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RESEARCH ARTICLE

Impact of class attendance on academic performance in the subject of physiology

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ABSTRACT

Background: High attendance is an essential requirement in professional courses such as medicine for good understanding and thorough grasp over the subjects. It is a common perception that missing classes frequently results in poor academic performances. **Aims and Objectives:** The aim of the study was to find out the effect of class attendance on student's academic performance in our setting among 1st year medical students in the subject of physiology. **Materials and Methods:** This retrospective study was conducted in the Department of Physiology, Government Medical College Srinagar from October 2018 to December 2018. 146 1st-year M.B.B.S. students who had attended physiology theory lectures and practical classes and appeared in the final exams in batch 2016–2017 were selected for this study. Records of attendance and academic performance were obtained. Statistical analysis was performed using Pearson correlation analysis. **Results:** Results revealed a positive and significant correlation between class attendance and academic performance in both theory and practical. The relationship between performance in practical and attendance was highly significant which shows that attending practical classes is essential for acquiring skills. **Conclusion:** This study has found a positive relationship between class attendance and academic performance of the students both in theory and practicals in the subject of physiology suggesting that high attendance is crucial for learning in medicine.

KEY WORDS: Attendance; Academic Performance; Medical Students; Physiology

INTRODUCTION

The main purpose of undergraduate medical education is to produce a physician with sufficient knowledge of health and disease, reasonable medical skills and a positive attitude toward patients and their families.[1] High attendance is an essential requirement in professional courses such as medicine for good understanding and thorough grasp over the subjects (both basic and clinical) which will eventually lead to better performance in their careers later.[2] Lecture attendance has a positive effect on students' academic performance, and hence a mandatory attendance policy is important.[3] Medical council of India regulations have made 75% attendance in a subject (inclusive of attendance in non-lecture teaching) compulsory for appearing in the final examination of that subject.[4]

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It is a common perception that missing classes frequently results in poor academic performances which have been supported by previously conducted studies.[5] A recent study showed that poor performers in the early years of medical school have more chances of becoming unsuccessful doctors[6] and are at an increased risk for subsequent professional misconduct.[7] Attending classes

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not only allows students to obtain information that is not contained in textbooks or lecture materials present online but also allows students varied contact with materials (lectures, review of notes, demonstrations, and so on).[8] While the effect of absenteeism on students' academic performance is well-established among students of other professional courses and foreign medical students,[9,10] very little attention has been paid in finding out the effect of the same on the performance of India medical students. Hence, this study was conducted to find out the effect of class attendance on students' academic performance in our setting among 1st-year medical students in the subject of physiology.

MATERIALS AND METHODS

This retrospective record-based study was conducted in the Department of Physiology, Government Medical College Srinagar from October to December 2018. 146 1st-year M.B.B.S. students who attended physiology theory lectures/practical classes in batch 2016–17 and appeared in the final exam were selected for the study. Confidentiality of individual student's score was maintained. Permission for access to the students' score sheets was obtained from appropriate authority (academic registrar and Institutional Ethics Committee). Attendance records of theory lectures and practical classes were collected from the attendance registers that are maintained by the department. For academic performance marks obtained in physiology subject in the final university exam including both theory and practical were collected from the academic section.

Descriptive statistical analysis includes percentage; mean and standard deviation was calculated by Microsoft Office Excel. Using SPSS version 20.0, the statistical parameters were analyzed. The relationship between attendance and examination performance was evaluated using the Pearson (r) correlation coefficients. $P \leq 0.05$ was taken as statistically significant. Correlations between attendance and examination performance were obtained separately for theory and practical.

RESULTS

Attendance and marks of 146 students were taken into consideration for the study, among whom 72 (49.3%) were males and 74 (50.6%) were females [Figure 1]. All students were of the age group of 17–20 years.

The average class attendance for theory lectures was 78.4% and their average performance in the final exam was 52.9%. Correlation between students' attendance in theory and their performance in the final exam was examined. It was found to be positive and statistically significant ($r = 0.204$, $P > 0.05$) [Table 1].

The average class attendance for practical lectures was 82.1%, and their average performance in the final exam was 60.4%. The average class attendance as well as average performance both were higher for practical as compared to theory. Correlation between students' attendance in practical and their performance in the final practical exam was examined. It was also found to be positive and statistically highly significant ($r = 0.233$, $P > 0.01$) [Table 2].

DISCUSSION

This study assesses the effect of student attendance in theory and practical on their academic performance in the first M.B.B.S. Results of the present study have revealed a positive and significant correlation between class attendance and academic performance in both theory and practical examination. The average class attendance as well as average performance both were higher for practical as compared to theory. The relationship between performance in practical and attendance was also highly significant which shows that attending practical classes are essential for acquiring skills.

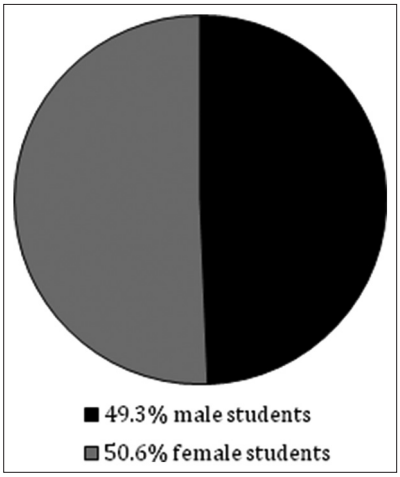

Figure 1: Pie chart showing the percentage of the gender of the students

Table 1: Correlation between attendance and academic performance in theory

Number of students	Attendance (mean±SD)	Academic performance (mean±SD)	*r*	*P*
146	78.40±10.84	52.90±9.67	0.204*	0.013

*: Correlation is significant at the 0.05 level, SD: Standard deviation

Table 2: Correlation between attendance and academic performance in practical

Number of students	Attendance (mean±SD)	Academic performance (mean±SD)	*r*	*p*
146	82.16±7.14	60.48±0.07	0.233**	0.005

**: Correlation is significant at the 0.01 level, SD: Standard deviation

Our study results are comparable with a study in the subject of pharmacology which found a positive and significant relationship between attendance and academic performance in both theory and practical.[11] Another study conducted in a medical college in Gujarat also observed a positive relationship between attendance and academic performance in physiology.[12]Attending classes regularly might also encourage professional socialization in addition to having a potentially positive impact on the course performance[13,14] which help medical students to develop professional skills, behaviors, attitudes, and values that are an integral part to becoming a future successful doctor.[12,15,16] Poor attendance, on the other hand, is a big stumbling block in the undergraduate medical education program that has been reported by many faculty members and medical administrators.[2,8,17,18]

The strengths of this study include its consideration of student attendance in both theory and practical. The present study was not free from limitations. We have only analyzed the relationship between the attendance and academic performance without taking into consideration other factors that might affect academic performance such as sociodemographic factors, study habits, learning styles, communication skills, and effect of conflict. Furthermore, the findings are based on research conducted at one medical college and on a single subject; hence, for generalization replication in other institutions is required.

CONCLUSION

This study has found a positive relationship between class attendance and academic performance of the students both in theory and practical in the subject of physiology. This suggests that high attendance is crucial for learning in medicine. Hence, the teaching faculty should try to maintain a healthy interactive educational environment to facilitate learning and provide encouragement to students to attend the classes regularly.

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