Absenteeism among Saudi Medical Students

Mahmoud F. Qutub[1*], Mohammad A. Bafail[1], Ahmad S. Alomari[1],
Abdulaziz A. Azahrani[1], Wesam T. Abuznadah[2], Fadi M. Munshi[3], Basim S. Alsaywid[1,2]
[1] King Saud Bin Abdulaziz University for Health Sciences (KSAU-HS), [2]King Abdulaziz Medical City,
National Guard Health Affairs, [3]Saudi Commission for Health Specialties, Jeddah
*Corresponding Author: Mahmoud Fareed Qutub, Mobile No. :+966558550995,Email: qutub.mahmoud@gmail.com

ABSTRACT
Background: Student absenteeism refers to the frequent absence from classes without any good reason and thought to be the primary concern in health profession education worldwide mainly in medical school.
Methods and Material: This study is a cross sectional design conducted in 152 medical students of King Saud Bin Abdulaziz University for Health Sciences (KSAU-HS), Saudi Arabia. A self-reported questionnaire was used to determine absenteeism behavior, contributing factors of absenteeism, and level of satisfaction of medical students towards the medical program of the university. Adapted questionnaire from Timmins and Kaliszer [9] was also utilized to examine factors of stress among medical students. Descriptive statistics, linear correlation and Pearson correlational coefficient utilizing SPSS v22 for the analysis of data.
Results: A total of 143 (92.76%) participated in the study. 104 or 72 % were male, and 28% were female with mean age of 22.5 ($\pm$2.02) and a mean GPA of 4.4 ($\pm$0.4). 77 (53.8%) of students were absent for 5 times or more in lectures/basic and clinical sciences sessions and clinical diagnostic sessions. These absences are mainly because of study (n=36, 25.2%) and course dissatisfaction (n=32, 22.4%). However, only 3 (2.1%) who had an absence for 5 times or more in Problem Based Learning (PBL) sessions. These absences in PBL sessions are mainly because of sleep (n=11, 7.7%) and family commitments (n=10, 7.0%). There is an inverse correlation between absenteeism and academic performance.
Conclusion: Absenteeism has a negative impact on the academic performance of medical students.
Keywords: Absenteeism, Medical Students , AcademicPperformance,Pproblem-based learning, Lecture

INTRODUCTION

Student absenteeism refers to the frequent absence from classes without any good reason and thought to be the primary concern in health profession education worldwide mainly in medical school [1]. Absenteeism behavior may negatively affect the general educational process and personal academic achievement of students. The teaching and learning environment will be affected as it may form an unwelcoming and dull learning environment for both teachers and students[2].

Student attendance is essential in the academic performance and professional development of medical students. The completion of the total credit hours in the aspect of academic and clinical contact is necessary to gain competence and ability to obtain Bachelor of Medicine and Bachelor of Surgery (MBBS). Lectures, laboratory, and clinical sessions provide an invaluable learning experience and in-depth information that are crucial for medical students' academic success. Lecturers offer a personal, professional experience that accentuate the factual knowledge provided in each learning session which cannot be provided via textbooks [3].

Also, student-lecturer interaction during a lecture or clinical session may provide priceless information and specific examples that make learning a subject more intuitive [2]. Therefore, absentees are subject to miss these rich educational resources. This loss may negatively impact student academic performance.

In spite of compulsory attendance rule, every student's parents, institute, and society suffer when students do not attend classes in medical college on a regular basis [3]. Poor execution of lecture among teachers, ineffective teaching strategies, and availability of learning resources on the internet were some of the most common reasons of student's absenteeism [4]. Also, studying while working has a considerable reason for the absences of students [2, 5, 6]. Other factors such as sleeplessness, poor health status, busy social life, and stress due to overload in learning task and assignments were reported that lead to absenteeism among students in medical and other health sciences related higher education [4,5].

The relationship between absenteeism and course performance has been investigated in several studies. In such, studies conducted in several Universities in South Africa, Saudi Arabia, as well in the United States revealed that the student's absenteeism and academic performance has a negative correlation [2, 7, 8]. Thus, it implies that the probability of student to obtain a high grade is through maintaining a good attendance [8].

Absenteeism is indeed an enormous concern in higher education. Therefore, this research would provide a valuable insights that might open the doors for intervention to reduce absenteeism among medical students and may induce a change in rules and regulations regarding attendance. This research will help medical students to improve their performance through changing their perspective toward attendance and set a more welcoming learning environment.

This study specifically aims to gain insight into the absenteeism behavior of medical students and its effect on their academic performance. Furthermore, this study will also determine contributing factor of medical student's absenteeism.

MATERIALS AND METHODS

This is a cross-sectional study design to determine absenteeism behavior among medical students of King Saud Bin Abdulaziz University for Health Sciences (KSAU-HS), Saudi Arabia. Considering the availability of medical students, focus subject to be evaluated and the fixed time period of conducting the study, a consecutive sample of 152 Batch 10 medical students from the academic year of 2015-2016 of KSAU-HS College of Medicine in Riyadh and Jeddah were invited to participate in the study.

The survey questionnaire tool utilized in this study is composed of three parts. The first part was to determine the gender of the participants and to investigate the absenteeism behavior among them in lectures, clinical and diagnostic skills sessions and problem-based learning (PBL) sessions. The second part was to assess the level of stress among medical students utilizing the adapted questionnaire from Timmins and Kaliszer [9]. It consists of 10 items in a 4-point Likert scale with corresponding verbal interpretations from "not at all stressful" (1) to "extremely stressful" (4). The modified survey questionnaire was peer-reviewed by a panel of medical educators and a college behavioral psychologist to ensure its face validity as it measures the target construct of the study. Pilot testing of the questionnaire was performed and obtained a Cronbach *a* of 0.8 which is considered to be in high reliability and adequate to fulfill the objective of the study. The third part consisted of 9 items in a 4-point Likert scale to measure the level of satisfaction of medical students towards the university's medical program.

Secondary data such as medical students' attendance records and end of the block grade point average (GPA) was also obtained through the permission gathered from student's affairs department of the College of Medicine. This was emphasized that the medical students' information will be anonymous and all academic records are kept confidential. All survey questionnaires will be destroyed upon completion of the study.

The statistical package for social science (IBM SPSS) version 22 was used for data analysis. Descriptive statistics in the participant's gender distribution, number of absences in particular sessions, reasons for being absent, stress level and level of satisfaction in the medical program of the university. Grade Point Average (GPA) were reported in the form of frequency, percentage, mean, standard deviation (SD) and rank. Linear regression analysis and Pearson correlation coefficient were calculated to determine the relationship between students absenteeism to their GPA. Statistical significance was defined at the 5% level of probability with 95% reliability.

This study was approved by Institutional Review Board of King Abdullah Medical Research Center (KAIMRC), Jeddah.

RESULTS

A total of 143 out of 152 Batch 10 medical students participated in the study, providing a response rate of 92.76%. The majority about 104 or 72 % of them were male, and 28% were female. The participants mean age was 22.5 (2.02) and a mean GPA of 4.4 (0.4). The average percentage of absences among the participants was determined at 18%.

Table (1): It shows the students' absenteeism in lectures/basic and clinical sciences sessions and clinical diagnostic sessions. A majority of 133 or 93% from the total students' absences is not due to illness. Almost 77 (53.8%) of students were absent

for about 5 times or more, followed by 30 (21%) who had an absence for 3-4 times and only 26 (18.2%) who had an absence for 1-2 times. Moreover, majority of 98 (68.5%) students whom absence took only for a day, followed by 21 (14.7%) whom absence took 2-3 days, and 13 (9.1%) whom absence took more than 3 days. It was found out that students absences are mainly because of the need to an extra time to study (*n*=36, 25.2%) and also because of course dissatisfaction (*n*=32, 22.4%). On the other hand, 84 or 58.7% of students' who had an absence in Problem Based Learning (PBL) sessions which was mainly because of illness. Almost, 43 (30.1%) of students were absent for about 1 or 2 times only, and only 3 (2.1%) who had an absence for 5 times or more. Moreover, majority of 45 (31.5%) students who missed only 1 session while only 1(0.7%) who missed more than 3 sessions. It was found out that students absence in PBL sessions are mainly because of sleep (*n*=11, 7.7%) and family commitments (*n*=10, 7.0%).

Table 1. Distribution and percentages of medical students' absenteeism

Absenteeism Characteristics	Class Sessions*	PBL Sessions
Cause of Absence		
Illness	10 (7%)	84(58.7%)
Non-Illness	133(93%)	57(39.9%)
Frequency of Absences		
1-2 times	26 (18.2%)	43(30.1%)
3-4 times	30 (21%)	11(7.7%)
5 times or more	77 (53.8%)	3(2.1%)
Duration of Absences		
1 day	98 (68.5%)	45(31.5%)
2-3 days	21 (14.7%)	11(7.7%)
more than 3 days	13 (9.1%)	1(.7%)
Reason of Absences		
Stress	26(18.2%)	8(5.6%)
Study	36(25.2%)	3(2.1%)
Job	16(11.2%)	-
Course	32(22.4%)	-
Dissatisfaction		
Social Commitments	17(11.9%)	9(6.3%)
Family Commitments	16(11.2%)	10(7.0%)
Others	33(23.1%)	15(10.48%) (*except for sleep*)
i.e. sleep		11(7.69%)

* Lectures/basic and clinical sciences sessions and clinical diagnostic sessions

Correlation between absenteeism and academic performance was measured by linear regression and Pearson correlation. It was found out that there is an inverse relationship between students' absenteeism and to their GPA's (*p*-value of 0.023). Figure (1), shows that for every decrease in student's absences percentage, GPA is increased by 1.108 degrees. This relationship is confirmed by Pearson correlation calculation and obtained a *p*-value of 0.023 and coefficient of - 0.190.
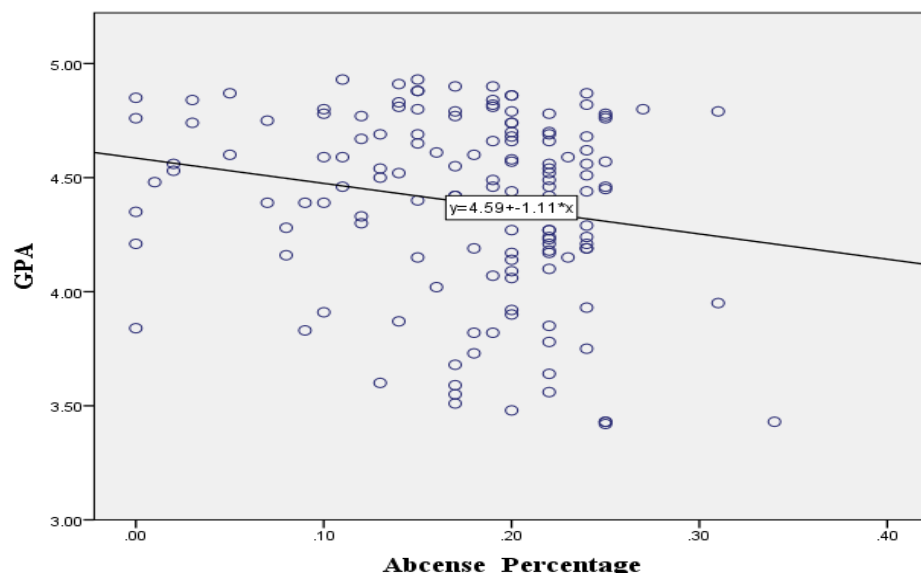
Figure 1. Linear relationship of medical students' absences and Grade Point Average (GPA)

The self-reported stress level of students was determined and presented in detail in table (2). It was found out that majority of the students identified the scheduled examinations as the extremely stressful for them. Course workload, theoretical content of the course and relationships with the classmate, were also the most of the contributing factors of their stress.

Table 2. Frequency and percentage distributions of reason of stress and determined level of stress among medical students.

Factors causes medical students stress	Level of Stress*			
	Not at all stressful	Moderately stressful	Very stressful	Extremely stressful
1. The theoretical content of the course.	17(11.9%)	81(56.6%)	31(21.7%)	14(9.8%)
2. The scheduled examinations on the course.	21(14.7%)	51(35.7%)	40(28%)	31(21.7%)
3. The assignments on the course.	68(47.6%)	49(34.3%)	18(12.6)	6(4.2%)
4. The workload of the course.	22(15.4%)	60(42%)	47(32.9%)	14(9.8%)
5. The classroom contact hours.	29(20.3%)	53(37.1%)	34(23.8%)	26(18.2%)
6. Secondments: travel.	64(44.8%)	42(29.4%)	16(11.2%)	15(10.5%)
7. Clinical placements.	54(37.8%)	63(44.1%)	16(11.2%)	5(3.5%)
8. Relationships with the classmate.	95(66.4%)	31(21.7%)	12(8.4%)	4(2.8%)
9. Relationships with medical tutors.	75(52.4%)	47(32.9%)	13(9.1%)	7(4.9%)
10. Relationships with clinical placement coordinators.	57(39.9%)	53(37.1%)	20(14.0%)	12(8.4%)

*Data were presented in frequencies and percentages

Furthermore, student's satisfaction levels with the university's medical program were determined and presented in detail in table (3). It shows that majority of the students find that medicine as the right, and very satisfying occupation for them where they obtained a mean score of 3.27 (.79), while 3.18 (.81) were satisfied. However, being involved in the decision regarding the course, a moderate satisfaction with a mean score of 1.93 (.86) was obtained.

Table 3. Medical students' level of satisfaction towards the medical program of the University.

Medical Program	Mean(SD)*	Rank	Level of satisfaction
1. Medicine is a satisfying occupation.	3.18(.81)	2	Satisfied
2. Medicine is the right occupation for me.	3.27(.79)	1	Very Satisfied
3. Medicine is a well-paid career.	2.97(.82)	4	Satisfied
4. The rewards in medicine are good.	3.01(.84)	3	Satisfied
5. The prospects of promotion within medicine are good.	2.73(.91)	5	Satisfied
6. I am involved in decisions made regarding the course.	1.93(.86)	9	Moderately Satisfied
7. Communication between medical tutors and medical student is good.	2.55(8.19)	6	Satisfied
8. Communication between staff on the collage and students is good.	2.50(.84)	7	Moderately Satisfied
9. Communication between clinical placement coordinators and students is good.	2.35(.82)	8	Moderately Satisfied
*Legend: 1.00-1.75(Not Satisfied) 1.76-2.50(Moderately Satisfied) 2.51-3.25(Satisfied) 3.26-4.00(Very Satisfied)			

DISCUSSION

This study aimed to investigate the relationship between absenteeism and academic performance as well as to identify contributing factors to medical students' absenteeism behavior. Regression analysis showed a negative relationship between absenteeism and academic performance. Thus, it implies that absence behavior is linked to poor academic achievement. This finding was supported by Silvestri [10] where he found that students who missed three or fewer classes in a particular course, achieved a lower course grades when compared to students who don't have missed lectures. The negative effect of absenteeism became more apparent in those who missed four or more classes than those who missed fewer classes. Moreover, the association of pharmacy students' absenteeism and academic performance was conducted on one hundred thirty five students and resulted in a negative correlation [11]. In this study, showed that lecture/basic and clinical sciences sessions and clinical diagnostic sessions had a higher number of 77 (53.8%) students who had an absence for 5 times or more as compared to 3 (2.1%) students who had an absent in PBL session for 5 times or more. This difference could be attributed to that the class attendance is formative while PBL attendance is summative. A similar finding was reported by a nursing study in which absence from lectures was higher than hospital-based sessions [5]. The

comparison may seem a bit out of frame, but the learning experience gained from the ward and PBL sessions are of a similar nature. Both are case-based, supervised, and both involve students in discussions related to finding a differential diagnosis and case management.

Factors for class absence and PBL were different. Main reasons for lectures/basic and clinical sciences sessions and clinical diagnostic sessions non-attendance were stress, catching up with the study materials, having another job, course dissatisfaction, social and family commitments. While absence from PBL sessions included sleeplessness, sickness, student activates, crowded streets, travel as well as the same reasons for class non-attendance. Some of these factors were reported in other studies. Undergraduate medical and health sciences students at Hawassa University in Ethiopia reported some reasons for missing lectures which included the ease of understanding the subject matter without guidance, preparing for another examination, lack of interest in the subject matter, dislike of teaching style and inconvenient class schedule [4]. A study from three South African Universities suggested that lecturers' actions or professional behavior may predispose to student absenteeism [2]. A collaborative study between The University of Tabuk in Saudi Arabia, Al-Imam Almahdi University in Sudan and the Ministry of health of Sudan, all reported that reasons for

medical students' absenteeism were lack of interest, topic related reasons, mood disturbance and transportation- and lecturer-related reasons [3].

Most of the medical students are satisfied with the university's medical program and medicine as a career, but the majority agreed that they were not involved in decisions made regarding the course. This could be a possible factor for absenteeism and further information possibly via conducting interviews are required to enhance student satisfaction and decreasing non-attendance. Travel from and to the university was found to be not at all stressful by the majority of students; as well as relationships with other students and staff. However, not surprisingly the bulk of students found the theoretical content of the course, scheduled examinations on the course, workload of the course and classroom hours moderately stressful. Such findings call for student counseling to deal with these stressors effectively which may create a more welcoming learning environment that also helps in improving overall attendance.

CONCLUSION

There were considerable factors that lead to absences among medical students. However, it is indeed that absenteeism has a negative impact on the academic performance. Therefore, there must be a program to support medical students towards effective management between school and personal life. This will also help to optimize their academic functioning and life productivity.

REFERENCES

1. **Sharmin T, Azim E, Choudhury S and Kamrun S (2017):** Reasons of Absenteeism among Undergraduate Medical Students: A Review. Anwer Khan Modern Medical College Journal, 8(1): 60-6.

2. **Wadesango N and Machingambi S (2011):** Causes and structural effects of student absenteeism: a case study of three South African Universities. Journal of Social Sciences, 26(2): 89-97.

3. **Merghani T, Haroun B and Elmubarak I (2013)**: Self-report of voluntary absenteeism from didactic lectures by medical students. Universal Journal of Education and General Studies ,213(10):324-8.

4. **Desalegn A, Berhan, A and Berhan Y (2014)**: Absenteeism among medical and health science undergraduate students at Hawassa University, Ethiopia. BMC medical education, 14(1): 81.

5. **Timmins F and Kaliszer M (2002):** Absenteeism among nursing students–fact or fiction?. Journal of nursing management, 10(5):251-264.

6. **Kottasz R (2005)**: Reasons for student non-attendance at lectures and tutorials: an analysis. Investigations in university teaching and learning, 2(2):5-16.

7. **LeBlanc H (2005)**: The relationship between attendance and grades in the college classroom. In 17th annual meeting of the international academy of business disciplines, Pittsburgh Pennsylvania, http://communication.utsa.edu/leblanc/articles/art31.pdf

8. **BinSaeed A, Al-Otaibi M, Al-Ziyadi H, Babsail A and Shaik S (2009):** Association between student absenteeism at a medical college and their academic grades. The Journal of the International Association of Medical Science Educators, 19(4): 155-159.

9. **Timmins F and Kaliszer M (2002):** Aspects of nurse education programmes that frequently cause stress to nursing students–fact-finding sample survey. Nurse Education Today, 22(3): 203-211.

10. **Silvestri L (2003)**: The effect of attendance on undergraduate methods course grades. Education, 123(3): 483-487.

11. **Hidayat L, Vansal S, Kim E, Sullivan M and Salbu R (2012):** Pharmacy student absenteeism and academic performance. American journal of pharmaceutical education, 76(1): 8.