

Original Article

Effect of Class Attendance on Medical Student's Academic Performance - An Observational Study

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Abstract:

This cross sectional study was conducted at Armed Forces Medical College (AFMC), Dhaka from October 2015 to September 2016. A total of 475 students belonged to four different phase groups were selected as research sample. Research Data regarding academic results and class attendance was collected from records of training section of the college and different departments. A pre tested semi structured questionnaire was distributed to the students to get their opinion regarding attendance and absence in the classes. Data was analyzed in terms of percentage and Chi-Square test using SPSS- 20 version of software. Male and female student ratio in this study was 168(35.36%): 307(64.64%). Majority of male students 142(84.52%) and female 282(91.86 %) obtained eligibility level of attendance. Considering item examinations 139(97.88%) male and 269(95.39%) female students completed the items in due time. Among students with good attendance male 133 (93.66%) and female 269(95.39%) passed the Term final exams regularly. In Professional examinations 128(90.14%) male and 261(92.55%) female students with better attendance passed at first chance. Statistically result by Chi-Square test showed significant result. Considering reasons for presence in the class 475(100%) students said it is a requirement for qualification to sit for professional MBBS examinations, 472(99.37%) attended to get clear idea about topic of discussion, 471(99.16%) opted for getting chance for interaction with class teacher, 468(98.53%) gave opinion about getting suggestions and important questions for examination, 412(86.74%) found the topic interesting and 67(14.11%) attended class for avoiding fine for absence. Regarding absence in the class 54(11.37%) was sick, 51(10.74%) found the class boring, 44(9.26%) felt the topic boring, 41(8.63%) was busy otherwise, 37(7.79%) thought they could get notes from friends, 22(4.63%) was on leave and 17(3.58%) thought they could pass subject without attending the classes. Students with regular attendance in class generally have positive effect since they get benefit from having better examination results, higher self concept, higher standardized test scores and educational attainment.

Key words: Medical Student, Class Attendance, Academic performance.

Introduction:

Organized lecture and tutorial classes are part and parcel of modern days academic activities. Regular attendance in classes help a student to get clear idea about the subjects of discussion as per course curriculum, which is essential for performing better result in examinations. Class attendance provides them a positive character building opportunity and teaches ways to develop discipline, commitment, tenacity, self

control and a healthy respect for college authority. Students keep themselves busy in the classes to nourish their knowledge, attitude and skill. But there is always a question whether regular attendance in the class has some positive effect on academic performance or not.

Objective:

To find out the relationship between regular attendance in scheduled classes and medical student's academic performance.

Materials and Methods:

This cross sectional study was conducted at Armed Forces Medical College (AFMC), Dhaka from October 2015 to September 2016. A total of 475 students belonged to four different phase groups were selected purposively and conveniently as research sample. The dependant variable was fixed at completion of item examinations at due time, term final and different professional examinations results, whereas independent variable was class attendance of students. Research Data regarding academic results and class attendance were collected from records of training section of the

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college and different departments. Ethical permission was taken from concerned authority for this research. A pre tested semi structured questionnaire was distributed to the students to get their opinion regarding attendance and absence in the classes. The participation was voluntary and all the participants were informed about the objective of this study. Verbal consent was obtained from every respondent student and they were informed that the researcher would maintain confidentiality of their identity and the collected information would be used for research purpose only. Data was analyzed in terms of percentage and paired sample t-test analysis using SPSS- 20 version of software.

Results:

Total male students were 42 from Phase: 1; 40 from Phase: 2, 47 from Phase: 3 and 39 from Phase: 4. Number of female students were 83, 85, 79 and 60 from 4 phases respectively (Fig-1). Male and female student's ratio in this study was 168(35.36%): 307(64.64%) (Fig-2).

Majority of students had class attendance more than 75%, which is a requirement of Bangladesh Medical & Dental Council (BM&DC) for becoming eligible to sit

for Professional MBBS examinations. Among the research samples, male students 142(84.52%) and female 282(91.86 %) obtained eligibility level of attendance (Fig-3).

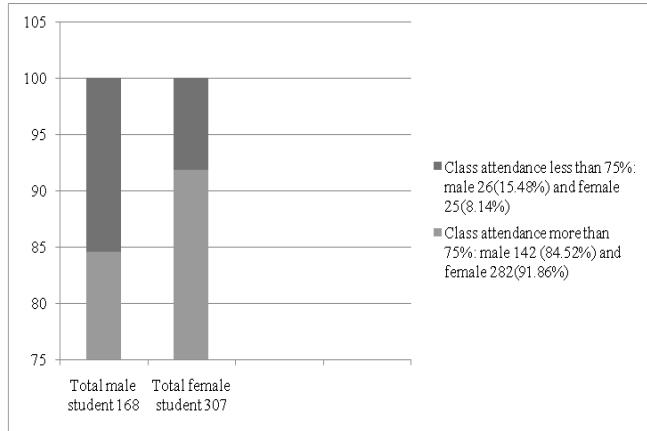


Figure-3: Status of class attendance among students (n=475).

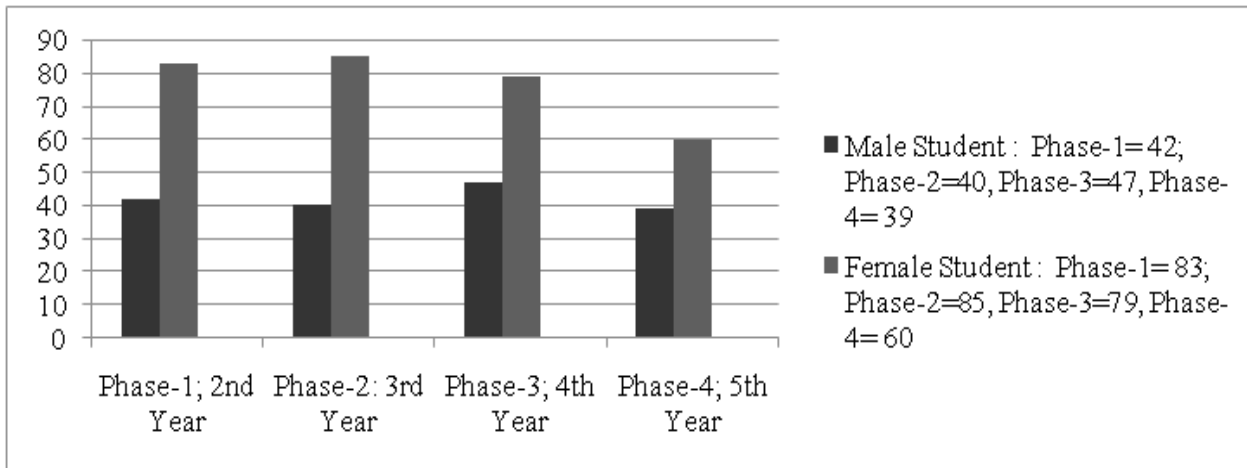


Figure-1: Total number of male and female participants from different phases (n=475)

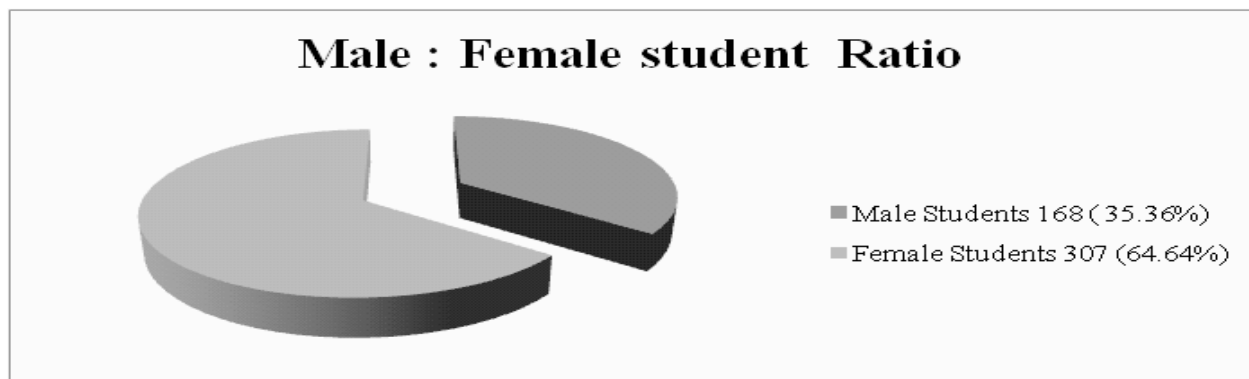


Figure-2: Male and female student ratio by percentage (n=475)

Students who had better percentage of attendance completed the class items in due time and passed Term final examinations at one chance (Table-I). Considering item examinations 139(97.88%) male and 269 (95.39%) female students completed the items in due time, whereas among students with less attendance only 06(23.08%) male and 05(20.00%) female could finish the items in scheduled date. Among male students 133(93.66%) and female students 269 (95.39%) passed the Term final exams regularly. Among students who had less attendance, only 12 (46.15%) male and 11(44.00%) female qualified in Term final examinations at first chance. In Professional examinations 128(90.14%) male and 261(92.55%) female students with better attendance passed at first chance, whereas 10(38.46%) male and 8(32.00%) female students with less attendance passed at first attempt.

Considering reasons for presence in the class 475(100%) students said it is a requirement for qualification to sit for professional MBBS examination, 472(99.37%) attended to get clear idea about topic of discussion, 471(99.16%) opted for getting chance for interaction with class teacher, 468 (98.53%) gave opinion about getting suggestions and important questions for examination, 412(86.74%) found the topic interesting and 67(14.11%) attended class for avoiding fine for absence (Fig-4). Regarding absence in the class 54(11.37%) was sick, 51(10.74%) found the class boring, 44(9.26%) felt topic was boring, 41(8.63%) was busy otherwise, 37(7.79%) thought they could get notes from friends, 22(4.63%) was on leave and 17(3.58%) thought they could pass subject without attending the classes (Fig-5).

Pearson Chi Square test between students with good attendance (>75%) and less attendance (<75%) showed significance result (Table-I, II, III).

Table I: Distribution of the patient by age and sex

Status	Completed all the item examinations in due time f(%)	Could not complete all the item examinations in due time f(%)	Statistical analysis
Male students having more than 75% attendance (142)	139 (97.88%)	3(2.12%)	Chi Square static is 104.0876 p- value is <.00001
Male students having less than 75% attendance (26)	06 (23.08%)	20(76.92%)	The result is significant at p <.01
Female students having more than 75% attendance (282)	269 (95.39%)	13(4.61%)	Chi Square static is 136.0477 p- value is <.00001
Female students having less than 75% attendance (25)	05 (20.00%)	20((80.00%)	The result is significant at p <.01

Table-II: Frequency distribution of status of Term Final examination result among the research samples (n=475).

Status	Passed in Term final examinations at one chance f(%)	Could not pass in Term final examinations at one chance f(%)	Statistical analysis
Male students having more than 75% attendance (142)	133 (93.66%)	9(6.34%)	Chi Square static is 41.977 p- value is <.00001
Male students having less than 75% attendance (26)	12(46.15%)	14(53.85%)	The result is significant at p <.01
Female students having more than 75% attendance (282)	269 (95.39%)	13(4.61%)	Chi Square static is 75.6074 p- value is <.00001
Female students having less than 75% attendance (25)	11(44.00%)	14(56.00%)	The result is significant at p <.01

Table-III: Frequency distribution of status of Professional MBBS Examinations results among the research samples (n=475).

Status	Passed Professional MBBS examinations at one chance f(%)	Could not pass Professional MBBS examinations at one chance f(%)	Statistical analysis
Male students having more than 75% attendance (142)	128 (90.14%)	14(9.86%)	Chi Square static is 40.0133 p- value is <. 00001
Male students having less than 75% attendance (26)	10(38.46%)	16(61.54%)	The result is significant at p < .01
Female students having more than 75% attendance (282)	261 (92.55%)	21(7.45%)	Chi Square static is p- value is <. 0000177.6365
Female students having less than 75% attendance (25)	8(32.00%)	17(68.00%)	The result is significant at p < .01

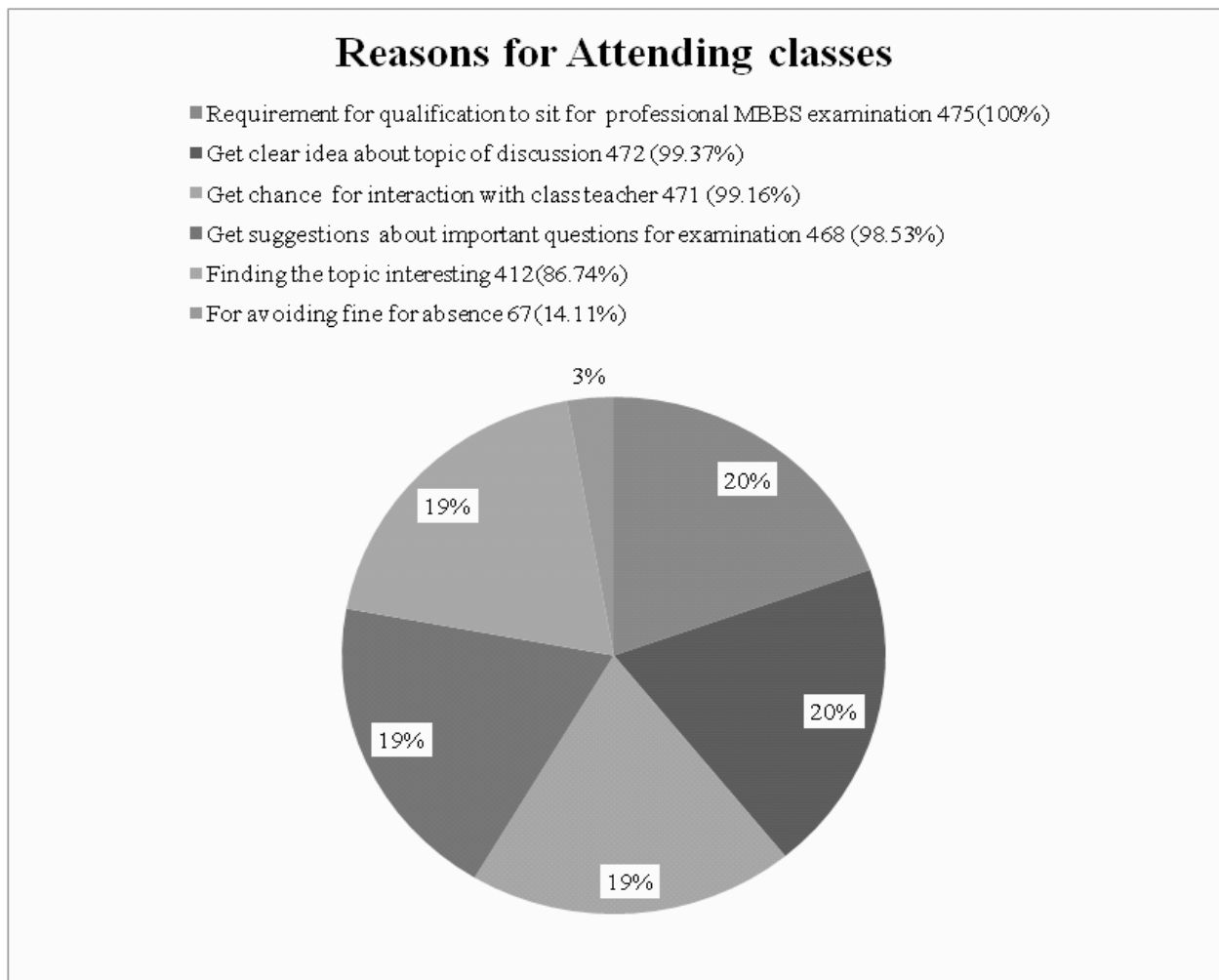


Figure-4: Reasons for attending classes by students

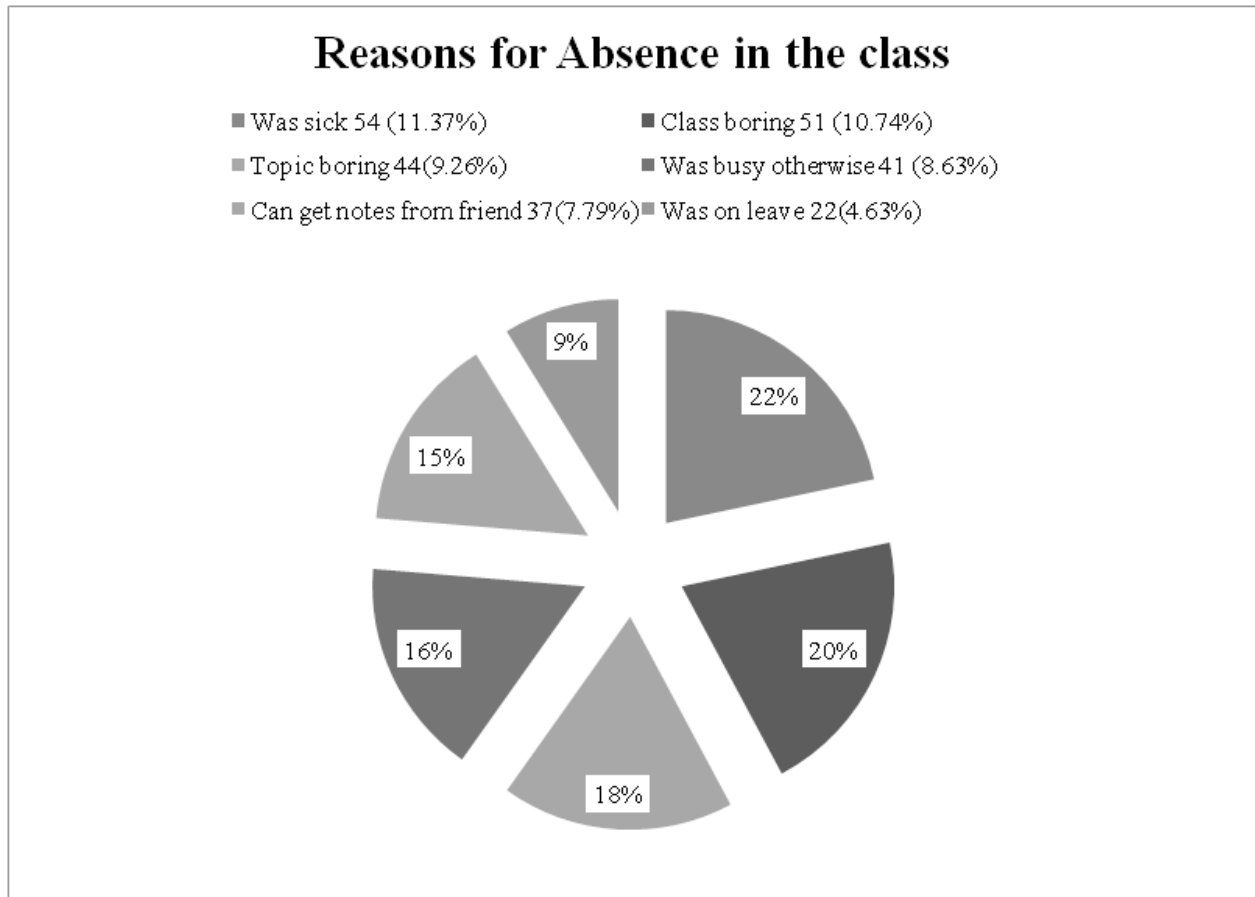


Figure-5: Reasons for remaining absent in the classes by students

Discussion :

Attendance in the class is very important because students are more likely to be succeeded in academics if they attend schedule classes consistently. It is difficult for teachers and students to build skills and progress if large numbers of students frequently remain absent in the class. Students who do not attend class on a regular basis are more likely to fall behind in academics, get into trouble with institutional authority as well as friends. Attending lectures yields a positive and significant impact on exam performance. Devadoss and Foltz (1996) found significant positive effects of class attendance on student performance from a survey-based analysis of students, across 4 US universities, taking classes in agricultural economics¹. Rodgers (2002) using data on attendance in an introductory statistics module at an Australian university also found a strong positive association between attendance and performance².

A survey-based panel data set by Stanca on students of microeconomics module at an Italian university

correlating between attendance and produced estimates showed a significant positive causal effect of attendance on performance³. In this study male and female student ratio was 168(35.36%): 307(64.64%), because majority of females performed better in admission test examination than male and got chance in the medical college. Most of the students who attended classes regularly and had percentage of attendance more than 75% obtained good results in examinations. But to make the attendance fruitful and having the most academic value, both students and teachers must be actively engaged. Students will accomplish little academically if they only come to class for giving percentage of attendance, use mobile for face book chat, complete work for other classes or even sleep. Students must choose to participate in their own education and take responsibility for their learning. Class attendance does not guarantee hundred percent successes in examination but certainly can enhance the probability of academic success. A number of studies performed by Brocato, Launius, Moore, Thomas and Higbee demonstrated a relationship between high attendance rates and high grades^{4,5,6,7}. Recent studies in economics classes by Chen and Lin,

indicated that attending lectures corresponds to a significant improvement in exam performance by as much as 7.7%⁸. Result of all these studies coincide with the result of this study.

Moore found that more than 90% of students in introductory science classes know on the first day of classes that they have a better chance of receiving a higher grade if they regularly attend classes⁶. A recent survey of undergraduates at Massachusetts Institute of Technology by Clay and Breslow reported that the most important factors in deciding whether to attend lectures are the lectures' quality and clarity, conflicting deadlines for other classes, the professor's use of relevant examples and the professor's ability to engage and entertain students⁹. Attendance feedback Gaudine and Saks is one interesting technique used in an attempt to improve class attendance. The hypothesis is that when students receive feedback documenting their absences as well as the average number of absences of other students over the same period, their attendance will improve after receipt of a feedback letter¹⁰. One recent study by Broucek and Bass showed that course grade point average significantly correlated with attendance after the use of attendance feedback letters¹¹. Romer in his study had found that absenteeism is a significant problem at many institutions of higher learning¹². Devadoss and Foltz discovered that it is also a major concern for educators¹³. A number of studies by Friedman, Rodriguez and McComb, McGuire (2003), Moore had described that daily absenteeism in college classrooms can be as high as one-third to almost one-half of students in certain disciplines^{14,15,16}.

In this study some students were absent in the class due to sickness, leave, feeling the class boring or thinking of getting notes from friends etc. This findings coincide with studies of Maizel who showed that some students believe, since they pay for classes, they should be the ones to decide whether or not to attend classes and should not be penalized for failing to show up¹⁷. Schoenbrum in his study found that some students believe they can learn more from not going to class¹⁸. They think that instead of wasting time being bored and distracted in classes, they can sit down on their own, focus, and learn the material. New digital media (user-published blogs, video clips, collaborative wikis, webcasts, and immersive virtual reality) is also an emerging concern to some faculty as a possible contributor to student classroom absenteeism¹⁹.

Conclusion:

This study has found positive relationship between class attendance and academic performance of the

students which coincides with most of the previous studies. Medical students often learned skills such as teamwork and leadership from college activities while decreasing the likelihood of different problem behaviors. It is suggested that faculty should deliver better quality teaching and encourage the students to attend in the class for having better examination results, having higher standardized test scores and higher educational attainment and having higher self concept.

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