

Original article

Perceptions of Students of Yeditepe University Faculty of Medicine About Educational Environment

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ÖZET

Yeditepe Üniversitesi Tıp Fakültesi öğrencilerinin eğitim çevresine yönelik algıları

Bu çalışmanın amacı, Yeditepe Üniversitesi Tıp Fakültesi öğrencilerinin eğitim çevresi algısını belirlemektir. Çalışma grubunu Yeditepe Üniversitesi Tıp Fakültesi birinci, ikinci ve üçüncü sınıfta öğrenim gören 37 kız 57 erkek olmak üzere toplam 94 öğrenci oluşturmaktadır. Öğrencilerin eğitim çevresi algılarını ölçmek için Dundee Ready Education Environment (DREEM) ölçeği kullanılmıştır. Öğrencilerin cinsiyetlerine göre, hem genel DREEM puanları hem de beş alt boyut puanları arasında anlamlı fark çıkmamıştır. Ayrıca, sınıflara göre yapılan ANOVA sonucuna göre de, genel DREEM puanları ve alt boyut puanları arasında anlamlı fark çıkmamıştır.

Anahtar Kelimeler : Eğitim çevresi, öğrenci algısı, tıp eğitimi

ABSTRACT

The aim of this study is to define students' perceptions of their educational environment at the Yeditepe University Medical School. The Dundee Ready Educational Environment Measure (DREEM) was used to measure students' perceptions of educational environment. DREEM was applied to 94 subjects including 37 female and 57 male students in years 1, 2, and 3. There was no statistically significant gender differences between overall DREEM scores and the five subscale scores based on the results of the t test. Similarly, a significant difference was not reported between overall DREEM scores and the subscale scores of ANOVA according to classes.

Key Words : Educational environment, student perception, medical education

INTRODUCTION

Classroom learning environment from the students' perspectives has been a major topic of the studies for nearly two decades¹. How students perceive the characteristics of the learning environment guide teachers a long way to plan, reconsider and implement the best teaching strategy. Students spend approximately 15000 hours in classroom environment at primary and secondary levels. As a result, positive experience on learning environment has an important role in the process². Students' approaches to learning and the quality of their learning outcomes are strongly influenced by students' perceptions of educational environment³.

Educational environment influences how, why, and what students learn and it has a characteristic that enables faculty, administrators, and students to answer the question of "what is medical education here really like?"⁴. Identifying the learning environment and understanding how students learn help teachers facilitate learning and plan a curriculum to achieve the learning outcomes⁵.

The nature of a learning environment depends on what happens in a given period of time, who is

present when it happens, and the physical characteristics of the setting⁶. In addition, learning environments are constrained by history. What typically happens and what has happened in the past shape the expectations of participants with respect to what ought to happen or could happen. Furthermore, each individual brings certain beliefs about the classroom roles for themselves and others. These beliefs not only govern how that individual acts in specific situations, but also constrain the meanings of the actions of others⁶. Learning environment research primarily focuses on student perceptions of the learning environment. Student perceptions of the learning environment influence learning behaviors and outcomes that, in turn, become part of the experienced learning environment of self and others⁶.

Students' perceptions of the educational environment influence their responses to teaching and learning processes. Moreover, the effects of the learning experience on the learner, going beyond cognitive achievement, have a bearing on students' self-evaluation and educational adaptation⁷. The role of learners' perceptions of

themselves (their competencies, interests, values), of others (teachers, parents, peers), and of learning environments (classrooms, libraries, homes) is very important in self-regulation, and thus, for education. These perceptions involve knowledge but are subjective and may conflict with other knowledge possessed by learner or others. Yet, such perceptions affect students' self-regulatory efforts⁸. Students' perceptions of their educational environment are a useful basis for modifying and improving the quality of educational environment. One of the most important findings of educational research is that meaning orientation to learning is positively associated with students' perception of the learning environment. There are significant positive relations between meaning orientation and five scales of the medical education environment measure: students' perception of teaching and learning, teachers, academic atmosphere, self and social perceptions⁹. People behave in direct correlation with their perceptions. To purposefully change behavior in any way requires that we understand that perceptual field. People do not behave according to the facts as they seem to someone else. What a person does, what a person learns, is a product of what is going on in that individual's unique and personal field of awareness. At school, student perceptions suggest that teacher behaviors which have tended to be viewed as merely a part of the "teacher role" do have a significant impact on the affective climate in classrooms. The perceptual reports clearly indicate that while there are a number of common perceptions held by students, there are many more perceptions that are individual. Three conditions must be met if worthwhile student perceptions are to be obtained. First, the teacher must admit that improvement is necessary and that students can provide useful information, second, the teacher must establish the kind of climate that is conducive to obtaining student perceptions, and third, teacher authenticity where students feel the teacher needs their input and their perceptual reports will be used to enhance the teacher's personalizing interactions with them¹⁰. Recently, several researches investigate student's goal orientation and motivation in studies involving actual manipulation of teaching/learning environments and measures of instructional variables. The learning environment in a physical education setting includes perceived teacher feedback, perceived challenge, perceived competitiveness, and perceived threat to sense of self, which are important predictors of intrinsic motivation¹¹.

Positive environment and positive learning outcomes appear to go together¹². Curriculum changes are usually undertaken in order to improve the whole learning environment for the students. It is thus important to determine how students are actually experiencing the educational environment¹³.

The aim of this study is to define how students at Yeditepe University Medical School perceive their learning environment. Training and education in Yeditepe University Medical School consists of six years except English Preparatory year. Basic medical science is aimed to be given during the first three years, advanced programs are planned for the fourth and fifth years, and after having completed these phases, the students pass to the sixth phase which is on family medicine. At the end of this year students are graduated as *Medical Doctors*¹⁴. As a result of this training and education the main purpose of Medical Faculty is to train students to become medical doctors who know health problems and who can challenge with these problems using their knowledge, practical and behavioral skills, who practice ethically, who have skill in questioning and research

MATERIAL AND METHOD

Subjects

The subjects of the study consist of totally 94 students including 37 female and 57 male students in years 1, 2, and 3 of Yeditepe University, Medical School.

Instruments

In order to measure students' perceptions on learning environment Dundee Ready Education Environment (DREEM) developed by Roff et al. is used. The development of assessment inventories enables students' perceptions of their educational environment to be quantified and compared, either within or between health professions institutions. DREEM is a universal diagnostic inventory for assessing the whole or parts of the educational environment and climate of health professions/medical schools to permit evaluation of their responses to the challenges of changing mandates and missions¹⁵.

DREEM consists of 50 items and each item is scored 4-0 with 4=Strongly agree, 3= Agree, 2= Unsure, 1= Disagree, and 0 = Strongly disagree by the respondents. 9 items (4, 8, 9, 17, 25, 35, 39, 48, 50) are scored in reverse for the analysis. The inventory also consists of 5 sub dimensions as given below;

- Perception of learning: 12 items (maximum score 48)
- Perception of Course Organizers: 11 items (maximum score 44)
- Academic self-perception: 8 items (maximum score 32)
- Perception of atmosphere: 12 items (maximum score 48)
- Social self-perception: 7 items (maximum score 28)

RESULTS

The data was first analyzed in terms of DREEM's five subscales and total score related to Alpha reliability values. In Table 1 Alpha reliability factors are given.

Demographic data is given in Table 1. When item-to-subscale and item-to-total correlation coefficients are examined, it is found that only the category of "Social Self Perception" has the score 0.20. However, correlations between other dimensions are high and the total reliability score of the scale is 0,91.

Table 1. Alpha reliability values related to five subscales

	N	Alpha
Perception of Learning	94	0,73
Perception of Course Organizers	94	0,69
Academic Self Perception	94	0,67
Perception of Atmosphere	94	0,76
Social Self Perception	94	0,20
TOTAL (DREEM)	94	0,91

Table 2 shows that the means of different dimensions are; 38,65 for perception of learning, 35,21 for perception of course organizers, 25,11 for academic self perception, 36,18 for perception of atmosphere, and 21,74 for social self perception, respectively. Hence, it can be concluded that the

results are quite acceptable. Moreover, the overall DREEM score, 156,91 is nearly perfect.

Table 2. Mean, Std. deviation, minimum, and maximum values related to subscales

	Mean	Std. Deviation	Minimum	Maximum
Perception of learning	38,65	6,78	13,00	49,00
Perception of course organizers	35,21	5,99	10,00	46,00
Academic self perception	25,11	5,55	7,00	34,00
Perception of atmosphere	36,18	7,69	8,00	48,00
Social Self perception	21,74	3,27	13,00	29,00
Overall	156,91	25,66	60,00	197,00

Based on t test given in Table 3, where the results are $p=0,52$ for perception of learning; $p=0.36$ for perception of course organizers; $p=0.16$ for academic self perception; $p=0.92$ perception of atmosphere; and $p=0.31$ for social self perception. Significant difference was not detected in comparisons between female and male students on their perceptions of learning environment in five-factor structure. In addition, the overall score is $p=0.43$ and there is no significant difference between the overall scores.

The data given in Table 4 indicates the differences among the students on their perceptions of learning environment and the comparison between the years (1st, 2nd, and 3rd). According to this table, the results are $F=0.97$ related to perception of learning; $F=0.56$ related to perception of course organizers; $F=0.50$ related to academic self perception; $F=2.87$ related to perception of atmosphere; and $F=0.23$ relating to social self perceptions.

Table 3. t test Results according to gender differences and total scores

	Gender	N	Mean	Std. Deviation	t	P
Overall	Male	37	154,35	26,51	-0,77	0,43
	Female	57	158,57	25,19		
Perception of Learning	Male	37	38,10	6,11	-0,63	0,52
	Female	57	39,01	7,20		
Perception of Course Organizers	Male	37	34,51	6,68	-0,91	0,36
	Female	57	35,66	5,52		
Academic Self Perception	Male	37	24,13	5,35	-1,38	0,16
	Female	57	25,75	5,63		
Perception of Atmosphere	Male	37	36,27	8,38	0,09	0,92
	Female	57	36,12	7,29		
Social Self Perception	Male	37	21,32	3,56	-1,00	0,31
	Female	57	22,01	3,07		

($p<0,05$)

Table 4. ANOVA results Indicating differences of the students in five subscales and total scores according to the year of the study

		Sum of Squares	df	Mean Square	F	Sig,
Perception of Learning	Between Groups	89,80	2	44,90		
	Within Groups	4187,30	91	46,01	,97	,38
	Total	4277,10	93			
Perception of Course organizers	Between Groups	40,67	2	20,33		
	Within Groups	3303,07	91	36,29	,56	,57
	Total	3343,74	93			
Academic Self Perception	Between Groups	31,59	2	15,79		
	Within Groups	2840,11	91	31,21	,50	,60
	Total	2871,71	93			
Perception of Atmosphere	Between Groups	327,49	2	163,74		
	Within Groups	5184,43	91	56,97	2,87	,06
	Total	5511,92	93			
Social Self Perception	Between Groups	5,02	2	2,51		
	Within Groups	992,85	91	10,91	,23	,79
	Total	997,87	93			
Overall	Between Groups	1402,403	2	701,20		
	Within Groups	59858,91	91	657,79	1,06	,34
	Total	61261,31	93			

($p < 0,05$)

When the scores were examined in five dimensions according to the year of study, no significant difference was found in perceptions of their learning environment, Furthermore, F is 0,34 for the overall DREEM score and this also shows that there is not a significant difference between overall scores.

DISCUSSION

In this study, learning environment perceptions of students at the first three years of Yeditepe Medical School is studied, DREEM was applied in order to learn students' perceptions on learning environment in the dimensions of perception of learning, perception of course organizers, academic self perception, perception of atmosphere, and social self perception.

At the first step of the analysis, Alpha coefficients assessing the reliability of sub-scales of DREEM and total scores based on the data of the study group were examined, It was found that only Alpha coefficient related to "Social Self Perception" was 0,20, Having less items in this category and less students in the study group than others may be the reason of this result, In future studies, the Alpha coefficients related to "Social Self Perception" dimension can be calculated with larger groups,

In the study, it was found that the overall mean of DREEM was 156,91, the minimum score was 60, and the maximum score was 197, DREEM results of 86 students in years 1, 2, and 3 of a Nepalese Health Sciences Institute reported a mean total of 130/200 and significant gender and academic year

differences, DREEM results of 407 Canadian chiropractic students in years 1, 2, and 3 reported radically declining overall means for each year - 111/200 for year 1, 97/200 for year 2, and 78/200 for year 3- with individual items and subscales indicating clearly where remediation was required, DREEM results of 127 Nigerian medical students in years 4, 5, and 6 were able to identify their perceptions of the strengths and weaknesses of the medical school which had a mean total of 118/200¹⁶,

In the examination of data of students' perceptions on learning environment, it is seen that there was not a significant difference in comparisons between female and male students on their perceptions of learning environment and in the comparisons between dimensions of "Perception of Learning", "Perception of Course Organizers", "Academic Self Perception", "Perception of Atmosphere", "Social Self Perception".

According to variance analysis in order to define the difference between students' perceptions and the year of study, no significant difference was determined for both between two genders and the related dimensions of "Perception of Learning", "Perception of Course Organizers", "Academic Self Perception", "Perception of Atmosphere" and "Social Self Perception",

Having no significant difference in comparisons between female and male students and scores according to the year of study can be explained in two ways, Firstly, Yeditepe University's Medical Faculty is a dynamic and young faculty and the conditions provided for students are very good,

The second reason may be the central national exam which is used to choose students for different faculties, When the scores required for the Faculty of Medicine are compared to the scored required for other faculties, it is clearly seen that Faculty of Medicine stands at the top of ranking, As a result, students are expected to

have a higher level of perception as well as success,

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REFERENCES

1. Fisher DL, Kent HB. Associations between teacher personality and classroom environment, *Journal of Classroom Interaction* 1998;33: 5-13.
2. Burnett CP. Teacher praise and feedback and students' perceptions of the classroom environment, *Educational Psychology* 2002;22: 5-16.
3. Dart BC, Burnett PC, Purdie N, Lewis GB, Campbell J & Smith D. Students' conceptions of learning, the classroom environment and approaches to learning. *The Journal of Educational Research* 2000;93: 262-70.
4. Genn J, and Harden RM. What is medical education here really like? Suggestions for action research studies of climates of medical education environments, *Medical Teacher* 1987;8: 111-124.
5. Pimparyon P, Roff S, Mcaleer S, Poonchai B, Pemba S. Educational environment, students approaches to learning and academic achievement in a Thai nursing school, *Medical Teacher* 2000;22: 359-65.
6. Lorcbach AW, Jinks JL. Self-efficacy theory and learning environment research, *Learning Environments Research* 1999;2: 157-67,
7. Sobral DT. Medical Students' self-appraisals of first-year learning learning outcomes: use of the course valuing inventory. *Medical Teacher* 2004;26: 234-8.
8. Schunk DH. Inherent details of self-regulated learning include student perceptions, *Educational Psychologist* 1995;30: 213-6.
9. Mayya SS, Roff S. Students' perceptions of educational Environment: A comparison of academic achievers and under-achievers at Kasturba Medical College, India, *Education for Health* 2004;17: 280-91,
10. Whitfeld T. How students perceive their teacher, *Theory Into Practice* 2001;15: 347-51.
11. Koka A, Hein V. Perceptions of teacher's feedback and learning environment as predictors of intrinsic motivation in physical education, *Psychology of Sport and Exercise* 2003;4: 333-46.
12. Al-Hazimi A, Zaini R, Al-Hiyani A, Hassan N, Gunaid A, Ponnamparuma G, et al. Educational environment in traditional and innovative medical schools: A study in four undergraduate medical schools, *Education for Health* 2004;17: 192-203.
13. Till H. Identifying the perceived weaknesses of a new curriculum by means of the Dundee Ready Educations Environment Measure (DREEM) Inventory. *Medical Teacher* 2004;26: 39-45.
14. <http://www.yeditepe.edu.tr/yeditepe/YeditepeUniversitesi/listpage.aspx?page=1618>: 20,03,2009.
15. Roff S, Mcaleer S, Harden RM, Al-Qahtani M,, Ahmed AU, Deza H, et al. Development and validation of the Dundee Ready Education Environment Measure (DREEM), *Medical Teacher* 1997;19: 295-9.
16. Roff S. The Dundee Ready Educational Environment Measure (DREEM)—a generic instrument for measuring students' perceptions of undergraduate health professions curricula. *Medical Teacher* 2005;27: 322-5.

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