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CAUSES OF NON-ATTENDANCE IN ANATOMY CLASSES OF HEALTH SCIENCE STUDENTS

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ABSTRACT

Objective: *Attendance in anatomy class has greater importance for students of health sciences as they hold a vital nature of their professional knowledge and practices and the responsibility for intervening the lives of others. Absenteeism is occasionally raised as an issue by attending students who resent others "getting away" with non-attendance and some formal documents appear to suggest that attendance should be mandated. This article researches to explore non-attendance from the perspective of absent students in anatomy classes of health sciences.*

Material and Method: *The research data was collected from freshman year students of Ataturk Vocational School of Health Science by means of a questionnaire during the anatomy classes of the academic year 2016–2017. Together with the demographic data, the questionnaire includes a Likert-type scale aiming to determine the factors influencing attendance at lectures.*

Results: *198 students participated in this study on a voluntary basis from different programs such as anesthesia, audiometry, dialysis, first aid and emergency and operating service. Raising attainment levels, being able to take their own lecture notes, learning which aspects of the lecture content were being emphasized and the opportunity to ask questions were amongst the chief reasons for attending anatomical lectures. It appears that the factors preventing students from attending lectures are mainly individual. Amongst the most frequently cited causes of non-attendance, sleeplessness, ill health and the inefficiency of lectures in overcrowded halls were emphasized.*

Conclusion: *The vital nature of professional expertise and its applications, health sciences students' attendance at lectures carried greater importance. It was important to strengthen the mentoring system with regard to individual and external factors, which had been implicated to have a substantial influence on lecture attendance by students. In this article, we also note that enforcing attendance apparently runs counter to import pedagogic principles.*

Keywords: *Anatomy, education, student non-attendance, absenteeism, lectures.*

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SAĞLIK BİLİMLERİ ÖĞRENCİLERİNİN ANATOMİ DERSLERİNDEKİ DEVAMSIZLIĞININ NEDENLERİ

ÖZET

Amaç: Anatomi dersine katılım, mesleki bilgi ve uygulamalarının hayati bir niteliği olduğundan ve başkalarının yaşamlarına müdahale sorumluluğunu taşıdığı için sağlık bilimleri öğrencileri için daha büyük bir öneme sahiptir. Derse katılan öğrenciler tarafından devamsızlık "dersten kaçan" öğrencileri bir sorun olarak gündeme getirmiştir ve bazı resmi belgeler derse katılımın zorunlu olduğunu öne sürmektedir. Bu makale, anatomi derslerinde devamsızlık yapan sağlık bilimleri öğrencilerinin bakış açısını araştırmayı planlamaktadır.

Materyal ve Metot: Araştırma verileri, 2016-2017 akademik yılı anatomi dersleri sırasında bir anket formu ile Atatürk Üniversitesi Sağlık Bilimleri Meslek Yüksekokulu birinci sınıf öğrencilerine verilmiştir. Anket, demografik verilerle birlikte, derslere katılımı etkileyen faktörleri belirlemek amacıyla Likert tipi bir ölçek içermektedir.

Bulgular: Bu çalışmaya anestezi, odyometri, diyaliz, ilk yardım, acil servis ve ameliyat gibi farklı programlardan 198 öğrenci gönüllü olarak katılmıştır. Öğrenme düzeylerini yükseltmek, kendi ders notlarını almak, ders içeriğinin hangi yönlerinin vurgulandığını öğrenmek ve soru sorma fırsatı anatomi derslerine katılmanın başlıca nedenleri arasındaydı. Öğrencilerin derslere katılmasını engelleyen faktörlerin ağırlıklı olarak bireysel olduğu görüldü. Devamsızlığın en sık nedenleri arasında, uykusuzluk, hasta sağlığı ve aşırı kalabalık salonlardaki derslerin verimsizliği vurgulanmıştır.

Sonuç: Mesleki tecrübenin özelliği ve uygulamaların hayatiyeti, nedeniyle sağlık bilimleri öğrencilerinin derslere katılımı daha büyük önem taşımaktadır. Öğrencilerin ders katılımı üzerinde önemli bir etkiye sahip olduğu düşünülen bireysel ve dış etkenlerle ilgili olarak danışmanlık sistemini güçlendirmenin önemli olduğu tespit edilmiştir. Derse katılımın zorlanılmasının, görünüşte pedagojik ilkelere ters düştüğünü belirtmek isteriz.

Anahtar kelimeler: Anatomi, eğitim, öğrenci devamsızlığı, devamsızlık, ders verme.

INTRODUCTION

Many lectures are irritated by student absenteeism and non-attendance is widely considered a problem.[1-3] Unauthorized non-attendance or absenteeism occurs when students miss timetabled teaching sessions without permission.[4,5] Educators in the field of health science believe there are a variety of causes of non-attendance and that these need to be brought to light.[4,6,7] The factors influencing student absenteeism are generally explained in terms of low motivation levels and difficulty in adapting to the university environment. Poor self-motivation, in particular, is one of the most potent factors. It leads to a decrease both in academic performance and in interactions with lecturers.[8-12]

In addition to these, non-attendance is a cause of anxiety amongst non-attending students with the fear that they will not be able to learn the missed topics and, for students who have attended the lectures, unnecessary repetition of topics already covered, consequently bring disruption to the teaching and learning processes.[12,13]

Anatomy course is compulsory in all vocational school of health sciences and in some education models it serves as a prerequisite course. This is a survey-based study on absenteeism of anatomy classes of students who will be serving in health sector professionally. We believe that anatomy, studying the main systems and the organs of the human body, is essential part of medical education.

Lecture absenteeism is associated with poor academic performance, unprofessional conduct and inadequate socialization.[1,4,9,14] But the subject is a frequent source of debate with regard to the connection between attendance and academic achievement.[4,15,16] The issue of attendance plays a crucial role in the acquisition of knowledge directing individual and practical learning in professional training such as anatomy education, and bringing such vital consequences. Non-attendance at anatomy lectures is particularly worrying in programmes aiming to educate members of a profession.[11,13,15] Professional responsibility and penalties for professional errors render even more essential the adequacy and quality of professional training in the domain of health sciences.[17,18] Defining the position is of great value within the framework of the quality of lectures, lecturers and students, for which a myriad of factors is responsible.

Especially the students who will be working on health services in the future have responsibility on people

and absenteeism will result in inadequate service. Since their professional knowledge and skills are based on human health, their ideas about absenteeism are important. It is significant that the students' awareness and their personal responsibilities start within school education.

Therefore, we are interested in the topic of non-attendance because we hold the belief that both the students and teaching staff should interact in anatomy courses in higher education. This article is based on experiences gained in an attempt to collect meaningful data on student non-attendance: including reasons for non-attendance and the views of students who repeatedly do not attend at taught anatomical sessions.

The results will shed light on improvements to anatomy education over a range of areas in the field of health sciences from the planning of the educational process to the teaching and learning environment and training of lecturers. In this connection, our study aimed to determine the factors which affect lecture attendance amongst students pursuing undergraduate courses in the field of health sciences. A further aim of the research was to reveal student perceptions of this issue in particular, and to generate suggestions for solutions and compare findings relating to various student groups.

MATERIAL AND METHOD

Design

This cross-sectional study was carried out in the spring semester of the academic year 2016–2017 at Ataturk Health Care Vocational School, Ege University. The study was approved by the suitably constituted Ethics Committee of the Ege University, within the work was undertaken to the Declaration of Helsinki (No: 10.11/3. Date: 12.01.2011).

Participants

The study covers a total of 198 first-year students enrolled in Ataturk Vocational School of Health Services on a voluntary basis. Vocational School of Health Services including departments of Anesthesia, Audiometry, Dialysis, First Aid and Emergency, Operating service, Medical Imaging, Medical Documentation and Secretarial Services, Medical Imaging Techniques, Medical Laboratory Techniques, Opticianry, Pharmacy services, Child Development, Care and Rehabilitation for Disabled People.

Students go through a period of adaptation to university education in their first year. Habits in the areas of learning and study which are favoured by students during this period are adopted as behaviours in the second year. For this reason the study group was chosen from freshman year who had acquired particular patterns of behaviour in the area of class attendance.

Data Collection

In order to reach all the students, both those who attend lectures on a regular basis and those who attend less frequently, or not at all, were requested to complete a questionnaire with the self-report method following an examination they were sitting in the fall semester. In this way, we endeavored to reach all students who entered the examination whether they attended lectures or not.

The students were asked to complete a questionnaire made up of 35 items devised by researchers in accordance with the literature.[1-5] The questionnaire aimed to determine socio-demographic characteristics of the students. All the items were assessed by a Likert-type scale, with the responses 'Strongly disagree', 'Disagree', 'Neither agree nor disagree', 'Agree' and 'Strongly agree' and with values ranging from 1 to 5 points. Negative attitude statements were awarded points in direct opposition to positive statements. As points increased on the scale, a positive attitude towards lecture attendance was indicated. Subsequent to the psychometric assessment, 34 items remained.

Analysis

Data analysis was carried out using SPSS 20 Statistical Package for Social Sciences (IBM, Chicago, USA). First, compliance with parametric testing criteria was assessed by conducting a test of compliance of all variables to normal distribution. In the evaluation of data a $p<0.05$ value was accepted as statistically significant. Averages have been expressed as mean ± standard deviation. The relationship between the scores from the scale and participants' socio-demographic characteristics was assessed by a t-test and ANOVA.

Psychometric Assessment

In order to evaluate content validity, the views of experts on the subject were sought with regard to the items which made up the scale. A pilot test was carried out with 5 students. It was ascertained that the

Table 1. Distribution of responses to statements in the lecture attendance scale.

Questions	Strongly disagree %	Disagree %	Neither agree nor disagree %	Agree %	Strongly agree %
1. Attendance at lectures is essential*	2.5	6.1	15.7	47.0	28.8
2. Roll calls are being held in classes*	7.1	10.6	14.1	30.8	37.4
3. It is important for me to attend lectures to maintain a high level of achievement	3.0	4.5	11.6	36.4	44.4
4. I prefer to listen to the lectures rather than read lecture notes	7.6	14.1	27.3	24.2	26.8
5. I enjoy attending lectures	5.6	13.1	26.3	39.4	15.7
6. Lectures are very instructive	5.1	9.6	33.8	34.8	16.7
7. Important topics are emphasized in lectures	4.1	6.6	23.4	37.1	28.9
8. I am able to ask questions in lectures	2.5	7.6	24.7	35.4	29.8
9. I can only understand lecture notes I have taken myself	6.6	25.3	18.7	26.3	23.2
10. Some important announcements about the lectures can be done	1.5	1.5	14.1	40.9	41.9
11. The lecturers help me to understand	1.5	7.6	24.2	37.4	29.3
12. The lecturers are very keen and enthusiastic in lectures	5.1	8.6	35.9	26.3	24.2
13. My classmates make me attend lectures	28.8	33.3	19.7	10.1	8.1
14. Activities during lectures are beneficial and help me to understand	10.6	9.1	30.3	31.8	18.2
15. My parents put pressure on me to attend lectures	37.4	36.4	12.1	10.1	4.0
16. Because I am ill	10.1	9.6	11.1	27.3	41.9
17. I have to work	54.5	16.2	9.6	9.1	10.6
18. The lecturers are boring	25.3	23.2	31.3	12.6	7.6
19. The lectures are boring	18.7	21.7	34.3	16.2	9.1
20. Even if I don't attend, the lecture notes are enough	18.7	17.7	29.8	22.7	11.1
21. Attendance at lectures does not affect academic achievement	21.2	24.7	24.7	20.2	9.1
22. The lectures are very easy, I could learn by myself	25.3	26.8	28.3	12.6	7.1
23. Lecture times don't suit me (too early/too late)	21.2	17.7	20.2	20.2	20.7
24. Overcrowded lectures hinder my understanding	13.1	19.7	15.7	23.7	27.8
25. The physical conditions in the lecture hall are unsuitable (hot/cold/small/stuffy)	14.6	13.1	26.8	21.2	24.2
26. My friends don't attend either	22.7	26.3	22.2	20.7	8.1
27. I have to study for exams in other subjects	15.7	24.2	23.7	26.3	10.1
28. There was another school activity that I had to take part in at the same time	41.9	26.3	16.7	7.6	7.6
29. I had something else important to do at that time (dental appointment, illness etc)	25.3	14.6	18.7	26.3	15.2
30. I don't like the other students in my class	28.8	22.7	26.3	14.6	7.6
31. The weather was very bad	14.6	20.7	27.3	24.2	13.1
32. I hadn't had enough sleep	15.2	15.7	21.7	27.3	20.2
33. I have a transport problem	26.8	20.2	23.2	19.2	10.6
34. I can't afford the fares to get to the university	42.4	26.8	15.2	10.6	5.1
35. My medication has a negative effect on me	52.5	22.2	11.6	8.1	5.6
36. Because I met up with my girlfriend/boyfriend outside	50.5	19.7	13.6	10.6	5.6

*Statistically significant difference

questionnaire was completed in 5–10 min on average. Results of the analysis for scale validity and reliability were as follows. The quality of response to the scale was, in general, good. There was no systematic non-response to any specific item. The proportion of non-response to propositions per question was between 2.0% and 5.3%. No respondent was found to have entered wholly positive (ceiling) or wholly negative (floor) responses. The scale's internal consistency coefficient (Cronbach's Alpha value) was found to be good at 0.85 and of an adequate level. Upon examination with Tukey's test of additivity, it was established that the scale items were of an additive quality ($F=112.12$, $p<0.001$). The Kaiser–Meyer–Olkin value (KMO) of the 35 items on the scale was found to be 0.86. As the value reached was above 0.60, it was clear that a factor analysis could be applied to the data. In Bartlett's test of sphericity, the chi-square was established as 5572.79, $p<0.001$. The Bartlett test results demonstrate that the data comes from multivariate normal distribution. To sum up, according to the results of the reliability and validity analyses, it has been established that this scale was reliable and valid.

RESULTS

Total of 198 students of Vocational School of Health Sciences participated in this survey. The participants of survey of 77.8% were female, 22.2% were male. Mean age was 19.21±2.58. Highschool of graduates of 42.4% were vocational high school of health and 36.4% were graduates of anatolian high school. Lived with 52% their families and 30.8% stayed at a dormitory. It was determined that students who were employed usually had part-time jobs, 85.2% of them with social security rights.

The educational background of the students' families in this survey was as follows: Education status of mothers 44.4% were primary school graduate and 22.2% were high school graduate. Mothers were housewives (75.8%) and private sector employees (12.6%). Fathers were self employed (27.8%) and worker (25.3%). Number of siblings of students 45.5% had a sibling and 26.8% had two siblings.

The students were asked about their success perception. They evaluated it as good in 57.6% and average in 36.9%. The students were also asked about the reason for choosing the department. They chose the department at their own request (61.1%) and for better job opportunities (16.2%).

Table 2. Comparison of students demographic characteristics and lecture attendance scale.

	Sex				Employment				Lecture attendance status			
	Female	Male	t	p	Yes	No	t	p	Yes	No	t	p
Lecturers and lecture	30.36±6.72	31.68±7.59	-	0.26	33.19±5.80	30.27±7.02	-2.022	0.045*	33.19±5.80	28.51±7.52	-	0.044*
Negative external factors	30.03±7.032	28.25±8.26	1.42	0.15	27.35±6.97	29.98±7.35	1.716	0.088	27.35±6.97	28.88±9.06	-	0.506
Lecture-related negative	15.91±3.81	14.75±4.33	1.73	0.08	16.04±3.25	15.60±4.05	-0.528	0.598	16.04±3.25	16.14±3.96	0.802	0.423
Individual factors	25.17±5.33	24.66±6.44	0.53	0.59	24.54±6.16	25.13±5.50	0.506	0.614	24.54±6.16	25.66±7.38	0.702	0.484
Educational environment	5.36±2.39	5.50±1.97	-	0.73	6.04±2.23	5.30±2.30	-1.538	0.126	6.04±2.23	5.48±2.40	0.259	0.796
Total	106.84±15.43	104.84±18.35	0.72	0.46	107.15±13.57	106.28±16.48	-0.258	0.797	107.15±13.57	104.68±18.80	-	0.490
	Mean±SD											
Academic achievement	Poor (n=4)	Average (n=73)	Good	Very Good	--	--	F	*p*				
Lecturers and lecture	31.25±3.10	30.92±6.21	30.52±7.28	29.71±10.40	--	--	0.101	0.959				
Negative external factors	27.00±4.97	29.25±8.28	30.08±6.57	28.00±10.31	--	--	0.491	0.689				
Lecture-related negative	17.25±2.87	15.71±4.30	15.57±3.65	15.57±5.77	--	--	0.239	0.869				
Individual factors	27.50±5.80	25.53±5.72	24.47±5.34	28.14±7.15	--	--	1.574	0.197				
Educational environment	5.25±1.50	5.51±2.28	5.29±2.29	6.00±3.32	--	--	0.301	0.825				
Total	108.25±11.90	106.92±16.93	105.93±14.72	107.43±30.15	--	--	0.084	0.969				
Parental attitudes	They are tolerant	They leave	They show	They oppose	They don't	--	F	*p*				
Lecturers and lecture	26.93±4.94	31.34±6.98	32.12±4.55	30.63±7.29	live 28.90±7.13	--	1.721	0.147				
Negative external factors	29.57±6.903	29.55±6.78	28.25±6.32	30.63±8.08	28.40±9.37	--	0.423	0.792				
Lecture-related negative factors	16.21±4.59	15.76±3.69	14.12±3.64	14.87±3.65	17.10±5.25	--	1.533	0.194				
Individual factors	24.28±5.33	25.17±5.16	25.50±6.63	24.96±6.55	25.00±5.69	--	0.094	0.984				
Educational environment	5.57±1.60	5.37±2.24	5.75±2.81	5.28±2.40	5.50±2.74	--	0.107	0.980				
Total	102.57±17.15	107.21±14.86	105.75±17.86	106.37±16.90	104.90±20.16	--	0.310	0.871				
Selection of department	Family (n=14)	Voluntarily	Incidentally	Easy of finding	Social status	Other	F	*p*				
Lecturers and lecture	32.93±7.84	30.10±6.31	31.67±6.39	30.59±7.82	33.11±9.87	30.90±8.01	0.733	0.600				
Negative external factors	28.57±7.85	30.55±6.65	25.42±8.06	29.37±7.14	28.33±9.20	27.10±11.10	1.556	0.174				
Lecture-related negative	16.50±3.78	16.18±3.64	14.17±3.90	14.81±4.45	15.22±5.07	12.80±3.79	2.290	0.047*				
Individual factors	25.43±5.18	25.41±5.11	22.42±3.70	24.34±6.70	26.00±6.74	24.80±8.32	0.804	0.548				
Educational environment	5.36±3.03	5.54±2.17	4.58±2.19	5.31±2.31	5.44±2.60	4.80±2.78	0.539	0.746				
Total	108.78±16.00	107.79±13.85	98.25±15.65	104.50±17.67	108.11±21.90	100.40±27.65	1.253	0.286				

t: t-test, $p<0.05$ **F:** ANOVA, $p<0.05$ *Statistically significant difference.

Lecture Attendance Status of the students 82.3% had absenteeism in previous month, 17.7% attended the classes regularly. They showed absence once (21.5%), twice (35.6%), three times (20.9%) and four times (6.7%). The students were asked about their opinion on higher education regulations. They stated as flexible 16.2%, quite strict 18.2%, very strict 2.5% and 48% did not have any opinion. Parents' attitude on absenteeism was also evaluated. They stated that the family left the decision to them (55.6%), was against (23.2%) and tolerant (7.1%).

Data analysis was carried out using SPSS (Statistical Package for Social Sciences) 21.0. Arithmetical means, standard deviation values and percentage distribution were reflected. The relationship between the scores from the scale was assessed by student sample t-test and ANOVA. In the evaluation of data a 0.05 difference in value was accepted as statistically significant.

In the study, the findings were gathered by a survey which consisted of three parts. The first part contained demographic information including gender, age, type of graduated school, and parents' education level. The second part included school education, reasons for choosing the department, absenteeism and general information related to absenteeism. Final part was composed of 36 questions focusing on the reasons for absenteeism (Tables 1 and 2).

Table 3. Correlations of students demographic characteristics and lecture attendance scale.

	Lecturers and lecture presentation		Negative external factors		Lecture-related negative factors		Individual factors		Educational environment		Total	
	r	*p*	r	*p*	r	*p*	r	*p*	r	*p*	r	*p*
Sex	0.80	0.264	-0.101	0.156	-0.123	0.084	-0.038	0.595	0.025	0.730	-0.052	0.469
Age	-0.145	0.042*	-0.155	0.029*	-0.181	0.011*	-0.069	0.333	0.008	0.910	-0.200	0.005**
Graduated high school	0.119	0.094	0.029	0.684	-0.077	0.279	0.043	0.546	0.047	0.515	0.067	0.347
Education status of mother	0.054	0.453	-0.021	0.771	0.088	0.217	0.027	0.703	0.086	0.230	0.057	0.426
Occupation of mother	0.082	0.249	-0.020	0.781	-0.069	0.334	0.011	0.881	-0.056	0.435	0.005	0.943
Education status of father	0.064	0.371	-0.050	0.487	-0.124	0.081	-0.004	0.953	0.038	0.596	-0.022	0.762
Occupation of father	0.065	0.366	-0.074	0.303	0.087	0.224	0.025	0.729	0.150	0.034*	0.046	0.523
Employment	0.143	0.045*	-0.122	0.088	0.038	0.598	-0.036	0.614	-0.109	0.126	0.018	0.797
Social security rights	0.032	0.655	0.101	0.157	-0.066	0.356	-0.019	0.790	-0.030	0.670	0.033	0.648
Perception of academic achievement	-0.038	0.592	0.045	0.531	-0.038	0.595	-0.051	0.478	-0.011	0.881	-0.025	0.731
Selection of department	0.031	0.666	-0.104	0.144	-0.211	0.003**	-0.049	0.496	-0.065	0.366	-0.112	0.117
Lecture attendance status	0.143	0.044*	0.048	0.506	-0.057	0.423	-0.50	0.484	-0.019	0.796	0.049	0.490
The number of absenteesim	0.122	0.120	0.085	0.282	-0.071	0.368	0.091	0.247	0.119	0.131	0.121	0.125
Assessments of education and training regulations in college-faculty	-0.110	0.124	0.020	0.785	0.126	0.076	0.031	0.669	-0.044	0.534	-0.003	0.966
Attitude of family about absenteesim	-0.027	0.710	0.004	0.954	-0.006	0.929	0.001	0.984	-0.007	0.927	-0.012	0.872

r: correlation coefficient, $p<0.05$* Statistically significant difference.

Total score was calculated by adding and taking the arithmetic mean of all the items within the group. In the scoring, total points given to ten items related to the lecturers and the lecture presentation formed "lecturers and the presentation score". The total score of these three groups formed "anatomy lesson satisfaction score". Total points given to eight items about negative extrinsic factors formed "negative extrinsic factors score". Five points given to negative factors related to the course formed "course related negative factors score". The total score of these three groups formed "anatomy lesson satisfaction score". The scores from the subgroups and scores from overall survey signified above avarage level of satisfaction (Table 1 and 2).

Students' opinions were analyzed with the items in the questionnaire expressing their satisfaction and the extent they have agreed for each item. The comments were based on the analysis of positive opinions (I agree and I totally agree) and their number and percentage within the group. The average scores of the scale sub-dimensions were 30.21±6.86 for lecturers and lecture presentation, 30.59±6.56 for negative external factors, 15.48±3.71 for lecture-related negative factors, 20.01±3.81 for individual factors, 5.27±2.11 for educational environment and 112.13±16.44 as the scale total. Table 2 presents the comparative data for some sociodemographic features of the study participants and their scale points.

In the relationship between the demographic characteristics of the students and lecture attendance scale (Table 3), it was found that lecturers and lecture presentation factors were negatively related with age but positively related with employment and lecture attendance (participation) and the results were statistically significant. As a result, as the age of the students increase, the arithmetic averages of the lecturers and lecture presentation factors decrease, furthermore as the lecture attendance and employment increase, the arithmetic averages of the lecturers and lecture presentation factors increase. Negative external factors were found to be negatively correlated with age and statistically significant. Hence, as the age of the students increase, the arithmetic averages of negative external factors are decrease. Lecture related negative factors were found to be negatively related to age and selection of department. As a result, as the age of the students and selection of department increase, the arithmetic averages of the lecture related negative factors decrease. There wasn't relationship between individual factors, educational environment factors and demographic characteristics. When all factors were evaluated together, only age was found to be negatively related.

DISCUSSION

Anatomy lectures aspire to engage with students as adult learners. However, where lecturers seek to control and enforce attendance it might be argued that students are subject to conflicting messages.[6,11,19] Educators and administrators have an important role to play in reducing absence through, for example, student-friendly timetabling and the juxtaposition or sequencing of popular and unpopular subjects.[20-22] Students' absenteeism is paradoxical in so far as evident disciplinary impulses run counter to widely accepted ideas regarding adult learning. Students are invited to take responsibility for their own learning. Lack of motivation and unwillingness or inability on the part of some students to accept the role allotted to them may therefore exacerbate non-attendance. However, previous researchers recognize that factors such as age, sex marital status, prior academic achievement, preferred learning styles and social class background, even seating location affect absenteeism.[15,23,24]

Anatomy lessons take scientific and applied courses in order to develop professional skills in the areas they are interested in. During anatomy education in our school, primarily at Ege University Faculty of Medicine and other hospitals, health centers and institutions combine their theoretical know-how with practice and improve their applied skills. Health science students' responsibility towards their job was investigated as if they were graduates. With this survey, students' opinion and their view on absenteeism of the anatomy classes, one of the most essential courses of all the departments, were analyzed (Figures 1 and 2). Upon graduation, students may serve in small provinces as well as metropolitans or universities. Thus, our students' knowledge on human anatomy and their application is essential. The students taking part in this study believe that it is necessary to attend the lectures as it has an impact on academic achievement (Tables 1 and 2).

Anatomy modules and courses include both taught and self-directed components and the nature of the taught component may affect the manner in which students approach independent study. Hughes (2005) suggests that amongst health students engaged in problem based learning, grade attainment improves as students move beyond immediate "learning issues".[2] However, studies into student effort tend to utilise retro- rather than prospective data collection and retrospective student self-reports are vulnerable to error.[1-19]

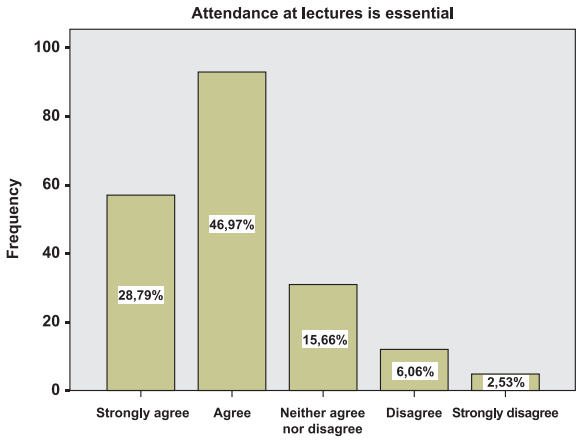

Figure 1. The attitude of students as "Attendance at lectures is essential" in anatomy classes of health sciences.

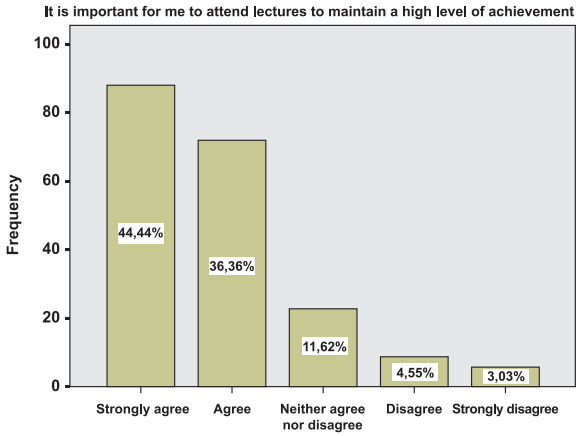

Figure 2. The sentiments of students as "It is important for me to attend lectures to maintain a high level of achievement" in anatomy classes of health sciences.

Questionnaire data and retrospective record analysis revealed that students were voluntarily absent for 4% of the time.[17,18] Most absenteeism was of less than 3 days and more than 50% of absences commenced on Monday or Friday. They noted that "students are no longer employees, they attend programmes voluntarily. Perhaps, rather than striving to control absenteeism with rigid procedures educators should examine methods of delivering programmes that are more responsive and suited to student needs.

Authors argue that the institutional experience of students is very different to that which existed when much of the earlier research on attendance was undertaken.[12-14] They suggest student-student and staff-student move between virtual and real learning environments. In the study carried out by Westrick *et al.* (2009) on the effect that lecture attendance has on learning, it is pointed out the lecture itself affects around 80% of health science students in deciding to attend a particular lecture.[21]

The predominant idea resulting from this study defines the factors preventing students from attending lectures as individual and external. In our study it is evident that reasons such as illness and lack of sleep are crucial in absenteeism. Of the responses to the scale, the highest points were obtained from external factors. Five most frequently cited reasons for non-attendance among pharmacy students were listed as: illness, sleeplessness, examinations of other subjects, the availability and adequacy of other sources of material, and attendance records not being kept. Illness is the chief reason in a study carried out on medical students' absenteeism. The most frequent reasons for non-attendance are cited as illness, weather conditions and participation in social activities.[13,18,25] Similar problems regarding non-attendance were found in our study. In another study carried out on health science students, the students living close to the university campus had the highest attendance rate. In addition to the heavy lecture-load, the students of health sciences also have assignments and examinations running concurrently.

Other factors being equal, it has been indicated that students who have an interest in the subject or greater academic focus have a higher attendance. A substantial number of students taking part in this study, believe that lectures are a hindrance to their understanding of topics. In a study carried out by Leufer and Cleary-Holdforth (2010) it is pointed out that class size is an important factor affecting the interaction among students with regard to the amount quality and duration of active participation in the lecture whilst reducing their grasp of content.[15] Students hold the belief that lectures in overcrowded classes are appealing to the ones sitting in the front row only, and lecturers are uninterested in student participation.

In the study carried out by Bati *et al.* (2013) on the effect of class participation on learning.[5] This study 82% of the students expressed that positive or negative experiences with the lecturers were important in making decisions about participating in lecture. In this study, lecture attendance was affected by the characteristics of lecturers such as their ability to facilitate learning or being boring to a degree of 40%.

One of the notable conclusions of this study is that lectures and lecturers were assessed as being boring. Other studies have also stressed similar findings.[14,23,25] Individual learning difficulties in lecture-based courses originate from student-related factors in the first place. The second factor is teaching-related resulting from the changing quality of lectures. Students have reported that academicians who may be experts in a particular field are not necessarily good at teaching. Nevertheless, it is stressed new teaching methods and technologies may help to overcome the difficulties experienced by university lecturers and students in the areas of motivation, competence and behaviour.[8] Increasing the attendance at anatomy lectures is possible with more modern student-centred approaches towards teaching learning and assessment. Students' theoretical lectures participating in this study may be strengthened by practical classes. Complementary methods such as video-lectures or lectures-on-demand can be useful in supporting the lecture content.

This study showed the tolerant attitudes of their parents, and their allowance to their children to be independent (Tables 1 and 2). In this study, it was stated that parents reminded students of the need to attend lectures. Some believe that instead of controlling the attendance with tough measures, it would be more useful to develop and put into practice courses of study which are more sensitive and suited to student needs. The workload of students could be lightened with flexible programme design and a reduced range of lectures. The study carried out by Timmins *et al.* (2002) emphasizes the need for a more detailed examination of the causes for absenteeism amongst students of health sciences and for the development of more sensitive programmes to help raise attendance levels.[17]

One of the most important factors in our study was the belief that student attendance was essential for academic achievement (Figures 1 and 2). This finding is compatible with other studies.[12-27] According to the report of Westrick *et al.* (2009) absenteeism falls down when attendance is a factor in raising the yearly grades of students.[21] In other words, students tend to attend the lectures more if there are tests during lectures and if practical applications are missed since these may cause them to fail. It is stressed that individual learning of the students are organized through the lectures that enable them to acquire knowledge. The conclusion reached is the point that students have the desire to learn and they wish to choose the teaching methods they believe will be of most useful to them in the learning process.[6,11,12,28]

Taking into account that this study covered only anatomy lessons in health sciences, there are some limitations in the explanation of causality. Nevertheless, it is significant as it is the first of this type of study to be carried out in Turkey in establishments involved in the training of health professionals and it has produced results which provide guidance to a

great number of academicians. Therefore, the findings of the study pave the way to treat this issue rather than neglecting it.

It was determined that 10-15% of the students from different backgrounds and culture were chronically absent. This situation reveals that absenteeism in lectures is a global problem. It is, hence, predictor and symptomatic as regards the learning process and the output of the education.[3,26,27] Among the options to decrease absenteeism, there we can cite four categories including academic support programs (psychological and social), multiple cooperation applications, computer assisted participation and mandatory sanctions. Academic failure, repeating a grade level and private tutoring are thought to have resulted from absenteeism. Our university also provides academic support programmes both psychologically and socially and counseling services to the students who are at the risk of failing academically in attending the lesson. Although there are studies indicating that academic success could be increased and absenteeism could be decreased by changing the lecture hours further, the physical location of the school is also cited in some studies as a factor affecting absenteeism. In our study, gender was not a significant factor in absenteeism and this was compatible within other works in literature. Studies in the literature report that absenteeism amongst female students is lower than in males.[13,19,28,29] This fact is also asserted in our study by the higher attendance scores of the female students. Therefore, we believe that the findings of this study will contribute to the factors on absenteeism of the students and increase their attendance on lectures.

In addition to, in the studies carried out by Kelly (2010) and Oakley *et al.* (2011), age of the students, employment, selection of department and lecture attendance status relationship with lecture attendance scale (Table 3) were consistent with these studies in the literature.[30,31]

It is clear that keeping record of attendance of student in classes has an impact on their success. It particularly has a significant effect when dealing with the first-year students, since a huge number of them, for the first time, is out of the family control, living in a new environment, close to the university. In such conditions, young students are facing two options: free life out of the university premises on one hand and learning at the university/health science on the other hand. Keeping record on regular student class attendance requires an extra effort from the anatomical professor. It is a time consuming job to call out names of all students, especially in cases when there is a higher number of students present in the classroom. Even though calling out students may bring the professor closer to them, since at least, the professor will become acquainted with their names, or sometimes even with problems faced by them. On the other hand, it usually becomes monotonous, and students consider it as lost time. A better solution to record student attendance is to do it using the appropriate electronic cards. The student physical presence in class is not sufficient to have a positive impact in their performance and success.

Anatomy lectures afford the opportunity to introduce a difficult subject, to describe different points of view on a given topic, or to sum up individual clinical or laboratory experiences. They encourage reflection on a subject, aid understanding, and develop scientific and clinical thought about it. As it is well known, every student has distinct individual characteristics and needs. In the light of this, universities make use of learning, teaching and evaluation strategies which respect to these differences. Furthermore, basic teaching strategies tend towards a teacher-centred rather than a student-centred approach.

This article has focused on the difficulties in gaining informed consent from student who do not attend, and the challenges in moving beyond surface responses to questions on reasons for non-attendance. Informed by this admittedly partial review we maintain that the evidence linking grade attainment with attendance and study effort is less conclusive than intuition might initially suggest.

CONCLUSION

The findings of this study suggest that teaching environment and the staff, which are causes of student anatomy lesson absenteeism are factors that need to be rectified. It has been emphasized that non-attendance at lectures cannot simply be regarded as a discipline problem and that the responsibilities which go hand in hand with professional training have caused concern amongst educators about student attendance and issues related to it. Additionally, there is a need for more research to be carried out into the use made by students of the extra time which is created when they do not attend anatomy lectures. It has been pointed out that both the educators and administrators have an important role to play in the raising of attendance levels with student-friendly programmes. It is also stressed that the roles of educators and educational establishments in facilitating attendance at lectures need to be clarified.

*The authors declare that there are no conflicts of interest.

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