

ATTENDANCE, ATTITUDES AND ACADEMIC PERFORMANCE: A STUDY ON FIRST YEAR MBBS STUDENTS ATTENDING PHYSIOLOGY CLASSES**Maulik Varu^{1*}, Anup Vegad², Chinmay Shah³, Hemant Mehta⁴, Yogesh Kacha⁵**

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Email id of corresponding author- drmaulikvaru@yahoo.com*Received: 25/07/2015****Revised: 10/03/2016****Accepted: 21/03/2016****ABSTRACT:**

Objective: Student attendance is declining day by day in medical colleges. In this context, the present study was undertaken to find out any impact of attendance on academic performance in exam as well as to find out students' attitudes towards their absenteeism. **Material and Methods:** Based on percentage of attendance in Physiology department, students were divided into five groups, I ($\leq 60\%$) to V ($\geq 91\%$). Academic performance was analyzed in terms of percentage of marks obtained in Physiology subject in final university exam including both theory and practical. Statistical analysis was carried out by obtaining p value with Kruskal Wallis test. Spearman Correlation was performed between attendance and academic performance. In predesigned pretested performa, students were asked reasons of their absenteeism at classes. **Result:** There was statistically significant difference between academic performance of five groups in both theory ($P=0.0369$) and practical. ($P<0.0001$) There was statistically significant positive correlation between attendance and academic performance in both theory ($P=0.0010$) and practical with more significant impact on practical. ($P<0.0001$) Most common reasons given by students for their absenteeism were either boring lecture or boring topic, which gives indication to do intervention and modification in teaching methods. **Conclusion:** The present study suggests a clear-cut impact of attendance on academic performance. Introspection need to be done and innovative method should be used to eliminate reasons of absenteeism.

Keywords: Attendance, Academic performance, Theory, Practical**INTRODUCTION:**

Theory lectures and practical classes are means of teaching in almost all the undergraduate

courses including MBBS. Daily attendance record is maintained and followed as per rules

and regulations. Higher attendance is often mandated in undergraduate medical education with an aim to produce clinicians with adequate knowledge of medicine and reasonable medical skills. (1) Unfortunately declining student attendance has been a problem since long. (2,3,4) Romer, one of the first authors to explore the relationship between student attendance and exam performance found that after controlling for unobservable aptitude, motivation and effort, attendance had a positive and significant impact on learning. On the basis of these findings, Romer recommended experimenting with mandatory attendance policies to enhance student performance. (5) Many studies have shown that there is a positive correlation between attendance and academic performance. (6, 7, 8) The present study was carried out on first year MBBS students to find out any impact of attendance on academic performance in Physiology subject. Attempt was also made to find out students' attitudes towards their absenteeism at theory lectures and/or practical classes.

MATERIAL & METHODS:

The study was conducted in department of Physiology, Govt. Medical College, Bhavnagar during the academic year 2011-12. 100 first year MBBS students attending Physiology theory lectures and practical classes were selected. Attendance records of theory lectures and practical classes were maintained separately. Based on percentage of attendance, students were divided into five groups named I($\leq 60\%$), II(61%-70%), III(71%-80%), IV(81%-90%) and V($\geq 91\%$). Academic performance was analyzed in terms of percentage of marks obtained in Physiology subject in final university exam including both theory and practical.

Statistical analysis:

Statistical analysis was carried out with Graphpad Instat 3 demo version by calculating mean and standard deviation and by obtaining p value with Kruskal Wallis test (Nonparametric ANOVA). Spearman Correlation was performed between attendance and academic performance. P value < 0.05 was taken as statistically significant. In predesigned pretested performa as given below, the students were asked reasons for their absenteeism at theory lectures and/or practical classes.

| Reasons for absenteeism at theory lectures | Reasons for absenteeism at practical classes |
|---|---|
| A:- I was genuinely sick | A:- I was genuinely sick |
| B:- Too busy | B:- Too busy |
| C:- Had to work | C:- Had other important work |
| D:- Subject clash | D:- The practicals were boring |
| E:- The lectures were boring | E:- The topic was boring |
| F:- The topic was boring | F:- I didn't like the demonstrator |
| G:-I didn't like the lecturer | G:- I don't like the subject |
| H:-I don't like the subject | H:- I couldn't be bothered |
| I:-I couldn't be bothered | |
| J:-I can pass the subject without attending Lectures | |
| K:-Lectures are a waste of time | |

Students were asked to rate their agreement with each statement using a 5-point Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = not sure, 4 = agree, and 5 = strongly agree. The responses were aggregated and divided by the sample size to derive mean scores for each statement.

RESULTS:

Group wise attendance and academic performance in theory and practical are presented in table 1 and table 2 respectively. It shows that in both theory as well as practical, the difference in academic performance between five groups was statistically significant. However as compared to theory ($P = 0.0369$), it is extremely significant in practical ($p < 0.0001$). Result of Spearman correlation is shown in table 3, which shows that there is statistically significant positive correlation between attendance and academic performance in both theory and practical. Again it is more significant in practical ($P < 0.0001$) than in theory ($P = 0.0010$) which is better seen in graph 1. Table 4 and 5 shows students' attitudes towards their absenteeism at theory lectures and practical classes respectively. Most common reasons given by students for absenteeism at theory lectures were either boring lecture or boring topic, while in practical was having other important work.

DISCUSSION:

It is well known that students who are organized and/or motivated will do better in their exams and it probably correlates strongly with their attendance in theory as well as practical classes. Students who are attending classes regularly have additional knowledge, material and support

gained from attending classes and can make good use of in-class resources. Results of the present study clearly support this concept. Although attendance in both theory lectures and practical classes appears to play an important role, academic performance especially in practical shows extremely significant positive correlation with attendance, which indicates that for acquisition of skill, it is necessary to attend practical classes.

Several studies have investigated the relationship between attendance and grade. Rodgers finds a small but statistically significant impact of attendance on academic performance in a sample of 167 students enrolled in her Introductory Statistics course. (4) Enamiroro Patrick Oghuvbu revealed a fair positive correlation between attendance and academic performance. (9) Vincenzo Andrietti et al. found a positive and significant effect of attendance on academic performance. (10) Schmidt reported that hours spent attending lectures and discussion sections positively affected course grades, even after controlling for hours of study. (11) Kirby and McElroy also base their analysis on a sample of 368 first year economics students in Ireland. They found that class attendance is significantly affected by hours worked and travel time to university. On the other hand, tutorial attendance appears to enhance exam performance more than class attendance. (12) Chilwant K. S. and Hundekari J.C. found that performance in theory examination is more significantly affected by attendance than in practical examination. (13)

The present study also included finding students' attitudes towards their absenteeism. Student's poor attendance in theory class due to boring class or boring topic gives indication to faculty to do introspection, make lectures more

interactive and make boring topic, more and more interesting. Faculty should try to go hand in hand with newer technology and use various media in appropriate proportion to make the students attentive. Researchers in the 1970s identified the importance of the lecturer in conveying principles rather than details (14) and in generating understanding in order for lectures to be effective. (15) Researchers have also identified the ability of lecturers to analyze and synthesize complex material, make it simpler for students, and explain it clearly, as a reason for lecture attendance. (16)

CONCLUSION:

The present study suggests a clear-cut impact of attendance on academic performance. The attendance policies in Medical Colleges, though not the only, but can serve as one of the effective means to regulate the academic standard of the students. Introspection need to be done and innovative method should be used to eliminate reasons of absenteeism.

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Table 1: Attendance and academic performance in theory.

| Group | No. of students | Attendance (%) | Academic performance (%) | p value |
|-------|-----------------|----------------|--------------------------|---------|
| I | 5 | 43.13 ± 5.18 | 57.00 ± 19.38 | 0.0369* |
| II | 9 | 57.15 ± 2.84 | 53.16 ± 15.97 | |
| III | 33 | 67.34 ± 3.21 | 59.98 ± 14.28 | |
| IV | 43 | 75.77 ± 3.03 | 65.36 ± 10.90 | |
| V | 10 | 83.81 ± 2.09 | 70.25 ± 9.91 | |

*statistically significant

Table 2: Attendance and academic performance in practical.

| Group | No. of students | Attendance (%) | Academic performance (%) | p value |
|-------|-----------------|----------------|--------------------------|----------|
| I | 4 | 43.19 ± 7.47 | 46.04 ± 7.46 | <0.0001* |
| II | 9 | 56.58 ± 3.45 | 53.33 ± 8.27 | |
| III | 27 | 66.18 ± 2.93 | 57.25 ± 9.41 | |
| IV | 40 | 75.69 ± 2.80 | 62.64 ± 8.21 | |
| V | 20 | 85.70 ± 3.49 | 69.08 ± 8.84 | |

*statistically significant

Table 3: Spearman correlation between attendance and academic performance

| | Correlation (r) | p value |
|------------------|--------------------|-----------|
| Theory | 0.324 | 0.0010* |
| Practical | 0.503 | < 0.0001* |

*statistically significant

Table 4: Likert scale of reasons for absenteeism at theory lectures

| Group | A | B | C | D | E | F | G | H | I | J | K |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Strongly disagree | 2.00 | 3.00 | 3.00 | 3.00 | 3.50 | 4.00 | 3.00 | 2.00 | 3.00 | 3.00 | 2.50 |
| Disagree | 2.00 | 2.33 | 2.00 | 1.67 | 1.67 | 1.67 | 2.00 | 1.33 | 1.00 | 1.67 | 2.33 |
| Not sure | 1.75 | 1.50 | 2.75 | 2.25 | 2.50 | 2.25 | 1.75 | 1.25 | 2.75 | 1.25 | 1.00 |
| Agree | 2.44 | 2.16 | 2.28 | 2.03 | 2.72 | 2.69 | 2.00 | 1.72 | 2.13 | 1.91 | 1.53 |
| Strongly agree | 1.70 | 1.52 | 2.48 | 2.26 | 3.00 | 2.48 | 2.00 | 1.61 | 2.09 | 2.30 | 1.87 |
| Not applicable | 1.00 | 1.00 | 1.00 | 3.00 | 4.00 | 3.00 | 1.50 | 1.50 | 2.50 | 3.50 | 3.00 |
| Average | 1.81 | 1.92 | 2.25 | 2.37 | 2.90 | 2.68 | 2.04 | 1.57 | 2.24 | 2.27 | 2.04 |

A:- I was genuinely sick, B:- Too busy, C:- Had to work, D:- Subject clash, E:- The lectures were boring, F:- The topic was boring, G:- I didn't like the lecturer, H:-I don't like the subject, I:- I couldn't be bothered, J:- I can pass the subject without attending lectures, K:- Lectures are a waste of time

Table 5: Likert scale of reasons for absenteeism at practical classes

| Group | A | B | C | D | E | F | G | H |
|--------------------------|------|------|------|------|------|------|------|------|
| Strongly disagree | - | - | - | - | - | - | - | - |
| Disagree | 1.25 | 1.25 | 1.75 | 2.00 | 1.50 | 1.75 | 2.00 | 1.50 |
| Not sure | 2.50 | 2.63 | 3.00 | 2.50 | 2.25 | 1.88 | 1.38 | 1.38 |
| Agree | 2.00 | 1.85 | 2.07 | 2.26 | 2.11 | 2.26 | 1.85 | 2.48 |
| Strongly agree | 1.77 | 1.64 | 2.68 | 2.23 | 2.73 | 2.09 | 1.77 | 2.14 |
| Not applicable | 2.80 | 2.60 | 3.00 | 2.80 | 2.20 | 1.80 | 1.40 | 2.20 |
| average | 2.06 | 1.99 | 2.50 | 2.36 | 2.16 | 1.96 | 1.68 | 1.94 |

A:- I was genuinely sick, B:- Too busy, C:- Had other important work, D:- The practicals were boring, E:- The topic was boring, F:- I didn't like the demonstrator, G:- I don't like the subject, H:- I couldn't be bothered

Graph 1: Groupwise attendance and academic performance(%) in theory and practical

