between classroom attendance and examination performance in a second year medical pathophysiology class. Adv Physiol Educ. 2018; **42 (4):** 593-598. Doi: 10.1152/advan.00123.2018.
12. **Hamdy H, Prasad K, Anderson MB, Scherpbier A, Williams R, Zwierstra R, et al.** BEME systematic review: predictive values of measurements obtained in medical schools and future performance in medical practice. Medteach. 2006; **28 (2):** 103-116.
13. **Smith LB.** Medical School and on-line learning: does optional attendance create absentee doctors? Med Educ. 2012; **46 (2):** 137-138.
14. **Eisen D, Schupp C, Isserof R, Ibrahimi O, Ledo L, Armstrong A.** Does class attendance matter? Results from a second-year medical school dermatology cohort study. Int J Dermatol. 2015; **54:** 807–816.
15. **Bauer L, Liu P, Schanzenbach DW, Shambaugh J.** Reducing chronic absenteeism under the every student succeeds act. Brookings Institution, 2018 Apr.
16. **Gottfried, M.** Chronic absenteeism and its effects on student's academic and socioemotional outcomes. J Educ for Stud Placed Risk, 2014; **19:** 53-75. doi:10.1080/10824669/2014.952696.
17. **Gottfried MA.** Chronic absenteeism in the classroom context: Effects on achievement. Urban Education, 2019; **54 (1):** 3-4.
18. **Cortright RN, Lujan HL, Cox JH, DiCarlo SE.** Does sex (female versus male) influence the impact of class attendance on examination performance? Adv Physiol Educ. 2011; **35 (4):** 416-420.
19. **Horton DM, Wiederman SD, Saint DA.** Assessment outcome is weakly correlated with lecture attendance: influence of learning style and use of alternative materials. Adv Physiol Educ. 2012; **36 (2):** 108-115.
20. **Khan YL, Lodhi SK, Bhatti S, Ali W.** Does Absenteeism Affect Academic Performance Among Undergraduate Medical Students? Evidence From "Rashid Latif Medical College (RLMC).". Adv Med Educ Pract. 2019; **10:** 999-1008. doi: 10.2147/AMEP.S226255.
21. **Cohall DH, Skeete D.** The impact of an attendance policy on the academic performance of first year medical students taking the fundamental of disease and treatment course. Caribbean Teaching Scholar, 2012; **2 (2):** 115-123.
22. **Bergman, P, Chan EW.** Leveraging parents: The impact of high-frequency information on student achievement. Teachers College, Columbia University, 2017. Retrieved from http://www.columbia. edu/~psb2101/ParentRCT.

Authors' Designation and Contribution

Sidrah Riaz; Associate Professor: *Design, Literature search, Data acquisition, Data analysis, Statistical analysis, Manuscript preparation, Manuscript editing.*

Mariam Sheikh; Associate Professor: *Data acquisition, Data analysis, Statistical analysis, Manuscript editing, Manuscript review.*

Muhammad Tariq Khan; Professor: *Concepts, Manuscript editing, Manuscript review.*

Ambreen Mumtaz; Professor: *Data acquisition, Manuscript editing, Manuscript review.*

Muhammad Saghir; Registrar: *Data acquisition, Manuscript editing, Manuscript review.*