Absenteeism from Lectures Among Medical Students in Casablanca

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| Abstract | Original Research Article |

Introduction: Absenteeism among medical students is a remarkable issue, affecting learning process and academic performance. The present study aimed to estimate the prevalence and associated factors to medical students' absenteeism. ***Methods***: A cross-sectional study was carried out at the Faculty of Medicine and Pharmacy in Casablanca using self administered questionnaires distributed to medical students from year one to year five levels randomly selected. The associations between absenteeism and all variables was identified by univariate and multivariate logistic regression analyses. ***Results***: 373 students completed the questionnaire. The prevalence of absenteeism in this study was 19.6% (95% CI=[15.9-23.9]). Multivariate analysis revealed several factors significantly associated with absenteeism from lectures, including age (AOR = 1.63, 95% CI: 1.07–2.48), being passionate about medicine (AOR = 0.22, 95% CI: 0.06–0.75), mode of transportation (AOR = 2.47, 95% CI: 1.06–5.77), lack of interaction between lecturer and students (AOR = 11.97, 95% CI: 1.39-102.46), dislike the teaching style (AOR = 6.87, 95% CI: 2.55-18.48), the ease of the subject (AOR = 2.96, 95% CI: 1.05-8.33) and students who prefer to study alone (AOR = 2.88, 95% CI: 1.26-6.56). ***Conclusion***: At the Faculty of Medicine and Pharmacy in Casablanca teaching strategies and lecture environment were the main factors related to absenteeism from lectures. Exploring a variety of teaching methods such as hybrid learning can be a beneficial preventive intervention.
Keywords: Absenteeism, Lectures, Medical Students, Prevalence, Associated Factors.

1. INTRODUCTION

Absenteeism among medical students is a remarkable issue, affecting learning process and academic performance [1]. Several studies across universities in South Africa, Saudi Arabia and the United States found a negative correlation between students' absenteeism and academic performance [2–4]. Also, absenteeism wastes educational resources, time and the potential of future physicians [5].

Recently, the absence of students in the classroom has been reported to be a growing concern in universities, especially medical universities [6]. With the rise of new educational technologies and online learning, students' interest and attendance have decreased even more [7].

Student absenteeism is defined as a student being absent from school. These absences can stem from motivational or structural reasons [8].

The causes of student absenteeism are similar, though the level and magnitude of each cause can differ from one country to another [9].

A variety of absenteeism factors among medical students were identified: poor teaching strategies, poor relationship with lectures, timings of the lectures and self imposed reasons such as lack of self discipline and motivation [10]. Additionally, non attendance to lectures was significantly associated with transport problems [11]. Availability of online lectures can also contribute to medical students missing class [12].

The process of medical education has a significant impact on the health of society through the future careers of students [13].

Medical students' absenteeism has been extensively studied, it is not a new phenomenon [14]. But there are still no studies that explore absenteeism and its contributing factors among medical students at the Faculty of Medicine and Pharmacy in Casablanca as far as the authors' knowledge. Therefore, the aim of this study is to assess the prevalence of medical students' absenteeism and to determine associated factors with it.

2. METHODS
Study Design
A cross-sectional study was carried out in March 2023 at the Faculty of Medicine and Pharmacy in Casablanca.

Participants and Sample
The study included medical students from year one to year five levels.

A sample size of 333 participants was calculated based on a prevalence of 50% with the help of Epi info statistical software. We adopted a randomized stratified cluster sampling method from pre-defined groups within the year of study.

Data Collection Tools
This study used a self administered questionnaire. The tool was divided into two parts: the first one included questions related to socio-demographic characteristics and lifestyle, the second part included reasons related to non attendance of lectures.

Statistical Analysis
All statistical analyses were performed using Jamovi software 2.3.28.

Qualitative variables were represented as count and frequency and quantitative variables as mean and standard deviation (SD).

Univariate and multivariate logistic regression analyses were performed to assess the association between the different variables and absenteeism among medical students. We treated lecture non attendance as the outcome variable. We used the question "How often do you miss lectures" using three response options: never, sometimes and often. We recoded the values into binary format (yes or no) in order to facilitate analysis (yes for "sometimes and often", no for "never"). Independent variables with p-value < 0.20 in the univariate analysis were included in the multivariate analysis. Odds Ratios (OR) and Adjusted Odds Ratios (AOR) were estimated with their 95% confidence intervals (95% CI). A p-value less than 0.05 was considered statistically significant.

Ethical Considerations
Students were informed of the aim of this study, their participation was entirely voluntary. To keep the confidentiality data sets were anonymised.

3. RESULTS
Socio-Demographic Characteristics and Lifestyle of Medical Students:
In all, 373 medical students responded to the questionnaire, they had an average age of 20.4 (years) ± 1.6, more than half of them were female (61.4%). Approximately two-thirds of participants were in their first three years (61.9%). The majority of students did medicine by choice (92.8%). Of these respondents, 91.7% were passionate about medicine and only 10.2% have experienced failure. 77.7% of respondents reported living with their parents. Most students used a means of transport (82.8%), with 67.6% of them opting for public transport. Only 11.5 % of participants had a sleeping disorder. **Table 1**.

Table 1: Socio-demographic characteristics and lifestyle of medical students

Characteristics	Frequency (N=373)	Percentage (%)
Age (Mean±SD)	20.4±1.6	
Gender		
Male	144	38.6
Female	229	61.4
Year of Study		
1st	71	19.0
2nd	81	21.7
3rd	79	21.2
4th	72	19.3
5th	70	18.8
Medical career		
By Choice	346	92.8
By Obligation	27	7.2
Passion for Medicine		
Yes	342	91.7
No	31	8.3

Characteristics	Frequency (N=373)	Percentage (%)
Year repetition		
Yes	335	89.8
No	38	10.2
Living situation		
With parents	290	77.7
With peers, partner or alone	83	22.3
Means of transport		
Yes	309	82.8
No	64	17.2
Mode of transportation		
Personal	101	32.4
Public	211	67.6
Travel Time		
<15 min	80	21.4
15-30 min	115	30.8
30 min-1h	127	34.0
>1h	51	13.7
Illness		
Yes	8	2.1
No	365	97.9
Sleeping disorder		
Yes	43	11.5
No	330	88.5

SD: standard deviation

Descriptive Statistics of Absenteeism Reasons:

The most common reason for non attending lectures noted by medical students was the lack of interaction between the lecturer and students (84.7%) followed by the simplicity of the subject (60.6%). Only 22.5% of participants claimed to miss lectures due to long course hours. Further characteristics are shown in **Table 2**.

Table 2: Descriptive statistics of absenteeism reasons

Characteristics	Frequency (N=373)	Percentage (%)
Lack of teacher-student interactions		
Yes	316	84.7
No	57	15.3
The subject is easy to learn		
Yes	223	60.6
No	145	39.4
Disinterest toward subject		
Yes	197	53.5
No	171	46.5
Dislike the teaching style of lectures		
Yes	174	47.3
No	194	52.7
Prefer to study alone		
Yes	113	30.3
No	260	69.7
Long lectures		
Yes	84	22.5
No	289	77.5
Available learning resources on the internet		
Yes	57	15.3
No	316	84.7

Prevalence of Absenteeism

The prevalence of absenteeism from lectures among medical students was 19.6% (95% CI=[15.9-23.9]).

Univariate and Multivariate Analysis to Identify Factors Predicting Absenteeism Among Medical Students:

Univariate analysis found that the age of medical students, third to fifth level of education, being

forced to pursue medicine, means of transportation and using personal transport were associated with absenteeism (p-value<0.20). Results showed also significant positive association between lack of teacher-student interactions, dislike of the teaching style, simplicity of the subject, disinterest toward subject, available learning resources on the internet, preferring to study alone and absenteeism. While being passionate about medicine was the only one negatively associated with absenteeism (OR = 0.21, 95% CI: 0.10-0.46).

In the multivariate analysis we excluded independent variables with p-value>0.20. **Table 3** presents the potential factors of absenteeism among medical students. Age (AOR = 1.63, 95% CI: 1.07–2.48),

being passionate about medicine (AOR = 0.22, 95% CI: 0.06–0.75), mode of transportation (AOR = 2.47, 95% CI: 1.06–5.77) were significantly associated with absenteeism. Students who reported a lack of interaction between lecturer and students had an AOR of 11.97 (95% CI: 1.39-102.46). Similarly, medical students who dislike the teaching style were 6.87 times more likely to miss lectures compared to a reference group of respondents (AOR = 6.87, 95% CI: 2.55-18.48). Simple subject (AOR = 2.96, 95% CI: 1.05-8.33) was associated with medical student absence. Additionally, participants who prefer to study alone were (AOR = 2.88, 95% CI: 1.26-6.56) times more likely to be absent than their counterparts.

Table 3: The univariate and multivariate analysis to identify predictive factors of absenteeism

Variable	Univariate analysis		Multivariate analysis	
	OR (95% CI)	p-value	AOR (95% CI)	p-value
Age	1.41 (1.20-1.66)	< .001	1.63 (1.07-2.48)	0.021
Gender				
Female	1			
Male	0.91 (0.54-1.55)	0.750		
Year of study				
1st	1			
2nd	0.86 (0.24-3.13)	0.829		
3rd	4.47 (1.58-12.67)	0.005		
4th	5.80 (2.05-16.40)	< .001		
5th	5.65 (1.99-16.05)	0.001		
Medical career				
By Choice	1			
By Obligation	3.73 (1.66-8.38)	0.001		
Passion for medicine				
Yes	0.21 (0.10-0.46)	< .001	0.22 (0.06-0.75)	0.016
No	1			
Year repetition				
Yes	1.31 (0.59-2.91)	0.501		
No	1			
Living situation				
With parents	1			
With peers, partner or alone	1.13 (0.60-2.12)	0.696		
Means of transport				
Yes	2.21 (0.96-5.07)	0.061		
No	1			
Mode of transportation				
Personal	3.34 (1.90-5.85)	<.001	2.47 (1.06-5.77)	0.035
Public	1			
Travel Time				
<15 min	1.91 (0.77-4.72)	0.160		
15-30 min	1.20 (0.49-2.92)	0.687		
30 min-1h	1.18 (0.49-2.86)	0.700		
>1h	1			
Illness				
Yes	1.38 (0.27-6.98)	0.697		
No	1			
Sleeping disorder				
Yes	1.48 (0.71-3.11)	0.293		
No	1			

Variable	Univariate analysis		Multivariate analysis	
	OR (95% CI)	p-value	AOR (95% CI)	p-value
Lack of teacher-student interactions Yes No	16.52 (2.24-121.43) 1	0.006	11.97 (1.39-102.46)	0.023
Dislike the teaching style of lectures Yes No	9.93 (4.89-20.17) 1	<.001	6.87 (2.55-18.48)	<.001
The subject is easy to learn Yes No	5.08 (2.50-10.30) 1	<.001	2.96 (1.05-8.33)	0.040
Disinterest toward subject Yes No	5.66 (2.92-10.97) 1	<.001		
Available learning resources on the internet Yes No	1.58 (0.82-3.05) 1	0.116		
Long lectures Yes No	1.16 (0.63-2.11) 1	0.626		
Prefer to study alone Yes No	4.05 (2.38-6.91) 1	<.001	2.88 (1.26-6.56)	0.012

OR: odds ratio**; AOR:** adjusted odd ratio

4. DISCUSSION

The main concern of this study is to estimate the prevalence of absenteeism and its contributing factors among medical students.

The current study showed that the prevalence of medical students' absenteeism was 19.6% (95% CI=[15.9-23.9]). This result was higher than the prevalence (9.6%) reported in Tunisia among 437 respondents. While absenteeism was highly prevalent (89%) among medical students in University of Tripoli in Libya. The possible explanation of this disparity might be the deficiency in college infrastructure [15].

According to the results, age is positively associated with absenteeism from lectures (AOR = 1.63, 95% CI: 1.07–2.48). This is consistent with the findings of a study conducted in Iran, where age was correlated to the status of medical sciences in the community as a component of absenteeism.

A passion for medicine is associated with a reduced risk of absences (AOR = 0.22, 95% CI: 0.06–0.75) among medical students. Our result aligns with other authors [9-16]. This could be attributed to the fact that students who find their field of study interesting are more engaged and motivated to attend lectures.

Our study found higher AOR (AOR = 2.47, 95% CI: 1.06–5.77) in medical students who rely on personal transportation. Probably, Students prefer to avoid the potential stress of congested streets in Casablanca.

Several studies have shown that learning is better and more effective when accompanied by the maximum cooperation and participation of students [11]. Among our study respondents, lack of interactions between teacher and students was strongly associated with non attendance at lectures (AOR= 11.97, 95% CI: 1.39-102.46), this is consistent with the study of Wadesango *et al*., who evaluated the causes of students' absence and the consequences in South African countries [2]. Furthermore, a significant increase in absenteeism was observed in medical students who dislike the teaching style (AOR = 6.87, 95% CI: 2.55-18.48). This might lead to boredom and dissatisfaction of students, who prefer to skip the lecture and to benefit from multimedia resources [7]. This result is consistent with numerous studies all over the world [17]. The ease of the subject was also found as a significant factor for missing lectures. A similar finding was reported by undergraduate medical and health sciences students at Hawassa University in Ethiopia [18].

In our research, students who prefer to study alone were positively associated with absenteeism. Various studies had achieved similar results [10-19].

5. CONCLUSION

The reasons for absenteeism are multifaceted. In our research, the most important factors related to missing lectures were: the teaching strategies and the lecture environment.

Understanding these factors is crucial. Only through a collaborative effort from administrators, teachers and students can we implement targeted interventions to promote better attendance.

Exploring a variety of teaching methods such as hybrid learning can be a beneficial preventive intervention.

The results of this study are promising, however, further studies are required across other faculties to enrich the current findings.

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